



KỶ YẾU

HỘI THẢO QUỐC TẾ DÀNH CHO CÁC NHÀ KHOA HỌC TRẺ KHỎI TRƯỜNG KINH TẾ VÀ KINH DOANH NĂM 2021

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HỌC VIỆN NGÂN HÀNG



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THEME 1

ECONOMIC GROWTH AND GLOBALIZATION

EVALUATING TRADE EFFECTS OF EVFTA ON THE EXPORTATION OF VIETNAMESE FISHERY PRODUCTS TO THE NETHERLANDS

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Abstract

Fisheries have been playing a crucial role in the economic development of Vietnam, especially in export performance. In 2019, Vietnam's fishery products were distributed to 127 markets and 2 trade blocs, in which the revenue of fishery products sold to the European Union (EU) market constituted 15% of the total export turnover of the industry. The conclusion of the European Union – Vietnam Free Trade Agreement (EVFTA) is expected to bring about a significant increase in Vietnam's export performance to the EU market, especially the Dutch market due to the fact that it has been one of Vietnam's biggest fisheries importers from the EU for several years. Understanding that, the paper employed Software for Market Analysis and Restrictions on Trade (SMART) to assess trade effects of EVFTA on the exportation of Vietnamese fishery products to the Netherlands once the agreement is fully activated for all types of marine food in 2027. It is concluded that for the trade creation effect, groups HS 0304, 0306 and 1605 will contribute the most to alterations in export turnover to the Dutch market. The trade diversion effect, despite its less influence on the exportation, still imposes a threat since the EU is also seeking partnership with other countries. Based on the analysis, the authors proposed some recommendations so that the government and businesses can set out feasible and relevant strategies to reach long-term objectives.

Keywords: EVFTA, fisheries, SMART, the Netherlands, trade effects, Vietnam.

1. Introduction

Free trade agreements (FTAs) have established motivation for overall development and created several positive impacts on the economy of Vietnam. According to the Ministry of Industry and Trade (MoIT) in 2020, apart from Vietnam becoming a member of the WTO, the implementation of FTAs has contributed to the growth in Vietnam's gross domestic product (GDP) by 300%, in export turnover by 350%. Among sectors whose exports benefit the most after FTAs, fisheries have always remained its top position in export turnover. In 2019, Vietnam's fishery products were distributed to 127 markets and 2 trade blocs, namely the EU and Association of Southeast Asian Nations (ASEAN); in which China, the EU, ASEAN, the United States, Japan and Korea were the main export markets in terms of value for marine goods. The export turnover of the field in the year was 8.54 billion USD, constituting 3.23% of the national total export turnover (European – American Market

Department, 2020). This proves the important role of the fisheries sector in the process of enhancing development and international integration for Vietnam.

After a decade of tense negotiation and unremitting efforts, EVFTA officially took effect on August 01, 2020, marking a new chapter in the relationship between Vietnam and the EU. According to the commitment, with regard to Vietnam's export activity, after the agreement takes effect, the EU will remove import tariffs on 85.6% of tariff lines, equivalent to 70.3% of Vietnam's exports to the EU (MoIT, 2020). After 7 years of implementation, the percentage of eliminated import tariffs on total tariff lines will be 99.2%, equivalent to 99.7% of Vietnam's export turnover. For the remaining 0.3% turnover, the EU offers tariff rate quotas with zero in-quota tariff. The EVFTA implementation is expected to enhance bilateral trade with the EU, sustain positive outcomes and consolidate Vietnam's participation in global value chains (World Bank, 2020).

Particularly, the conduct of EVFTA will open new doors for the export activity of Vietnamese fishery products. In 2019, EU's imports accounted for 15.11% of Vietnam's total export turnover in the field. Vietnam was the EU's 6th biggest fisheries supplier in the same year. In the Asian area, Vietnam was only behind China in terms of fisheries export value to the EU (European – American Market Department, 2020). Of all 28 member states, the Netherlands has been one of the most important trading partners of Vietnam in the EU, especially in the sector of fisheries export. In 2019, the exportation of the industry to the Netherlands (HS 03, 1604 and 1605) brought Vietnam over 185 million USD (Trade Map, 2021), which constituted 17% of the total amount exported to the EU and made the country become the biggest EU export market for Vietnamese fishery products. Statistics from Trade Map (2021) indicate that the main Vietnamese fishery exports to the Netherlands in 2019 were in the group HS 03 (0301, 0303, 0304, 0305, 0306, 0307) and HS 16 (1604 and 1605). Among those, key products with significant export turnover included shrimp, pangasius and tuna, with their proportions in the year being 60%, 22.78% and 10.61% of the total.

The Netherlands' large import for Vietnam's fishery products is due to the prices being lower compared to other seafood brands in the country (Vietfish Magazine, 2020). Moreover, the Center for the Promotion of Imports from developing countries (CBI) in 2021 stated that Vietnam's products are able to meet the Dutch market's growing demands for products that are ready to eat or quick and easy to prepare. Besides, the Netherlands has for long been regarded as an entry point and major entrepot to the EU market. From the Rotterdam Port, Dutch and international traders distribute products to various European countries (MoIT, 2018).

There have been many researchers adopting different approaches to study about the opportunities as well as challenges for Vietnam's exportation to the EU under the influence of EVFTA, as this agreement is expected to make a significant difference to the position of the exporter on the market. Vu Thanh Huong and Nguyen Thi Minh Phuong (2015) used trade indicators to evaluate potential trade impacts of EVFTA based on current trends between

Vietnam and the EU. Le Thu Ha (2017) applied the Sussex Framework to conduct quantitative and qualitative analysis on trade impacts of EVFTA on both sides of the agreement. Vo Tat Thang et al. (2018), Vo Thanh Thu et al. (2018), Pham Van Phuc Tan and Nguyen Tien Hoang (2020) adopted SMART model to investigate effects of EVFTA on Vietnam's exportation performance on distinct fields, including footwear, apparels and seafood. However, they only focus on the whole EU area. In the meanwhile, studying about such a leading importer like the Netherlands actually plays an important role in Vietnam's future development strategy for each market.

This study focuses on applying SMART model to simulate export performance, in particular trade effects, of Vietnamese fishery products to the Netherlands after the EVFTA takes effect and all tariff barriers are eliminated. Based on the analysis, the paper identifies opportunities and challenges for Vietnam's fisheries industry and proposes solutions to promote the exportation of fishery products to the Netherlands.

2. Literature review

2.1. Ex-ante evaluation and ex-post evaluation

According to Plummer et al. (2010), in general, there are two main directions to evaluate impacts of an FTA, namely ex-ante evaluation and ex-post evaluation. Ex-ante simulation entails transferring the potential results of a policy transition into a group of economic variables of interest, while ex-post approaches analyze the effects of previous trade policy using historical evidence (Plummer et al., 2010).

It is essential to have a clear and accurate comprehension of the possible impacts of an FTA before it comes into force. Based on cost-benefit analysis and the identification of what can or cannot be provided to their FTA partners, the country can decide negotiation position (Plummer et al., 2010). Pre-negotiation studies are also useful to fully take advantage of potential export gains of FTAs and to come up with adjustments in policy for sectors on which FTAs may have negative influences (Plummer et al., 2010). Similarly, evaluating actual impacts of an FTA after its implementation to see whether the results are as anticipated can help to draw up further necessary adjustment policies for the affected sectors and to exploit the benefits that are yet to fully materialize, especially when the negative effects of the FTA appear to outweigh positive results (Plummer et al., 2010).

Although EVFTA already came into force, an ex-ante approach will be more sensible than applying an ex-post assessment. As Bacchetta et al. (2012) stated, analyzing a policy or policy reform using ex-post methods requires the policy or reform to have been active long enough for its effects to be observable in the data. The agreement has been in place for about 9 months, thus an overall and thorough data set for its impacts after implementation is not available to conduct precise analysis.

2.2. General equilibrium and partial equilibrium

To conduct an ex-ante approach, it needs to be decided between general equilibrium (GE) and partial equilibrium (PE) models (Bacchetta et al., 2012). While GE analysis considers inter-relationship and inter-dependence between equilibrium adjustments with each other, PE does not (Ahuja, 2019; Halevi et al., 2016). Therefore, where the change in the price of a good has significant effects on prices and quantities of others, such as in the case of inter-related goods (substitutes and complementary goods), PE approach will not be a proper option for analysis. GE, on the other hand, is able to explain the mutual and simultaneous determination of prices and quantities in such cases.

On the other hand, according to Bacchetta et al. (2012), PE approach only requires a smaller amount of data, mainly trade flows, trade policy data and elasticities. Moreover, there are lots of ready-made models available for analysis (Bacchetta et al., 2012). As a result, PE will be more useful compared to GE when it comes to the assessment of a particular commodity at a disaggregated level.

Hence, PE approach will be suitable for the research's scope, which is evaluating trade effects of EVFTA on the exportation of Vietnamese fishery products to the Netherlands.

2.3. Viner's theory on trade creation and trade diversion

Evaluation of the trade effects as a consequence of FTA is accompanied by the concepts of trade creation and trade diversion, which were first introduced by Viner (1950). Utilizing a mathematical model in a partial equilibrium framework, Viner stated that any kind of preferential trade benefits international trade as it encourages the specialization of production in low-cost countries. He also proved that FTAs do not always increase welfare for members as others always thought. In fact, trade creation, which occurs when a high-cost domestic producer is replaced by a lower-cost partner and the consumer can buy more at a cheaper price, leads to an improvement in resource allocation and presumably has positive welfare effects. On the other hand, trade diversion results in a welfare loss for the home country since the low-cost rest of the world partner is replaced by a high-cost partner country.

2.4. Model framework

2.4.1. SMART simulation

The research adopts SMART model for simulation. SMART (Software for Market Analysis and Restrictions on Trade) model, developed by Jammes and Olarreaga (2005), is part of the World Integrated Trade Solution (WITS) database and software suite provided jointly by the World Bank and the United Nations Conference on Trade and Development (UNCTAD). It is a PE model that focuses on one importing market and its exporting partners and assesses effects of a tariff change scenario by estimating alterations in a set of variables.

2.4.2. Empirical studies utilizing SMART model for evaluating trade impacts of FTAs

The SMART model has been utilized by multiple researchers for stimulating trade impacts of an FTA on a country. Makochehanwa (2011) employed SMART model to assess

impacts of the Tripartite Free Trade Area (T-FTA) of three regional economic communities in Africa on the 26 participating member countries. The results indicated that countries such as Angola and the Democratic Republic of the Congo (DRC) were anticipated to be the main beneficiaries, with new trade created being worth 2 billion USD. The study also found that about 1 billion revenue would be lost due to the reduction of import duties, in which countries suffer the most would be DRC and Kenya (214 million and 211 million USD, respectively). Othieno and Shinyekwa (2011) used the WITS-SMART simulation model to evaluate effects of the East African Community Customs Union on Uganda with regard to trade, welfare and revenue effects in sensitive products since 2005. The overall results demonstrated that tariff reduction on category B products (sensitive products) will lead to increases in trade creation and welfare effects. Trade diversion effects are more reflected on imports of soap products, paper products, fabrics and manufactured cotton. Furthermore, the government is anticipated to face a tariff revenue loss which should be taken into consideration. Guei et al. (2017), in research about effects of Trade Development and Cooperation Agreement (TDCA) using SMART, concluded that trade expansion did not completely occur between the FTA's members, and the removal of tariff barriers would cause 562 million worth of government revenue loss and a welfare gain of 134.45 million USD.

In Vietnam, there has not been such a significant number of researches using SMART model. Some researchers used SMART model under more than two scenarios including Vu Thanh Huong (2016) and Vo Tat Thang et al. (2018). Vu Thanh Huong (2016) predicted that while reducing tariffs on EU medicines would not result in a major increase, Vietnam's deeper cooperation with Trans-Pacific Partnership Agreement (TPP) and ASEAN+3 countries would have a slight impact on its imports from the EU. Vo Tat Thang et al. (2018), with their research on EVFTA's impacts on Vietnam's footwear industry, found that although the field's export would witness increases in data, the EU's anti-dumping duties would negatively influence Vietnam's key export footwear - group HS 6403. The simulation results also showed that there would be a remarkable shift in the export structure by product group which enjoyed higher tariff preference. Besides, Vo Thanh Thu et al. (2018) conducted a SMART analysis in Vietnam's apparel export after the full application of EVFTA and estimated that the trade diversion effect would be more visible than trade creation, which means apparel export would come from vast imports from the EU due to duty elimination and not an effective allocation of resources. Pham Van Phuc Tan and Nguyen Tien Hoang (2020), in their research on Vietnam seafood exportation to the EU market after EVFTA, stated that the trade creation effect would be larger than the trade diversion effect but the difference was small.

3. Methodology

3.1. Model assumptions

To run SMART simulation, there need to be three parameters of elasticity including import demand, export supply and substitution elasticities (Plummer et al., 2010), which were

developed based on assumptions explained in the original work of Jammes and Olarreaga (2005) and also the publication of Plummer et al. (2010). To be more specific:

The import side in SMART model relies on the Armington assumption, which was introduced in 1969, that commodities are distinguished by their origins. This means that goods imported from different countries are imperfect substitutes. Therefore, even when an FTA entails preferential trade liberalization, imports demand does not shift to the beneficiary completely. Within the Armington assumption, consumers optimize their welfare through a two-stage process. First, after the price index of the commodity changes, they will decide how much to spend on the good. The ratio of percentage quantity changes over percentage changes is called import demand elasticity. After that, consumers allocate their chosen level of spending for this commodity among different national varieties based on the relative price of each variety. The extent of the between-variety allocative response to the change in the relative price is determined by the substitution elasticity. Substitution elasticity is assumed to be equal and remain unchanged across goods from different sources. Note that this elasticity will have an impact on trade diversion among exporters.

For the export side, in the simplest version of SMART model, export supplies are perfectly elastic, which assumes that at a certain price, the amount of goods a foreign country can export is not restricted. Different countries compete to supply the home market and the model simulates any changes in imports after a tariff reduction or a change in trade policy occurs. In this case, export supply elasticity is infinite. This assumption should be applied only if the importing country accounts for such a small portion of the total export turnover of the exporter.

3.2. Input data

This paper adopts the HS (Harmonized System) classification and evaluates the effects of EVFTA on Vietnam's exportation of fishery products namely HS 03 - *Fish and crustaceans, mollusks and other aquatic invertebrates*, 1604 - *Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs and 1605 - Crustaceans, mollusks and other aquatic invertebrates, prepared or preserved (excluding smoked)*.

2027 is the estimated year when all tariff lines for Vietnamese goods are completely removed. Because of the time lag in statistics, figures for 2020 have not been available on reliable sources yet. Moreover, as EVFTA takes effect in 2020, numbers in the year would not be appropriate to be applied for prediction. Therefore, the authors decided to use 2019 as the base year in the SMART model.

Data related to the export turnover of Vietnamese fishery products to the Netherlands in 2019 will be extracted from the United Nations International Trade Statistics Database (UN Comtrade) and Trade Map database. The most-favored-nation tariff rates that the EU imposed on Vietnamese fishery products as per commitment among WTO's members are available on UNCTAD's Trade Analysis Information System (TRAINS).

The values for export supply and substitution elasticities are by default, which are 99 and 1.5 respectively. The data for import demand elasticity is by default on the system.

Tariff reduction scenario will be after EVFTA comes into force, all tariff barriers on Vietnamese fishery products exported to the Netherlands will be eliminated (0%).

3.3. Sensitivity analysis and robustness test

In order to ensure the accuracy as well as the applicability of results, the authors conducted sensitivity analysis and robustness test by adopting the approach of Guei et al. (2017) and Vo Thanh Thu et al. (2018). Initially, the base case is run using the default number of substitution elasticity, which is 1.5. For testing the robustness of the results, the simulation is carried out repeatedly under different substitution elasticity values, which are demonstrated in table 1.

Table 1. Elasticities used in sensitivity analysis and robustness test

Indicators	Lower bound	Base case	Upper bound	Best case
Substitution elasticity	0.5	1.5	2	6
Export supply elasticity	99	99	99	99

Source: The authors compiled (2021)

In the base case, substitution elasticity has a value of 1.5. Other scenarios, namely lower bound, upper bound and best case, have substitution elasticities as 0.5, 2 and 6 respectively (Guei et al., 2017). Export supply elasticity remains unchanged throughout the analysis, at 99.

4. Results

4.1. Overall trade effect on the exportation of Vietnamese fishery products to the Netherlands after EVFTA

From the results given by SMART simulation, it is clear that EVFTA has positive impacts on the exportation of Vietnam's fishery products to the Netherlands, which is demonstrated in the following table.

Table 2. Overall trade effect on the exportation of Vietnamese fishery products to the Netherlands after EVFTA

Indicators	Effects
Initial export value in 2019 (million USD)	184.978
Export value in 2027 (million USD)	207.139
Total export change (million USD)	22.161
Trade creation (million USD)	12.406
Trade diversion (million USD)	9.755

Increase in exports (%)	12
Trade creation/Total export change (%)	56

Source: The authors compiled and calculated from SMART results (2021)

Thanks to the influence of EVFTA in 2027, the export turnover of Vietnamese fishery products will grow by an amount of 12% compared to 2019. To be more specific, the rises due to the trade creation effect will be more significant than those of the trade diversion effect, in which trade creation's value is 56% of the total. The fact that there will be more preferential tariff rates on Vietnam's exporters helps to reduce prices and improves the ability to replace the Netherlands' domestic goods with Vietnamese fishery products.

4.2. Trade effects on each HS group of Vietnamese fishery products to the Netherlands after EVFTA

Table 3 demonstrates data for change in the value of each product group (4-digit HS code) as well as the correlation between this alteration and the level of tariff reduction.

It can be seen that products in group HS 03 contribute more to the total trade effect under EVFTA with its proportion being over 55%. This is because HS 03 managed to gain more export turnover in 2019 in comparison with HS 1604 and 1605. However, the changes in group HS 16 are more noticeable - 15.40% due to its higher tariff rate, at 9.08%. Especially, groups HS 0304, 0306 and 1605 are expected to witness the most dramatic alterations among all, with their total trade creation value taking up approximately 90% of the total.

Table 3. Trade effects on each HS group (4-digit) of Vietnamese fishery products to the Netherlands after EVFTA

HS Code	Export value in 2019 (million USD)	Trade creation (million USD)	Trade diversion (million USD)	Total trade effect (million USD)	Change in export value (%)	Applied tariff rate (%)	New tariff rate (%)
03	121.282	7.669	4.680	12.349	10.18	5.76	0
0301	0.016	0	0	0	0	0	0
0303	3.728	0.333	0.145	0.478	12.81	6.72	0
0304	58.793	4.335	1.295	5.630	9.58	5.97	0
0305	0.974	0.183	0.029	0.212	21.81	9.66	0
0306	57.677	2,817	3,208	6,025	10.45	5.3	0
0307	0.095	0.001	0.003	0.004	4.76	1.9	0
16	63.695	4.737	5.075	9.812	15.40	9.08	0

1604	5.729	0.722	0.779	1.501	26.20	11.16	0
1605	57.966	4.015	4,296	8.311	14.34	7	0
Total	184.978	12.406	9.755	22.161	12		

Source: The authors compiled and calculated from SMART results (2021)

Overall, trade creation leads to increases in welfare for both Vietnam and the Netherlands, which is a good sign. However, there is not much difference between trade creation and trade diversion effect values, in which proportions of both effects of the total are slightly equal. Without guidance on cost-effectiveness for the Vietnamese fisheries industry to follow, the Netherlands' loss from diverting imports from efficient producers (other countries) to a lower one (Vietnam) will be worsened. Moreover, although the increase in the trade diversion effect proves that Vietnamese products' prices are more competitive than other exporters', it also means that this upturn is just short-term and vulnerable to the Netherlands' partnerships with Vietnam's competitors.

4.3. Competitors' loss under the impacts of EVFTA

Although Vietnam will benefit greatly from full tariff liberalization for fishery products when exporting to the Netherlands, it is also critical to identify non-EVFTA countries whose trade with the Netherlands will be redirected the most after the agreement's implementation, which is shown in table 4.

Among 5 countries, Morocco is expected to have a decrease in their data the most, especially in group HS 1605. The reason for its big drop is that in 2019, Morocco exported 156 million USD worth of fishery products to the Netherlands, which was 3 times larger than Vietnam (The Observatory of Economic Complexity, 2021). At the moment, the negotiation for a Deep and Comprehensive Free Trade Agreement (DCFTA) between the EU and Morocco is still ongoing. Similarly, other countries including India and Indonesia, despite being anticipated to export much less, are pushing for FTAs with the EU (Ministry of Commerce and Industry, 2021; EC, 2021). It is noted that Vietnam needs to establish a long-term development strategy to tackle difficulties arising from possible trade deals between the EU and other competitors.

Table 4. Countries suffer the most under the impacts of EVFTA

Country	Before EVFTA (million USD)	After EVFTA (million USD)	Change (million USD)
Morocco	186.744	183.114	-3.630
India	79.172	78.148	-1.024
Bangladesh	70.180	69.239	-0.941
Indonesia	43.395	42.686	-0.709
Ecuador	147.818	147.272	-0.546

Source: The authors compiled and calculated from SMART results (2021)

4.4. Sensitivity analysis and robustness test

After conducting SMART simulation for the base case, the authors repeatedly calculated other three scenarios as introduced in Chapter 3. The percentage changes of those scenarios are calculated by the following formula (Vo Thanh Thu et al., 2018):

$$\% \text{ change} = \left| \frac{\text{Base case} - \text{Scenario value}}{\text{Base case}} \times 100 (\%) \right|$$

Results for the test are shown in table 5.

Table 5. Sensitivity analysis and robustness test results

Effect/Indicator	Lower bound	Base case	Upper bound	Best case
Trade creation (million USD)	12.406	12.406	12.406	12.406
Trade creation (% change)	0	-	0	0
Export after (million USD)	200.645	207.139	210.374	236.109
Export after (% change)	3.14	-	1.56	13.39

Source: The authors compiled and calculated from SMART results (2021)

It can be seen that trade creation value does not change in SMART simulation with different substitution elasticities. On the other hand, there are more noticeable changes in total export turnover due to alterations of trade diversion values. However, the values of percentage are under 4% level of significance, indicating that the change from the base case is insignificant. Hence, the base case is robust. With the change of export turnover being 13.39%, the case in which substitution elasticity is 6 will be the best scenario for Vietnam's fisheries export to the Netherlands.

5. Conclusion and implications

The conclusion of EVFTA is anticipated to bring about dramatic changes in Vietnam's export performance, especially in such a key sector - fisheries.

Using SMART simulation, it can be concluded that EVFTA will help to increase the export turnover of Vietnam's fisheries industry to the Netherlands by an amount of over 22 million USD after 7 years, 12% higher compared to 2019. Nearly 90% of the growth is contributed by groups HS 0304, 0306 and 1605. Moreover, through sensitivity analysis and robustness test, it is clear that the base case's results are reliable and can be taken into consideration for guiding policymaking.

It should be noted trade creation accounts for 56% of the total trade effect, meaning that the gains in fisheries export of Vietnam to the Netherlands are mainly due to duty reduction and effective allocation of resources. Yet, trade diversion effect still plays a fairly big role, suggesting that a large share of export turnover will not keep going up in the long term without proper guidance to enhance product quality and quantity on a massive scale.

Therefore, it is important for the government to supervise and inspect business activities regularly as well as closely follow the aquaculture planning to improve the value chain. Especially, Vietnam has to keep fishing quotas in 11 provinces (9 in the Central Coast area and 2 in the South West area) under control (Le Thi Ngoc Thuy, 2018). This helps to avoid over-exploitation, control the dispersal and instability in sources of materials as well as ensure that the quality of raw outputs meets demands for manufacturing and exporting activities. Besides, the latest information on the Netherlands' requirements must be delivered to fish farmers and fishermen as soon as possible to make sure that their capture and aquaculture activities are suitable and legally accepted (VASEP, 2020).

Another thing that should be done is putting financial and human resources into researches and technology applications for improving fingerling quality, upgrading infrastructure, and establishing automatic production lines (Tran Huu Ai, 2018; Nguyen Tien Hoang & Pham Van Phuc Tan, 2020). Not only does it help to manage the quality of products better, but it also increases productivity and ensures better accuracy, which enhances competitive advantages for Vietnamese firms thanks to economies of scale.

As Le Thi Ngoc Thuy (2018) suggested, to take comprehensive control over sustainable and legal fisheries business, authorities need to focus on carrying out the Fisheries Law 2017 in manufacturing, exploiting and processing activities. The law also ensures long-term and solid development for the fisheries sector in general and fisheries export of Vietnam in particular. Especially, after the IUU incident, Vietnam needs to carefully and thoroughly prohibit illegal fishing vessels. Nguyen An Phu et al. (2020) proposed a model in which radio frequency identification technology (RFID) and blockchain (a database system that allows storing and transmitting blocks of information) can be combined together to build the traceability system that is supposed to help manage and verify the origins of seafood more easily. It will lessen the possibility of receiving a red card as well as remove the imposed yellow card from the EC.

There are some limitations of the research. The key model for the thesis - SMART model - contains some shortcomings. To be specific, it is a partial equilibrium model, which only concerns the direct impacts of a trade policy change in one market. Indirect effects in other markets (inter-industry effects) and feedback effects are ignored. Moreover, effects of an FTA on domestic production are not calculated in SMART, which some policymakers may find unhelpful, especially if they want to examine the plausibility of new foreign exporters providing goods for the domestic market. Last but not least, SMART model's results may be touchy to the modeling presumptions and parameter values used.

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IMPACT OF FOREIGN DIRECT INVESTMENT ON EXPORTS AND RESPONSES OF VIETNAM IN THE CONTEXT OF COVID-19 PANDEMIC

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Abstract

Foreign direct investment (FDI) is an important resource to develop human resources, generate jobs, expand markets, promote exports and foster the economic transition. It plays an important role in the economic growth and integration of such developing countries as Viet Nam. In this article, the authors investigate the current situation of foreign direct investment (FDI) and exports to Viet Nam during the period of 2013 – 2020, then explore the impacts of FDI on exports in Viet Nam. The researchers collected time-series data by quarters from the first quarter of 2013 to the fourth quarter of 2020 from General Statistics Office of Viet Nam and figures on IFS-IMF. The study used log regression – log linear model to evaluate the impacts of FDI and exports in Viet Nam during the period to provide evidence on the roles of FDI in promoting exports in Viet Nam. In addition to positive effects, there are still some limitations on FDI impacts on exports in Viet Nam. Therefore, the researchers suggested some recommendations on attracting and using FDI to boost exports in Viet Nam in order to respond to Covid-19 pandemic.

Key words: *foreign direct investment, FDI, export turnover.*

1. Theoretical background and empirical research on impacts of FDI on exports

1.1. FDI and its roles in promoting exports

Foreign direct investment (FDI) is the long-term investment of an individual or company into another country by establishing a business. The foreign individual or company takes the controlling ownership of the business.

FDI contributes to enhancing the economic openness, boosting exports through the following channels:

- *Improving export capacity of the host country.* It is attributed to the fact that the host countries can access modern technologies; improve their management skills, workers' skills and product quality.

- *Increased competition from FDI enterprises in the host country.* Companies in the host country have to improve technologies, increase production specialization, invest in training highly-skilled workforce to produce goods which are competitive and exportable due

to the establishment of FDI enterprises in their country. [Haskel, J. & et al (2007); Karpaty, P. & et al (2004); Buckley, P.J. & et al (2007); Hamida, B. (2011)]

- *Technology transfer through production cooperation.* The cooperation of production and supply with FDI enterprises also increases exports of domestic enterprises because they can learn from the links with FDI enterprises. Domestic enterprises are also trained to produce and export goods with international standards. [Glass, A. & et al (2004)]

- *Labour movement.* Workers of FDI enterprises can move to other host companies. The knowledge on production of exports or skills of management of export market information, etc. of the moved workforce can facilitate the industry to improve its human resources for exportation, then enhance the export capacity of host firms. [Glass, A. & et al (2004)]

- *Attracting satellite FDI enterprises.* When FDI enterprises shift their global production, their global supply chains will move. FDI enterprises lead to new businesses – satellite production firms following FDI enterprises to host countries. [Ngoc, N.B. (2017)]

- *Providing information on export markets.* FDI enterprises operate in many countries, so they are the providers of information on foreign markets, customers, channels and technologies. They, then create channels for host exporters to access foreign markets and customers. [Aitken, B.J. & et al (1997)]

1.2. Empirical research on impacts of FDI on exports of host countries

There have been a lot of domestic and foreign studies on the impacts of FDI on exports of host countries, namely,

Frank S.T.H., & Mei-Chu, W.H. (2006), used time-series and panel data from 1986 to 2004 to examine the causality relations between GDP, exports and FDI among China, Korea, Taiwan, Hong Kong, Singapore, Malaysia, Philippines and Thailand, the eight rapidly developing countries in Southeast Asia. The results show that FDI has unidirectional effects on GDP directly and indirectly through exports and there also exists bidirectional causality between exports and GDP.

Haseeb, M., et al. (2014) empirically investigates the relationship between exports, foreign direct investment and the economic growth with the annual time-series data from 1971 to 2013. The Auto Regression Distributed Lag (ARDL) model is used to indicate the productivity factor and impacts of exports on the non-export sector. Exports has a positive effect on the economic growth and FDI. The findings suggest that Malaysia should pursue exports promotion and a liberal investment policy to maintain and boost its overall economic growth.

Abdull, A., et al. (2019) with the time series data from 1977 to 2012 investigate the effect of foreign direct investment (FDI), exports (EX), imports (IM) and trade openness (TO) on economic growth (GDP) in United Arab Emirates (UAE). The results indicate the

relationship between FDI and GDP in UAE and a significant and strong Granger causality from FDI to imports and from imports to FDI.

Stefan, C.G., et al. (2019) studied 11 Eastern European countries during 2003-2016. The empirical results indicate a non-linear relationship between FDI and gross domestic product per capita. The Granger causalities show a one-way causal relationship from FDI to growth in the short run and a two-way causal connection between FDI and economic growth in the long run.

Nam, T.H., & Anh, N.M.Q. (2015) used time series analysis techniques during the period of 1990-2013, specifically the unit root test and cointegration approach to build the regression model. The empirical results show that FDI inflows have positive impacts on economic growth while inflation rate has negative effect on economic growth. The study suggests that Vietnamese government should improve regulations on business activities by easing the process of business start-up, reducing government bureaucracy, controlling prices, complying with international trade commitments, enhancing public spending on education and training and augmenting cooperation between training centers and FDI enterprises, etc. These policies can attract FDI and boost economic growth rate in Viet Nam.

Canh, N.P., & Quyen, P.G. (2016) used time series data from 1986 to 2014 on FDI, exports and imports to examine their relationships with GDP. The findings show that FDI and trade openness have positive correlation effect on GDP, implying that in the long run, the implementation of policies to attract FDI inflow and the openness (increased exports and imports) will boost economic growth. Besides, the results reveal that the impacts of FDI shocks on GDP are fairly strong in the long term, which implies that policies on attracting FDI inflows to Viet Nam will enhance long-term economic growth if the FDI is used reasonably and efficiently.

Nhung, N.T.K. (2017) studied that short run and long run impacts of foreign direct investment (FDI) and exports on economic growth of Viet Nam using annual time series data from 1986 to 2015 by applying ARDL model. The findings reveal that in the long run, FDI has a significant positive effect on economic growth in Viet Nam while the impact of exports is negative. However, FDI and exports do not have any significant impact on growth in the short term.

Cong, H.T. (2019) examines the relationship between foreign direct investment, international trade, gross cumulative fixed assets and GDP growth rate in Viet Nam from 1990 to 2017. Johansen test and Vector Error Correction model (VECM) show the long-term relationship among these variables. Foreign direct investment, international trade and cumulative fixed assets have significant impacts on GDP growth rate in Viet Nam.

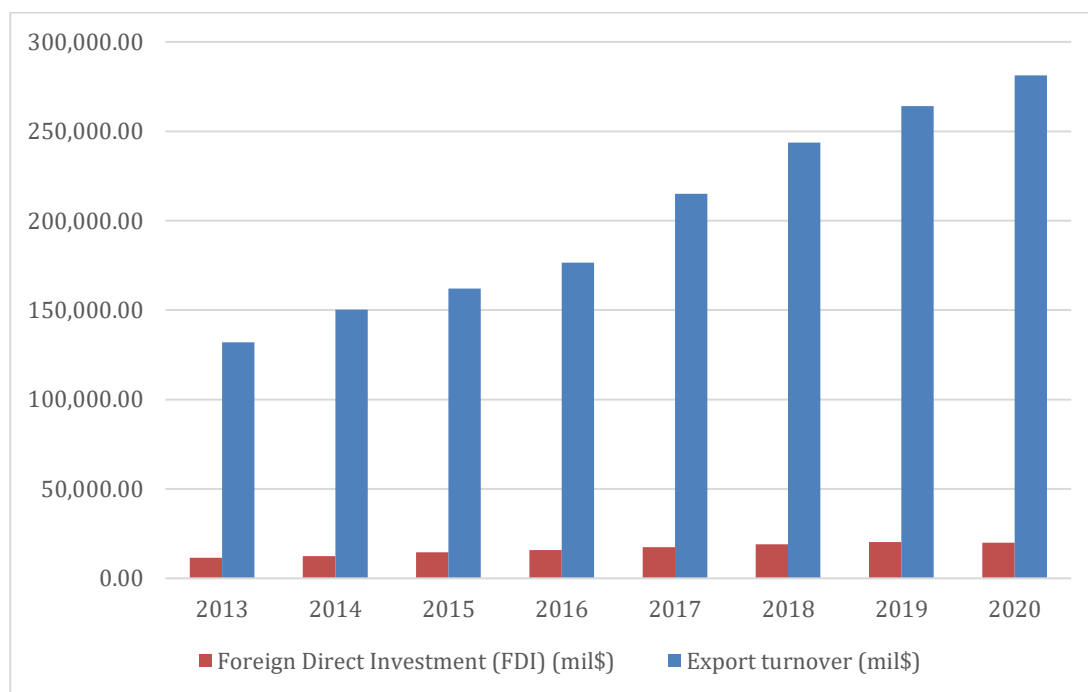
In order to collect more evidence on the impact of FDI on exports in Vietnam, especially in 2020 when the economy faced Covid-19 pandemic with the economic slowdown and reduced FDI inflows into Vietnam, the research team collects data in time series quarterly from the first quarter of 2013 to the fourth quarter of 2020 from General Statistics Office and on IFS-IMF site. With the general review on FDI and exports in Vietnam based on the secondary

data and the quantitative results from log-linear log regression model on the impacts of FDI on exports in Vietnam, the authors suggest some recommendations on attracting and using FDI to promote exports in Vietnam in response to the Covid-19 pandemic.

2. Overview on FDI and exports of Viet Nam during 2013 – 2020

After over 30 years of attracting FDI to Viet Nam, many research concluded that FDI has made some significant contribution to promoting exports and economic growth. In the period of 2013 – 2019, FDI inflows into Viet Nam increased compared to the previous period. In 2020, in the context of Covid-19 pandemic, FDI inflows in Viet Nam dropped by USD400 million (a decrease of 2% year-on-year), which is inevitable. However, there is still positive sign in the economy of Viet Nam in 2020 with increased exports and the surplus of around USD19 billion, a slight drop compared to previous years.

Figure 1. Foreign direct investment (FDI) and export turnover of Viet Nam during 2013 - 2020



Source: GSO (2021), IFS-IMF (2021)

FDI contributes to promoting exports, expanding external relationships to enhance the innovation capacity, national competitiveness in the context of international economic integration. According to GSO (2021), exports of FDI sector in 1995 only accounted for 27% of the total, but they increased to 66.8% in 2013; 67.4% in 2014; 70.6% in 2015; 71.5% in 2016; 72% in 2017; 71.4% in 2018; 67.8% in 2019 and estimated to reach 64% in 2020 (Table 1). In a difficult year of 2020, under serious impacts of the pandemic on many economies, the trade balance on goods of Viet Nam in 2020 continued the surplus of nearly USD19 billion, including USD34.6 billion surplus of FDI sector (including crude oil). [Ministry of Planning and Investment, (2021)]

Table 1. Goods export value of FDI sector over total export value during 2013 - 2020

	2013	2014	2015	2016	2017	2018	2019	2020
Goods export value of FDI sector (%)	66.8	67.4	70.6	71.5	72	71.4	67.8	71.7

Source: Compiled from GSO, (2021) and Baodautu.vn, (2021)

FDI is an important factor to boost the transition of economic structure, focus exports on advantageous goods and increase the value of exports. FDI accounted for over 50% of the total value of the manufacturing industry [Vi, G. (2020)]. FDI also supports the transition of agricultural structure, increases the value of exported produce, and applies advanced technologies to diversify products, raise productivity and product competitiveness. FDI enterprises contribute greatly to the State budget with increasing value.

FDI helps improve technologies, product quality and competitiveness of Vietnamese exports in the international market. Through the FDI sector, Viet Nam can access the world's advanced technologies to develop high-tech industries such as electronics, engineering, software industry, and biotechnology, etc. With the rapid development of high-tech industries, FDI enterprises provide the added value of 12.2% of electronics, computers and optical devices [Huong, N.T.M. (2019)];

Export diffusion impact from FDI enterprises to domestic firms is analyzed in the study of Nguyen Bich Ngoc (2017) in the processing and manufacturing industries. It shows that large-scale FDI projects have generated significant impacts on exports of these industries in Viet Nam. The operation of FDI enterprises in the processing and manufacturing industries put pressure on domestic firms to apply new technologies, improve production, enhance export market search and strengthen trade connections. The dominance on capital and technology of multinationals has created huge challenges to export market share and the competitiveness of host firms. Besides, from the macroeconomic perspective, FDI enterprises outperform domestic ones in exports. However, it also leads to the uncertainty in exports because the production and exportation of FDI sector heavily depend on the regional and global supply chain.

Apart from positive effects of foreign direct investment on exports in Viet Nam, the heavy dependence on exports is evaluated to have a lot of potential risks.

The connection between FDI sector and domestic sector has not met the expectation with low "localization" rate in some industries, and limited added value per unit. The number of "outsourcing" FDI enterprises is still high with the "localization" rate of 20% - 25% on average. Thus, FDI helps increase export value but it also leads to an increase in import value.

Viet Nam is still in the low position in the global supply chain with the added value yet to meet the requirements of high-tech production and assembling lines of large corporations in the world. Many FDI projects have just focused on some stages in labor-

intensive industries for outsourcing, assembling and processing. There are limitations in the investment of FDI sector in high-tech and source technologies.

Many FDI enterprises only emphasize exploiting natural resources, causing air and noise pollution, and environment damage, etc. FDI sector sometimes neglect their financial obligation, exploit the incentives, apply “price transfer” tricks to avoid taxes and create unhealthy competition, etc.

3. FDI impacts on exports of Viet Nam during 2013 – 2020 – From quantitative analysis

3.1. Data series and methodology

3.1.1. Data series

In order to find evidence on FDI impacts on exports in Viet Nam during 2013 – 2020, the researchers collected data on foreign direct investment (FDI) and export turnover (X) in the period of 2013 – 2020 with statistics by quarters, with total 32 observations in the time series.

FDI value by comparative prices in 2010 is shortened to LFDI, export turnover is coded X. Variables “FDI, X” after logarithm are coded “LFDI, LGDP”.

Table 2. Statistical description of variables in the model

	LX	LFDI
Mean	10.79659	4.211731
Median	10.76274	4.190375
Maximum	11.29165	4.638605
Minimum	10.30104	3.810051
Std. Dev.	0.280744	0.241646
Skewness	0.047324	0.089068
Kurtosis	1.864340	1.850158
Jarque-Bera	1.731576	1.805159
Probability	0.420720	0.405522
Sum	345.4908	134.7754
Sum Sq. Dev.	2.443327	1.810184
Observations	32	32

Source: Collected by researchers

3.1.2. Methodology

The authors used log regression – log linear model to evaluate FDI impacts on the export turnover of Viet Nam. The model is formulated as follows:

$$LX = \beta_1 + \beta_2 LFDI + \varepsilon$$

In which ε is random error.

The research procedure is undertaken as follows:

Step 1: Using Eviews 8 to run the model with the secondary data.

Step 2: Testing the statistical significance of regression coefficients corresponding to explanatory variables and the significance of the regression model at $\alpha = 5\%$.

A regression coefficient is significant if its Prob < $\alpha = 5\%$ and a regression model is significant if Prob(F-statistic) < $\alpha = 5\%$.

Step 3: Testing the explanation of the model by R-squared.

A model is explanatory if R-squared > 0.6.

Step 4: Checking the model defects with $\alpha = 5\%$.

A model is useful (for analyzing and forecasting) if the coefficient R-squared has no autocorrelation defects; heteroskedasticity; multicollinearity (for multiple regression models)

The residuals of the model must follow normal distribution. In the study, the authors use Eviews 8 tools to test these defects. Specifically:

- Using Breusch godfrey test to test autocorrelation. The model does not have autocorrelation defects at p if Prob(F-statistic) and Prob(Obs *R-squared) < $\alpha = 5\%$.
- Using Breusch-Pagan-Godfrey Test to test heteroskedasticity defects. The model is not subject to heteroskedasticity if Prob(F-statistic) and Prob(Obs * R-squared) < $\alpha = 5\%$.
- Using Jarque - Bera Test to check whether the residuals of the model follow normal distribution. The model residuals follow normal distribution if Prob (Jarque - Bera) > 5%.

3.2. Results of model estimates

An econometric model is used to examine the FDI impacts on exports with results as expressed in *Table 3*.

Table 3. FDI impacts on exports of Viet Nam during 2013 – 2020

Dependent Variable: LX

Method: Least Squares

Date: 05/18/21 Time: 21:55

Sample: 2013Q1 2020Q4

Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LFDI	1.052873	0.089671	11.74150	0.0000
C	6.362172	0.378272	16.81904	0.0000

R-squared	0.821283	Mean dependent var	10.79659
Adjusted R-squared	0.815325	S.D. dependent var	0.280744
S.E. of regression	0.120646	Akaike info criterion	-1.331448
Sum squared resid	0.436665	Schwarz criterion	-1.239840
Log likelihood	23.30317	Hannan-Quinn criter.	-1.301083
F-statistic	137.8629	Durbin-Watson stat	2.023798
Prob(F-statistic)	0.000000		

Source: Research findings

3.2.1. Testing model fit

Regression coefficients are statistically significant: $\text{Prob}(\beta_1) = 0.0000 < 5\%$; $\text{Prob}(\beta_2) = 0.0000 < 5\%$;

Regression model is fit: $\text{Prob}(\text{F-statistic}) = 0.000000 < 5\%$;

Coefficient of determination R-squared = $0.821283 > 60\%$;

No heteroskedasticity problem. According to Table 4, $\text{Prob. F}(2,29) = 0.2159 > 5\%$; $\text{Prob. Chi-Square}(2) = 0.2009 > 5\%$.

Table 4. Heteroskedasticity Test: WHITE Test with cross terms

Heteroskedasticity Test: White

F-statistic	1.616832	Prob. F(2,29)	0.2159
Obs*R-squared	3.210223	Prob. Chi-Square(2)	0.2009
Scaled explained SS	4.244784	Prob. Chi-Square(2)	0.1197

Source: Research findings

No autocorrelation problem. According to Table 5, $\text{Prob. F}(2,28) = 0.3871 > 5\%$; $\text{Prob. Chi-Square}(2) = 0.3504 > 5\%$.

Table 5. Breusch–Godfrey Serial Correlation LM Test with lags = 2.

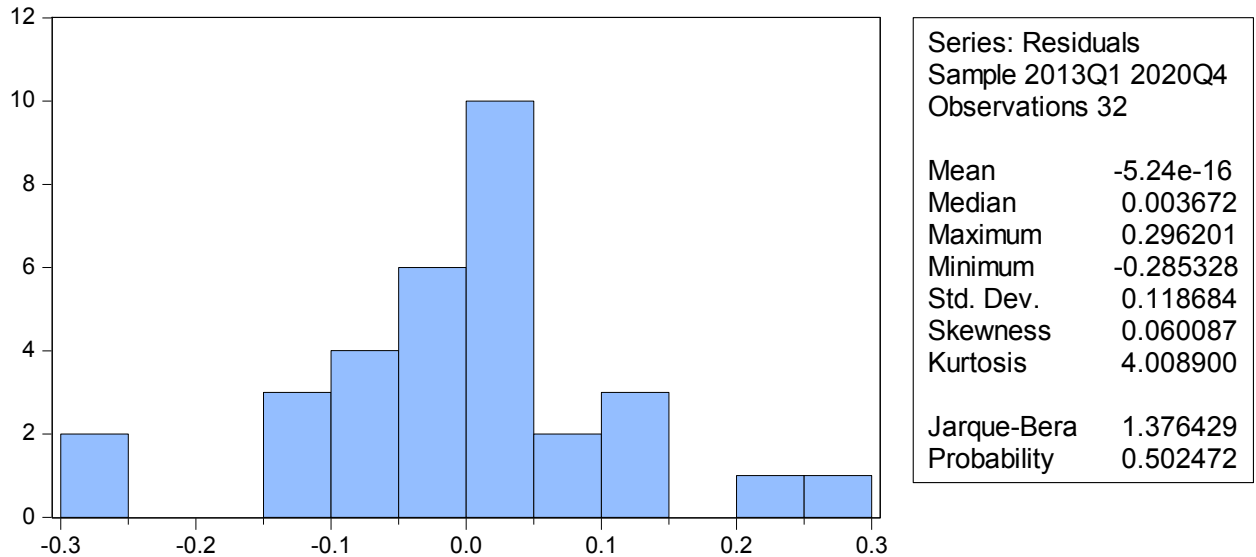
Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.981862	Prob. F(2,28)	0.3871
Obs*R-squared	2.097174	Prob. Chi-Square(2)	0.3504

Source: Research findings

Residuals of normal distribution. According to Figure 2, Prob (Jarque - Bera) = 0.502472 > 5%.

Figure 2. Residuals of normal distribution



Source: Research findings

3.2.2. Regression model and result analysis

Data analysis results on Eviews 8 in Table 3 indicate the impacts of FDI on export turnover in Viet Nam during 2013 – 2020 with the data series by quarters as follows:

$$LX = 6.362172 + 1.052873 * LFDI + e$$

It shows that:

(1) The export turnover is under the influence of foreign direct investment (FDI) over time, specifically $\beta_2 = 1.052873 > 0$. Thus, *in case other factors remain constant, the increased FDI will lead to an increase in export turnover (X)*. When FDI increases by 1%, export turnover (X) will increase by 1.052873 %. Therefore, FDI and export turnover have a proportional relation, increased FDI promotes exports, which is relevant to the economic theory and findings of the above empirical research. It is also appropriate with the economic situation of Viet Nam in transformation with the strategy to attract capital for developing export-oriented production in order to promote economic growth and development.

(2) R-squared = 0.821283, so the model can explain 82.1283 % of the fluctuation in the export turnover. With the intensive integration into the world economy and the capital-dependent economic growth in Viet Nam, the model indicates the important role of FDI in promoting exports of Viet Nam.

4. Some recommendations on attracting and using FDI to promote exports in Viet Nam in response to Covid-19 pandemic

Based on the situation of FDI and exports during 2013 – 2020 in Viet Nam as collected, summarized and analyzed by the researchers, it is certain that FDI plays an important role in promoting exports in Viet Nam during the period. With the aims to maintain and promote exports albeit the negative impacts of Covid-19 pandemic, in the coming time, the Government should have solutions on attracting and using FDI efficiently so as to promote exports and boost the economic growth, specifically:

- Assisting FDI enterprises to overcome obstacles in business such as facilitating customs clearance, extending work permits for foreign labour, etc. as well as considering suggestions on extending project plan due to the pandemic, the period for paying project guaranteed deposit, shortening time for administrative procedures.

- Improving investment and business environment, reforming policies and strategies to attract foreign investment. In order to attract FDI, apart from perfecting the legal framework and reforming administrative procedures, Viet Nam has to create an attractive investment environment for selecting projects and investors. Investment promotion agencies should proactively work with prospective foreign investors in Viet Nam to exchange information, guide and discuss the procedures immediately instead of waiting for the pandemic to end. Completing legal normative documents can encourage and facilitate technology transfer, improve the effectiveness of State administration, prevent „price transfer“, tax avoidance and negligence of financial obligations through technology transfer contracts.

- Prioritizing high-tech, environmental friendly, information and telecommunication and electronic industries, automobiles, agricultural machinery, construction, industrial facilities, supporting industry, R&D, Internet, etc., in addition to processing industry, high-tech agriculture, medical and healthcare equipment, education and training, high quality tourism, financial services, logistics and other modern services. Developing technical infrastructure, green energy, renewable energy and smart energy, etc.

- Encouraging foreign investors to put out capital and advanced technology to increase unit added value, raise “localization” rate and engage in the global value chain, then, improve the national innovation, competitiveness of the country, enterprises and goods, services of Viet Nam. Boosting connections between FDI and domestic sectors to increase “localization” rate, and product value to expand exports, restructure the economy with the innovative growth model based on Industry 4.0 platforms.

- Formulating strategies for training managers, and workers in foreign-invested companies on professional skills, work style and ethics. Providing managers in foreign economic field with skills for exploiting markets, international business and laws, etc. Enhancing the work ethics of managers in foreign investment management agencies. Building appropriate remuneration policies and trade unions in FDI enterprises to protect the legal rights and interests of Vietnamese workers.

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COMPLETE INSTITUTIONS, MECHANISM, POLICIES FOR DEVELOPMENT OF COASTAL ECONOMIC ZONE IN VIETNAM

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Abstract

Institutions, mechanisms and policies play a very important role in the development of coastal economic zones (CEZs) in Vietnam. When the institutions, mechanisms and policies on the development of the EZ are consistent, they will create a clear legal corridor, and encourage investors to invest in production, business, technical and social infrastructure projects in the EZs. At the same time, they create a unified legal basis in management and clearly define the responsibilities of the actors involved in the development of the CEZs in Vietnam. In the article, the author outlines the development of the coastal zones in Vietnam; points out the actual status of institutions, mechanisms and policies for the development of the CEZs in Vietnam over the past time. From there, the author proposes some measures to improve the institutions, mechanisms and policies for the development of the CEZs in Vietnam in the coming time.

Keywords: *coastal economic zone; improve institutions; mechanisms and policies.*

1. Introduction

The 21st century is the century of the Ocean, when resources are in danger of being exhausted, many are no longer able to recover. As a result, for countries with seas like Vietnam, developing a marine economy based on the sea is a major strategy. Vietnam has had a number of policies to develop the coastal economic zone (EZ) in recent years, assisting in the release of resources to help Vietnam become a strong and sustainable sea country. These policies ensure prosperity, security and safety of the country. Identifying EZs is a new development model with a breakthrough in the development of CEZs and EZs, and they play a key role in regional development and regional linkages. Thus, in recent years, the Party has paid special attention to the issue of improving institutions, mechanisms, and policies to develop the EZs and the CEZs. The Party of Communist Vietnam stressed: "Review and improve the system of policies and laws on the sea towards sustainable development, ensuring its feasibility, synchronism, consistency, and conformity with legal standards and international treaties to which Vietnam is a signatory. It is critical to create a favorable legal corridor to mobilize domestic and foreign resources for investment in infrastructure construction, development of science, technology, human resources and transfer of marine knowledge. It is necessary to actively participate in and actively promote the formation of global and regional mechanisms related to seas and oceans" [7, pp.100].

Therefore, it is critical to clarify the current state of EZ development in Vietnam and accurately assess the current status of Party and State institutions, mechanisms, and policies

on CEZ development in recent years. Since then, proposing some solutions to improve the institutions, mechanisms and policies for the development of the CEZ in Vietnam in the coming time has a very vital meaning. These policies contribute to the realization of goals in the strategy of sustainable development of Vietnam's marine economy to 2030, with a vision to 2045. This article is based on the theoretical framework of the Vietnamese Communist Party's line of view on the development of EZs. The article also evaluates reports of the Government, the Ministry of Planning and Investment, the Economic Zone Management Board (EZ) of the People's Committees of the provinces and cities. The research assesses the actual situation, proposing solutions to improve the institutions, mechanisms and policies for the development of the EZs in Vietnam in the coming time, specifically:

Explaining the process of formation and development of EZs in Vietnam in recent years, analyzed data focuses on the period 2015-2020.

Assessing the actual status of institutions, mechanisms and policies for the development of the EZ in Vietnam in recent times.

Proposing a number of measures to improve institutions, mechanisms and policies for the development of EZs in Vietnam in the coming time.

2. Methodology

To accomplish the research objective, the article uses logical-historical, statistical-comparative, analytical-synthetic and specific economic methods:

In-situ method: Interpreting and synthesizing research works on the improvement of institutions, mechanisms and policies for development of EZs in Vietnam.

Survey of coastal economic zones in Vietnam, from secondary data collected from Economic Zone Management Department, Ministry of Planning and Investment; Government reports for accurate assessment the actual status of the institutions, bodies and policies for the development of the EZs in recent times. From there, the author proposes a number of solutions to improve the institutions, bodies and policies for the development of EZs in Vietnam in the coming time.

Consult experts through seminars.

3. Results

3.1. General issues about economic zones, coastal economic zones

3.1.1. Concept of Economic Zone

Many authors have mentioned, reviewed, and analyzed the concept of economic zones in the world today, and it has been given various conceptions and names such as Special Economic Zone; Economic Zone; Non-tariff zones; Free trade zone. As a result, there has not been a unified concept or name for an EZ until now.

Meng defined an EZ as a defined geographical area where economic activities are not subject to regulatory and tax regulations, based on his research into the model and structure of

government as it relates to the entire national economy Guang-wen [22, p. 16]. SEZ is a term used to describe a special geographical area, according to Lee Changwon. Special regulations that are not available in other regions are allowed to be applied in this area. To be more specific, an SEZ is a zone created with incentives, such as lower tariffs, better infrastructure, and different administrative and physical resources than other parts of the country, in order to attract foreign capital and technology [19, p. 3]. An EZ is an IZ with special incentives to attract foreign investment, raw materials imported into the EZ go through a number of processing stages before being re-exported, according to the International Labor Organization [17, p. 16].

Article 3 of the Vietnam Investment Law 2020: An economic zone is a defined geographical area with multiple functional zones established to promote investment, socioeconomic development, environmental protection, and national security and defense [14, p. 26]. In comparison to previous concepts, this is a new concept in Vietnam about economic zones, and it is relatively complete when it shows the purpose of establishing economic zones to attract investment, develop socioeconomically, and protect national defense and security. The relationship between economic development and defense and security protection in EZs is highlighted by this concept. However, the concept is still broad, and it fails to mention the special benefits that EZs in Vietnam enjoy.

Thai Van Doan proposed the concept of an economic zone, which is a geographically defined area with its own mechanisms and policies for business, trade, import, and export. They received exceptional privileges on land policy, science, and technology, tax or non-tariff zones, talent incentives, high-quality human resources. It is a place to test new policies before they are widely implemented across the country. As a result, the administrative apparatus for managing and operating this special zone is also unique. [1, p. 34-37].

The Decree on the Management of Industrial Parks and Economic Zones, Decree No. 82/2018/ND-CP, clearly states: "An economic zone is an area with definite geographical boundaries, including many functional zones, established for the purpose of attracting investment, developing socio-economic, and protecting national defense and security." The central economic zone and the economic zone are both included in the economic zone [13, p. 3].

Despite the fact that the EZ countries have different names, they all share the following characteristics:

First, the EZ was created on the basis of a large natural land area with unique natural characteristics, as well as a favorable geographical and economic location.

Second, an economic zone is divided into a non-tariff zone and a tariff zone, where a non-tariff zone is defined as an area with defined boundaries, separated from the surrounding area by a hard fence, and where no people live.

Third, multi-sector and multi-field investments are permitted, but only with a focus target appropriate for each economic zone established in each different locality.

Fourth, the EZ has an impact on socio-economic activities at the provincial/city level as well as in the surrounding large areas.

Fifth, the EZ has a strategy, a synchronous and balanced connection in the locality's and region's overall reasonableness.

Sixth, the economic zone serves as a test bed for new institutions, mechanisms, and policies aimed at attracting domestic and foreign investment through special incentives, which is a key driver of economic growth in cities and countries' economies.

3.1.2. Concept of coastal economic zone

Specific research on the conditions and practical characteristics of Vietnam based on various conceptions of economic zones. The authors present various conceptions of specific EZs using various approaches:

According to author Pham Xuan Hau, the Central Economic Zone is a large area with a diverse economic structure that enjoys preferential policies on management, investment capital, import and export, and technical infrastructure to attract large projects; it is the economic center of the locality and region; it ensures a good combination of economic development with national defense and security, and it creates a link between Vietnam and other countries. [2, p. 3]

The EZ, according to author Nguyen Van Phu, is a distinct economic zone with a particularly favorable business and investment environment for investors, as well as a defined geographical boundary formed in the coastal area. [12, p. 2] The government decided to establish the ship at sea. The EZ, according to Luu Ngoc Trinh and Cao Tuong Huy, is a general type of open economic zone that covers many different fields, employs special policies to encourage investment, and has an open administration in the direction of a "one-stop-shop." It is also a place to test new economic mechanisms and policies in order to learn from experience and apply them more widely [11, p. 4].

The author develops the concept of the central economic zone in Vietnam by generalizing various conceptions of the economic zone. The central economic zone is a type of economic zone established in an area with a favorable geographical location along the coast. It enjoys special preferential policies and is organized into functional zones in order to attract investment capital, develop socioeconomically, and strengthen national defense and security. It also plays a key role in regional development and economic region linkage.

3.2. Status of development of coastal economic zones in Vietnam

Aware of the importance of the marine economy in general and the EZs in particular for socio-economic development. In the period of national renewal, the Party and State have many resolutions and policies to promote the role of the Central Economic Zones in socio-economic development.

Table 3.1: List of coastal economic zones in Vietnam that have been established, put into operation and are in the planning up to 2020

STT	CEZ area	Local	Founded year	Area(ha)
I	The coastal economic zone has been established and is operating			
01	Chu Lai EZ	Quang Nam	05/06/2003	27.108
02	Dung Quat EZ	Quang Ngai	21/03/2005	45.332
03	Nhon Hoi EZ	Binh Dinh	14/06/2005	12.000
04	Chan May-Lang Co EZ	Hue	05/01/2006	27.108
05	Vung Ang EZ	Ha Tinh	03/04/2006	22.781
06	Van Phong EZ	Khanh Hoa	25/04/2006	150.000
07	Nghi Son EZ	Thanh Hoa	15/05/2006	106.000
08	Van Don EZ	Quang Ninh	31/05/ 2007	217.133
09	Southeast Nghe An EZ	Nghe An	11/06/2007	19.567
10	Dinh Vu EZ	Hai Phong	10/01/2008	22.540
11	South Phu Yen EZ	Phu Yen	29/04/2008	20.730
12	Hon La EZ	Quang Binh	10/06/2008	10.000
13	Dinh An EZ	Tra Vinh	27/4/2009	39.020
14	Nam Can EZ	Ca Mau	11/23/2010	11.000
15	Phu Quoc EZ	KienGiang	14/2/2013	58,923
16	Southeast Quang Tri EZ	Quang Tri	27/2/2015	23.972
17	Thai Binh EZ	Thai Binh	9/02/2017	30,583
18	Quang Yen EZ	Quang Ninh	24/09/2020	13.303
II	The coastal economic zone is in the planning but has not yet been established			
01	Ninh Co EZ	Nam Định		13,950
Total	19	18		871.05

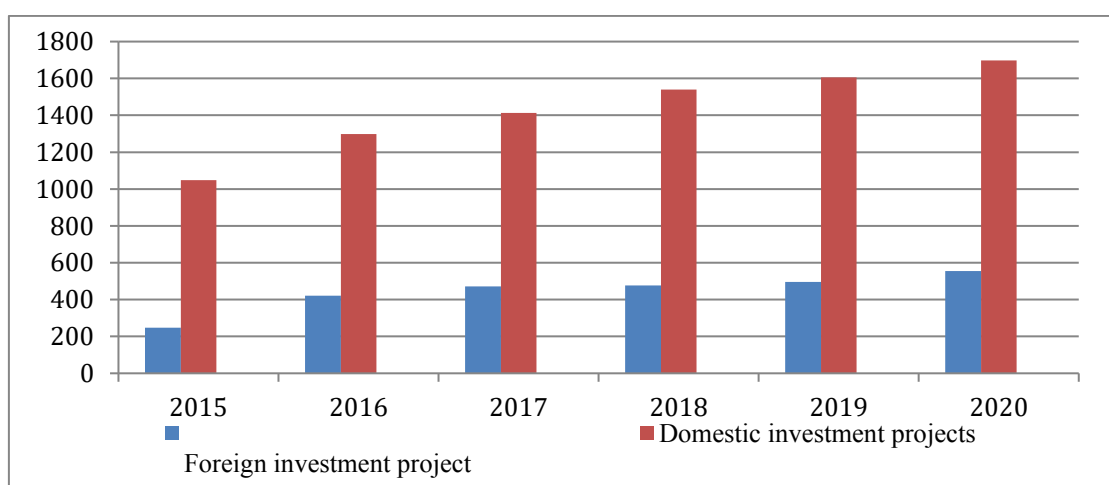
Source: Compiled by the author [5]; [6]

In recent years, the EZs have emphasized their importance in Vietnam's CEZs, demonstrating that this is a game-changing new development model that plays a critical role in regional development and linkage.

Regarding production and business investment projects, technical and social infrastructure investment projects in the EZs have continuously increased over the years. As for production and business investment projects (Figure 3.1), in 2015, the EZs attracted 247 foreign investment projects and 1048 domestic investment projects. In 2017, the number of investment projects increased to 471 foreign investment projects and 1413 domestic investment projects.

**Figure 3.1: Production and business investment projects
in coastal economic zones in Vietnam for the period 2015-2020.**

Unit: Project



Source: Author's compilation [5], [6]

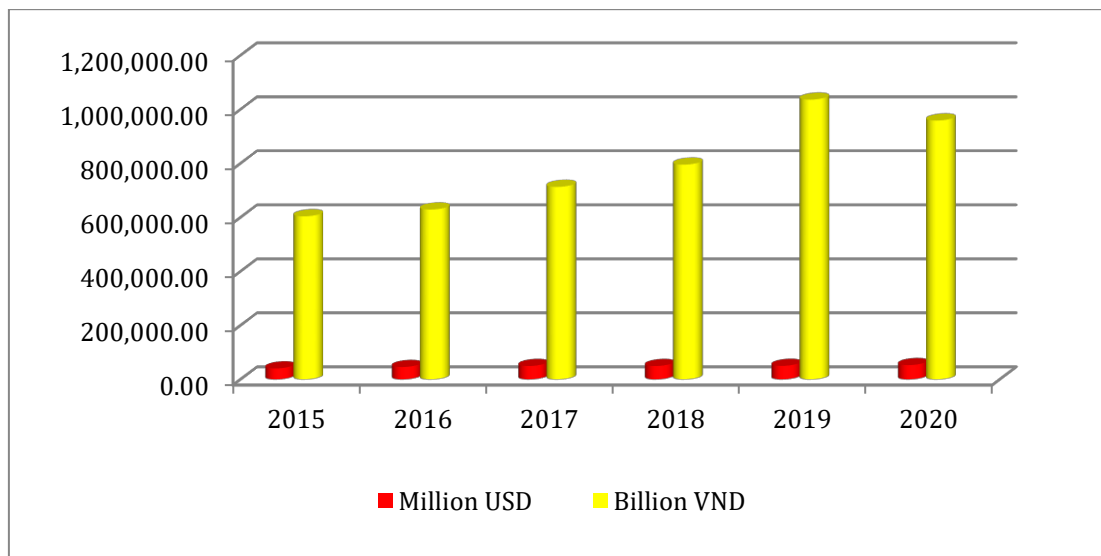
In 2019, the number of foreign investment projects increased to 496 projects and domestic investment projects increased to 1605 projects. In 2020, despite the negative impact of the Covid-19 pandemic, the Vietnamese economy still showed signs of growth, with the number of investment projects increasing to 555 foreign investment and 1697 domestic investment projects. For technical and social infrastructure investment projects, although the number of investment projects compared to the area of the EZs is still low, they have increased over the years. In 2015, there were 17 foreign investment projects and 82 domestic investment projects. In 2017, the number of foreign investment projects did not increase. However, the number of investment projects in the country rose to 108 planned projects. By 2020, the number of foreign investment projects increased to 37 projects and 187 domestic investment projects [6].

Regarding investment capital, due to production and business projects, technical and social infrastructure investment projects have increased over the years. Therefore, the amount of investment capital in the EZs also increased. According to the statistics (Figure 3.2), in 2015, it attracted 41,134.80 million USD of foreign investment capital and 604,305.17 billion VND of domestic investment capital. In 2017, the amount of foreign investment capital

increased to USD 50,072.19 million and 713,325.42 billion VND of domestic investment capital. In 2019, the amount of foreign investment in production and business projects increased to USD 50,499.59 million and 1,036,425.52 billion VND of domestic investment capital. In 2020, the amount of foreign investment capital increased to 53,379.21 million USD, but this year the amount of domestic investment decreased to 959,099.40 billion VND, due to the negative impact of the Covid-19 epidemic on the Vietnamese economy.

Figure 3.2: Investment capital in production and business projects in the EZ in the period 2015-2020.

Unit: Million USD; Billion VND



Source: Author’s compilation [5], [6]

As for investment capital in technical and social infrastructure projects in the EZ, there was an increase. In 2015, the investment capital in technical and social infrastructure projects was USD 1,336.40 million and 70,266.90 billion VND. In 2017, it increased to 1,377.10 million USD of foreign investment capital and 92,386.6 billion VND of domestic investment capital; in 2019 the amount of foreign investment capital did not increase compared to 2017, but domestic investment capital increased to 107,670.00 billion VND. In 2020, despite the impact of the Covid-19 epidemic, investment projects in technical and social infrastructure in the EZs in Vietnam still attracted USD 2,013.50 million and 126,583.81 billion VND. Including the period 2015-2020, the amount of capital attracted in investment projects in technical and social infrastructure increased by USD 1,880.10 million and 55,316.91 billion VND [6].

In terms of the production and business situation in the Northern Central Coast EZs, there has been a steady increase in the value of industrial production; turnover; and state budget payments over the years.

According to statistics (Table 3.2), in 2015, the industrial production value of the EZs reached 7,768.44 million USD, the revenue was 9,906.97 million USD and 41,319.37 billion VND. The export value was 6,501.46 million USD, the import value was 8,654.30

million USD and paid to the state budget 37,556.03 billion VND. In 2017, development indicators in Vietnam's EZs were constantly increasing. Industrial production value reached 10,247.58 million USD, revenue was 13,160.68 million USD and 48,854.33 billion VND. Export value reached 8,609.90 million USD, the import value was 11,545.12 million USD, and the state budget payment increased to 51,258.23 billion VND. In 2019, the value of industrial production in the EZs had a rapid increase to 27,816.33 million USD, the revenue was 12,095.34 million USD and 72,954.33 billion VND, the export value was 16,224.86 million USD, the import value was 11,302.68 million USD after many years. The balance of export and import in Vietnam was positive. In 2019, CEZs contributing to the state budget reached 97,224.41 billion highest. In 2020, the growth indicators in the Central Economic Zone in Vietnam are lower than in 2019, due to the impact of the Covid-19 epidemic, but compared to other years in the same period 2015-2020, there is still growth. Production value industry reached 27,688.31 million USD. The revenue was 17,804.94 million USD and 62,317.33 billion VND. The export value was 13,147.54 million USD and the export value was 8,717.42, contributing to the state budget 65,224.19 billion dong.

Table 3.2: Production and business situation in coastal economic zones in Vietnam in the period 2015-2020.

Unit: Tr. USD; Billion VND

Five	Business production situation					
	Value of the industry production (Mil.USD)	Turnover		Import value (Mil.USD)	Export value (Mil.USD)	Submitting national budget (Billion VND)
		(MI. USD)	(Billion VND)			
2015	7,768.44	9,906.97	41,319.37	8,654.30	6,501.46	37,556.03
2016	8,689.24	10,867.28	44,471.33	9,452.30	7,266.90	43,831.60
2017	10,247.58	13,160.68	48,854.33	11,545.12	8,609.90	51,258.23
2018	18,129.81	9,882.34	55,059.44	8,558.68	12,343.90	80,738.91
2019	27,816.33	12,095.34	72,954.33	11,302.68	16,224.86	97,224.41
2020	27,688.31	17,804.94	62,317.33	8,717.42	13,147.54	65,224.19

Source: Author's compilation [5], [6]

In terms of attracting and creating jobs for workers in the EZs in Vietnam, it has not increased continuously over the years. In 2015, the EZs in Vietnam attracted and created jobs for 170,293 thousand workers. In 2017, the number of laborers attracted and created jobs increased to 194,893 thousand employees. In 2019, this number increased to 228,353 thousand

employees. In 2020, despite being affected by the Covid-19 pandemic, the number of laborers attracting and creating jobs in EZs in Vietnam increased to 267,486 thousand people [6].

The results achieved in the development of EZs in Vietnam in recent years have many different factors. In particular, one of the factors that brought the initial success in the development of economic zones in Vietnam is that the Party and State have many policies to gradually improve institutions, mechanisms and policies, which creates a unified legal corridor for the development of the EZ.

3.3. Current status of institutions, mechanisms and policies for the development of coastal economic zones in Vietnam.

3.3.1. Achievement

First, the Party, State and government has issued many resolutions, legislation system, mechanisms, and policies to encourage promote economic zones of coastal development.

The fourth meeting of the Central Committee of the Party, term VIII, in 1997, our Party set out a policy to study and pilot a few economic zones and free trade zones in eligible coastal areas. Resolution of the 4th Party Central Committee, term VIII, the Politburo gave guidance on the formation of economic zones in Notices No. 79-TB/TW dated September 27, 2002 and No. 155-TB/TW dated September 9/ 2004 of the Central Executive Committee; Resolution No. 36-NQ/TW dated October 22, 2018, the Eighth Conference of the 12th Party Central Committee on the strategy of sustainable development of Vietnam's marine economy to 2030 and a vision to 2045. The Government issued Decision No. 1353/QD-TTg dated September 23, 2008 on the master plan on development of EZs in Vietnam up to 2020; Decision No. 126/2009/QD-TTg dated October 26, 2009 promulgating the mechanism to support central budget capital for investment in developing the infrastructure system of the Central Economic Zone ; Decision No: 203/QD-TTg, dated February 6, 2020 on the establishment of the National Steering Committee on the implementation of the Strategy for Sustainable Development of Vietnam's KTB up to 2030, with a vision to 2045; Decision No: 647/QD-TTg, dated May 18, 2020 on the approval of the international cooperation project on sustainable development of Vietnam's marine economy until 2030. The National Assembly and the Government have promulgated Laws and Decrees such as: EZs operating under the provisions of Land 2015, Investment Law 2020, Decree No. 118/2015/ND-CP dated 12/11/2015, Decree No. 29/2008/ND- CP dated March 14, 2008, Decree No. 164/2013/ND-CP dated November 12, 2013, Decree No. 114/2015/ND-CP dated November 9, 2015, Decree No. 82/2018/ND -CP May 22, 2018. Thus, the Party, State and government has issued many resolutions, legislation systems, mechanisms, and policies to encourage and promote economic zones of coastal development.

Secondly, gradually perfecting mechanisms and policies to attract investment in the development of coastal economic zones.

The system of mechanisms and policies to attract investment in the development of internal economic zones in Vietnam in recent years is based on the implementation of the

contents of Decree No. 29/2008/ND-CP dated March 14, 2008, Decree No. Decree No. 82/2018/ND-CP dated May 22, 2018; Decree No. 218/2013/ND-CP; Decree No. 134/2016/ND-CP dated September 1, 2016 of the Government detailed the implementation of a number of articles of the Law on Export Tax; Land Law 2015; Law on Investment 2020 and a number of guiding documents of ministries and branches to implement laws related to investment attraction in EZs. On the basis of a system of legal documents that generally regulates investment attraction of the State, the Government over the years, the People's Committees of the North Central provinces have concretized the institutions, mechanisms and policies of the State. The government on attracting investment into the EZs has applied and promulgated a number of regulations to support the EZs in investment promotion and support businesses in accessing local resources. Mechanisms and policies on investment incentives are prescribed more and more clearly, specifically, creating conditions to attract enterprises to invest in business and production in EZs, especially foreign-invested enterprises. Many localities apply preferential policies on corporate tax and corporate income tax; land use tax; import and export tax in non-tariff zones in the EZs, in order to encourage investors to invest in production and business projects, especially investment in technical and social infrastructure projects in the EZ.

Third, the function of state management of economic zones has been gradually improved.

Many amendments and supplements to regulations on state management of economic zones were issued. At present, the state management function for EZs is increasingly being completed and clearly defines the functions, tasks and powers of the subjects. Currently, the state management function for economic zones is specified in Decree No. 82/2018/ND-CP dated May 22, 2018 on management of industrial parks and economic zones. Accordingly, the government performs the unified state management of the EZ throughout the country on the basis of assigning specific tasks and powers of each ministry, branch, provincial People's Committee and Economic Zone Management Board; direct the elaboration and implementation of master plans, development plans and promulgation of policies and legal documents on economic zones. In particular, the mechanism has been completed to give more autonomy to the Management Boards of the EZs of the provinces and cities. Therefore, the EZ Management Board performs the function of direct state management of the EZ. It manages and organizes the performance of the function of providing public administrative services and other supporting services related to investment and production and business activities for investors in the EZ. The EZ Management Board has direct authority in the management of investment and management of the EZ in a number of fields under the guidance and authorization of the Ministries and competent agencies: trade, construction, labor, and environment. The EZ Management Board is assigned a number of additional powers, such as deciding to invest in projects of groups B and C using state budget capital as authorized by the People's Committees of provinces and cities, and land allocation according to the provisions of the land law. Thus, with the issuance of a more autonomous mechanism

for localities and the EZ Management Board, it has created conditions to promote the initiative of localities in development of EZs.

Fourth, administrative reform is accelerated.

Administrative reform is one of the contents that the Party and State in general and the People's Committees of the provinces and cities pay great attention to in the development of the EZ. The objective of administrative reform is to build a strong, clean and efficient administration, creating favorable conditions for the development of the EZs. Administrative reform has been carried out synchronously on four fronts: administrative reform, apparatus reform, building a contingent of civil servants in state management, and public financial management.

Over the years, provinces and cities have flexibly applied legal documents issued by the state related to the development of EZs to suit the market mechanism, practical requirements, and the legal basis for the development of EZs in the region. State management agencies regularly review the system of legal documents, cancel outdated and duplicate documents, eliminate procedures that are no longer suitable, and reduce troubles for businesses and investors in the process. Business registration procedures are simplified. Import and export procedures are simplified. Production and business registration certificates are issued, and customs procedures are fundamentally reformed. It also exempts from inappropriate fees and charges.

3.3.2. Limit

Firstly, the system of legal documents, mechanisms and policies in development and management with economic zones is still overlapping and inadequate.

Although in the past few years, the Party, State, and government and People's Committees, the city has issued many resolutions, laws, decrees, decisions, regulations, guidelines to promote development of the CEZs. At present, the general legal framework for the operation of the national economic zone is under Decree No. 82/2018/ND-CP dated May 22, 2018 on management of industrial parks and economic zones. However, many contents in Decree No. 82/2018/ND-CP overlap or even contradict some contents in the Land Law and Investment Law, and Enterprise Law. At present, the institutions, mechanisms, policies, and legal support applied to the EZs are almost no different between localities and regions. The development of the EZ in Vietnam is mainly due to the dynamism and creativity of local leaders. Because there is no regional administrative authority to manage the development of the EZ, the coordination mechanism between provinces and cities in the development of the EZ is still spontaneous and only stops at the level of commitments and agreements between the provinces, local leadership. The mechanism has not effectively brought into play the comparative advantage in each locality.

Second, many administrative procedures are unreasonable. The qualifications and capacity of some managers are still limited.

Documentary reformation towards the development of the CEZ was pushed strongly but the change was slow. The identification and assignment of functions and tasks of each agency, ministry, branch or locality is not reasonable. There are overlaps and duplications. The procedures for investment licensing, planning and expansion of the EZ still go through many different stages and steps. The capacity of a part of cadres and civil servants in charge of state management of EZs in some provinces and cities has not really met the requirements, especially some cadres and civil servants lack new management knowledge and skills, lack of market acumen. Their duty performance responsibility is not high.

Thirdly, the mechanism and policies for preferential input into coastal economic zones are still scattered and not focused.

Investment incentive mechanisms and policies are specified in Decree No. 29/2008/ND-CP dated March 14, 2008 as on financial and credit incentives; construction and development of infrastructure; Corporate income tax; personal income tax; the land rent tax... regulated by the Government is still spread out, in general, there is no specific priority for each economic zone associated with the advantages of each locality. In addition, the application of investment incentive mechanisms of localities is not consistent and strong, even if there is a phenomenon of unfair and partial competition in order to attract investment projects. investment at all costs without taking into account the socio-economic effects as well as local contributions and budgets.

Fourth, the adjustment and renewal of functions and tasks of some state management agencies for coastal economic zones has been slow.

Decree No. 82/2028ND-CP was introduced to replace and supplement some contents of Decree No. 29/2008/ND-CP on regulations on industrial parks, export processing zones and economic zones. In which, it is critical to clarify the functions, tasks and powers of the entities participating in the development of the EZ. However, some state management agencies still interfere too deeply in the operation of the EZs. The structure of the management apparatus at many levels is still very cumbersome, massive, with many intermediate levels. The management and administration methods of the management apparatus at all levels have been slowly reformed. The determination of the specific tasks of each level of government is not clear enough. There are things that are still done on many levels. The address is unknown. The responsibilities are unclear, and the initiative of the Management Board is not clear enough. The EZs in localities are still the management model. The Management Boards of the EZs are within the Management Boards of CEZs and EZs of the provinces and cities. On the other hand, the coordination mechanism, although clearly stated in Decree No. 82/2018ND-CP between ministries, branches and localities and the Management Board of the MPA, is still governed and imposed by the ministries' agencies. Institutions on management of cadres and civil servants, although there have been many amendments and supplements, there have been no fundamental and strong reforms, from the

recruitment, use, appointment, dismissal, to training and retraining, reward, discipline, remuneration policy (salary, bonus), evaluation of cadres and civil servants.

In summary, the above limitations may not only make it difficult to develop the CEZs in Vietnam, but also significantly affect the contribution of the CEZs on economic development and solve social problems of the province and city where the EZ is located.

3.4. Some solutions to improve institutions, mechanisms and policies for the development of coastal economic zones in Vietnam.

Completing the institutions, mechanisms and policies for the development of the CEZ in Vietnam is the most important content that directly determines the quality and performance of the CEZ. Institutions, mechanisms and policies are the legal basis, an important basis for the development of the CEZ in Vietnam in terms of quantity, size, quality and structural perfection. Accordingly, perfecting the institutions, mechanisms and policies for the development of the CEZ in Vietnam is the promulgation, amendment and supplementation of legal regulations by state management agencies and a system of viewpoints and policies. The solutions have to suit reality, promote the development of the EZ to contribute to socio-economic development, ensure the environment and strengthen national defense and security. The content of perfecting the institutions, mechanisms and policies for the development of the EZ is relatively broad, requiring consensus and determination from each entity in building a legal framework, promulgating preferential policies and mechanisms, and managing housing in order to create conditions for the development of the EZ in Vietnam. In order to continue to perfect the institutions, mechanisms and policies for the development of the CEZ in Vietnam, it is necessary to implement the following measures well.

3.4.1. Completing the legal system to create a unified legal corridor for the development of coastal economic zones in Vietnam

Perfecting the legal system in order to create corridor unified legal development of the CEZ is important to create a legal corridor. The improvement of institutions, mechanisms and policies in the immediate future needs to study, develop and promulgate the Law on Economic Zones to create a legal corridor for the economic zone to operate smoothly. Therefore, the National Assembly needs to promulgate the Law on Economic Zones and the Government to issue Decrees and Circulars guiding to create an open and unified environment to attract investors, especially foreign direct investment projects (FDI).

The promulgation of laws should focus on: (i) criteria, requirements and conditions for new establishment, adjustment of scale (expanding or narrowing) of the Central Economic Zone; (ii) Mechanism and policy for development of the EZ (clearly defining responsibilities and interests of parties involved in investment and construction); (iii) functions, duties and powers of the EZ in the provinces; (iv) rights, obligations and responsibilities of the Ministry of Planning and Investment, Ministries, Sectors and People's Committees of provinces and cities having EZ. On the other hand, the Law needs to provide preferential terms within the framework of Vietnamese law allowing incentives: import and export tariffs, corporate taxes, finance, banking,

investment in infrastructure development, which applied to the EZ in each certain period. At the same time, the Law on Economic Zones should aim at decentralizing the real management rights to the People's Committees of the provinces and cities. The Management Boards of the EZs deal with relevant issues in the development of the EZ. In addition, the Economic Zone Law also needs to have provisions that clearly define the functions, powers, obligations and responsibilities of investors in the EZ, in order to closely link the interests and responsibilities in (investment, construction, protecting the environment, ensuring national defense and security, ensuring social security for workers, etc. In order to develop the Law on Economic Zones to ensure correct, effective and visionary, it is necessary to consult experts inside and outside the countries. It refers to the laws of a number of countries in the region and the world related to the development of the EZ in general and the EZ in particular.

3.4.2. To perfect investment mechanisms and policies to create a driving force for the development of coastal economic zones in Vietnam

Completing investment mechanisms and policies in order to create motivation and bring breakthroughs to promote the development of the coastal EZ in Vietnam. Currently, the whole country has 19 coastal zones which have been planned, established and put into operation. However, the planning and establishment are separated in the same period, leading to scattered and inefficient investment. Some EZs are facing a lack of capital in investment and infrastructure development. It is key to develop classification criteria to focus investment and improve the infrastructure of a number of EZs that have more potential and benefits than other EZs for development as a driving force for spillover in the region. On the other hand, this would strengthen the local initiative in mobilizing resources to invest in infrastructure construction, avoiding the situation of relying only on central support.

To create incentive for a number of EZs to grow, in regional development and regional linkages in marine economic development in general and in the EZs in particular. In the current situation, to achieve the country's economic growth and development goals, realize the goals in the Strategy for Sustainable Development of Vietnam's KTB by 2030, with a vision to 2045, it is important. make the Central Economic Zone develop properly with its inherent potentials and strengths. However, to attract domestic and foreign investment projects into the EZ requires a synchronous infrastructure system. The synchronous development of infrastructure of 19 EZs in Vietnam together is a difficult problem. Therefore, it is necessary to study and select a number of regional economic zones with strengths to focus on developing, creating a push for the remaining economic zones to develop. Continue to invest resources in developing the EZ according to the Prime Minister's decision in the 2016-2020 period, and then include economic zones (EZs) such as: Van Don EZ (Quang Ninh province); Nghi Son EZ (Thanh Hoa); Vung Ang Economic Zone (Ha Tinh) ; Chu Lai EZ (Quang Nam province); Van Phong EZ (KhanhHoa province); Phu Quoc EZ (KienGiang province) is the 06 selected economic zones to focus on investing development resources as the development center of the country 's EZ . In order for investment resources to be effective from the state budget and localities, in the

immediate future, it is necessary to focus on investing in basic development and completing important technical and social infrastructure works of the EZ. to meet the requirements of large-scale, dynamic investment projects. In addition, the Ministry of Planning and Investment shall assume the prime responsibility for and act as the focal point to monitor the process of concentrating development investment from the state budget for selected key economic zones, reporting to the Prime Minister on problems during implementation. Ministries and branches of the Central Government research and develop mechanisms and policies according to the field of sector management consistent with the law on economic zones, and at the same time direct the economic zones to develop in the direction of their strengths and exploit their advantages to the fullest. ; People's Committees of provinces, cities and provincial EZ Management Boards adhere to the principle of focusing on investment and development of selected key economic zones; using the allocated central budget capital in accordance with regulations, ensuring the progress of disbursement and construction of works. On the other hand, it is necessary to proactively allocate local budgets and mobilize other legal capital sources other than the state budget to invest in developing the infrastructure of the EZ, bring into play the proactive role of the locality, build an assigning and coordinating uniformly and effectively in the state management of economic zones according to the functions and tasks delegated and authorized according to the provisions of law.

3.4.3. Perfecting mechanisms and policies in the management of coastal economic zones (CEZ)

So as to create consistency in the state management of CEZ in Vietnam, in the future, the government should opt for piloting CEZ 01-02 at localities with advantages and favorable conditions to establish the economic zone's management board, which operates under the supervision of local authority, to oversee the pilot performance. If this model proves successful, it will continue to be finalized for a unified management agency of CEZ in the Northern Midwest provinces. On the other hand, in order for the Management Boards of the Northern Central Coast to well perform the functions and tasks of state management of the CEZ, in addition to the tasks specified in the Government's Decree No. 82/2018/ND-CP Regarding the management of CEZ and EZs, the Provincial Party Committees and People's Committees of provinces and cities where the EZs are operating, agree to let the EZ Management Board be a focal point of the agency directly under the Provincial People's Committees of the localities: to be the focal point of management. management of investment activities in the EZ, in the locality. Departments, departments, branches and state management agencies in provinces and cities when implementing professional tasks in the EZ are responsible for coordinating and collecting opinions from the Provincial EZ Management Board, ensuring the operation of an unified state management, avoiding overlaps and creating favorable conditions for enterprises to operate in accordance with the law according to Clause 4, Article 63 of Decree No. 82/2018/ND-CP. Investors and enterprises having investment projects in the EZ are supported by competent authorities to carry out administrative procedures on investment, business, land, construction, environment, labor and trade

according to the regulations. the "one-stop, on-site" mechanism, to support labor recruitment and other related issues in project implementation.

At the same time, in order to facilitate the implementation of "one-stop shop, on-site" mechanism according to the spirit of Decree No. 82/2018/ND-CP, in order to quickly resolve administrative procedures, make breakthrough in investment and development CEZ without reducing the monitoring role of the professional sectors in the administrative system, the people's Committees of provinces and cities directs the relevant branches to advise the Provincial People's Committee to step up decentralization and authorize the Management Board to perform tasks; The Department of Planning and Investment advises and authorizes: Investment decisions for projects of groups B and C using public investment capital shall be allocated to the Economic Zone Authority for construction investment in the area of the EZ after being approved by the Provincial People's Council. People's Committees of provinces and cities shall decide on investment policies (according to point c, clause 3, Article 64 of Decree 82/2018/ND-CP). To assume the prime responsibility for appraising investment projects of groups B and C using the announced investment capital and arrange for the Management Board of the MPA to invest in the area of the EZ; Departments of Construction in provinces and cities to advise and authorize: To perform the tasks of state management of construction specified at Point b, Clause 3, Article 63 of Decree 82/2018/ND-CP; Department of Natural Resources and Environment fields in the provinces and cities to advise authorized: Perform tasks of State management of environmental provisions in Clause 3, Article 63 of Decree 82 and a number of tasks to manage state natural resources and environment in the EZ as prescribed by law.

4. Conclusion

The development of the EZs in Vietnam in recent years has made many contributions to promoting socio-economic development of localities; increasing budget revenue; jobs; attracting domestic and foreign investment capital; transforming the economic structure of localities towards modernity. This confirms the important role of the EZs in regional development and regional linkages in the North Central provinces. One of the reasons for these successes is that over the years, the Party, State and Government have issued many resolutions, legal documents, decrees and decisions in order to create a legal corridor for the operation of the CEZs. However, in response to the requirements of developing economic zones, the institutions, mechanisms and policies for development have revealed many limitations that need to be adjusted and perfected to suit the process of integration and development. On the basis of assessing the situation on completion of institutional mechanisms, policy development CEZ in Vietnam over historical periods, the authors proposed solutions including: Completing the institutions to create a corridor unified legal develop coastal economic zones; improve investment mechanisms and policies in order to create driving force for the development of the EZ; Completing mechanisms and policies in the management of EZs. Good implementation of the above solutions is to contribute to perfecting institutions, mechanisms and policies in order to

concretize the viewpoints and lines of the Party, State and Government on the development of internal economic zones in the current period.

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FACTORS AFFECTING THE IMPLEMENTATION OF RESILIENCE – ENHANCING HUMAN RESOURCES PRACTICES IN TOURISM AND HOSPITALITY INDUSTRY DURING CRISIS CAUSED BY COVID-19 IN VIETNAM

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Abstract

Since the end of 2019, the tourism and hospitality industry has been severely devastated by the global covid-19 pandemic. In this context, the idea of building up and developing organizational resilience for businesses in order to adapt, to survive during crisis and to recover after crisis has attracted the concern from both academics and practitioners. From the perspective of human resource management, this study aims to discover factors having impact on the selection of human resource practices adopted to strengthen organizational resilience capacities during the lockdown. A qualitative approach with 15 in-depth interviews with managerial personnel working in tourism and hospitality sector in Vietnam have been conducted. The findings make a significant theoretical contribution in understanding crucial antecedents affecting the implementation of resilience-enhancing human resource practices during crisis.

Keywords: *The covid-19 pandemic, Organizational resilience, Human resource practices, lockdown, thematic analysis.*

1. Introduction

Following the dark picture with difficulties caused by devastating impact of the Covid-19 pandemic since 2019, global tourism in 2021 continues to suffer with 87% fall in international tourist arrivals in January as compared to 2020, in which Asia and the Pacific region witnesses the largest decrease in international arrivals with a decline of 96% (UNWTO, 2021). This unprecedented global health crisis has triggered the most severe economic recession and caused enormous danger to global Travel & Tourism sector with a massive loss of almost 4.5 trillion USD and 62 million jobs that were lost last year (World Travel & Tourism Council, 2021). In such worst scenario, it becomes more and more important for organizations in the tourism and hospitality sector to develop and enhance their own resilience capacity in order to manage and survive as well as to recover the whole industry. However, organizational resilience linked to crisis in the field of tourism and hospital industry has not been wide studied yet (Orchiston et al., 2016). Many webinars focusing on the impact of the Covid-19 on tourism industry attracting numerous tourism scholars have discussed extensively the question of how an organization could build resilience to cope with crisis (Resilient Destination, 2021). The answers can be central on how

organizations adjust their operation, marketing, finance and human resource management strategies that help them cope with unexpected challenges (Hall et al., 2017).

Among diverse management practices, human resource management has revealed its strategy role that views employees as assets contributing to organizational sustainable competitive advantages (Avey et al., 2008; Bustinza et al., 2019; Naznin & Hussain, 2016; Pfeffer, 2005). However, despite the emphasis on the importance of human capital in constructing organizational resilience in times of crisis (Lengnick-Hall et al., 2011; Nilakant et al., 2014), how to apply human resource (HR) practices to enhance resilience capacity has not well been considered within tourism literature (Brown et al., 2018; Hall et al., 2017). Therefore, this study aims to explore human resource practices adopted by tourism and hospitality businesses during the disaster caused by the Covid -19 pandemic in order to build and maintain organizational resilience capacity. To be conducted in Vietnam where the management of the first wave of the virus is considered as a model for the rest of the world would provide (Marques, 2020), results from this study would contribute to the body of knowledge on crisis management by enlarging and enriching our understanding of organizational resilience enhanced by human resource practices.

2. Literature review

2.1. Organization resilience in tourism

Organizational resilience was defined as “a firm’s ability to effectively absorb, develop situation-specific responses to, and ultimately engage in transformative activities to capitalize on disruptive surprises that potentially threaten organization survival” (Lengnick-Hall et al., 2011, p.244). From this perspective, organizational resilience has attracted the concern of numerous scholars for a decade (Biggs et al., 2012; Dahles & Susilowati, 2015; Orchiston et al., 2016; Prayag et al., 2020). In very first studies of organization resilience in the tourism industry, organizational resilience has been understood as an organization’s ability to cope with unexpected change and adapt to unprecedented threats to the business environment (Biggs et al., 2012). From the resource-based view, organizational resilience was built upon fundamental resources including finance, human, networks and other core values (Biggs et al., 2015). In another hand, business resilience was proposed by Dahles and Susilowati (2015) as the organization’s capacity to wait for a return to the previous state of perceived normality together with the capacity to innovate and grow in the face of disturbance. As a result, strategies of businesses depend mainly on maintaining by cost reduction and innovating by operational adjustment (Dahles and Susilowati, 2015). From this alternative perspective, a strategy-based approach was used to view organizational resilience that reflects “three strategies – survival, adaptation and innovation – existed side-by-side” (Dahles & Susilowati, 2015, p. 47).

Resource-based organizational resilience and its dimensions could also be explored based on a capital-based approach (Brown et al., 2018) that defined organizational resilience as a “dynamic condition describing the capacity of a hotel, together with its stakeholders (staff, guests, the local community), to assess, innovate, adapt, and overcome possible disruptions” (Brown et

al., 2017, p.365). This integrated framework illustrates the whole picture of the organizational resilience in hotel sector with six types of capital including economic, social, physical, human, natural and cultural (Brown et al., 2018). Moreover, capital building organizational resilience could be also grouped into three critical categories: people, processes and partnership (Foster & Dye, 2005; Hall et al., 2017). Therefore, it could be argued that human capital represents the core to create inter-relationships between other factors contributing to develop organizational resilience (Hall et al., 2017; Lengnick-Hall et al., 2011), making human capital strategies in developing resilience become the interest to scholars in the management field (Lengnick-Hall et al., 2011; Nilakant et al., 2014). However, this organizational resilience capacity enhanced by HR practices has not been studied yet in the literature of tourism and crisis management, especially in the context of the global health crisis such as Covid-19 Pandemic.

2.2. Human resource management (HRM) in crisis

During the time of crisis, HRM could contribute to organization by its operational capabilities to manage crises and its interventions to facilitate collective and individual organizational performance, which help them to improve crisis responses (Hillyard, 2000; Wang et al., 2009). Preliminary insights have revealed the prevalence of measures of cost reduction in response to recession such as layoffs, payroll cut, freeze in new recruitment, reduction in training, rigorous performance management or downsizing rather than maintaining the whole system (Israeli et al., 2011; Mohrman & Worley, 2009; Santana et al., 2017; Teague & Roche, 2014).

From an alternative approach, organizations also seek for other perspective to reinforce their capabilities rather than adopting cost reduction measures alone (Teague & Roche, 2014) such as the high-commitment model in HR practices (Roche et al., 2011) and the importance of enhancing morale and commitment of the workforce (Cascio, 2010). Teague and Roche (2014) categorized all HR practices in crisis into two aspects, namely technical and behavioral. Technical HR practices aims to cost and headcount reduction, while behavioral HR practices refers to practices that facilitate motivation and employee commitment.

Cutting cost initiatives include cutting payroll, bonus and benefits, reducing the use of contemporary staff, cutting training expenditure, encouraging employees to take paid leaves, unpaid leaves, payroll freeze, new hire freeze to avoid layoffs would be encouraged to implement first. Among these measures, layoffs seem to have detrimental influence on employees' morale and their commitment, making it become a breach psychological contract between the workforce and the firms (Arshad & Sparrow, 2010). Another way to enhance organizational resilience could be achieving social capital. According to Parzefall & Kuppelwieser (2012), employees' affective commitment is profoundly affected by social capital because it helps to ease the mental health problems during crisis (Christodoulou & Christodoulou, 2013) as well as assists employees and organizations in staying strong during tough times. Moreover, social capital enhancing practices are accumulated thanks to interaction of employees in training, learning, job security and working together (Leana & Van Buren, 1999). From alternative perspective, managers would like to

empower their organizational resilience capacity by developing a diffused power and accountability that emphasizes the involvement and participation of employee in making decisions, taking responsibility within the organization (Lengnick-Hall et al., 2011).

It could be seen that within crisis management literature, HR practices enhancing organizational resilience have been discussed but the factors influencing the deployment of these practices have not been examined yet. Based on this theoretical foundation, the current research focuses on exploring factors affecting the implementation of HR practices that enables tourism and hospitality organizations to build and develop their resilience capabilities to overwhelm crises.

3. Data and Methodology

Due to its exploratory nature, this study adopted a qualitative approach with in-depth interviews in three major tourist cities in Central Vietnam, including Hue, Danang and Hoi An in order to explore HR practices of Vietnamese during the lockdown to confront, adapt, and recover amid this pandemic. While Hoi An and Hue are the famous heritage destinations in Vietnam with their UNESCO World Cultural Heritage sites, Danang is a busy transport hub with numerous direct international flight connections and various resorts and hotels along its coastline (Hildebrandt & Isaac, 2015)

For the reliability of information concerning to the HR practices implemented during the lockdown, managerial personnel such as General Managers and Human Resource Managers in tourism and hospitality industry were invited and interviewed. Additionally, a combination of purposive, snowball, and quota sampling techniques were employed to obtain a maximum variation and depth of information. A variety of informants from various sectors within the tourism and hospitality industry, such as accommodation, restaurants, and travel agencies were approached to get diverse information.

A semi-structured interview approach using open-ended questions and providing a greater understanding of the implementation of HR practices during the lockdown was adopted, as it allows key questions to be asked to all respondents, while ensures flexibility to follow up on newly emerged topics as well as to adapt the interview guide according to the informants' characters such as their positions or sectors (Patton, 2014). Before starting interviews, an interview guide was composed based on the review of relevant literature within the areas of human resource management and crisis management. Interview scenario included 3 main but flexible steps: asking for the impacts of Covid-19 on their businesses, exploiting HR practices being adopted and asking for their assessment of these practices. The interview guide was prepared in English and subsequently translated into Vietnamese and back-translated to validate its quality (Tyupa, 2011).

The data collection, i.e. in-depth interviews, was conducted in May and June 2020. The interviews were carried out in Vietnamese, on a one-to-one basis and each lasted from 30 to 60 minutes. Table 1 presents a profile of 15 managerial personnel of lockdown who were interviewed in this study.

Table 1. The profile of the informants and their businesses

Informant no.	Gender	Age group	Position	Experience in the current position	Experience in the T&H industry	Sector	Number of employees	Business ownership
1	Female	30-40	General Manager	2 years	13 years	Accommodation	97	Joint-stock company
2	Male	30-40	HR Manager	7 years	15 years	Accommodation	300	Private company
3	Male	30-40	General Manager	3 years	5 years	Accommodation	55	Private company
4	Female	30-40	HR manager	7 years	10 years	Accommodation	110	Private company
5	Male	30-40	General manager	2 years	3 years	Accommodation	29	Private company
6	Male	40-50	Branch manager	2 years	15 years	Travel agency	90	State-owned company
7	Male	40-50	CEO	7 years	20 years	Travel agency	80	Joint-stock company
8	Male	30-40	General Manager	3 years	12 years	Travel agency	20	Private company
9	Male	30-40	General Manager	10 years	12 years	Restaurant	40	Private company
10	Male	40-50	General Manager	5 years	More than 20 years	Travel Agency	30	Private company
11	Female	25-30	HR manager	5 years	5 years	Accommodation	24	Private company
12	Female	30-40	General Manager	7 years	7 years	Accommodation	20	Private company
13	Male	30-40	General Manager	6 years	6 years	Accommodation	80	Private company
14	Male	30-40	Founder / owner	19 years	19 years	Restaurant	350	Private company
15	Female	30-40	Branch deputy	1 years	8 years	Travel agency	20	State-owned

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The interviews were recorded, then transcribed and translated into English by the bilingual researchers. The thematic analysis was then used to analyze and seek patterns in the data (Braun & Clarke, 2006). The interview guide was used as an initial coding structure of the data, yet new themes and subthemes also allowed emerging. The identified themes and subthemes were reviewed, crosschecked, and discussed among the research team to reach a consensus about the findings.

4. Results and Discussion

The finding shows four major factors affecting how informants make decisions of choosing these practices during crisis to strengthen their organizational resilience capacity, including financial constraint, organizational culture, leadership and business vision, are discussed in the following sections.

4.1. Financial constraint

A healthy financial condition and access to finance determine the survival and success of an enterprise (Biggs et al., 2012). Various informants claimed that finance is the most difficult obstacle that they had to overcome, especially in this pandemic which has inflicted a huge loss in the tourism and hospitality industries, in terms of tourist arrivals and tourism receipts (Gössling et al., 2020).

There are several problems, but the first one is finance (Informant #8)

The largest impact is definitely liquidity; we can expect zero profit. So, the financial crisis is the most important issue of our business (Informant #6)

In this study, most informants are working for private SMEs in tourism and hospitality industry that are characterized by their limited access to financing resources and heavily labor-intensive, making labor costs dominate the financial balance. Therefore, they must struggle with their financial challenges during lockdown by initial initiatives of cutting working hours and temporarily laying off staff. This was emphasized by many informants:

We are trying to cut all the unnecessary costs as well as negotiate to reduce the interest and sell other assets to reduce the interest. In general, we are trying to cut the cost as much as possible (Informant #5)

Regarding the policies for sustaining, on one hand, we review all of our spending; on the other hand, we are trying to reduce the cost, where labor cost is the largest. Hence, we have to reallocate jobs in order to reduce this labor cost to half (Informant #7)

Nonetheless, not all businesses chose to lay off their staff. Many were trying to retain their current employees with various solutions and policies. These practices were determined by other factors, including organizational culture, leadership, and vision/strategy. These less tangible aspects of organizations are in fact highly relevant to resilience issues (Seville et al., 2008).

4.2. *Organizational culture*

Various informants mentioned that the existing organizational culture have a huge impact on their decision of which policies to apply. In people-orientation culture, the individual is the central focus of the organization and the structure, as well as policies, (Mullins & Christy, 2016). This culture also values fairness, supportiveness, and respects individual rights (Carpenter et al., 2012).

In some businesses, layoffs are not their solution during financial difficulties because informants strongly declare that employees and their welfare were the center of their decision-making process. This is evidenced in the following quotes:

This is our culture, since the beginning of our business, the culture of focusing on people and respecting people (Informant #1).

A business can only be strong when they have a strong workforce with strong spirit and commitment. [...] If a business cannot sacrifice its benefits for its employees' welfare, it cannot build a strong organization. (Informant #14)

Many informants also recognized the essential role of human asset in delivering good service quality, customer satisfaction and augmenting profitability (Fulford & Enz, 1995). They believe that by caring for their employees at difficult time, they will increase their loyalty and commitment and in turn contribute to the business performance. Indeed, this set of values, including people-oriented values and ethical behavior, is suggested to be an essential element in organizational culture as it is one of the best predictors of employee commitment (Ortega-Parra & Sastre-Castillo, 2013). In this stream of thought, the informants shared:

With the support for current employees during this difficult time, they will be more loyal and committed to the organization (Informant #4).

The heart of tourism products is the human resource. If we don't invest in people, we cannot succeed (Informant #1)

The shared values within the organization do not only guide the decision-making process of the managers, but also direct the behavior of the employees (Webster and White, 2010). One informant stated that:

Some of my employees were willing to take unpaid leave in order to share the financial burden with the business. This touching action rooted in our culture. We were together when we succeed, and so no one is left out in difficulties (Informant #6).

It indicated that this culture value of sharing in both success and difficulties are cherished within the organizations and it shapes the employees and managements' behaviors and attitudes (Schein, 2010). Additionally, the organizational culture is evidenced to be influenced by the values of the nation or country in which the organization operates (Webster and White, 2010). Vietnam has a high level of collective culture means where strong relationships between individuals are fostered and people often look after others in societies to make them feel secured

and tranquil (Hofstede Insight, 2021). In return, these employees seek for their loyalty (Quang & Vuong, 2002).

4.3. Leadership

Similar to the above discussion on the organizational culture, employee-oriented, sharing and ethical values also highlighted as the core values of the Vietnamese managers, i.e. our informants, which essentially guide their decision regarding the resilience HR practices. Various informants indicated that the first thing they cared and worried about was the welfare of their employees.

In my head, the first questions always are “Do we have enough money to pay our employees?”, “How many can cope with the current situation?”, “How many will have to quit the job?” [...] All the debts will have to be postponed so that we have enough budgets for a three-month salary (Informant #6).

Terminating contracts, in terms of legal aspect, it is not difficult, especially in the current crisis. Yet regarding humanity, we are not comfortable making this decision (Informant #1)

This clearly demonstrates the two main aspects of servant leadership, including ethical behavior and concern for subordinates (Ehrhart, 2004), which are particularly appropriate in service organizations such as the hospitality sector (Mullins & Christy, 2016). Not only about caring for the employees, the fact that these businesses tried to pay their employees and keep their positions also demonstrates an ethical decision and behavior of the leaders in the time of crisis.

4.4. Business vision and mission

The last influential factor to the implementation of resilience HR practices is the business vision and mission. During the crisis, the priority is essentially the survival of the business; hence various informants stated that their long-term strategies which significantly contributed to the current resilience practices should be in line with their business vision. In this case, amid the current crisis, both business vision (i.e. long-term) and post-crisis missions (i.e. short-term) have guided resilience strategies.

When COVID-19 started to develop, the industry in general and our business in particular has three missions: to minimize the damage, to survive and to thrive and develop afterwards. (Informant #7)

Numerous informants working in higher-ranked hospitality businesses considered human resource as their crucial assets and important key to success, making them involve retaining and developing a highly skilled and committed workforce during crisis. In spite of facing to the financial burden of labor cost, they still strongly believe that maintaining the current workforce is essential to the development of the business.

Our resort requires high service quality and thus highly skilled staff. And it is not easy to find highly qualified people, especially in peak season. (Informant #4)

The most important element to differentiate and create the soul of our business is our employees. If we cannot ensure the loyalty, pride, commitment among employees, we cannot provide good service quality to meet the customers' expectations (Informant #1)

The answers are reverse for lower-ranked hotels and restaurants where informants are willing to let their current employees go. This is because these businesses just aim to a standard service quality with lower skilled employees, making highly skilled and committed ones be not what they focused on.

Our target market is package tours and medium spending groups who only stay one night at our hotel. So, we don't need highly skilled, experienced and loyal employees. We only need medium skilled employees who could provide standard services to the basic demands of our guests. (Informant #13)

5. Conclusion

In the context of a worst global crisis (Covid-19), this study promptly provides the insights about factors that affect the deployment of HR practices enhancing organizational resilience.

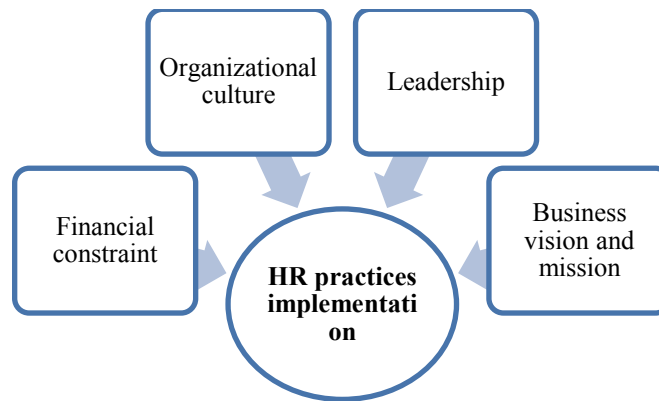
4.5. Contributions

Theoretically, the findings of study make several implications to broaden the literature of organizational resilience and disaster management in tourism and hospitality industry. The study clarifies four crucial factors including financial constraints, organizational culture, leadership and business vision and mission. From this perspective, regarding short-term strategies, it is revealed that these businesses while trying to cope with the negative impacts of COVID-19, they did not forget that their business will need to continue to be competitive, to develop and to come out of this crisis stronger. This finding of the current research has so far been new to understand the dependence of resilience HR strategies or policies on internal factors of an organization. Compared to previous studies that focusing on the prevalence of cost reduction measures such as layoffs, payroll cuts, recruitment freezes, reductions in training, rigorous performance management or downsizing when facing to crisis, the findings of this study help businesses also make alternatives ethical decisions by maintaining the whole system and attempting to enhance the moral and commitment of their human resources.

Figure 1 presents a conceptual framework of factors influencing resilience HR practices in crisis as a visual display of theoretical contributions of this study.

In term of managerial contributions, managers could consider these internal business management factors to find a balance between what is feasible and what is really practical to them during a crisis.

Figure 1. Proposed conceptual framework of factors affecting the implementation of resilience – enhancing human resources practices in a crisis



4.6. Limitations and future research

The study strives to collect data from subsectors of tourism industry including accommodations, restaurants and travel agencies; however the samples are limited and not balanced enough across these sectors that make us unable to compare organizational resilience between sectors. Therefore, a further research should expand the interviews into more representatives of each sector and also include other sectors (i.e., transport, tourist attractions) to understand the different levels of resilience as well as how resilience HR practices work well with different kinds of tourism businesses. In addition, as being reliant on the informants' interviews, this study does not explore the factors affecting resilience HR practices at the macro level such as governmental policies, Covid-19 infection level or tourism dependency level of a destination. As a result, it is an idea for future research to yield a more holistic picture of organization resilience in a wider business eco-system.

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DEVELOPMENT STRATEGIES AND UPGRADING IN APPAREL VALUE CHAIN: COMPARATIVE ANALYSIS OF VIETNAMESE FIRMS

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Abstract

The study focuses on analyzing the development strategies of certain Vietnamese apparel manufacturers leading to industrial upgrading in the textile value chain. To clarify the research objectives, the article uses the analytical framework of apparel value chain. On that basis, the author uses qualitative research methods to analyze and compare two Vietnamese enterprises with different development strategies to show the differences. The data used in this article was collected by the author from secondary data sources to show the current situation of Vietnam's textile and garment industry and the primary data through online interviews with these firms' managers. The analysis results from the case of successful upgrading show that vertical cooperation through joint venture with lead firms helps apparel manufacturers with process upgrading while a market diversification strategy, specifically local market penetration in this study, enables firms to gain functional upgrading.

Keywords: *domestic market penetration, joint venture, industrial upgrading, market diversification.*

1. Introduction

Vietnam's garment industry has developed since 1990 and has played an increasingly important role in Vietnam's economic growth (Dinh & Dang, 2011), however it is heavily dependent on external sources of supply and the value added in each garment and textile product is low, leading to low production efficiency. According to the Vietnam Cotton and Yarn Association (2021), Vietnam's garment export value in 2009 was US\$8,5 billion, double that of 2004 (US\$4,2 billion) and reached 35,2 billion. USD in 2020 despite being heavily affected by the Covid-19 epidemic.

Vietnamese garment enterprises that have successfully upgraded their value chains are likely to receive more orders and contracts, thus higher affordability, while companies that have not successfully upgraded still struggle to find markets and more buyers for the purpose of maintaining production lines; moreover, facing tougher contract conditions (especially in terms of price) and problems with employee retention (Goto, 2012). However, after a certain period of time benefiting from product and process upgrades, these businesses face certain limitations, leading to the need for further functional upgrades, even for the most competitive exporters (Goto, 2012).

Meanwhile, with Vietnam's economic development speed, the domestic market will be expanded day by day; People's purchasing power are stronger and stronger and this is definitely a development prospect for businesses. Although domestic market-oriented enterprises understand the market, they still lack the expertise, high production techniques and international standards that have been accumulated by export-oriented garment companies (Goto, 2012). Seizing development opportunities and being well aware of the prospects of the domestic market, many Vietnamese garment exporters are switching to focus on serving the domestic market and have achieved certain success.

The purpose of the article is to review the current production level of Vietnamese garment and textile firms, to comparatively analyze two case studies to show development strategies to help promote upgrading capacity and to evaluate these upgrading strategies of garment enterprises through a qualitative approach by comparative case study analysis. The study first redefines the position of Vietnamese garment enterprises in the apparel value chain. Second, the study points out the benefits of collaboration between Vietnamese garment suppliers and international buyers. Third, the study clarifies how Vietnamese suppliers upgrade themselves in the apparel value chain through these development strategies and linkages. On that basis, the article will give some suggestions for Vietnamese garment enterprises to improve their production capacity and upgrade themselves in the apparel value chain. To achieve the above goal, the article is divided into 5 parts including introduction; review of research papers; analytical framework, research methods and data collection; research results and discussions; Conclusions and implications for businesses.

2. Literature Review

2.1 Global value chain (GVC)

Kaplinsky and Morris (2000) show that the conception of value chain is discussed in the prior researches such as the researches in value system by Porter (Porter, 1985); the research with the phrase “value stream” by (Womack & Jones, 1996); the research with the term “filier” to describe the process of physically converting the materials into finished products or service or the studies by Gary Gereffi and Korzeniewicz (1994) firstly using “global commodity chains”. All these terms defined in the extant literature have the same meaning to the value chain currently used (Kaplinsky & Morris, 2000). The GVC framework examines how a given industry is organized through the analysis of the structure and dynamics of various factors related to global transactions, especially the focus on nature and content of the linkages that span international borders (Gary Gereffi, 2010; Gibbon, Bair, & Ponte, 2008). This framework sets the ground to explain the shift in global-local dynamics towards export-oriented industrialization and buyer-driven supply chains (Gary Gereffi, 1999). There exist four dimensions of GVC analysis such as geographic scope, governance, upgrading and local institutional context (G Gereffi & Fernandez-Stark, 2016).

The governance structure gives a description of how the value chain is controlled by the firm and more specifically how the power relationships determine the allocation and flow of financial and human resources in a chain (Gary Gereffi, 1999). In the apparel industry, the lead firms are able to collect and process information, offering them a strong bargaining position (Coe, Hess, Yeung, Dicken, & Henderson, 2004; Gary Gereffi, 1997). In general, it is accepted that suppliers upgrade within production, however, face discouragement and even obstacles concerning design, marketing activities, branding and retailing (Bair & Gereffi, 2001; Tokatli, 2007).

Industrial upgrading is the core concept in GVC research showing the movement from lower-value activities to higher ones in value chains in order to increase the benefits by taking part in global production (Gary Gereffi, Humphrey, & Sturgeon, 2005; Gary Gereffi & Kaplinsky, 2001; Kaplinsky & Morris, 2000). Industrial upgrading is categorized into four types (Gary Gereffi & Kaplinsky, 2001; Humphrey & Schmitz, 2002b; Kaplinsky & Morris, 2000), including process upgrading (improving technology and/or production systems); product upgrading (producing more sophisticated, complex or better quality products); functional upgrading (increasing the range of functions or changing the mix of activities to higher value tasks); and chain upgrading (moving from one industry to another). Besides, concerning industrial development in GVCs where FDI plays an important role, there exist two further dimensions inclusive of local linkages capturing relations between FDI plants and local firms (most importantly, supply chain backwards and forwards linkages) and skill development capturing skill transfer from FDI to local workers through investment in training or possibilities to imitation (Morris & Staritz, 2017).

2.2 Cooperation through value chain

2.2.1 Vertical cooperation

Cooperation between firms in current economic relations shows its importance in the generation of entrepreneurial growth and in the creation and extension of competitive advantages and synergy effects (Brach & Kappel, 2009). The existing research makes a basic distinction between four different types of cooperation models (Gary Gereffi et al., 2005; Rauch & Hamilton, 2001), namely market coordination, horizontal cooperation, vertical cooperation and vertical integration. In this study, the author focuses on vertical cooperation as a research framework. Vertical cooperation is defined as long term contracts between legally and economically independent firms. In these cases, mutual dependencies develop with time, unlike the case with horizontal cooperation, dependencies are here characterized by asymmetry between (one or more) lead firms, which dominate the collaboration and lead it strategically, and (one or even many) small and medium-sized (SMEs), which have a supplier-purchaser relationship (Gary Gereffi et al., 2005; Rauch & Hamilton, 2001). The development of globalization, information and communication technologies and the concurrent reduction of transfer costs have promoted international vertical cooperation in transnational value chains (Brach & Kappel, 2009). Multiple

researchers analyze local developments in industrial clusters (Giuliani, Pietrobelli, & Rabellotti, 2005; McCormick, 1999; Schmitz, 2004b) and the “industrial divide” as well as the mutual relationships between chain members and spatial location patterns (Krugman, 1997; Saxenian, 2007). Moreover, industrial clusters of SMEs are viewed as the basis for integration into value chains, with a particular focus on “joint action” and “collective efficiency” (Humphrey & Schmitz, 2002a; Schmitz, 2004a).

2.3 Industrial upgrading

2.3.1 Process upgrading in apparel value chain

Process upgrading is the process of increasing the efficiency of internal processes so that these are significantly better than those of rivals, both within individual links in the chain (increased inventory turns, lower scarp), and between the links in the chain (more frequent, smaller and on-time deliveries) (Humphrey & Schmitz, 2002b; Kaplinsky & Morris, 2000). The process upgrading focuses on machinery with a view to improving productivity through new capital investments, and information and logistics technology, benefiting both the firm and the chain because it reduces the total time, cost and increases the flexibility of the supply chain process (Gary Gereffi, Fernandez-Stark, & Psilos, 2011). The role of foreign investors and their ownership characteristics and how they relate to upgrading has received more limited albeit increasing attention in the GVC and related literatures (Morris & Staritz, 2017). The foreign intervention shows a significance in process upgrading regarding the fact that international buyers introduce new machinery and production technologies to garment suppliers (Goto, 2012).

2.3.2 Functional upgrading in apparel value chain

Functional upgrading is defined as the increase in value added by changing the mix of activities conducted within the firm (taking responsibility for, or outsourcing accounting, logistics and quality functions) or moving the locus of activities to different links in the value chain (from manufacturing to design) (Humphrey & Schmitz, 2002b; Kaplinsky & Morris, 2000). According to the so called “smile” curve of value creation in chains, production-oriented activities account for less value added than pre- and post-fabrication stages, such as product concept, design, and R & D on the one hand, and sales, marketing, and after sales services on the other (Everatt, Tsai, & Cheng, 1999; Ram Mudambi, 2007). Ram Mudambi (2008) differentiates between standardized and specialized value adding activities within GVCs. Standardized activities are repetitive, low value-adding commoditized activities that can be performed by many firms using limited knowledge-based resources. High value activities, denoted as general purpose activities, business services and specialized manufacturing, are typically associated with the intangible components of the product or service, and are related to R&D or marketing knowledge.

3. Analytical Framework, Methodology and Data Collection

3.1 Analytical Framework

3.1.1 Process upgrading ($\Delta \frac{Q}{L}$)

Based on the topic and context of the research, the author decides to apply the analytical approach of Goto (2012), who shows that for Vietnamese export-oriented garment suppliers, competitive firms, due to their ability to upgrade within the changing business environment, have been able to reap higher value-added. Process upgrading is defined as any increase in the number of physical output per worker (operational-based physical productivity) and product upgrading as the increase in the per unit product value-added (Goto, 2012). The total value-added of a supplier is basically the product of operational-based physical productivity, the number of workers and per unit product value-added as follows:

$$\frac{VA}{L} = \frac{Q}{L} \times \frac{VA}{Q}$$

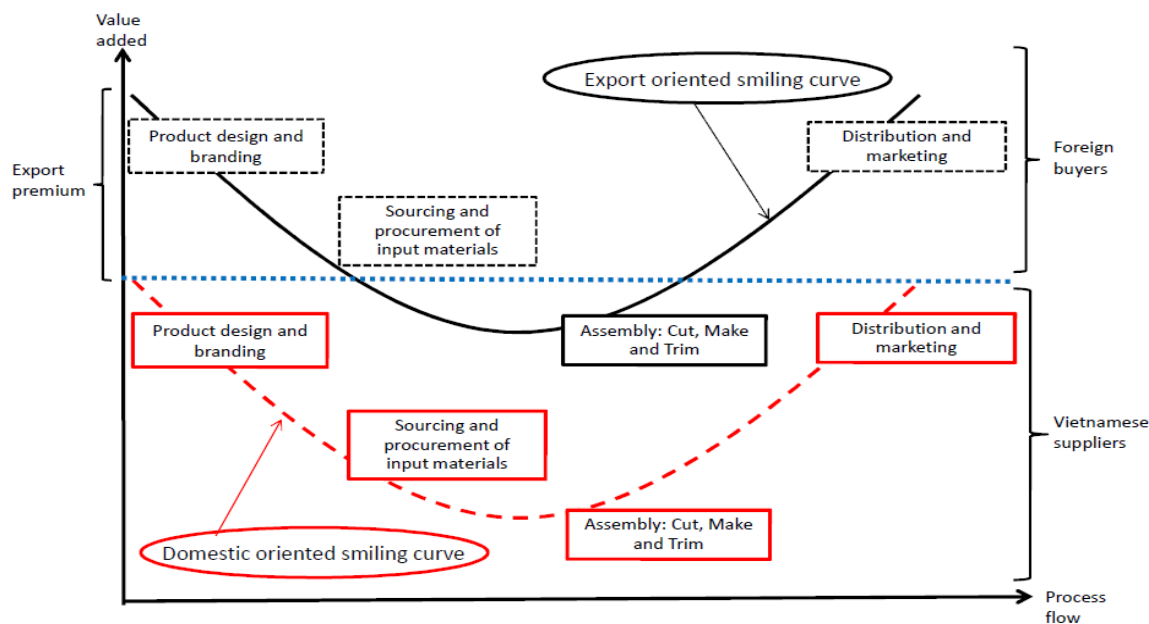
Where VA is total value-added, Q is the total number of garments produced within a given period of time and L is the total number of workers. From the equation, any changes in the value-added per worker $\frac{VA}{L}$ or $(\Delta \frac{VA}{L})$ are a result of changes in $\frac{Q}{L}$ or $(\Delta \frac{Q}{L})$ and/or $\frac{VA}{Q}$ or $(\Delta \frac{VA}{Q})$. In this case, $\Delta \frac{Q}{L}$ refers to the degree of process upgrading.

Assessing process upgrading is difficult if only using only value-added or price data, as the changes in physical output per worker or operational-based physical productivity are not necessarily reflected (Goto, 2012). Ideally, the productivity of each garment supplier should be evaluated and compared based on worker value-added, however, in fact, it is difficult to conduct as a result of data shortage allowing for consistent and statistically significant analyses. Nevertheless, in the case of an CMT-based export oriented supplier, the value-added per worker is highly correlated with the operational-based physical productivity (Goto, 2012).

3.1.2 Functional upgrading

The process of functional upgrading is a dynamic trajectory (Gary Gereffi, 2019). Firms acquire new capabilities and functions as they move from the assembly of imported inputs to original equipment manufacturing (OEM) and original design manufacturing (ODM) up to original brand manufacturing (OBM) (Gary Gereffi, Lim, & Lee, 2021). However, the value-added according to difference in functions is different in relative terms, conditional to market orientation (Goto, 2012). Clearly, the quality requirements for export oriented businesses are more stringent compared to those for local ones, it may well be the case that a CMT function for the export market embeds more knowledge-intensive functions and are, therefore, of higher value-added than the product specification functions for the local market. The article bases the analytical framework on the following model of Goto (2012):

Figure 1: The Garment Smiling Curve: Functional Hierarchy in the Garment Production-Distribution Flow



Source: Goto, 2012 (Modified from Mudambi (2007) and Goto (2006 and 2011))

3.2 Methodology and Data Collection

3.2.1 Methodology and Research Sample

With the aim to give an in-depth look into the development strategies in apparel upgrading, specifically in private local firms, it is decided that the qualitative comparative analysis of empirical case studies will be applied to give the descriptions to each empirical field of study (King, Keohane, & Verba, 1994). Furthermore, the strategy of the most similar system design (Berg-Schlosser & Gisèle, 2009) is also applied. The two cases of Vietnamese private local firms in this research have a range of similar aspects, concerning the background, namely the location, the lines of products, some markets, export - orientation and so on. However, some different factors are supposed to be attributable to the findings of this research. The summary of background information of two cases is as follows:

Table 1: Background Information of Case Studies

	Bavina Company	Tan Minh Company
Headquarter address	57-59 Ho Tung Mau, District 1, Ho Chi Minh, Vietnam (one representative office in Osaka, Japan)	45B Dong Ho Street, Ward 8, Tan Binh District, Ho Chi Minh City, Vietnam
Establishment year	2014	1994
Firm type	Joint Venture (34% owned by Japanese investors)	Private
Number of plants	01	07

Number of labourers	around 200 in total	around 3000 in total
Labourer's monthly wage	average 250-270\$	average 180\$
Product lines	High-class products: knitted and woven shirts, T-shirts, casual wear, jackets, pants, blouses...	Woman dresses, pants, jackets, trousers, shirts, skirts and some other items
Main markets	- Foreign Market (90%): Japan, EU, America, Korea and China - Local Market (10%)	- Foreign Market (99%): Japan, EU, America, Korea and China - Local Market (1%) (uniform only)
Monthly Production Volume	around 220,000 pieces	around 1,084,000 pieces
Local stores	Yes	No
Production Capability	CMT, FOB and ODM	CMT and FOB II

Source: The Author's Interview

Two cases of Bavina Company and Tan Minh Company have been chosen for comparative in-depth analysis for some rationales of case selection. In this research, case selection is guided by the underlying research question and preliminary hypotheses, and is that unlike statistical research, random sampling is applicable in case-oriented and small sample research (Berg-Schlosser & Gisèle, 2009). Furthermore, there are a number of other considerations in case choosing decision such as the familiarity with the chosen cases, language skills basically required for interviews, interpretation and analysis, more necessarily the accessibility of the source and data for collection, the relevant literature, which the case selection in this research can satisfy, therefore, a certain degree of intimacy is developed (Ragin, 1994). Last but not least, the research questions and the analytical frameworks guide case selection (Berg-Schlosser & Gisèle, 2009) in this research.

3.2.2 Data Collection

This research has two main sources of data: the primary data and the secondary data. For the primary data, data collection was conducted through online interviews with the directors of the sample firms from March to May, 2021. 6 interviews in total were done with the general managers (Mr. Viet Phan of Bavina Company and Mrs. Phuong Le of Tan Minh Company) with 3 interviews for each. During the very first interview, the general questions about the company such as the main markets, sale situation, main lines of products and the levels of production were raised. In the second interview, the relevant questions such as the methods to access the foreign markets, how to cooperate with lead firms, the types of contracts and the development plans were asked. The latest online interviews were done online with the same interviewees to make sure the reliability of the answers. This time, the

interviewer asks unclear questions about the development models and how to implement them. All the interviews have been recorded for reference and conducted in Vietnamese, the native language of both interviewer and interviewees. Therefore, the reliability of the answers can be made sure without misunderstandings. All the questions for 6 above interviews are to the main points of this research to explore the findings.

The secondary data is cited from popular and reliable sources such as official websites of the Vietnamese government or official organizations and the extant literature, for example, the Vietnamese Ministry of Industry and Trade, Vietnam Textile and Apparel Association, General Statistics Office of Vietnam; General Department of Vietnam Customs. These websites provide the data and analyze both the general picture and the real situations of the Vietnamese apparel industry. Furthermore, the worldwide popular websites from official organizations have been made effective use of, namely the sources of data from World Trade Organization, World Bank, World Development Indicator, IMF Data and Statistics.

4. Results and Discussion

According to the information from the author's interviews with Bavina Company, *"before deciding to establish this company, I had experiences of studying in Japan and working for a Japanese apparel firm. During that time, I accumulated the know-how and knowledge of production and management, especially establishing a network with Japanese buyers, thus enabling easier access to the lead firms in Japan"* the president of Bavina answered..

During the first stage, the company focused on apparel production under CMT contracts on the order basis from foreign buyers. However, the firm is currently conducting production under CMT, FOB and ODM contracts, especially ODM contracts for the domestic market and OBM for its own brand. The reasons for this successful upgrade is that *according to the president, "the firm is equipped with modern facilities and machines from Japan; moreover, the skilled employees are also trained by Japanese experts, leading to a high productivity and labor-efficient use"*. Moreover, this company has every intention of building other plants in rural areas, the outskirts of Ho Chi Minh City and in surrounding provinces in order to make use of the cheap labor resource. In terms of technology transfer and technical training, the firm has enjoyed multiple benefits from the Japanese lead firm as a result of the joint venture. According to the manager, *"during the very first period of production time for the Japanese market, the Japanese lead firm sent the technicians to train Vietnamese engineers and a group of employees on site"*.

Regarding the business targets, this firm sets three explicit targets, including merchandising export garment, developing domestic apparel market and manufacturing high-class garment accessories. With the success of upgrading in the value chain, the firm has had the capacity of manufacturing exported garment parts and accessories of high quality, sophistication and various designs. Moreover, *"my firm is conducting the sale of materials and accessories not only to foreign markets but also for the domestic market, especially some*

subcontractors for the Japanese market, namely Tomiya Sumit Garment Export Factory, Nha Be Garment JSC, Binh Minh Garment JSC, Garmex Saigon JSC” answered the president. Besides, Bavina Company currently has its own brand for the domestic market and a plan to develop apparel products into the Japanese market through some e-platforms such as Amazon and Rakuten.

With reference to Tan Minh Company, during the period of time from 2006 to 2007, the Board of Chairman decided to relocate all factories to Quang Nam province, where both the cheap labor resource and land resource were available. *“One of the attractive points of this place is the policies for encouraging regional economic development”* the interviewee answered. With a view to cutting management costs and to avoiding strong competition in keeping and recruiting workers, new factories are set up in almost all laborers’ hometowns, which creates more jobs while enabling workers to stay with their families instead of travelling to Ho Chi Minh City. In addition, *the respondent added “all production activities are undertaken in-house, for instance, time consuming quality control and operation monitoring procedures. This firm also has enough capabilities to make finished products in obedience with specifications of subcontracts. However, the input for production is almost procured from foreign providers”*. The firm runs some product lines with different brand names, complying with the specifications and requirements from foreign buyers while the main product line for the local market is uniform only on an unusual order basis.

Only around 1% of product volume caters for the local market and the rest is for export. However, *“this firm is conducting R&D activities to prepare for switching to the local market under its own brand name because this market is accessible, profitable and growing”* answered the interviewee.

Thanks to ultimate cooperation with popular international buyers, the firm is boosting its products’ competitiveness and enlarging its export market. However, there is no technology transfer from these buyers, leading to the fact that this firm is still labor-intensive lacking in cutting edge technology.

Table 2: Development strategies of the two firms based on upgrading trajectories in the apparel value chain

Case	CMT (Cut, Make, Trim)	OEM (Original Equipment Manufacturing)	ODM (Original Design Manufacturing)	OBM (Original Design Manufacturing)
	- Manufacture on contractual basis and export to foreign markets	- Manufacture on an order basis - In charge of part of pre & post production (input, logistics, finance...)	- Conduct pre and post production for Japanese market - In collaboration with Japanese firms’ designs - Open retail stores	- Meanwhile in collaboration with Japanese designers to manufacture its own brand name products and

Bavina Company			for production-collaborated products and introduce its own brand name products into local market during the early time of market entry	accessories for export and local market. - In the long run: export clothes under its own brand name to foreign markets
Tan Minh Company	- Manufacture on contractual basis	- Manufacture on contractual basis - More active in backward preparation - Seek more buyers and broaden production scale	- Manufacture small orders for local market on an irregular basis - In the long run: have a plan to enter the local market in the future	

Source: The Author's Interview

Table 3: Operational-based physical productivity of two cases

	Number of plants	Number of workers	Number of products (pcs per month)	Operational-based physical productivity (pcs/a person per day)
Bavina Company	01	2.940	1.083.600	12.3
Tan Minh Company	07	200	220.000	36.7

Source: Author's Calculation

The first factor attributing to the successful process upgrading of Bavina compared to Tan Minh is the joint venture with the Japanese lead firm. “Around 34% of Bavina Company’s share is acquired by the Japanese lead firm, leading to the ultimate inter-dependence between the two firms. Thanks to this inter-firm collaboration, our company benefits from technology transfer, on-site training, production organization guidance, buyer connections and development strategies introduced by Japanese lead firms to acquire capabilities to serve both foreign markets and local markets at the same time” the president of Bavina revealed. When the firm was just founded, it only had the production capability for CMT contracts. However, since switching to the Japanese market with support of lead firms, the firm has advanced itself up to FOB, ODM production level for export products and even OBM production level for domestic market. Regarding design activities, Bavina Company also has got advice, consultancy from skilled Japanese designers. Meanwhile, Tan Ming Company, despite its long history, remains at the production level of CMT and FOB. Although this firm has various experiences of collaborating with foreign lead firms,

there exists no technical support from these international buyers. As a result of the difference in supplier-buyer relationship in the two cases, the table 3 shows a sharp contrast in productivity between these two cases with the level of operational-based physical productivity of Bavina around 3 times compared to that of Tan Minh.

Bavina Company currently holds production capability up to OBM compared to OEM of Tan Minh Company when switching to the local market. The main reason for this gap is that *“Bavina knows how to utilize its ultimate cooperation with the Japanese lead firm”*. Based on the information gained from the interviews with the managers of both companies, the big differences in both firms are the matter of technology transfer and business development strategies. When Bavina Company possessed production capacity under the OEM contracts for export, it started to have a plan to switch to the domestic market with garment products and accessories under its own brand name (OBM), given this market’s profitability and growth. Meanwhile, Tan Minh Company keeps maintaining CMT and OEM production for export and focusing on utilizing the cheap workforce. Although Bavina Company first had no knowledge and sales experience for local market, technical support and market, design consultancy from its lead firm made it rapidly outstanding compared to other local competitors of long history. Its production capability accelerated to the level of ODM in a short time and now up to the level of OBM production for the local market. The garment smiling curve by Goto (2012) adapted for local market-oriented businesses shows that the value-added according to difference in functions are most likely different in relative terms, conditional to market orientation. In the case of Bavina Company, this firm has reached OBM level in the sector of serving the local market and ODM production level for export. Although the upgrade from ODM to OBM within the local market is far easier compared to that in foreign markets, this is a chance for Bavina Company to speed up its production capability and enjoy the highest rate of value-added.

Through the comparison of these two cases, domestic market development strategy confirms its importance. The successful case of Bavina Company is supposed to clearly illustrate this argument from the perspectives of both reality and theory.

5. Conclusion and Implications

5.1 Conclusion

Vertical cooperation through joint venture and market diversification have major implications for apparel firms to gain upgrading. The market diversification, specifically domestic market entry strategy in this study, shows its efficiency and its outstanding benefits to garment manufacturers in functional upgrading, which also matches the research result of Staritz and Morris (2012). Contextually, the boom of Vietnam’s economy and the quickly increasing income makes the domestic market more appealing to both foreign investors and local firms (Goto, 2012). While continuous entry of new competitors, especially foreign firms, into the market is a threat, export suppliers are still struggling to upgrade themselves into more added-value stages in the apparel value chain (Goto, 2012). With export

experiences and technology transfer from lead firms, the strategy that export-oriented garment manufacturers switch to the local market is proper. Local customers with increasing income have greater and greater demand for products of high quality (Onyusheva & Kaewpradit, 2017), which is a chance of development for original exporters like the two cases. Moreover, this strategy serves not only the purpose of sales but also that of functional upgrading. In reality, Vietnamese suppliers have to face varied challenges to upgrade themselves when joining the global apparel value chain because of lead firms' control, therefore, the production levels of those firms often stay at CMT and OEM, which are labor-intensive but bring back the low rate of profits (Goto, 2012). Market diversification strategy, domestic market entry strategy in this study, brings those firms more chances for process upgrading.

On the other hand, process upgrading requires not only technology knowledge but also a huge amount of capital. In this case, vertical cooperation through the joint venture with a lead firm is an effective solution. Active cooperation (for instance through technology and transfer of knowledge) reduces transaction costs and creates trust (Casella & Rauch, 2002). The investment from lead firms along with high technology transfer seen as a dynamic and open integration process, enables local apparel firms to handle the dilemma (Kenta, 2007). Small suppliers do not have to tackle the challenges necessary for upgrading, such as activities and investments by themselves; instead, the lead firm actively supports them as a partner and profits from spillover and external effects (Brach & Kappel, 2009). With all these experiences, the local firms find it easy to manage themselves in the local market. In this market, they can develop their own brand name and prepare necessary backward linkages for further advancement.

5.2 Implications

From the comparative analysis of the two cases, the collaboration with lead firms and market diversification strategy show their importance in promoting apparel firms' production level to gain more added value. Adjusting collaboration with international buyers is a suggestion for textile manufacturers. By utilizing this linkage, firms can be updated with cutting edge technology in developed countries, creating the advantage of technology over other competitors in a short time. Not only is technology transfer achievable but specialist consultancy, such as design, marketing strategy, is also a matter of consideration. Moreover, market diversification is another implication for textile firms. Based on the statistics of the living standard of Vietnam, the domestic market is also a priority for market diversification. The advantages of local market knowledge enables firms to develop much more easily. Generally speaking, apparel manufacturers utilizing relationships with lead firms and having a proper market diversification strategy will have more chances to upgrade themselves.

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NON-LINEAR EFFECTS OF INSTITUTIONAL QUALITY ON ECONOMIC GROWTH: EVIDENCE FROM GMM MODEL

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Abstract

Economic growth has been an attractive topic. Exploring the source of growth is as challenging as Yali's question in a well-known book named Guns, Germs and Steel written by Diamond (1997). In this paper, with data from 71 countries in the period of 1986-2015, we employed GMM model and found that institutional quality plays a fundamental role in supporting support economic growth in the long run, in addition to traditional economic factors such as capital, labor, TFP, etc.. However, institutional quality only promotes economic growth when reaching a certain threshold. Hence, below this threshold, the improvement of institutional quality has a negative impact on economic growth.

Keywords: *institutional quality, economic growth, long-run, GMM.*

1. Introduction

Nobel Prize-winning economist Robert Lucas (1988, quoted by Perkins et al., 2013) once stated: “*Is there some action a government of India could take that would lead the Indian economy to grow like Indonesia’s or Egypt’s? If so, what exactly? If not, what is about the “nature of India” that makes it so? The consequences for human welfare involved in questions like these are simply staggering: Once one starts think about them it is hard to think of anything else*”. In addition to the significance of economic growth, Sumon Kuznets has emphasized on the importance of growth in the long run. Little change in annual growth rates creates a significant increase in national income over years. Long-term economic growth as described supports "convergence" proposition. In reality, the rise of Asian countries such as Korea, Japan, and Taiwan in the 1960-1990 period made great strides close to developed countries. In the group of developed countries themselves, other developed countries have also gradually caught up with the United States. Also, China is a growth-phenomenon worth learning after the end of the Cultural Revolution in 1978 when the average annual growth rate of up to 9.5%/year for a long time has helped the scale of the gross domestic product. The second largest nation in the world today.

For decades, economists have been eager to find the answer to the question of why do countries have strong levels of economic development while others have less? Economic theories continually point out factors that affect the level of countries' development. Accordingly, to achieve sustained gross domestic productivity growth, a wide range of conditions, including both direct and indirect ones, is essential.

Historically, economic theories have focused more on the factors that directly affect the level of economic development of a country (Diamond, 1997; Acemoglu & Robinson, 2012; Perkins *et al.*, 2015). As in the extended neoclassical growth model, the long-run value of GDP per capita is determined by investment (or capital accumulation), population growth, and human capital (Mankiw, Romer & Weil 1992). Later, economic theories have expanded neoclassical economics, adding indirect determinants such as geographical location, trade integration, *etc.* Particularly, new institutional economics deals with new institutional economics, takes a view at the quality of government institutions and policies as one of the other influence thing having an important impact on GDP per capita in the long run (Barro & Lee, 1994, North & Thomas, 1973). In this study, we will exploit data from 71 countries in the period 1986 - 2015 to analyze the impact of institutional quality on long-term economic growth, thereby, proposing some policy recommendations.

2. Literature Review

North and Thomas (1973) defined institutions as “rules”, which are formal constraints or implicit rules devised by humans to shape interactions in society. Formal institutions mainly refer to the constitution, statutes and well-defined rules of the government, codified and enforced by the state with its coercive power. Meanwhile, informal constraints include unwritten rules such as traditional values, norms, and rules, taboos based on ties and interpersonal relationships (Chong & Calderons, 2000). This study focuses only on the impact of formal rules, expressed through political stability and effective governance, on long-term economic growth.

On the one hand, economic theories show that institutional quality has a positive effect on GDP per capita. The new school of institutional economics emphasizes the critical role of equality scheme and objective institutions, stemming from the central role of accepting and protecting property rights and commercial contracts, allowing expand market exchange, investment and innovation across economic sectors and geographies at reasonable costs. Similarly, several studies (Shleifer and Vishny, 1991, Ehrlich and Lui, 1999) find evidence that controlling corruption has a positive effect on economic growth.

On the other hand, although supporting the main arguments of Shleifer and Vishny (1991), Bardhan (1997) argues that countries that characterized by pervasive and cumbersome regulations, corruption would be a factor improving the efficiency of administrative procedures and thereby promote growth. In addition, an increase in institutional quality, related to the introduction of new taxes, new restrictions on economic activities, or the requirement of stricter compliance with the rules and new regulations, would be possible to have a significant impact on the underground economy. For a large share of the shadow economy-countries as Latin American and Asian ones, Perera and Lee's study (2013) points out the initial negative impact of institutional quality on economic performance.

Experimentally, studies on the same topic have shown inconsistent results. For example, while Valeriani and Peluso (2011) showed positive relationship between

institutional quality and economic growth, Butkiewicz and Yanikkaya (2006) decomposed institutional quality into criterias and found that each would have diferent impact on economic growth. Specifically, if maintaining the rule of law that promotes growth, improving institutional quality has no effect on improving economic performance. The above two authors realized that the conclusion is sensitive to the sample of selected countries as well as to estimation techniques. Similarly, Teles (2007) found that the level of marginal effect of corruption on growth depends mainly on other institutional aspects. For instance, if a country experices only corruption in judiciary or officialdom, its economic growth would likely to be at a high rate, whereas, when these occur at the same time, the economy growth would be possible at lower levels. These findings suggests that the impact of institutional quality on economic growth would be imposible to be purely linear.

In general, the above theoretical and experimental studies support the hypothesis of each non-linear relationship between institutional quality and economic growth. These two variables can be correlated with each other in a U-shape. In early stages, since limited in level of quality institution, improving the quality of institutions have caused certain impacts on economic growth. As institutional quality crosses the threshold, improving institutional quality would have been a positive contribution on long-term economic performance.

3. Research Method

3.1. Model

The theory of conditional convergence states that each country has a steady state of output per capita. In the context of cross-country comparisons, after controlling variables that affect long-run equilibrium values, countries with high levels of output per capita would generally grow more slowly than countries with low output per capita. Consistent with production function, the dependent variable in the model, $DY_{i,t}$, is measured by GDP growth rate. The experimental model can be presented in the following abbreviated form:

$$DY_{i,t} = \beta_0 + \beta_1 \log(Y_{i,t}) + \beta_2 X_{i,t} + \varepsilon_{i,t} \tag{2}$$

Based on previous theoretical and empirical studies, the regression model allows the occurrence of single and squared variables of institutional quality. The reason is for establishing for testing procedure latter as follows:

$$DY_{i,t} = \beta_0 + \beta_1 \log(Y_{i,t}) + \beta_2 INS_{i,t} + \beta_3 INS_{i,t}^2 + \beta_4 X_{i,t} + \varepsilon_{i,t} \tag{3}$$

Institutional quality has a U-shaped non-linear relationship with economic growth when β_2 negative and β_3 positive and statistically significant. $X_{i,t}$ is the vector of variables that affect the long-run equilibrium level of GDP per capita. Representative set of explanatory variables, including capital investment, fertility rate, TFP, and human capital as primary growth factors. Other variables added to the model to control for geography, and integration

include: government spending, inflation rate, trade openness, FDI, growth rate of trade exchange rate (terms of trade), and geographic location. Dependent variables are carefully selected into the model following on economic development theories, avoiding the situation of adding irrelevant variables that drive endogenousness phenomenal. Besides, the additional dummy time variable is taken in the above model to control for normal shocks to GDP per capita growth in all countries.

3.2. Data

Model (3) is applied to panel data of 71 countries for the period 1986-2015. The data series are structured into six 5-year periods covering 1986-1990, 1991-1995, 1996-2000, 2001-2005, 2006-2010, and 2011-2015. The 5-year averaging is a transformation commonly found in long-term economic research, made with the goal of eliminating short-run variability of economic factors, as well as to meet the requirements of GMM estimates for large N and small T.

This research follows Kaufmann *et al.* (2010), defining institutional quality as “*the traditional and institutional values by which a country's authority is exercised*”. Institutional quality reflects the government's capacity to formulate and implement policy, control corruption, as well as how the government is selected and monitored, reflected in five dimensions, including: 1) democratic accountability, (2) government stability, (3) bureaucracy quality, (4) control of corruption, and (5) law and order. All five components of institutional quality are derived from ICGR data sources. We aggregate the five components of institutional quality into a weighted average overall index.

Research data is drawn from reputable sources, including World Bank's World Development Indicator (WDI) dataset (2020), Feenstra's Penn World Table version 9.1, and Robert Inklaar and Timmer (2015). The variables in the model are measured based on previous empirical studies with corresponding objectives, such as Rodrik (2002), Lee (2016), Gallup, Sachs and Mellinger (1999), Butkiewicz and Yanikkaya (2006). Specific measurements of variables in the model and data sources are presented in the table below.

Table 1. The variables in the model

Variable	Meaning	Details	Source of data
GDPpcg	GDP per capita growth	GDP per capita growth, % annually	WDI
GDPpc	GDP per capital	Natural Logarit real GDP per capital, PPP (price 2017)	WDI
Ins	Institutional quality	Average of 5 variables nominated to institutional	ICGR

Variable	Meaning	Details	Source of data
		quality: democratic accountability, government stability, bureaucracy quality, corruption control, law and order	
Cor	Corruption control	Corruption control quality	ICGR
TFP	Total Factor Productivity	Real TFP	PWT 9.1
FDI	Foreign Direct Investment	Foreign Direct Investment over GDP, %	WDI
lfer	Fertility rate	Natural Logarit average child over women	WDI
HC	Human Capital	Average schooling years plus returned numbers	PWT 9.1
Trade	Open tradeness	Export and Import over GDP, %	WDI
Gov	Government Expenditure	Government Expenditure over GDP, %	WDI
CF	Accumulated capital	Gross capital formation/GDP, %	WDI
INF	Inflation	Annual Inflation, %	WDI
TOTg	Growth in term of trade	Export price over Import price	PWT 9.1
Distance	Position	Natural Logarit of distance from a position to equator	

3.3. Estimation method

To solve the endogeneity problem that frequently occur in conventional OLS estimation method (Roodman, 2009), many estimation methods have been developed with the central role of using instrumental variables. Among them, GMM is one of the most commonly used estimators, allowing to overcome the difficulty of choosing instrumental variables and solving the endogenous problem.

For the purpose of researching the impact of institutional quality on economic growth, the two-step system GMM (two-step system GMM) estimate was chosen because of its effectiveness compared to *Different GMM* or *One step system GMM*. In addition, the error in the two-step regression model will be unreliable if it is not normalized. Therefore, we use

Windmeijer (2005) sample correction to estimate the robust standard error (robust standard error), and also adds a time dummy variable in the model to eliminate the correlation over time between countries family.

The robustness of the GMM estimate depends on the uncorrelated error assumption and the values of the instrumental variables used. Accordingly, the Hansen (1998) J-test helps to assess the problem of excessive instrumental variable usage. AR (2) test evaluates the second order series correlation in the model, thereby showing the quality of the instrumental variables used.

4. Results

4.1. Description

The two tables below show descriptive statistics and correlation matrices of the variables used in this article.

Table 2. Descriptive statistics of variables used in the model

Variable	Obs	Mean	Std	Min	Max
GDPpcg	538	2,26	3,16	-19,86	15,20
GDPpc	545	9,44	1,12	6,14	11,60
Ins	508	4,36	1,02	1,12	6,6
Cor	508	3,26	1,31	0,01	6
TFP	444	0,96	0,14	0,32	2,03
FDI	535	4,27	11,40	-1,90	222,00
lfer	558	0,83	0,46	0,14	2,03
HC	534	2,57	0,64	1,11	3,72
Trade	539	79,36	53,05	13,37	396,97
Gov	532	16,19	5,00	4,14	35,65
CF	536	24,27	6,13	10,03	47,67
INF	521	37,47	190,24	-0,44	2342,221
TOTg	465	1,91	7,43	-23,45	124,861
Distance	546	7,96	0,88	4,71	8,86

Table 3. The matrix of correlation among variables in the model

	GDPpcg	GDPpc	Ins	Cor	TFP	FDI	lfer	HC	Trade	Gov	CF	INF	TOTg	Distance
GDPpcg	1													
GDPpc	-0,03	1												
Ins	0,03	0,72	1											
TFP	0,63	0,01	0,04	-0,09	1									
FDI	0,08	0,12	0,13	0,02	0,01	1								
lfer	-0,16	-0,72	-0,59	-0,34	-0,21	-0,14	1							
HC	0,02	0,79	0,67	0,45	0,18	0,12	-0,78	1						
Trade	0,09	-0,33	0,26	0,12	0,04	0,43	-0,32	0,26	1					
Gov	-0,21	0,46	0,5	0,46	-0,07	0,06	-0,31	0,44	0,11	1				
CF	0,32	0,01	0,01	-0,08	0,19	0,04	-0,17	0,04	0,16	-0,07	1			
INF	-0,37	-0,09	0,14	-0,01	-0,12	-0,04	0,01	-0,03	-0,03	0,01	-0,02	1		
TOTg	-0,11	-0,08	-0,2	-0,14	-0,01	-0,01	0,04	-0,04	0,01	-0,08	0,02	-0,02	1	
Distance	-0,02	0,31	0,32	0,31	0,04	0,06	-0,36	0,33	-0,01	0,26	0,03	0,01	0,01	1

4.2. Regression results

This section reports the estimation results from the GMM model with the aim of finding out the factors affecting long-run economic growth. The panel data series includes 71 countries, structured into six five-year periods from 1986 to 2015.

Table 4. Regression results

Variable name	(1)	(2)
Lagged Dependent variable	0,148** (0,058)	0,232*** (0,062)
GDP per capita	-1,681* (0,887)	-1,301 (0,897)
Institutional quality	-6,502** (3,081)	
Institutional quality squared	0,728** (0,348)	
Corruption control		-2,911*** (0,868)
Corruption control squared		0,452*** (0,131)
TFP	1,645 (2,735)	2,279 (3,446)
Foreign Direct Investment	-0,005 (0,015)	-0,003 (0,015)
Fertility rate	-2,685** (1,066)	-3,105*** (1,130)
Human Capital	1,392* (0,739)	0,529 (0,707)
Open tradeness	0,003 (0,006)	0,002 (0,006)
Government Expenditure	-0,221***	0,239***

Variable name	(1)	(2)
	(0,080)	(0,072)
Capital Accumulation	0,229***	0,191***
	(0,078)	(0,072)
Inflation rate	-0,054*	-0,051*
	(0,029)	(0,027)
Growth of term of trade	0,111**	0,110*
	(0,054)	(0,058)
Distance	0,149	-0,119
	(0,265)	(0,279)
c	-	19,809**
		(7,646)
Time Variable	Yes	Yes
AR(2) p-value	0,169	0,114
Hansen P value	0,618	0,749

Note: ***, **, * significant at level of 1%, 5%, 10%. Robust standard deviation in *brake*

First column in the table 4 shows the regression results of model (3) with institutional quality as measured by the unweighted mean of 5 variables namely democratic accountability, government stability, bureaucracy quality, corruption control, law and order. The negative estimator of the first explanatory variable after the lagged dependent variable, the natural logarithm of GDP per capita at the beginning of each period, exhibits a strong conditional convergence effect. The estimated rate of conditional convergence is 1.68% per year, indicating that a country with a GDP per capita at about a quarter of another country's will tend to grow 1.16% faster than another richer countries ($= 1.68 \cdot \ln(2)$), assuming similar long-run GDP per capita levels.

The institutional quality factor has a non-linear relationship with economic growth. The correlation coefficient of the institutional quality variable and its square is negative and positive, respectively, with both coefficients being statistically significant. The direction of the correlation coefficient of institutional quality and its square shows that GDP per capita growth rate will decrease with institutional reform at a low level of institutional quality, but will increase with governance efficiency when the country has maintained a certain level of institutional quality. The study further implements the Lind-Mehlum U-test to clarify the existence of a U-shaped relationship. The results confirm a non-linear correlation between institutional quality and economic growth, with p. -value is at 0.038 and the cut-off value is 4.46. This result implies that for countries with institutional quality below the threshold of 4.46 (such as Vietnam at around 4.11), *reform* could have a negative impact on economic growth in early stages. In the later period, when economic actors have adapted to *Doi moi*, the improvement of state management efficiency will be the fundamental for economic growth.

Table 5: Lind – Mehlum test

	(1)	(2)
<i>Lower bound</i>		
Slope	-4,870	-3,002
p>/t/	0,019	0,000
<i>Upper bound</i>		
Slope	3,114	2,393
p>/t/	0,038	0,010
<i>SLM test</i>		
t-value	1,80	2,36
p>/t/	0,038	0,0105

Column 2 in Table 5. shows the estimate of model (3) when replacing the variable of institutional quality with the variable controlling for inflation. The estimated coefficients are the same as in column (1), showing a non-linear relationship between inflation control and GDP per capita growth.

Other factors

Over the 30-year period from 1986, traditional factors such as investment and human capital continued to play an important role in promoting economic efficiency. Investment rates (or capital accumulation rates) and human capital have a positive and statistically significant effect on growth. Meanwhile, the natural logarithmic value of the birth rate is negative and statistically significant, showing that family planning has a positive effect on economic growth. The TFP growth rate, if used as a substitute for the real TFP value, would have a positive and statistically significant effect on economic growth. These results are consistent with previous studies.

The high growth rate of trade exchange rate has a strong and positive impact on economic growth. An unexpected point is, although the rate of international trade integration has a positive effect, it is statistically insignificant with growth. Note that, foreign trade policy, is measured in terms of relative economic openness (total import and export as a percentage of GDP), hence, it does not clearly reflect an increase in the absolute value of imports and exports, nor does it capture other aspects of imports and exports that can have an impact on economic growth, such as trade diversification.

The role of geography has not been proven in the research model shown in a positive but not statistically significant regression coefficient. If in previous studies, geographical location is an important exogenous variable affecting economic growth (the most famous is the study of Diamond (1997) and a group of scholars Gallup, Sachs, and Mellinger (1999)),

recent studies seem to ignore this factor. The research model found no evidence of a statistically significant relationship between geographic location and GDP per capita, even when other geographically related variables were used, such as the dummy landlock (countries with or without a coastline) or climatic characteristics (temperate, mediterranean, tropical, *etc.*). This could be explained that geographical location plays an important role in the creation of human capital and asset capital in the early stages of world economic history, in the later period, factors such as science, technology, biomedicine and high globalization may have obscured the influence of geography in explaining growth performance across countries.

The inflation rate has been a negative effect on long-term economic growth with a significance level of less than 10%. Inflation erodes purchasing power and public confidence in the economy. This has been found from many previous studies, implying that inflation stability will be good for economic growth. For countries with high economic openness, a large world price shock makes the possibility of importing high inflation. Macro-stability in general and inflation in particular is an important goal for many countries with large economic openness like Vietnam.

Government spending has a negative effect on long-run economic growth at the 1% significance level. This reflects Government spending is not good for long-term economic growth. The relationship between government spending and economic growth varies between regression models depending on the time and space context. Government spending that is not well managed is harmful to growth and vice versa. However, if the market is free to regulate, without the participation of the government, market failures such as information asymmetry, negative externalities, shortage of goods for public purposes will occur.

5. Conclusion

Long-term economic growth plays a critical role. Although economic growth has been unlikely to lead to economic development since it depends on the quality of growth, for developing countries, maintaining economic growth is important in improving the level of economic growth. life and it is the means to economic development or to increase “freedom” for people (Sen, 1980). Developing countries without rapid economic growth are left behind. The study shows the importance of institutions for long-term economic growth through a panel data model collected from 71 countries in the period 1986-2015. In addition to traditional factors such as capital accumulation, labor have an influence on long-term economic growth, the evidence for geographical factors becomes less convincing compared to previous studies. This shows that geography is no longer destiny. With good institutions as the foundation, especially those that support economic growth and encourage innovation, can help economic growth in the long run. However, the model implies that institutional quality and growth are U-shaped, whereby developing countries may need to sacrifice growth in the face of low initial institutional quality promotion. Ultimately, well institutions could only be fundamental for long-term economic growth, improving product productivity still take a

direct function. This, in turn, requires active industrial policies on the part of countries. This is also the subject of further expansion of this study in the future.

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THE IMPACT OF EVFTA ON VIETNAM'S RICE EXPORTS

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Abstract

In the context of global economic integration, participation in free trade agreements (FTAs) will become an important factor contributing to promoting Vietnam's economic development, in which the EU – Vietnam Free Trade Agreement (EVFTA) is considered as one of the strongest opening level ever. To examine the impact of EVFTA on Vietnam's rice exports, the study employs the SMART model with the context before and after the preferential tax rate of 0% and the method of gathering secondary data. The findings imply that the EVFTA will greatly promote Vietnam's rice export business. To be more specific, when the tax rate is reduced to 0%, the rice export value increases to \$7,890 (thousand USD), or a 13.87 percent increase. In terms of added value, exporting to Germany will help Vietnam the most with a total value of \$5,657 (thousand USD). The findings of this study may provide policy recommendations to assist Vietnam's rice export industry in taking advantage of the potential presented by EVFTA.

Keywords: EVFTA, Rice, Export, Vietnam.

1. Introduction

Participation in free trade agreements (FTAs) has become an important factor in promoting countries' economic development in the context of global economic integration. The EVFTA was proposed and developed in the context of Vietnam's and the EU's increasing bilateral relationship, particularly in the areas of economics and trade. The EVFTA was established in October 2010 when the Vietnamese Prime Minister and the EU President agreed to begin negotiations. The EVFTA was approved by the European Council on March 30, 2020, after ten years of discussions. The EVFTA was ratified by the Vietnamese National Assembly on June 8, 2020. The EVFTA go into force on August 1, 2020. The Agreement is made up of 17 chapters, two protocols, and a number of memorandums of understanding, with the following topics at the forefront: trade in goods (including general provisions and commitments to open markets), rules of origin, customs and trade facilitation, food hygiene and safety measures (SPS), technical trade barriers (TBT), investment, services commerce (including general regulations and commitments to open markets), trade remedies, competition, state-owned companies, government procurement, intellectual property, trade and sustainable development, cooperation and capacity building, legal concerns, institutional theory. The EU will reduce import tariffs on approximately 85.6 percent of tariff lines, or 70.3 percent of Vietnam's export turnover to the EU, as soon as the Agreement takes effect. The

EU will reduce import taxes on 99.2 percent of tariff lines, or 99.7 percent of Vietnam's export turnover, after seven years from the date of the Agreement's come into force. The EU promises to provide Vietnam a tariff quota with a 0% import tax within the quota for the remaining 0.3 percent of export turnover.

EVFTA provides Vietnam with an opportunity to enhance its economic structure, labor structure, institutions, business environment, competitiveness, and take use of investment capital, technology, expertise, and management expertise to create more jobs in the country. For Vietnamese agricultural products, the EVFTA "opens a large door" to Europe. After 3-5 years, the EU would reduce the tax rate on rice products to zero percent and grant Vietnam a quota of 80,000 tons of rice each year (including 30,000 tons of milled rice, 20,000 tons of unmilled rice and 30,000 tons of fragrant rice). The EU, in particular, will liberalize broken rice totally (this commitment helps Vietnam to export an estimated 100,000 tons to the EU annually). In the face of many new situations from the EVFTA, opportunities, and challenges exist in parallel, it is extremely important to analyze different scenarios at each time and should be considered specifically for each industry.

EVFTA is one of the strongest free trade agreements ever, with high criteria encompassing many elements. Participating in EVFTA provides Vietnam with several benefits and prospects, and is expected to have a positive impact on commerce, particularly rice exports. Previous research on the impact of the EVFTA on two-way commerce between Vietnam and the EU, including rice exports, has been conducted. These studies, however, were conducted before the agreement took effect, and the data has not been updated. Therefore, the authors chose this study to update the most recent data while also using the SMART model to estimate the impact of EVFTA on Vietnam's rice exports to EU countries using six HS codes (HS100610-HS100640). The findings of this study will demonstrate the influence of the EVFTA on Vietnam's rice exports to EU nations, giving a scientific foundation for managers and enterprises to implement suitable strategies to maximize the benefits of the agreement for Vietnam's rice exports.

2. Literature review

2.1.. Researchs on the impact of free trade agreements on Vietnam's exports

FTA formation is currently an unavoidable trend in the integration and growth process that countries cannot neglect. Free trade agreements provide countries with tremendous economic development prospects, but they also present domestic businesses with certain competitive hurdles. As a result, measuring the impact of FTAs is critical, as it aids governments in proactively assessing their economic consequences so that reasonable policies can be implemented to take advantage of the opportunities and benefits that these FTAs provide. Along with the excitement around Vietnam's participation in FTAs, there have been numerous studies conducted on FTAs and the impact of each FTA on Vietnam when it participates, including:

According to Nguyen Tien Dung (2011), who examined "The Impact of ASEAN-Korea Trade Area on Vietnam's Trade," an increase in foreign investment capital can provide considerable benefits in addition to trade liberalization benefits. To realize the potential benefits of the AKFTA, Vietnam must continue to strengthen its infrastructure and investment environment, as well as cultivate a competent workforce. In his paper "Vietnam-Chile Free Trade Agreement: Potential and Challenges for Vietnam," Nguyen Tien Hoang (2017) indicates that VCFTA provides enormous opportunities for Vietnamese exporters, such as reaching new markets and expanding consumer products exports, which is Vietnam's strength. However, there are numerous challenges that must be overcome, the majority of which derive from the low competitiveness of Vietnamese exports and variations in the Chilean market.

Authors Ha Van Hoi (2012) and Nguyen Thi Oanh (2019) look at the benefits and drawbacks of Vietnam joining the CPTPP free trade agreement, claiming that it will expand export potential, particularly for agricultural and garment items. It does, however, confront numerous hurdles and challenges, including copyright and origin issues. The simulation results of Nguyen Thanh Tung (2015) demonstrate that TPP will have a detrimental impact on the overall livestock business. Competition from non-TPP countries will have the greatest impact on the meat business. Meanwhile, competition in the local market will benefit domestic consumers more.

Using an extended gravity model, Vu Bach Diep, Nguyen Thi Phuong Thao, and Ngo Hoai Thu (2018) examined factors affecting Vietnam's products exports to the EU market from 2005 to 2017. The results of gravity model estimation show that the factors: GDP, population, institutional quality, and WTO accession have a positive impact on export volume. Meanwhile, other factors such as geographical distance, technological distance show the opposite effect. The "history" factor is observed to have a negative impact but is not statistically significant. Vu Thanh Huong and Nguyen Thi Minh Phuong (2016) used trade indicators to examine the EU-Vietnam Free Trade Agreement's sectoral impact. The study has divided industries into groups for consideration based on the impact of EVFTA and shows the following research results: In the period 2001-2015, Vietnam's export and import turnover with the EU were both steadily increased. The trade relationship between Vietnam and the EU is mainly interdisciplinary due to the large gap between the two parties in terms of import and export structure, comparative advantage, and export specialization. Particularly in the machinery and equipment industry, intra-industry trade takes place at a high level. Do Thi Hoa Nha, Nguyen Thi Oanh, and Ngo Hoai Thu (2019) examined Vietnam's export activity to the EU market from 2008 to 2016. Based on analyzing the current status of export activities, achieved results, limitations, and causes, the study has proposed several solutions to boost Vietnam's exports to this market in the coming period. The recommendations mainly focus on: improving the competitive advantage of products; promoting the export of Vietnamese products with high comparative advantage; strengthening trade promotion activities, expanding distribution channels; effectively dealing with trade remedies of the EU market,

and increasing access to information about the EU market and EVFTA commitments. Meanwhile, much other research has also tried to evaluate the EVFTA's influence on Vietnam's export products, such as Vu Thanh Huong (2016), Nghiem Xuan Khoat and Laura Mariana CISMAS (2019), Le Thi Thu Trang (2015), Vo Thanh Thu, et al. (2018), etc.

Do Thi Hoa Nha and Nguyen Thi Thu Ha (2019) deployed extended gravity models and array data to investigate the factors affecting the export of agricultural products from Vietnam and developing countries to the EU and highly developed markets from 2005 to 2017. The study used gravity model and panel data for the period 2005-2017 to analyze the factors affecting the export of Vietnamese agricultural products to the EU market. The obtained outcomes show that the factors of GDP per capita, population, institutional quality, and WTO accession have a positive impact. Meanwhile, other factors of geographical distance, technological distance has a negative harms impact on agricultural exports. Do Thi Hoa Nha and Ma Thi Huyen Nga (2017) describe the current state of Vietnam's agricultural exports to the EU market from 2005 to 2015, as well as examine the EVFTA's main commitments directly related to Vietnam's agricultural export activities to the EU market.

Free trade agreements such as the CPTPP and the EVFTA are expected to benefit Vietnam in general. Vietnam will profit considerably from tax reduction for export items, particularly in essential commodities like textiles, footwear, seafood, and agricultural products.

There have been numerous international and domestic studies on FTAs. However, EVFTA studies are primarily conducted while the EVFTA has not yet entered into force, commitments have not been made public, and the impact of tariff and non-tariff barriers reduction has not been fully assessed. After the EVFTA went into effect, there seems not to be many studies, particularly on the effects of the EVFTA on Vietnam's rice exports to EU countries.

2.2. Several methods were used to assess the impact of a free trade agreement on a country's exports

The period before and after the agreement enters into force is commonly separated into two stages when researching an agreement. We normally analyze the potential effects of the agreement in phase 1 before it enters into force; at this stage, the policy may alter in the future. As a result, we anticipate the opportunities, benefits, and obstacles that the agreement may bring in order to design solutions to maximize the agreement's benefits. In the period after the agreement comes into force, the policy has been officially implemented, we evaluate the actual impact that the agreement brings after a period of joining the agreement. This phase's assessment aims to review and check the set goals, as well as identify problems so that solutions can be found quickly. Many authors, such as Monteagudo and Watanuki (2002), Muhammad Aamir Khan et al. (2018), Philip D. Adams (2005), have used the CGE general equilibrium model to assess the impact of an FTA on a country's exports. These authors Josefina Monteagudo (2002), L. Sheng (2018) (Muhammad Aamir Khan et al. (2018), Philip

D. Adams (2005) used the CGE general equilibrium model to assess the effects of an FTA on a country's exports. Vu Bach Diep, Nguyen Thi Phuong Thao, and Ngo Hoai Thu (2018) apply an extended gravity model to investigate the factors affecting Vietnam's products exports to the EU market in the period 2005-2017. With the same tools, particularly extended gravity models and panel data, Do Thi Hoa Nha and Nguyen Thi Thu Ha (2019) study the factors affecting agricultural exports of Vietnam and developing countries to the EU and highly developed markets from 2005 to 2016. In his paper "The impact of free trade agreements on international agricultural trade: a gravity application on the dairy product trade and the ASEAN-CHINA-FTA," Henning Schaak (2015) utilizes a gravity model to examine the effects of the ASEAN-China -FTA on international commerce of dairy products. Trade indicators are used by Le Thi Thu Trang (2015), Vu Thanh Huong, and Nguyen Thi Minh Phuong (2016) to examine the impact of EVFTA on specific industries. Vu Thanh Huong (2016), Vo Thanh Thu et al. (2018) use the SMART model. The input data for the SMART model is simpler than for the CGE and gravity models, which allows for a better assessment of the effects of tax changes on trade creation values and trade diversion. Another benefit of the approach is that it allows you to concentrate on monitoring and making trade judgements for each industry and country, as well as offering comments and higher practical recommendations. As a result, the SMART model was chosen to analyze the impact of EVFTA on Vietnam's rice exports to the EU market in this study.

3. Research Methodology

3.1. Data specification

After conducting a review of domestic and foreign research papers in the same field, the study identifies, adjusts and supplements observations to suit the research context of Vietnam. The impact of EVFTA on Vietnam's rice export turnover is analyzed by comparing the situation of Vietnam's rice exports before and after the signing of the EU – Vietnam free trade agreement.

Accordingly, secondary data on the value of Vietnam's rice export turnover, namely the export volume of commodity code HS1006, to the countries of the European Union (EU27) in the period 2010 – 2020 is collected from sources such as the General Department of Vietnam Customs, World Bank data bank and Integrated Trade Intelligence Portal (WTO). In addition, secondary data used to assess the status of Vietnam's rice exports are collected from reports of the General Statistics Office of Vietnam, the Ministry of Finance, and Vietnambiz from 2010 to 2020.

With the SMART model, the study uses the latest updated data in 2019, and the results are calculated assuming a tax rate of 0% after 3-5 years.

3.2. Data analysis methodology

SMART model is a market analysis model developed in the database "World Integrated Trade Solutions - WITS", then used in combination with other databases on trade and tariffs of World Bank as well as of businesses to perform commercial simulations.

This model is used to estimate the effects on trade due to changes in tariffs. SMART allows analysis and results of changes in trade flows such as import and export turnover, trade creation and diversion; changes in world prices and tax revenue. The model allows assessing the impact of an FTA at the level of highly disaggregated products (Admed, 2010), specifically up to the 6-digit HS level.

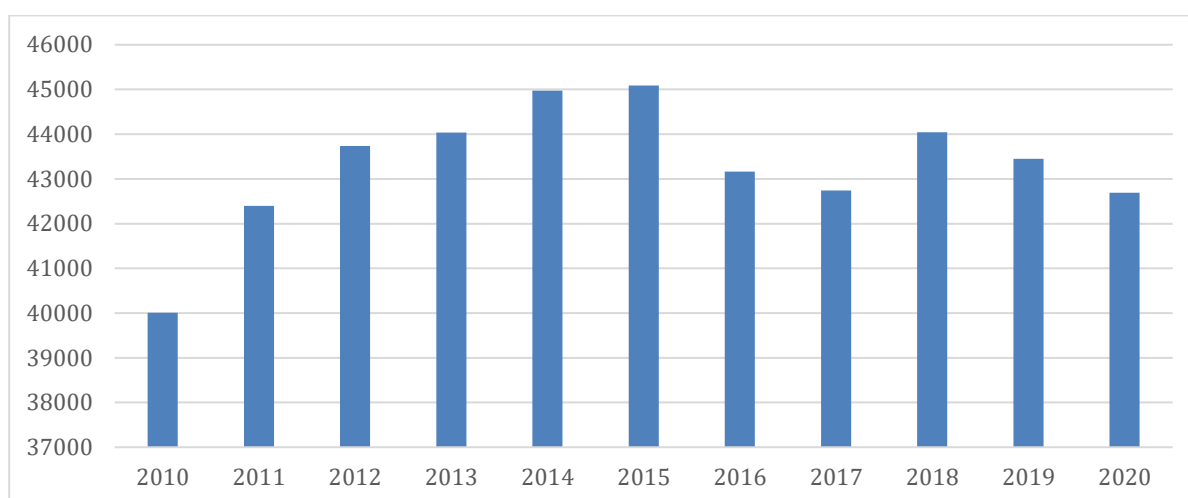
The SMART model requires three input parameters: (1) elasticity of import demand; (2) elasticity of import substitution and (3) elasticity of export supply. These elasticities are based on three important assumptions: (1) the import demand assumption proposed by Armington (Armington, 1969); (2) the two-stage consumer optimization process, and (3) the assumption of infinite elasticity of export supply. SMART establishes the assumption that for a given good, nations will compete to export to another market. The extent to which each country reacts in terms of its exports to changes in prices is the elasticity of export supply. The SMART model assumes that the elasticity of export supply is infinite, that is, the export supply curve is horizontal and at a given price, one country can export an infinite amount of that good to another country. This paper uses the default value of the SMART model with an export supply elasticity of 99, and the value of the substitution elasticity imposed for all goods set at 1.5. The outputs of the SMART model aim to answer the following questions: (i) How does the EVFTA affect Vietnam's rice exports?; (ii) What policy recommendations do the research outcomes provide to help the Government and businesses make the most of opportunities and at the same time overcome limitations created by the Agreement?; and (iii) What is the most appropriateness of the research model (SMART model) used by the study?

4. Research outcomes

4.1. Actual production and export of rice from Vietnam

Overall, Vietnam's total rice production during the research period increases from 40,005.6 thousand tons at the beginning (2010) to 42,690.0 thousand tons at the end of this period (2020), although the fluctuation is unevenly over the years. Specifically, in the period from 2010 to 2015, Vietnam's rice production tends to increase gradually over the years, from 40,005.6 thousand tons (2010) to 45,091 thousand tons (2015). 2015 is also the year with the highest rice production. The remaining period from 2015 to 2020, rice production fluctuates and tends to decrease in general. 2018, 2019 and 2020 are three consecutive years that Vietnam's rice production decreases by 1356 thousand tons from 44,046 thousand tons (2018) to 42690 thousand tons (2020).

Figure 1: Total rice production of Vietnam in period 2010-2020



Source: General Statistics Office of Vietnam and Vietnambiz

Vietnam's rice export volume fluctuates during the period 2010-2020, this fluctuation is presented in Table 1 as following.

Table 1: Vietnam's rice exports volume and value from 2010 to 2020

Year	Rice exports value (Million USD)	Rice exports volume (Thousand ton)
2010	3249.5	6893
2011	3651.0**	7116.3
2012	3673.7	8017.1
2013	2922.7	6587.1
2014	2935.2	6331.4
2015	2796.3	6582.2
2016	2159	4809.3
2017	2633.5	5818.5
2018	3060.2	6107.2
2019	2805.4	6340.0*
2020	3070.0*	6150.0*

*: data compiled from source Vietnambiz, **: data compiled from the Ministry of Finance

Source: General Statistics Office of Vietnam, Ministry of Finance and Vietnambiz

The highest export volume is in 2012 with 8017.1 thousand tons. In the period 2010 - 2012, the value and volume of rice exports tend to increase gradually and relatively steadily

from 6893 thousand tons (US\$3249.5) to 8017.1 thousand tons (US\$3673.7). In the period 2012 - 2016, the volume of rice exports fluctuate and decrease to 4809.3 thousand tons (US\$2159) in 2016. The next period from 2016 to 2019, Vietnam's rice export output has recovery trend, increasing again from 4809.3 thousand tons in 2016 to 6340.0 thousand tons in 2019. By 2020, although the rice export volume only reaches 6150 thousand tons, still 3.5% lower than in 2019 because of ensuring national food security, but the export value increases by 9.4%.

The volume and value of rice exports from Vietnam to the EU countries, on the other hand, are presented separately in Table 2 below.

Table 2. Vietnam's rice exports volume and value to the EU from 2010 to 2020

Year	Rice exports value (USD)	Rice exports volume (Ton)
2010	7,826,195	17,186
2011	14,526,859	27,728
2012	19,044,440	42,402
2013	23,637,668	56,355
2014	13,651,652	26,272
2015	9,266,741	19,163
2016	8,006,205	17,339
2017	3,928,614	8,495
2018	5,552,006	9,623
2019	10,682,392	19,870
2020	12,868,968	23,724

Source: General Statistics Office of Vietnam, Ministry of Finance and Vietnambiz

The data in Table 2 shows that Vietnam's rice export volume to the EU from 2010 to 2020 has a significant difference. Specifically, from 2010 to 2013, rice production continuously increased sharply from 17,186 tons of rice (2010) to 56,355 tons (2013) (about 3.28 times increase). Therefore, the export value in the period 2010-2013 increased, from 2010 to 2013 tripled. In the period 2014 - 2018, the output and value of Vietnam's rice exports to the EU both decreased, from 13,651,652 tons, down sharply to 5,552,006 tons (approximately 2.46 times decrease). After that, it tends to increase again in 2019 and 2020 due to the positive impact of the EVFTA agreement.

According to data from the Ministry of Industry and Trade, in 2019 Vietnam's rice exports to the EU is relatively low, only about 20,000 tons, worth 10.7 million USD.

Meanwhile, the EU's average rice consumption is very large, estimated at 2.5 million tons/year in the period 2016-2020.

According to statistics from the General Department of Customs, Vietnam exports to the EU market about 100,000 tons of rice per year. With the commitments discussed in the EVFTA, the EU gives Vietnam a quota of 80,000 tons of all kinds. At the same time, the EU also allows complete liberalization of broken rice, helping Vietnam to export up to 100,000 tons of broken rice to the EU annually. For rice products, the EU will bring the tax rate to 0% after a certain schedule. Vietnamese rice exported to Europe also has positive signs when the price of Vietnamese rice exported to the EU market has increased from 80-200 USD/ton, depending on the type compared to the price before the EVFTA entered into force. Vietnam's rice exporters all have access to opportunities from EVFTA when there are continuous activities to expand exports to the EU market.

Currently, the usual absolute tax rate per ton for broken rice (HS100640) is around 65 EUR or 17.84%. The Ministry of Planning and Investment states that rice is a commodity that benefits a lot from the EVFTA Agreement. Vietnam's rice export turnover to the EU is forecasted to increase by 65% by 2025. However, besides the above advantages, Vietnamese rice when exported to the EU also encounters many challenges. Firstly, EU consumers are familiar with rice products from Cambodia, Thailand, Myanmar. Secondly, the EU is a very strict market in terms of quality standards, pesticide residues, etc. The next challenge that needs to be mentioned is the reputation of Vietnamese rice exporting companies is not really high.

4.2. Assessing the impact of the EVFTA on Vietnam's rice exports – Results from the SMART model

In this study, the assessment of the impact of the EVFTA on Vietnam's rice exports is based on the scenario when the tax rate reaches 0%. The results are aggregated after using the SMART model with 26 EU countries (except Luxembourg because the data on the model has not been updated).

Table 3: Overview of changes in Vietnam's rice exports to EVFTA countries

Content	Value (Thousand USD)
Initial export value	48.993
Export value when tax is 0%	56.883
Total export value changes	7.890
Trade creation	2.572
Trade diversion	5.318

Content	Value (Thousand USD)
Export increase (%)	13.87
Trade creation value/Total export value change (%)	32.60

Source: Compiled by author from SMART model results

When the rice tariff is 0%, the expected export value reached 56,883 million USD, up 13.87% compared to the initial export value. This proves the positive impact of joining the EVFTA agreement on Vietnam's rice products. In addition, the results of Table 3 also show that Vietnam's rice exports will generate USD 2,572 thousand in trade creation value, as well as USD 5,318 thousand in trade diversion value. This increase in export turnover can be explained by two main reasons: First, Vietnam's rice price is often lower than that of other countries; Second, when the export tax is reduced, it will further reduce the price of Vietnamese rice, improving the competitiveness of Vietnamese rice in replacing goods of the importing country (creating trade) as well as goods from other countries. another country (trade diversion).

Table 4: Change in Vietnam's rice exports by country

No.	Country	Total change in exports (thousand USD)	Share of total change in exports (%)	Growth rate (%)
1	Germany	5.657	74.94	15.60
2	France	0.03	0.04	16.66
3	Finland	0.41	5.43	16.20
4	Netherlands	1.461	19.58	14.52
5	Sweden	0.017	0.01	16.04
6	Total	7.548	100.00	15.41

Source: Compiled by author from SMART model results

According to the results obtained from the SMART model in Table 4, in terms of countries, Vietnam will benefit the most from exports to Germany and the Netherlands when the total proportion of exports to these two countries account for 94.52 % of total export value. On the other hand, France and Sweden are the two markets where Vietnam benefits the

least when the rice export tax rate is 0%. This is consistent with the fact that these are countries with low demand for rice from Vietnam, so the export value is not large.

Table 5: Impact of EVFTA on trade creation and trade diversion

Country	Trade Creation Value (Thousand USD)	Total trade creation rate (%)	Total trade impact (thousand USD)	Trade Diversion Value (Thousand USD)	Ratio of total trade creation to total trade impact (%)
Germany	2.126	74.02	5.657	2.126	37.58
France	0.001	0.04	0.003	0.002	33.33
Finland	0.148	5.31	0.41	0.262	36.10
Netherlands	0.591	20.57	1.461	0.871	40.45
Sweden	0.006	0.06	0.017	0.011	35.29
Total	2.872	100	7.548	4.676	38.05

Source: Compiled by author from SMART model results

The results from Table 5 show that the trade diversion value reaches 4,676 thousand USD while the trade creation value is 2,872 thousand USD. These data indicate that the increase in rice exports from Vietnam to EU countries is largely due to the increased competitiveness of Vietnam rice price in comparison with other countries in EU when the EVFTA take effect and the export tax rate is reduced to 0%. Germany, the Netherlands, and Finland are the countries with the largest share of trade creation with 74.02%, 20.57%, and 5.31%, respectively.

Table 6: Countries most affected by EVFTA

No.	Country	Trade Diversion Value (Thousand USD)
1	Cambodia	-1.644
2	India	-1.194
3	Thailand	-0.744
4	Japan	-0.181
5	Turkey	-0.095

Source: Compiled by author from SMART model results

Cambodia is the country most affected by this agreement due to trade diversion value of -1,644 thousand USD. The following positions are India, Thailand, Japan and Turkey with the value of -1,194,000 USD, -0.744 thousand USD, -0.181 thousand USD and -0.095 thousand USD respectively. In this list, all 5 countries are major rice exporters in the world.

5. Conclusions

The study uses the SMART model to assess the effects of the EVFTA, particularly the tariff reduction on Vietnamese rice exports, on factors such as proportion, development speed, impact, trade creation, and trade diversion. The model's simulation results revealed that removing rice tariffs will result in an increase in Vietnam's rice exports to the EU, with an estimated added value of \$7,890 (thousand USD). This is one of the most compelling evidences of EVFTA's enormous potential for Vietnam's rice export industry. This finding could lead to policy recommendations to help Vietnam's rice export industry maximize the benefits of the EVFTA. Specifically as follows: Firstly, the Government needs to increase communication activities and disseminate EVFTA's regulations on administrative procedures and standards for exported rice. Second, businesses need to actively learn, and strictly enforce the provisions of the EVFTA. Third, businesses need to improve production capacity, focus on investing in improving product quality, creating higher value. At the same time, they also need to develop production and business strategies aimed at targeting customers and identifying competitors.

However, the study has certain drawbacks, including the following: first, The SMART model ignored economic interactions between different sectors in an economy, resource constraints such as labor, land, and capital, as well as resource mobility across sectors in the economy (Karingi et al., 2005); second, despite the use of the SMART model, the scenario only relates to exports and one rice product. Future research may be able to address the issues mentioned by this study.

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TAX COMPETITION IN THE GLOBALIZATION CONTEXT: EMPIRICAL EVIDENCE IN ASEAN COUNTRIES

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Abstract

This study examines the effect of globalization and tax competition on tax revenue in Southeast Asian countries. Figures show the sign of tax competition in Southeast Asian countries. We evaluate the effects of tax competition on tax revenues of Southeast Asian countries with the globalization KOF index. The analysis shows interdependence among the tax revenues of Southeast Asian countries in the context of economic integration. Meanwhile, empirical results imply the positive effect of tax competition on tax revenues of Southeast Asian countries in the period 1999-2019. Based on these findings, the paper proposed recommendations for the tax policies in Southeast Asia in a globalized world.

Keywords: *Tax competition, Integration, ASEAN.*

1. Introduction

Tax competition has gradually been becoming an emerging topic of research in the context of economic integration. There are two main reasons that we studied the tax competition and its effects on the tax revenues of the Southeast Asian countries: (1) research gap and (2) Present situation.

Regarding the research gap, with the global integration, tax competition and its effect on national tax revenues are considered by several researchers; however, there is still controversial on this topic. On one hand, some papers state that tax competition has many positive effects (Mitchell, 2004; Razin & Sadka, 2012; Tiebout, 1956). A low income, capital gain, and sales taxes may enhance trades. This may not only decrease tax revenue but also increase the revenue by the value-added tax system (Edwards & Mitchell, 2008; Mitchell, 2004). Due to a pressure of tax competition, every country has to reform its tax regulations as well as rationalize government spending. This pressure stimulates both effective resource allocation and economic growth. Hence, these countries create more jobs and attract more domestic and foreign investments (Mitchell, 2004; Teather, 2002). On the other hand, Some scholars, however, indicate that the tax competition is detrimental in general. This trend pushed countries to reduce tax rates, leading to a race to the bottom, which undermines the government spending on social security (Oates, 1972; Weiner & Ault, 1998; Wilson & Wildasin, 2004; Zodrow & Mieszkowski, 1986).

Similarly, empirical studies also show conflicting findings. Some papers prove that the tax competition increases tax revenue (Garrett, 1995; Karkalakos & Makris, 2008; Quinn,

1997; Swank, 1998). The others have a converse opinion (Bretschger, 2010; Bretschger & Hettich, 2005; Egger, Pfaffermayr, & Winner, 2005; Winner, 2005).

For the present situation, it is necessary to study the tax competition in ASEAN countries. In 2015, there is a turning point of the economic integration process in both Southeast Asia and the world with the establishment of the ASEAN Economic Community – AEC (Lee & Fukunaga, 2014; Onyusheva, Thammashote, & Kot, 2018). Nevertheless, the figure shows the relationship between a development of tax competition through tax cuts (reducing tax rates to create tax advantages) and the FDI flows into Southeast Asia countries (Lee & Fukunaga, 2014). This, hence, brings several challenges for the countries whose high government spending in the area, such as Vietnam, Lao, and Indonesia.

Therefore, the paper examines the hypothesis that tax competition exists in Southeast Asia countries in the economic integration and evaluates its effects on tax revenues of these analyzed countries. This paper is organized as follows: Section 2 presents Literature Review; Section 3 is empirical model; Section 4 shows the results and discussion; and Section 5 is Conclusion.

2. Literature Review

2.1 Tax competition and tax harmonization

Tax competition occurs when a taxpayer reduces a tax burden by transferring capital and labor (immigrant) from one country having high tax rates to others having lower ones to reduce tax payment. Meanwhile, tax harmonization is established to guide the members in the area to set relative or similar tax rates even if a taxpayer work, save, consume and invest in other countries (Edwards & Mitchell, 2008; Mitchell, 2004). In fact, tax competition and tax harmonization play an important role in national tax policy and taxpayer behaviors. Both of them provide the fundamental orientations for tax policies in various countries.

Therefore, in some cases, they are mostly converse, forcing the government to choose either one. There are many scientific disputes about them for decades. Some posed that tax competition promotes economic growth (Mitchell, 2004; Razin & Sadka, 2012; Tiebout, 1956). On the other side, some indicate that tax competition is not beneficial and required tax harmonization in the area (Oates, 1972; Weiner & Ault, 1998; Wilson & Wildasin, 2004; Zodrow & Mieszkowski, 1986). The research of Tiebout (1956) and Oates (1972) are pioneering, forming the two main opposing arguments over tax competition and tax harmonization.

On the one side, Tiebout (1956) argues that everyone can choose only one community (or country) to live; while every country offers various public goods and tax regulations. Therefore, they will choose a country/community having the most advantaged tax system to live and work. This phenomenon is called “voted by their feet”, each individual flees the country with a high tax rate into others with a lower tax rate to gain the largest net profit after tax (Mitchell, 2004).

This phenomenon requires countries to cut tax in order to remain and attract factors of production, such as capital and labor (Edwards & Mitchell, 2008; Mitchell, 2004), but tax revenue is the main resource of government spending. To ensure sufficient revenue, the government has to execute both tax and government spending regulations effectively; therefore, tax harmonization is not essential (Tiebout, 1956). In short, Tiebout's theory supports free flows of factor inputs, such as capital and labor, and an independent tax system of each country. In general, the results of the competition are an award for countries having preferential tax rates and a loss for those remaining an ineffective fiscal policy, which boosts them to reform the policy properly (Mitchell, 2004; Razin & Sadka, 2012; Tiebout, 1956).

In fact, similar to other competitions, tax competition has several positive effects. Firstly, an individual may receive more net profit after tax due to a lower tax burden. More important, according to Mitchell (2004) and Curzon-Price (2008), the main positive effect of tax competition is to prevent waste of government spending. Because of individuals and investors always want to optimize their income/profit after tax and their profitable opportunities are not limited by physical boundaries, they will flee the countries imposing at a heavy tax rate. Although tax policy is merely one of the elements leading to tax competition, its direct impacts on investments and labor income are not overlooked. As mentioned above, heavy tax regulations and red tape make investors and workers (especially high-skilled workers) leave these countries and choose the better one. It is highly appreciated that a country can create a private sector's prosperity (Curzon-Price, 2008; Edwards & Mitchell, 2008).

At the macro level, low tax rates on income, investment, and consumption facilitate trades (Edwards & Mitchell, 2008; Mitchell, 2004). If the tax competition is healthy, everyone should be able to benefit from low tax rates. Due to pressure from tax competition, every country has to reform a more effective tax system and rationalize their government spending. The tax competition pressure not only stimulates better allocation of resources but also promotes economic development. Tax reforms based on the market spur economic growth and improve living standards for citizens. Then, these countries offer more jobs and attract more domestic and foreign investments (Mitchell, 2004; Teather, 2002).

On the other side, despite the positive effects of tax competition, it may also have negative impacts on economic efficiency in some cases. According to Oates (1972), it may cause ineffective low tax rates as government is not able to provide sufficient necessary public goods. These scholars against tax competition, hence, have a similar argument that: Tax competition on variable factors of production, such as capital and labor, may reduce the efficiency of providing public goods of the government, so tax harmonization is a good strategy (Oates, 1972; Sinn, 1997; Zodrow & Mieszkowski, 1986). These scholars mention a shortage of public goods is a result of the competition on reducing tax rates and attracting investment, which is called "race to the bottom". Because of tax competition, an incessant tax cut may widen the budget deficit, and then, government reduces spending on public goods below an optimization level. In addition, as government spending is not relatively decreased

by lowering tax rates, tax competition may worsen the fiscal deficit and public debt. In the case of reducing government spending, it is possible that these reductions are not appropriate. Tax competition, hence, causes tax degradation (Mitchell, 2004).

Some scholars also propose rules of tax harmonization to guarantee to offer sufficient public goods. Any negative effect of tax competition is a reason to impulse to coordinate tax harmonization among countries. In general, tax harmonization is defined as a process of adjusting the tax systems of different jurisdictions in pursuit of a common policy goal (Kopits & Kopits, 1992). According to tax harmonization theory, a taxpayer is able to gain benefits through tax policies if they are harmonized properly (Mitchell, 2004). All the while, governments are protected from the negative effects of tax competition. Besides, despite the fact that tax harmonization forms higher tax rates, the double taxation on investment is well controlled and restricted (Edwards & Mitchell, 2008; Mitchell, 2004).

There are not much empirical studies on tax competition, especially in developing world such as ASEAN countries. A brief study on the previous studies indicates two significant challenges in conducting empirical research about tax competition: (1) Limited relevant data and (2) There is not an official measure of tax competition available.

Due to the lack of relevant data, empirical research on tax competition often focuses on developed countries. Research of OECD (1998) focus on unfair tax competition among OECD member states as well as non-member states. The research points out many negative effects of tax competition, especially the creation of “tax havens” which enables many taxpayers to shift their incomes and avoid taxes. Mintz (2006) shows many negative effects of the uncompetitive tax policies of Canada, calling for the reform of the tax system in Canada. The research proposes a number of recommendations such as abolishing the tax on savings, scrapping the tax incentives for certain businesses, and reducing tax rates for income earned on interests, investment, and corporations. Altshuler and Goodspeed (2015) search for empirical evidence of tax competition between the USA and many European countries. The empirical results showed that European countries tend to compete with the USA on corporation taxes but there is no evidence to support that there were tax competitions among each other.

The second challenge is the lack of unification of methods to measure and quantify the level of tax competition. From the author’s understanding, there is not an official index to measure the tax competition level. Some recent studies measure the tax competition level through the globalization index because globalization is considered as a catalyst of tax competition (Bretschger, 2010; Bretschger & Hettich, 2005). Onaran and Boesch (2014) use the KOF Globalization index to evaluate the effects of tax competition on the average real tax rates at fifteen countries in the EU and thirteen countries in Central and Eastern Europe (CCE) between 1970 and 2007. Although no correlation between tax competition and capital tax rates or sale tax rates were established, the research shows a positive effect that tax competition has on income tax among the group of countries in the EU. For the countries in

the CCE, the research find a positive correlation between tax competition and capital tax, a negative correlation with sale tax and no correlation with income tax. Meanwhile, Ranjan and Gözgör (2018) study the effects of tax competition on tax policies using the Globalization index KOF in 149 countries between 1970 and 2015. The result shows that tax competition has a considerably negative effect on revenue of firms in the countries under study. Similarly, Öz-Yalaman, Sevinç, and Sevil (2019) uses the globalization index KOF to evaluate the effects of tax competition on the revenue of the corporation tax in 33 countries during the 1998-2016 period. The result shows an inverse relationship between tax competition and the revenue from corporation tax in this case.

2.2 Tax competition in ASEAN countries

As confirmed by ASEAN national leaders at the ASEAN annual summit meetings, the opportunity can only be realized if and only if member states “come together” to develop. Hence, member states proactively integrate into the regional economy, most notably demonstrated by establishing the ASEAN Economic Community (Lee & Fukunaga, 2014; Thanh et al., 2014).

ASEAN leaders have shaped the development route of AEC to become a commonwealth ASEAN economy which is highly competitive and goods, where investments can move freely and growth can be distributed equitably. According to the plan, member states are implementing free trade and free movement of investment which encourages more business and attracts more foreign investment (Chia, 2014).

Nevertheless, the problem with taxation is a significant barrier for the AEC to realize its full potential. One of the four components that make the AEC is establishing a common market and a common manufacturing base via: (1) free movement of goods; (2) free movement of services; (3) free movement of investment; (4) free movement of capital and (5) free movement of skilled workers (Chia, 2014; Lee & Fukunaga, 2014). However, ASEAN countries have maintained different taxation policies both in terms of rates and basis (Thanh et al., 2014).

Table 1: Tax rates of main taxes in ASEAN countries in 2019

	Income tax rates		Capital gain tax rates		Consumption tax rates (Value Added Tax, Goods and Services Tax)
	Coporate Income Tax	Personal Income Tax	Dividend	Interest	
Brunei	20 %	0 %	0 %	15 %	0 %
Cambodia	20 %	20 %	14 %	14 %	10 %
Thailand	20 %	35 %	10 %	15 %	10 %
Vietnam	20 %	35 %	0 %	5 %	10 %

Laos	24 %	24 %	10 %	10 %	10 %
Malaysia	24 %	26 %	0 %	15 %	6 %
Myanmar	25 %	25 % - 30 %	0 %	15 %	Service: 5 % Goods: 3 % - 100 %
Indonesia	25 %	30 %	20 %	20 %	10 %
Phillipines	30%	32 %	30 %	30 %	12 %

Source: ASEAN Country Tax Profiles (KPMG, 2019)

The above table shows a large difference between tax policies of different ASEAN countries. Generally speaking, the average corporate tax rate is about 23.1%, oscillates between 20% in Vietnam to 30% in the Philippines (not including Singapore). With respect to income tax, there is also a significant difference between these countries, e.g. Brunei at 0% and Vietnam and Thailand at 35%. This reflects a contrast in the tax policies in these countries. Similarly, tax rates applied to income from investment also vary. While many countries maintain a zero -percent tax rate, the Philippines and Indonesia maintain a high rates at 30% and 20% respectively.

For indirect taxes such as Value-added tax (VAT) and goods and services tax, most countries levy a 10% rate, though Myanmar levies a 100% rate on some specific goods.

Table 2: Trend lowering the corporate tax rates in some ASEAN countries.

Countries	2009	2010	2011	2012	2013	2014	2015
Thailand	30%	30%	30%	23%	20%	20%	20%
Philippines	30%	30%	30%	30%	30%	30%	30%
Indonesia	28%	25%	25%	25%	25%	25%	25%
Vietnam	25%	25%	25%	25%	25%	22%	22%

Countries	2016	2017	2018	2019
Thailand	20%	20%	20%	20%
Philippines	30%	30%	30%	30%
Indonesia	25%	25%	25%	25%
Vietnam	20%	20%	20%	20%

Source: Tax Foundation (2019)

The figure also shows that not only tax policies in member states differ but also tend to be competing against each other. The above table shows how corporate tax rates have been gradually decreased in some ASEAN countries in recent years. The trend is decreasing which signifies the tax competition to attract foreign investment. From 2009, Indonesia has started to gradually lower the corporate tax rates from 25%. Not to be out of the trend of the region, from 2014, Vietnam lowered its corporate tax rate to 22%, and in 2016 to 20%. Thailand also reduced its corporate tax rate to 23% in 2012. Similarly, other countries also lower their corporate tax rates.

In addition to lowering the corporate tax rates, these countries also bestow many tax breaks in order to attract more investment. For instance, in 2015, Thailand Investment Regulatory Commission passed a programme which extended the tax-free period to eight years and lowered the corporate tax rates to 10% for Thai firms and 0% for foreign subsidiaries (Dun & Bradstreet, 2018). Malaysia officially applied a 100% tax-break to firms for 10 years, allowing firms which met the criteria for doing business in information technology to borrow funds for research and development in order to attract investment in electronic and start-ups industries.

In summary, besides the positive effects such as tax-payers can retain a larger portion of their income, thus, encourage more investment, manufacturing and spending, tax competition also has negative effects such as causing fall in tax revenues which leads to government deficits in some countries, especially those with large public spending like Vietnam, Brunei and Cambodia.

Consequently, this paper will strive to achieve two things. First, it aims to test the hypothesis that there exists a trend in tax competition among ASEAN countries amid the international economic integration via the Diagnostic Test for cross-section dependence method. Second, the author will evaluate the effects of tax competition on tax revenue in the countries under study via the globalization indices.

3. Empirical model

In order to address the research objective, the paper expands the model of Bird, Martinez-Vazquez, and Torgler (2006) and Thanh et al. (2014) to study the effect of tax competition on the tax revenue at ASEAN countries between 1999 and 2019. The model has the following form:

$$TAXREV_{it} = \alpha_i + TAXCOMPETE_{it} + \sum_{k=1}^n \beta_k X_{it} + \varepsilon_{it}$$

In this model,

i signifies the country and *t* signifies time in years.

TAXREV represents the tax revenue as a percentage of GDP.

TAXCOMPETE is the level of tax competition, measured by the Globalization index KOF.

X_{it} is the collection of controlled variables including: Value of the agricultural industry (AGR); GDP per capita (GDPpc) and Population (POP).

To do the empirical test, the author collects the corresponding data to measure the variables described in the model in nine ASEAN countries: Brunei, Cambodia, Laos, Malaysia, Myanmar, Philippines, Indonesia, Thailand and Vietnam between 1999 and 2019 (excluding Singapore and Timor Leste). The data mostly originated from reliable sources of the World Bank, International Monetary (IMF), United Nations Development Programme (UNDP) and The Asian Development Bank (ADB). The KOF Globalization Index was collected from ETH Zurich.

4. Results and discussion

To examine the tax competition between ASEAN countries during the 1999-2019 period, the author employed the diagnostic test for cross-section dependence of Pesaran (2004), modified by De Hoyos and Sarafidis (2006). The result is presented in the table below:

Table 3 : Diagnostic Test for cross-section dependence

Variable	CD-test	Correlate
TAXREV	2.12**	0.047

(**): corresponds to the 5% significance level)

Source: Author's calculation.

The diagnostic test confirms there is cross-section dependence at 5% significance level. The result of this diagnostic test points to a correlation between the tax revenues between ASEAN countries and suggests the underlying tax competition between countries in the region.

To evaluate the effects of tax competition on the tax revenue in ASEAN countries between 1999 and 2019, the author employed the Fully Modified Ordinary Least Square (FMOLS) and Panel Dynamic Ordinary Least Square (PDOLS) methods. However, before conducting the FMOLS and PDOLS, the stationarity test and cointegration test must be carried out. The results of the stationarity test using the method of Levin, Lin, and Chu (2002) and the cointegration test using the method of Kao and Chiang (1999) showed a correlation between the variables in the model. The results are presented briefly below:

Table 4: The empirical results by FMOLS and DOLS

Dependent variable: TAXREV	FMOLS		DOLS	
	Coefficien t	P- value	Coefficien t	P-value
ARG	-0.595	0.000	-0.260	0.008
LNGDP	11.293	0.000	7.795	0.029
LNPOP	-23.693	0.000	-16.804	0.034
TAXCOMPETE	0.477	0.000	1.969	0.664

Source: Author's calculation.

The results estimated from the two methods show the compatibility of the signs and what is predicted by the theoretical framework. The GDP per capita has a positive effect on tax revenue in the countries under discussion. An increase in individual income leads to an increase in demand for goods and services. Higher-income also means higher spending capacity, thus, leads to a larger amount of tax revenue (Fox & Gurley, 2005). The value of the agricultural industry (AGR) has a negative effect on the tax revenue. Agriculture is a challenging industry to levy taxes against, hence, the larger the proportion of this industry in the national GDP, the more negative effect it has on the tax revenue as it usually enjoys favorable tax treatment (Le et al 2008; Thanh et al 2014). On the other hand, the fact that population (POP) has a negative effect on tax revenue reflects a limited tax management ability of many ASEAN countries (Dyrenge, Hanlon, & Maydew, 2008; Thanh et al., 2014).

In general, tax competition has a positive effect on tax revenue in the ASEAN countries during the 1999-2019 period. As a result, although there are doubts about whether tax competition is taking place, globalization has brought positive effects to the total tax revenue of ASEAN countries (Thanh et al., 2014). This process leads to the increase in goods, capital and skilled labour flows and through that increases the total tax revenue in these countries. In addition, the trend in tax competition forces ASEAN countries to reform their tax and spending policies to become more efficient.

5. Conclusion and policy implication

The author employs the Diagnostic test for cross-section dependence of Pesaran (2004), modified by De Hoyos and Sarafidis (2006) to test the hypothesis about tax competition among ASEAN countries between 1999 and 2019. In addition, the author also constructs a model to evaluate the effects of tax competition on the tax revenue in the countries under discussion. In this model, tax competition is quantified by the KOF globalization index. The result of the diagnostic test shows the existence of the correlation among tax revenues of ASEAN countries. There are also positive effects of tax competition on tax revenue in this case.

The policy implication of this research is quite clear: tax reform in ASEAN countries needs to be considered in the context of tax competition. Although the empirical results show the positive effect of tax competition on tax revenue, tax competition also brings negative effects if the competition is harmful. Harmful tax competition leads to concern about a “race to the bottom” which damages all member states, causes government deficit leads to fewer funds available for public services especially in countries with large government spending. Therefore, in the short term, there should be more discussions about tax reforms in regional conferences. In the long term, tax harmonization at a convergence and cooperation level may be the best option for ASEAN to begin political cooperation to design a better tax harmonization policy.

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AN OVERVIEW OF INTERNATIONAL TRADE, INVESTMENT AND PARTICIPATION OF VIETNAM IN THE GLOBAL VALUE CHAIN IN 2010 - 2020

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Abstract

In recent years, Vietnam has achieved impressive milestones in Vietnam's economy in general and main economic aspects such as international trade, international investment and participation in the Global value chain (GVC) in particular. However, besides impressive and encouraging achievements, Vietnam still faces certain inadequacies and challenges in developing the economy. By using secondary data collected from official sources, the article will provide an overview of Vietnam's economic development through a detailed analysis of the three aspects mentioned above; on that basis, suggest some opportunities and challenges for Vietnam in the coming time.

Keywords: *International trade, foreign direct investment, participation in Global value chain, Vietnam.*

1. Introduction

The years from 2010 to 2020 mark many development milestones of Vietnam's economy in general and main economic aspects such as international trade, international investment and participation in the Global value chain (GVC) in particular. Looking back at the growing process over the past 11 years, it can be seen that Vietnam has made great efforts to make a breakthrough in its economic progress. Specifically, import and export turnover increased impressively, maintaining a surplus in the trade balance in recent years. Furthermore, international investment, especially foreign direct investment (FDI), is increasing, making a key contribution to the country's economic growth. In addition, participation in GVC has brought many positive changes in the international environment.

A GVCs consists of a series of stages involved in producing a good or service, with each stage creating different value-added; each country participates in at least two different stages in GVCs (World Bank, 2020). Up to now, there has not been a clear consensus on the definition of GVC; therefore, this article will cite the definitions of GVC related to the research content. Firstly, forward GVC participation involves exporting goods and services that become inputs in the exports of other countries. It includes transactions in which a country's exports are not consumed in the importing country but are instead re-exported by that country as part of a good or service (indirect value-added) to a third country. Secondly, Backward GVC participation involves importing foreign inputs to produce goods and services for export. It is measured as the foreign content of exports (foreign value-added). Thirdly, Total GVC participation is the sum of the foreign value-added and

the indirect value added in export to a third country. And Finally, GVC intensity is a country's total GVC participation as a share of its total trade.

In the 1990s, information and communication technologies (ICTs) significantly reduced communication costs and stimulated multinational activities, promoting international trade in general and GVC trade in particular. As a result, GVC intensity during this time was rapidly increased (Amador and Cabral 2016). However, this intensity level decreased after the global financial crisis of 2008-2009; it has since considerably recovered, but until now has never been able to reach pre-crisis levels. Recently, GVC intensity has been flat or even trending downward. Moreover, the global dispersion of production has also decreased since 2011 (Timmer et al., 2016). Some explanations for the stagnation of GVCs are the saturation of possibilities for unbundling production; increasing risks and costs associated with trade and investment; increasing local capacity and local sourcing in some developing countries; automation-induced reshoring and nearshoring; and a global shift in demand away from goods towards services. However, it is also possible that the method of measuring the development of GVCs is limited and has not caught up with the actual growth rate, so the calculation is still lacking, leading to a low number of GVCs (World Bank, 2021).

GVCs, international trade and FDI are mutually reinforcing (World Bank, 2021). FDI has been the main driver of GVC expansion and international trade over the past few decades. The decisions of multinational corporations to disperse their production lines worldwide have spurred the increase and expansion of activities in GVC and international trade. In contrast, the last 10 years have seen a slowdown in GVC expansion associated with a decline in global FDI inflows and international flows, suggesting a strong link between the three terms. However, theories and empirical studies on the relationship between FDI, international trade and GVCs have only focused on recent years. These theories suggest a mutually reinforcing dynamic between FDI, international trade and GVC participation.

Numerous studies have empirically tested the relationship between FDI, international trade and GVCs participation. Buelens and Tirpák (2017) use the gravity model to identify a positive association between bilateral FDI and total trade. World Bank (2020) illustrates that FDI inflows play an important role in the extent of backward GVC participation shares and levels, especially in the manufacturing sector. The lack of foreign companies in the manufacturing sector is an important reason for the low GVC participation rate in sub-Saharan Africa. Countries that attract FDI in manufacturing may also reduce their exports of raw agricultural goods and services embodied in exports of resource intensive goods, thereby reducing GVC participation rates for these raw materials in the future (World Bank, 2020). FDI contributes to countries' GVC participation directly by integrating local firms into global production networks and providing higher quality inputs and services to local firms, generating widespread positive spillovers that expand host countries' GVC participation (World Bank, 2020). GVC participation, in turn, stimulates FDI flows. Martínez-Galán and Fontoura (2019) show that a country's degree of GVC participation contributed positively to bilateral FDI inflows in the 2000s.

Given the close relationship between FDI, international trade and GVCs, the article "*An overview of international trade, investment and participation of Vietnam in the global value chain in 2010 – 2020*" will provide a detailed analysis into the field of international trade, foreign direct investment and Vietnam's participation in GVC in 2010-2020 to assess the achievements and challenges that Vietnam has gained in recent years. On that basis, it will give some comments and suggestions on the opportunities and challenges of Vietnam in the coming time. The article will use secondary data collected from official sources to assess the overview of the development status of FDI, international trade and Vietnam's participation in the global value chain.

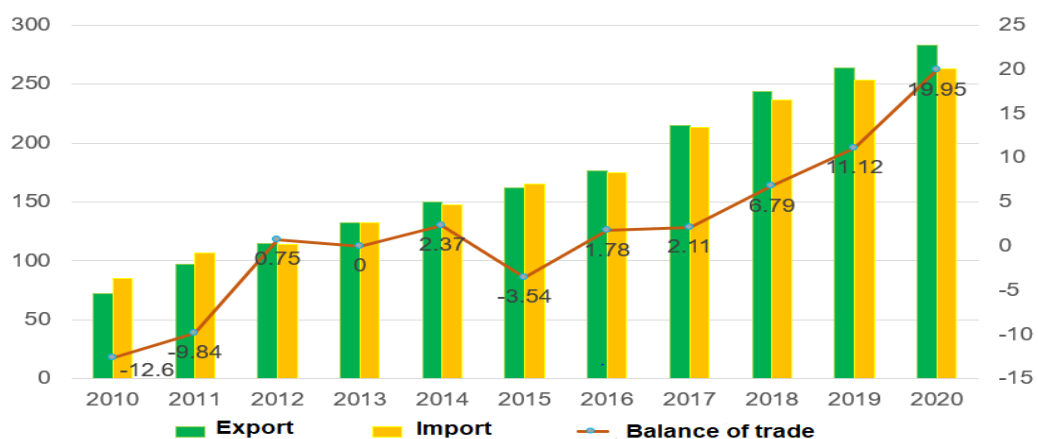
The structure of the article is distributed as follows: Part 2: Research on the development status of international trade in Vietnam from 2010 to 2020; Part 3: Clarifying the situation of FDI inflows into Vietnam in 2010-2020; Part 4: Understanding Vietnam's participation in GVCs; Part 5: Concluding and providing some opportunities and challenges for Vietnam in the near future.

2. Trade of Vietnam in 2010 – 2020

After the global financial crisis in 2008-2009, Vietnam's international trade quickly recovered and developed relatively stably over the years (Figure 1). Although in 2010 and 2011, Vietnam still witnessed deficits in the trade balance, in the following years, Vietnam's export turnover had a breakthrough compared to imports, resulted in reversing the trade balance. Since 2012, Vietnam's trade balance has started to reach a surplus, and from 2016 up to now, the figures are increasing significantly. The trade surplus in 2016 was 1.77 billion USD; in 2017 was 2.11 billion USD; in 2018 was 6.79 billion USD; in 2019 was 11.12 billion USD; and in 2020 was 19.95 billion USD which is the highest trade surplus of Vietnam’s history. The special thing is that although in 2020, most of the countries are negatively affected by the Covid 19 Pandemic, Vietnam still achieves positive growth in international trade. This achievement resulted from closed cooperation between the government, the business community, the solidarity and unanimity of the Vietnamese people to overcome this challenge.

Figure 1: Export-Import turnover and Trade balance of Vietnam in 2010 – 2020

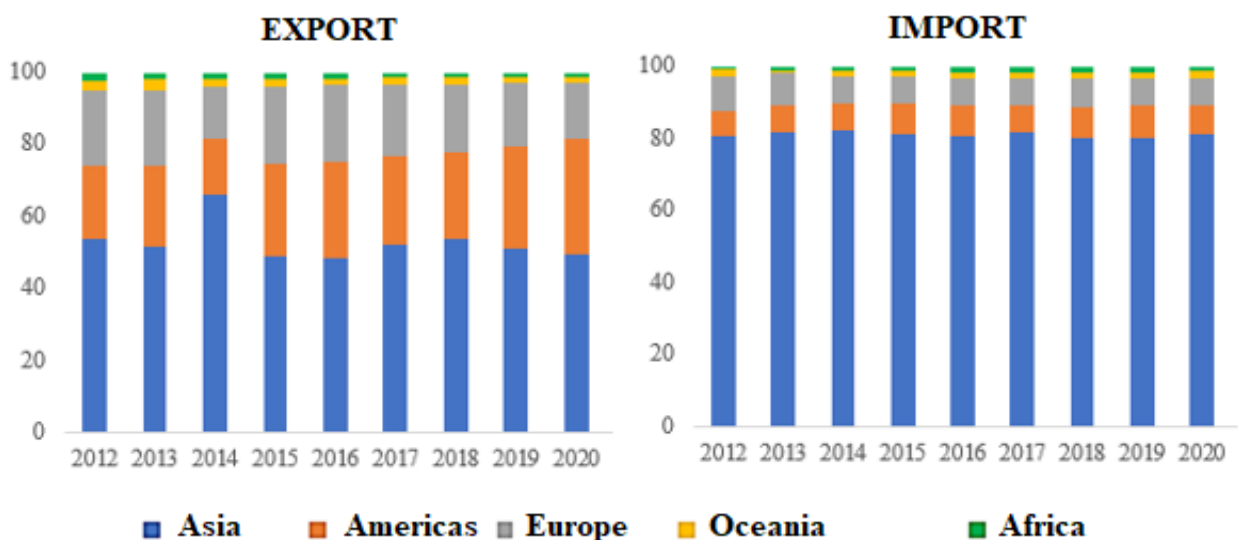
(Unit: Billion USD)



Source: General Department of Vietnam Customs, 2021

Regarding the structure of Vietnam's import-export market, Asia has always been the main counterpart of Vietnam's trading, accounting for more than 50% of the total exported value and about 80% of the imported value during 2012-2020 (Figure 2). The second trading partners of Vietnam are Europe and America, with proportions of about 20% and 10% of Vietnam's total trade turnover, respectively. Oceania and Africa account for tiny proportions of Vietnam's total imported and exported value, only about 1-2% in the whole period. The main national partner of Vietnam's international trade is China, Korea, Japan, the United States and the EU. Although Vietnam's two main export markets, Asia and the Americas, were heavily affected by the Covid-19 Pandemic, trading between Vietnam and these two continents has still grown relatively stable in the year 2020.

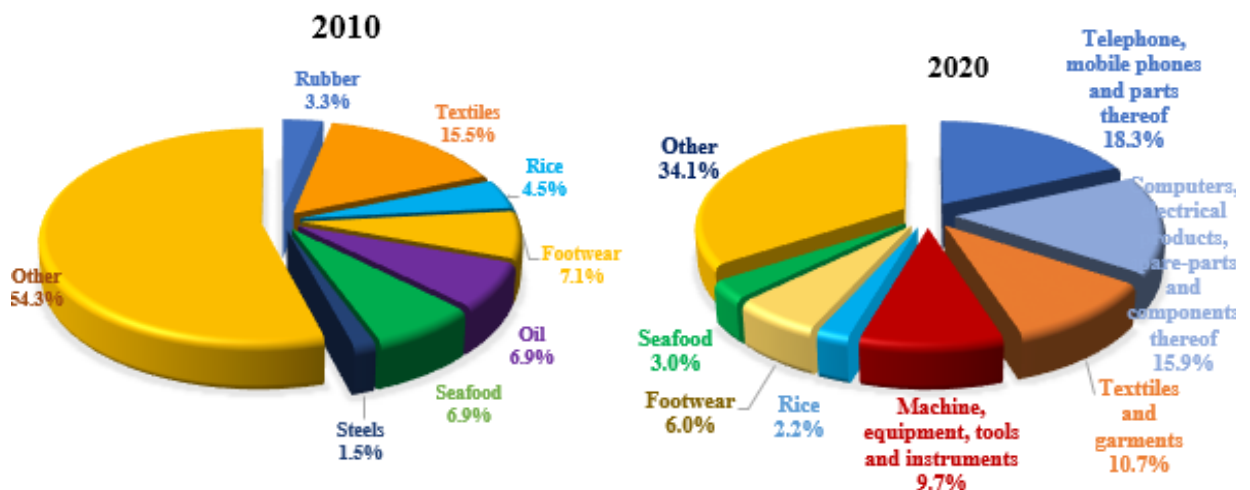
Figure 2: Vietnam's international trade with continents in the period 2012 - 2020



Source: General Department of Vietnam Customs, 2021

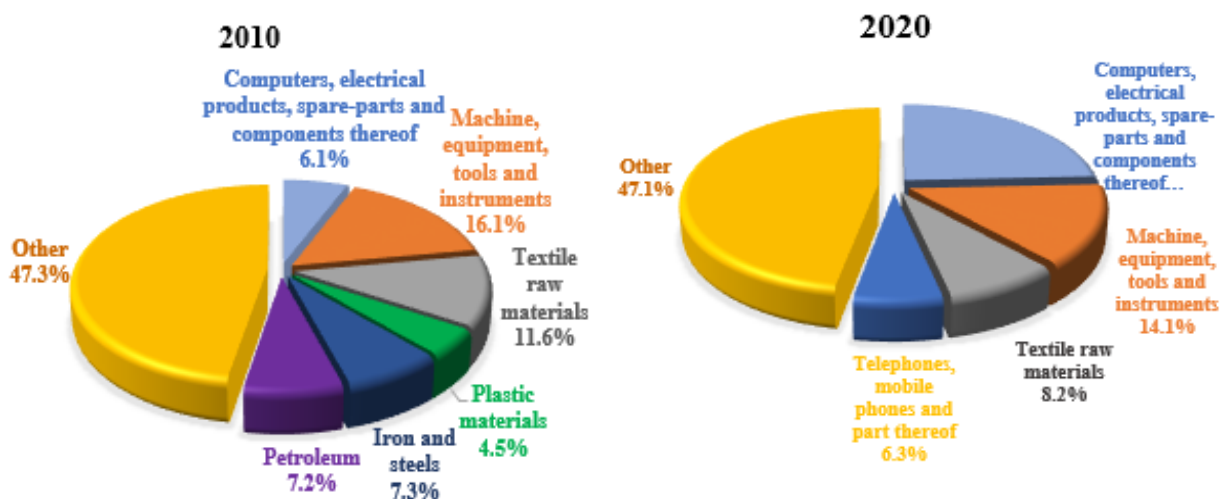
Regarding the structure of exported goods in Vietnam, comparing the proportions of the 10 main commodity groups between 2010 and 2020 shows a clear shifting trend (Figure 3 & 4). In 2010, Vietnam mainly exported materials and agricultural products such as textiles, footwear, rice, seafood, oil, rubber and steel. But by 2020, Vietnam tended to increase exports of higher technology products and reduce the proportion of agricultural sectors. Specifically, in 2020, the two items accounting for the largest exporting proportion are telephones, mobile phones and parts thereof, accounting for 18.3%; and computers, electrical products, spare-parts and components accounting for 15.9%, respectively; while rice accounted for only 2.2% and seafood was only 3% which was much lower than the level of 2010. As for the structure of imported goods, in the period 2010 - 2020, Vietnam has restricted the import of certain groups of raw materials such as petroleum and iron and steel but increased importing electronic components, machinery and equipment spare parts serving manufacturing industries. This is partly due to the underdevelopment of Vietnam's electronic supporting industries and significantly affects Vietnam's participation in electronic GVC.

Figure 3: Comparison of proportions of major exporting commodity groups in 2010 and 2020



Source: General Department of Vietnam Customs, 2021

Figure 4: Comparison of proportions of major importing commodity groups in 2010 and 2020



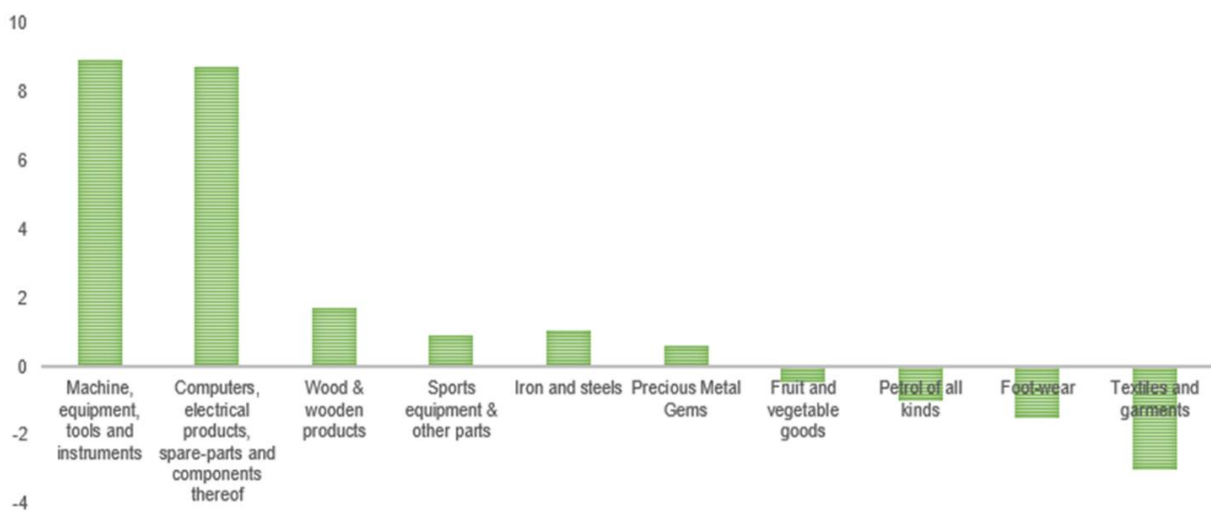
Source: General Department of Vietnam Customs, 2021

In terms of exporting value of some group of products in 2020 compared to 2019, in the year 2020, the total exporting value reached 282.65 billion USD, increased 7% compared to 2019 (Figure 5). In which commodity groups such as machines, equipment, tools, and instruments increased by 8.89 billion USD, equivalent to 48.6% higher; computers, electrical products, spare parts and components increased by 8.66 billion USD (go up 24.1%). Other commodity groups with high export growth rates in 2020 are wood and wood products (up 16.2%), iron and steel (up 25.1%),... Meanwhile, several commodity groups have sharp decreases in exporting value, such as textiles and garments, which went down to 3.02 billion USD, equivalent to a decrease of 9.2%; footwear went down to 1.52 billion USD (down 8.3%). The reduction of these commodities would be due to a decrease in the demand for the

global transportation of goods and passengers and a decrease in the import demand of most of Vietnam's major textile and footwear markets such as the US, EU, and Japan, South Korea. However, it can be seen that despite the complicated developments of the Covid-19 Pandemic, Vietnam still has a positive export growth. Especially the increase of electronic industrial products showed the industry's resilience and will act as a driving factor for the development of international trade in particular and increase the position of the Vietnamese economy in general.

Figure 5: Changes in export value of some commodity groups in 2020 compared to 2019

(Unit: billion USD)

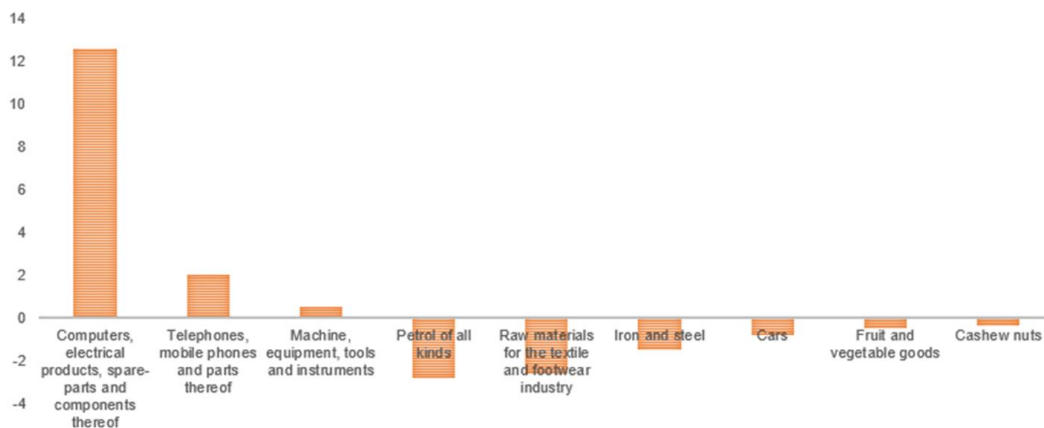


Source: General Department of Vietnam Customs, 2021

Regarding the importing value of some major commodity groups in 2020 compared to 2019, in 2020, the total imported value increased to 9.31 billion USD, corresponding to an increase of 3.7% compared to 2019 (Figure 6). In which, the groups with strong import growths included computers, electrical products, spare-parts and components thereof (up 24.6%); telephones, mobile phones and parts thereof (up 13.9%); plastic products (up 11.2%),.... Meanwhile, importing value of some goods group dropped sharply, such as petrol of all kinds; raw materials for the textile and garment industry, iron and steel; cars,....The cause of this decline is mainly due to the impact of the Covid-19 Pandemic that has reduced demand in travelling of people and goods.

Figure 6: Changes in import value of some commodity groups in 2020 compared to 2019

(Unit: billion USD)

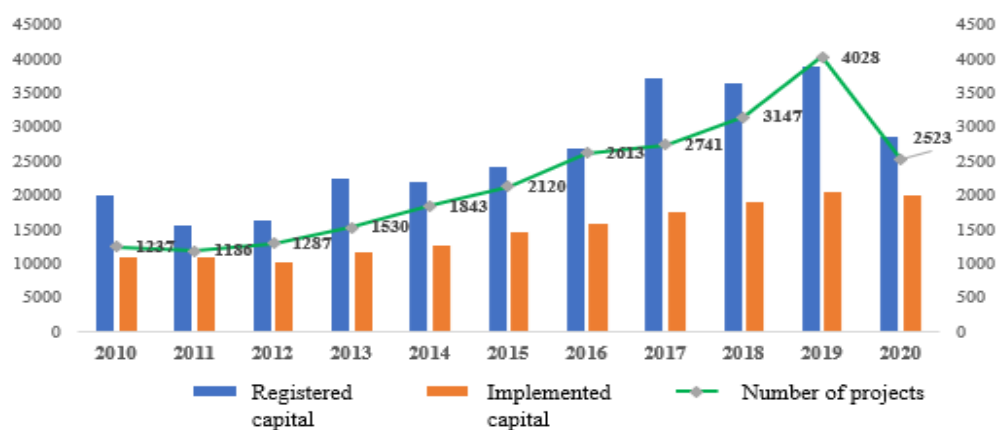


Source: General Department of Vietnam Customs, 2021

3. Foreign direct investment of Vietnam in 2010 – 2020

Since Vietnam joined the WTO up to now, foreign direct investment flows into Vietnam has always maintained a stable and impressive growth rate over the years until the outbreak of the COVID-19 Pandemic has changed the situation (Figure 7). In 2010, the total registered capital, implemented capital and number of projects in Vietnam respectively were 19,887 billion USD and 11.0 billion USD; but by 2019, these figures have reached the milestone and increased by about twice. Especially, the number of foreign investment projects in 2019 increased about 4 times compared to 2010. This achievement has shown the success and effectiveness of the national policies to attract foreign investment in recent years. However, by the end of 2019, the outbreak of the Covid-19 pandemic had strongly affected foreign investment flows into Vietnam. For the first time in eight years, Vietnam witnessed a decrease in FDI. Specifically, as of December 20, 2020, the total newly registered capital reached 28.53 billion USD, only occupied 75% compared to the same period in 2019. The implemented capital in 2020 is 19.98 billion USD, equaling 98% compared to the same period in 2019.

Figure 7: Number of projects, total registered capital and implemented capital of FDI into Vietnam in the period 2010 - 2020



Source: General Statistics Office, 2020 and Foreign Investment Agency, 2021

Regarding FDI attraction in Vietnam by partners, there are 112 countries and territories investing in Vietnam in 2020. Singapore leads with a total investment of nearly 9 billion USD, accounting for 31.5% of total investment capital in Vietnam; Korea ranked second with total investment capital of over 3.9 billion USD, accounting for 13.8% of total investment capital in Vietnam (Figure 8). China ranked third with total investment capital of 2.46 billion USD, accounting for 8.6% of total investment capital in Vietnam. Followed by Japan, Taiwan, Hong Kong,... Regarding FDI attraction by locations, 60 provinces and cities across the country are destinations for international investment in 2020. In which, Ho Chi Minh City is leading with a total registered capital of 4.63 billion USD, accounting for 15.3% of total investment capital (Figure 9). Bac Lieu ranked second with a large project worth 4 billion USD, accounting for 14% of the total registered investment capital. Hanoi ranked third with nearly 3.6 billion USD, accounting for 12.6% of total investment capital. Following are Ba Ria - Vung Tau, Binh Duong, Hai Phong,... Considering the number of new projects, Ho Chi Minh City still leads (950 projects); Hanoi ranked second (469 projects); Bac Ninh ranks third (153 projects),... Regarding FDI attraction by sectors in Vietnam, 19 sectors attract FDI. In which, the manufacturing processing sector leads the way with total investment capital of 13.6 billion USD, accounting for 47.7% of total registered investment capital (Figure 10). The production, electricity, gas, steam and air conditioning supply ranked second with a total investment capital of over 5.1 billion USD, accounting for 18% of the total registered investment capital. Next are real estate activities, wholesale and retail trade with a total registered capital of nearly 4.1 billion USD and over 1.6 billion USD. The rest are other sectors.

Figure 8: FDI attraction in vietnam by counterpart in 2020

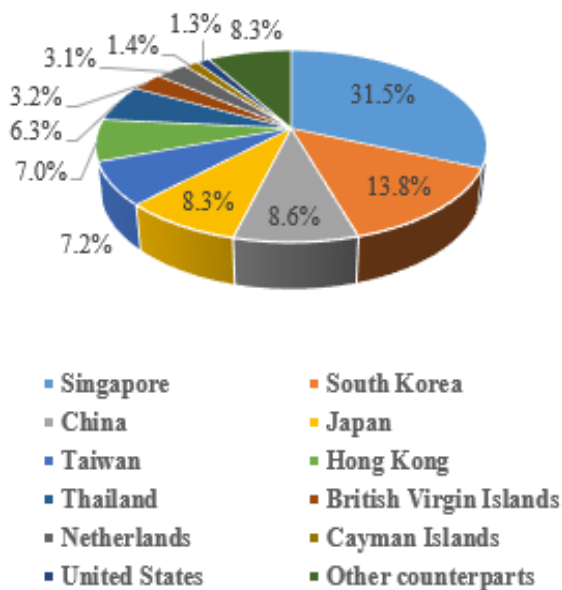
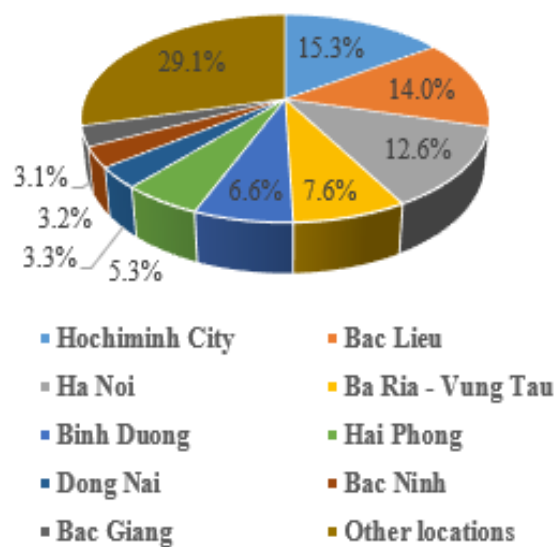
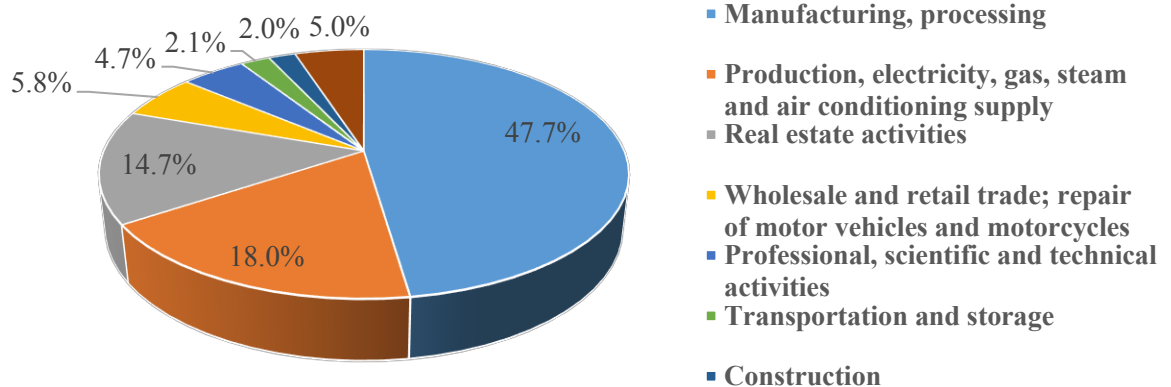


Figure 9: FDI attraction in vietnam by location in 2020



Source: Foreign Investment Agency, 2021

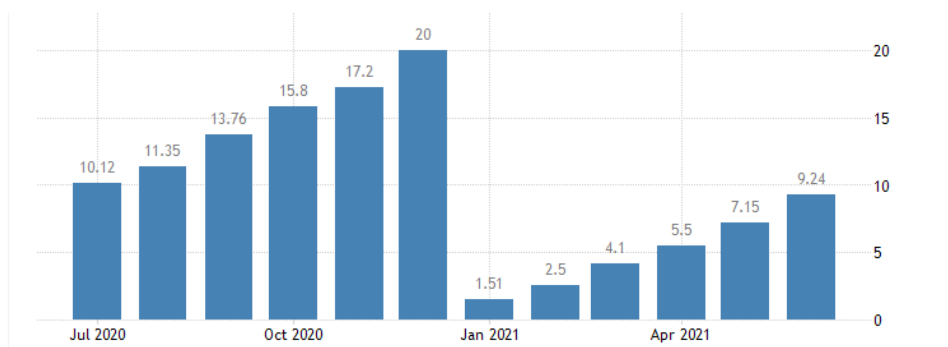
Figure 10: FDI attraction in Vietnam by sector in 2020



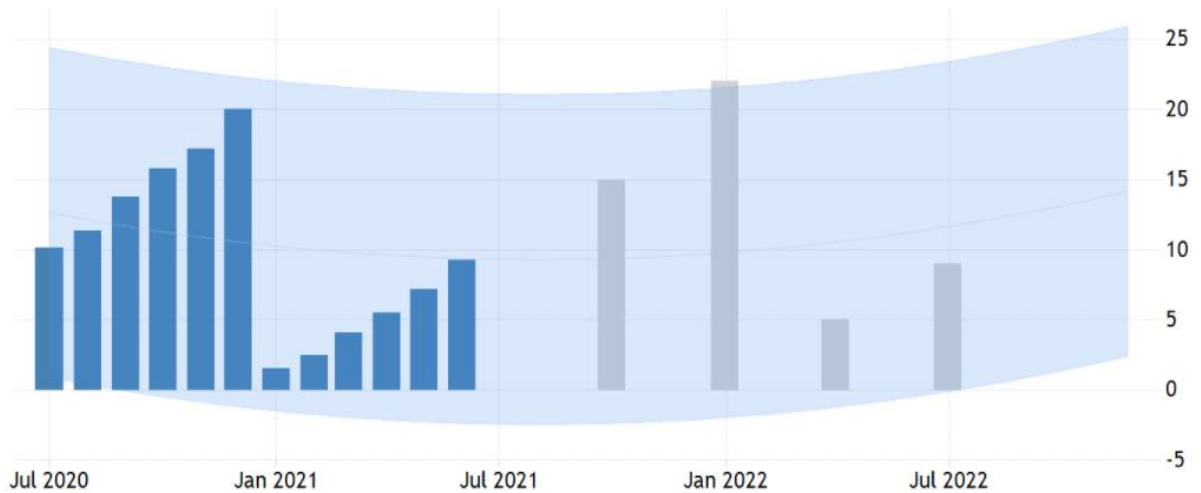
Source: Foreign Investment Agency, 2021

Predictions about the growth of FDI inflows to Vietnam, the prospect seems to still continue overcast in the near future. According to data of Tradingeconomics.com, although Vietnam viewed a slight increase in FDI inflow at the end of 2020, this effort could not be maintained when it once again recorded a sharp decline in early 2021 (Figure 11). In mid-2021, a fragile recovery was recorded in FDI inflow, but it only reached about 10% to the level before the sharp decline. The reason for this phenomenon is that at the beginning of 2021, the fourth wave of COVID-19 swept into Vietnam, which significantly affected the resilience of the economy in general and the ability to attract foreign investment into Vietnam in particular. The happenings of the COVID-19 Pandemic in Vietnam up to now is still very complicated, as the number of cases increases nationwide, especially in Ho Chi Minh City, is escalating day by day. With the current situation, the implementation of social distancing on a large scale, possibly nationwide, is likely to happen. If that becomes a reality, Vietnam's attractiveness to foreign investment inflows will be further weakened. It will be difficult even to maintain the current level of a weak recovery. According to the website Tradingeconomics.com, FDI inflows into Vietnam will continue to decline and may bottom out in the second half of 2021 (Figure 12). However, by 2022, FDI into Vietnam may record recovery and breakthrough, with the potential to achieve the same level of growth as before the 4th COVID-19 outbreak.

Figure 11: Vietnam Foreign Direct Investment



Source: Tradingeconomics.com/ Ministry of Planning and Investment, Vietnam, 2021

Figure 12 : Vietnam Foreign Direct Investment Forecast

Source: *Tradingeconomics.com/ Ministry of Planning and Investment, Vietnam, 2021*

4. Vietnam's participation in the global value chain

Vietnam's participation in GVC is based on two indicators: (i) GVC participation index and (ii) GVC position index.

Based on the analytical framework of Koopman et al. (2010), the measures of a country's Participation based on two components. The first one is backward linkage (BW) or participation in the downstream part of GVCs is based on the foreign value-added content present in a country's export product (FVA). The second is forward linkage (FW) or participation in the upstream part of GVCs is reflected in the domestic added value present in products exported to third countries (DVX). The two of them contribute to the country's total exports (EXP).

At the country level, the GVC participation index is calculated based on the formula:

$$GVC_Par = \frac{DVX}{EXP} + \frac{FVA}{EXP}$$

The position country in GVC is calculated based on the formula:

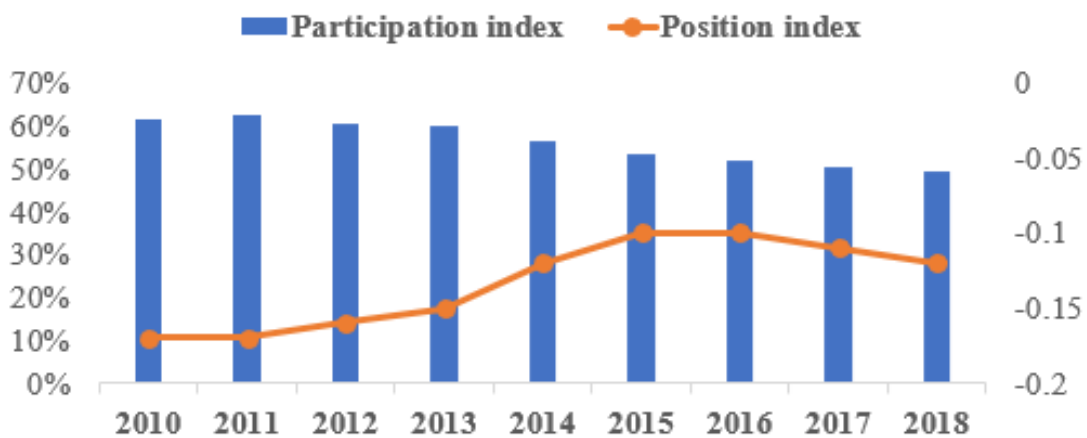
$$GVC_Pos = \ln\left(1 + \frac{DVX}{EXP}\right) - \ln\left(1 + \frac{FVA}{EXP}\right)$$

If $GVC_Pos < 0$, country located downstream of GVC; $GVC_pos > 0$, country located upstream of GVC.

Regarding Vietnam's position in GVC, during 2010-2018, Vietnam was located downstream of GVC, illustrated by a negative position index throughout the period (Figure 13). This said, Vietnam is mainly involved in the back-end activities of the chain, such as processing and assembling the final product, and can also do a little bit of product distribution to the final customer. Regarding Vietnam's participation in GVC, it shows that Vietnam is quite open and actively participates in GVC, with an average participation level of about 55%

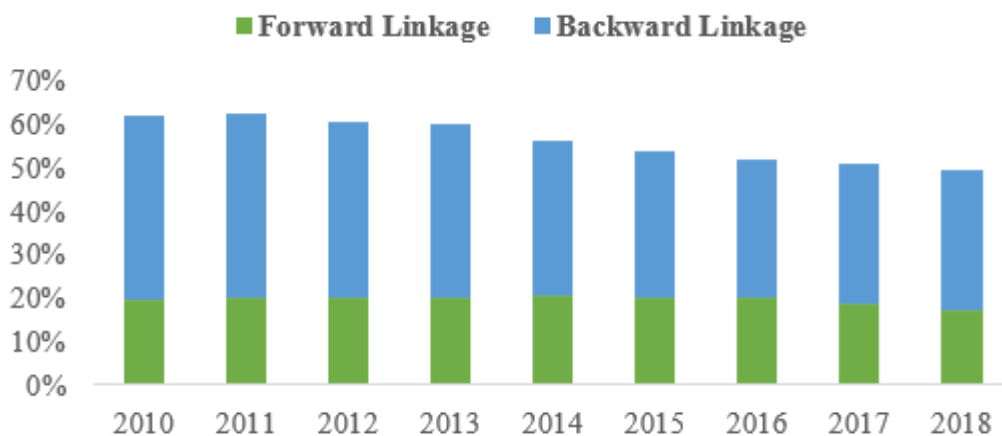
over the period. However, a detailed analysis of Vietnam's participation in GVCs illustrates that Vietnam is still mainly participating in the backward linkage in GVC; that is, Vietnam mainly participates as an importer from abroad, which account for about 35-40% of the total participation level of 60% (Figure 14). Meanwhile, export activities to foreign markets and exports to third countries (forward linkage) account for only about 20-25% of Vietnam's total participation in GVCs. However, a good sign is the increase of the forward linkage in Vietnam's GVC, which implies that Vietnam is gradually orienting more towards overseas exports, and beyond that is the gradual progress to move to the upstream position of GVC, which has the potential to bring more added value to the country.

Figure 13: Vietnam’ participation and position index in GVC



Source: Author's calculations from UNCTAD-MARIO database.

Figure 14: Foward Linkage and Backward Linkage in Vietnam’a participation in GVC

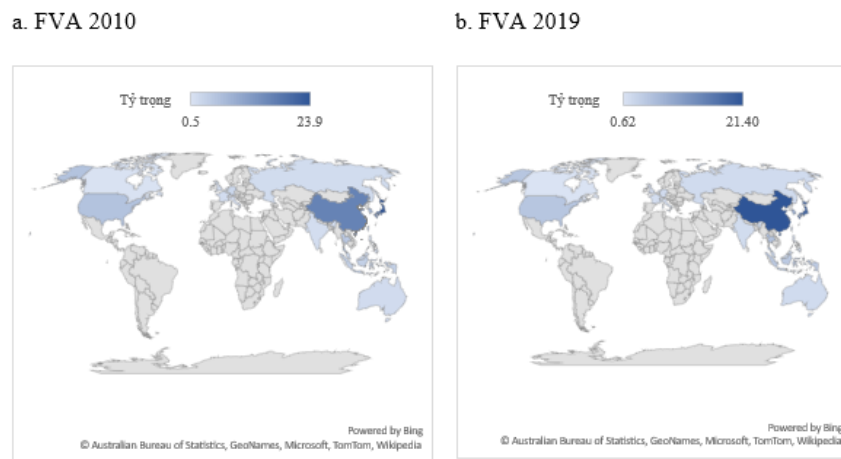


Source: Author's calculations from UNCTAD-MARIO database.

Regarding Vietnam's main importing foreign value-added partners (in backward linkage), the country still mainly imports from Asia and has not clearly demonstrated deeper cooperation with other world regions during the period 2010 – 2019 (Figure 15). The main importing markets of Vietnam included China, Japan, China, Korea, Singapore and Thailand.

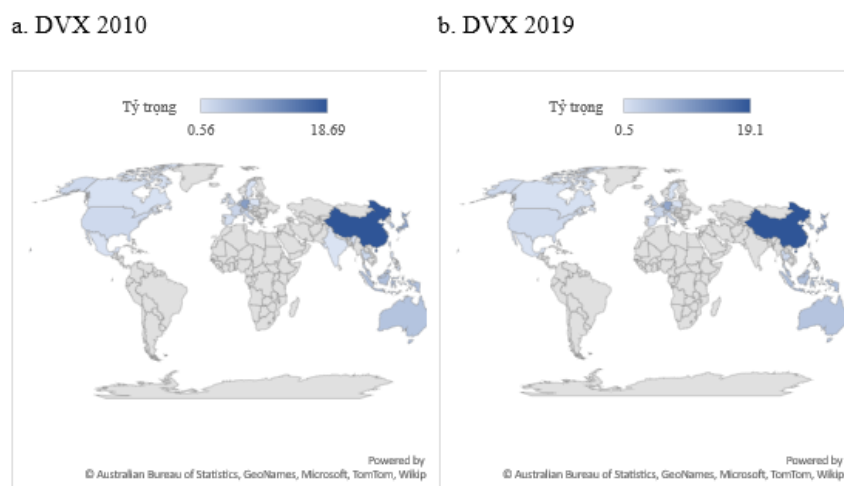
Although Vietnam has begun to move towards importing inputs from Europe and the United States in recent years, it still accounts for a small proportion compared to its Asian counterparts. On the other hand, *in exporting domestic value-added partners and continued to be exported to third countries (in forward linkage)*, Vietnam has a greater diversity of trading partners (Figure 16). Although Asian markets still account for the largest proportion of Vietnam's previous linkages in GVCs, there has been an increase in the share of partners from Europe, the United States, Australia and Germany; this shows that Vietnam has begun to tend to increase the diversity in export markets, moving to more European and American regions, opening up new opportunities for domestic production and export activities.

Figure 15: Proportions of importing foreign value-added partners of Vietnam's export in 2010 and 2019 (%)



Source: Author's calculations from UNCTAD-MARIO database

Figure 16: Proportions of exporting domestic value-added partners and continued to be exported to third countries of Vietnam's export in 2010 and 2019 (%)



Source: Author's calculations from UNCTAD-MARIO database.

5. Conclusion

The article “*An overview of international trade, investment and participation of Vietnam in the global value chain in 2010 – 2020*” provides a general look at the economic development in Vietnam through the major aspects of the nation such as international trade, foreign direct investment, and participation in GVCs. In general, Vietnam has made great efforts in recent years to develop different areas of the economy and gain certain achievements. Specifically, international trade has always maintained impressive growth, with the surplus in the international trade balance in 2020 peaking at nearly 20 billion USD, contrary to the negative growth recorded in most other countries in the world due to the impact of the Covid-19 Pandemic. In addition, attracting FDI also shows many positive opportunities. Although Vietnam witnessed a decline in FDI in 2020 and is expected to continue this reduction until the end of 2021, Vietnam is still considered a promising candidate for foreign investment inflows. Especially, Vietnam is one of the most potential countries for capital flows shifting from China due to the impact of the China Plus One strategy. However, to take advantage of this, Vietnam also needs to build a favourable investment environment and be ready to exploit foreign investment flows to serve its economic progress.

Besides, the analysis of Vietnam's participation in GVC also points out certain opportunities and challenges that Vietnam needs to consider in the near future. Vietnam's participation in GVCs is relatively high, with an average of about 55% in the 2010-2020 period, showing that Vietnam is quite open and dynamic in GVCs, playing an active role in the international market. However, Vietnam mainly participates in the backward linkage of GVC and is located in the downstream position of the chain, which is assessed to enjoy less value-added than the upstream position in GVC. Therefore, this may be a disadvantage of Vietnam in the recent development process. However, a good sign is that Vietnam has begun to move to the upstream position of the chain, providing a positive prospect of improving value-added for the country's economic growth. To actualize this, Vietnam will need to prepare the necessary elements for being more proactive in input supply, especially in enhancing the capacity of Vietnam's supporting industry in the upcoming time./.

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IMPACT OF MACRO AND REGIONAL FACTORS ON THE SMES' INVESTMENT IN NORTHWEST VIETNAM

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Abstract

Using the EFA and logistic regression on a sample of 370 SMEs in four Northwestern provinces of Vietnam, the research finds that when the macro and regional environment factors, including infrastructure and technology, institution, cultural – social-economic factors, markets, and loan accessibility, become favorable, SMEs will raise the scale of long-term investment. From 2015 to 2018, the above factors used to be at or below the national average, but now they have been significantly improved, bringing more business opportunities to investors. The results also suggest that local governments should keep on the current policies and programs and at the same time improve the effectiveness of policy implementation. This will be an important foundation to encourage SMEs to expand production and investment.

Key words: Investment, SMEs, Vietnam.

1. Introduction

Investment is crucial to the future development and innovation of enterprises. Various theoretical and empirical studies have attempted to seek and explain the determinants of firm investment. Theories of Keynes (1936) show that corporate investment decision is heavily influenced by outside conditions such as expectation, sales and profits, demand, industry growth, and macro-economic conditions. In addition, the internal determinants of investment include firm's capacity to mobilize internal and external funding, firm liquidity, cash flow, access to credit and so on. However, there is still a research gap in empirical studies on SMEs' investment in developing countries such as Vietnam. In Vietnam, SMEs account for 98% of total enterprises and employ 70% of the total workforce. SMEs are considered as the leading economic force in the undeveloped areas of Vietnam. Especially in the poor Northwest region where the average poverty rate is 21.85%, three times higher than the national average rate, SMEs make significant contributions to the regional socio-economic development (contribute nearly 45% of regional GDP and 30.02% of total exports in 2017). Given their crucial role, the development of these SMEs, however, is impeded by great barriers, of which the investment-related issues are the most challenging. Also from 2014 to 2017, about 30% of SMEs in the Northwest sub-regions do not make or even reduce asset investment.

Given SMEs' crucial role in leading regional socio-economic development, identifying the drivers of SMEs' investment is necessary to enhance private investment. This study will investigate the determinants of firms' investment with the focus on the influences

of macro and regional factors on asset investment of SMEs in four provinces of Northwestern Vietnam, including Hoa Binh, Son La, Dien Bien, and Lai Chau. The study will provide new empirical evidence on the drivers of SMEs' asset investment in poor localities in developing countries. The study also gives policy suggestions for local governments to promote asset investment in small businesses, thereby supporting the socio-economic growth in disadvantaged areas. The paper is structured as follows. Section 2 presents a literature review on this topic, followed by the research methodology in Section 3. The findings are analyzed in Section 4. The final section discusses some policy implications.

2. Literature Review on Determinants of Firm Investment

2.1 Researchs over the world

Various theories and empirical studies investigate both internal and external drivers of firm investment. With the focus on macro and regional factors, the research will review the impacts of the typical variables on investment as follows.

Infrastructure and technology of the economy

It is hypothesized that operating in an economy with developed infrastructure and modern technology, firms can save production costs as well as increase investment opportunities to expand their scale (Amado, 1989). The role of infrastructure and technology on promoting investment is further analyzed in the study on foreign investment. For example, Galan et al. (2007) examine the most important factors that foreign enterprises consider when making investment decisions. The results reveal that technology and infrastructure are more important than other traditional factors such as cost and market when multinational companies choose investment locations. Dizon and Cruz (2020) show that government investment in upgrading local road systems and transport networks contributes to an increase in foreign direct investment (FDI) into the Philippines.

Local institution and investment policies

Sachs and Warner (1995) emphasize the role of institution on the development and integration of poor countries. The research indicates that economic growth or economic integration requires an effective economic institution which is reflected in the openness of trade and the protection of private property. A good and effective economic institution creates favorable conditions for firms to take more investment activities. Studying the impact of the local business environment on investment activities, Barro and Sala-i-Martin (1997) prove that the government's policies on Intellectual Property Rights and taxes are crucial to encouraging businesses to invest in technology. Similarly, Ayele (2006) and Kotler (2012) both affirm the importance of local preferential policies in encouraging and attracting enterprises' investment. The policies, including financial support, investment promotion, tax and land incentives, and site clearance support, encourage enterprises to expand investment scale. World Bank (2005) shows that well-designed regulation and taxation are an important part of a good investment environment that benefits not only large firms but also small firms and not only local firms

but also foreign firms. Any mismatch between policies and implementation can adversely affect the efficiency of firm investment. Furthermore, the discrimination of government agencies in treating firms can also hinder investment plan. The evidence is shown in the research of Oum and Park (2004) on foreign investment.

Socio-cultural factor

Socio-cultural factor affects investment at both the country level and the firm level. Based on the scale “power distance” developed by Hofstede (1984), a scale representing national culture, Varsakelis (2001), using data from 50 different countries, shows that the lower power distance a country has, the more likely the country is to invest in R&D to change old and inefficient systems. At the enterprise level, Galan et al. (2007) find that in the early stages, the investment activities of Spanish multinational enterprises in underdeveloped countries in Latin America highly depend on local socio-cultural factors. This is explained by the fact that foreign enterprises need to understand the local socio-cultural characteristics to select appropriate business areas, target markets, and strategic products. and that the decision to expand long-term investment in a new market should also be based on the assessments of the market’s development trend, including the factors of social and cultural diversity and consumption behavior of local people.

Output and input markets

The impacts of output and input markets on firm investment are mostly studied in the cases of multinational companies. In a series of researches by Dunning et al. in 1997, 1980, and 1993, one decisive factor for the offshore direct investment of multinational companies is the market of host countries. Tatoglu and Glaister (1998), and Galan et al. (2007) confirm that such features as a large market with high profitability or a fast-growing market are very attractive to multinational companies from the US, Spain and some other Western countries. The input market that provides raw materials and local labor is an important factor for foreign investors. The availability of raw materials and labor helps enterprises reduce costs and makes them more active in the manufacturing process. Le and Pham (2020), using data of 32 developing countries in Africa from 1990 to 2017, find that the labor force is a positive and significant factor in attracting private investment.

Access to credit

Businesses need funding to maintain their operations and make new investments. Credit is a critical complementary source of investment funding for enterprises, especially SMEs. Asante (2010) shows that credit plays an important role in private investors’ decisions in Ghana. Small firms usually face the problems of high borrowing rates and debt burdens when seeking funding for investment. Ali et al. (2014) examine the effect of credit restrictions on the investment of household businesses in Rwanda, one of the most populous countries in Africa. Accordingly, limited access to credit reduces firms’ investment in non-agricultural business activities by about 6.3%. In Vietnam, according to the most recent World Bank Enterprise Survey, 9.3% of small-sized enterprises and 13.9% of medium-sized enterprises

identify access to finance as a major constraint to their business. 21% of small firms used banks to finance investments, compared to 33% for medium-sized firms and 39% for large firms. The statistics also show that the larger the size of the firm, the higher the approval rate for their loan applications. Le and Kim (2019) proved that domestic credit freedom allows firms to access external funding more easily so the firm's investment is less dependent on internal cash flow. The findings also suggest that small firms are likely to gain more advantage in access to external finance than larger firms do when the government removes restrictions in the credit market.

2.2 Researchs in Vietnam

There are a limited number of studies on the determinants of firm investment in Vietnam. Existing literature on this topic mainly focuses on the drivers of provincial foreign direct investment (FDI) in Vietnam and the impacts of macro and regional factors have not been well studied. For instance, Nguyen (2006), Le (2012), and Le (2017) investigate the factors influencing FDI in some economic zones in Thanh Hoa. Nguyen (2006) uses a provincial data set to examine how such factors as economic growth, market size, labor cost, and infrastructure influence foreign investors to choose investment locations and set the scales of FDI enterprises. The findings show that the above factors are statistically significant and positively correlated with investment decisions. Nguyen (2006) emphasizes that the bigger the market size, the more businesses are attracted and vice versa. Surveying 80 FDI enterprises in Thanh Hoa, Le (2012) finds that the political factor has the strongest impact on investment of FDI enterprises, followed by the infrastructure factor, the market factor, and the cost factor respectively. Continuing the research stream, Le (2017) identifies macro and regional factors that positively affect investment in Nghi Son economic zone in Thanh Hoa. These influential factors include input cost, preferential policies, local institution, and geographical location. In these studies, the socio-cultural factor and capital access factor have not been considered. Another limitation of these studies is that they focus on the problem of one province so the results might be of locality.

There is still a big research gap in studying the determinants of SMEs' investment in Vietnam, especially the impacts of macro and regional factors. The main reason is due to the lack of data. This paper is expected to enrich the current literature in some aspects. First, it provides new empirical evidence of the influences of macro and regional factors on SMEs' investment. Second, the scope of studies is expanded, covering 370 SMEs in four provinces: Hoa Binh, Son La, Dien Bien, and Lai Chau. Third, the research is among very few studies considering socio-cultural and capital access factors. The following parts present the research methodology and main findings.

3. Research Framework

3.1. Research sample

This paper collected data from 370 SMEs in four Northwestern provinces, including Hoa Binh, Son La, Dien Bien, and Lai Chau. The sample structure is determined according to

the criteria of size, business type and ownership, corresponding to the structure of the total SMEs of the Northwest sub-region. The survey was conducted from April 2018 to June 2018. The questionnaires were sent to the managers of 370 SMEs via email and post. This sample size is adequate for conducting exploratory factor analysis (EFA) and multiple regression (Tabachnick and Fidell, 2007). The questionnaire includes three main parts, namely (i) Business information, (ii) the Importance of 27 items in making investment decisions and (iii) SMEs’ future investment decision. In the second part, the Likert scale with a five-point scale is used to allow responders to express how important each item is to the firms’ decision-making process.

3.2. Methods

From the data on 27 questions in Part 2, the research performed the Exploratory Factor Analysis (EFA) on SPSS 22 to identify and model the underlying interrelationships among 27 items and then form factors. This study employed the decision criteria such as checking the appropriateness of the data for EFA (KMO and Bartlett’s test of sphericity), rotation (the Total Variance Explained, Loading Factor in Rotated Component Matrix), and the adequacy and reliability of scales (Cronbach’s Alpha). The extracted factor scores from EFA were served as independent variables in the following logistic regression.

The final factor structure extracted 6 factors from 27 items as the candidates for the influential factors of SMEs’ investment (see Table 1). First, 27 items were entered for Principal Component Analysis (PCA) to extract factors. The test of sampling adequacy gives a KMO value of 0.732 (greater than 0.5) (Hair et al., 1998). Bartlett’s test of appropriateness for PCA has a p-value of 0.000 (smaller than 0.001) (Field, 2013). Consequently, the sample is suitable for PCA. The next steps to follow factor extraction are factor retention to decide the number of factors to retain and factor rotation to make factors easy to interpret. The result from the matrix of the rotated factor loadings shows that 21 items of 27 original items can be grouped into new six groups (named FAC 1, FAC 2, FAC 3, FAC 4, FAC 5 and FAC 6 respectively) and all items have factor loadings greater than 0.5. Six items that are removed include ITI 4, ITI 8, PP 3, PP 5, MK 5, and AL 5. The values of Cronbach’s alpha for six groups are 0.829, 0.801, 0.608, 0.742, 0.826, and 0.619 respectively. These alpha coefficients are greater than 0.6 so the scale in each group is one-dimensional and then factors can be used for the next step.

Table 1. Underlying variables in research model

Scales	Item labels	Definition
<i>Infrastructure, technology and institutions</i>	ITI1	The development of infrastructure services (e.g., transportation, electricity, water, telecommunications) for the enterprises' asset investment.
	ITI2	The ability to access to the modern technology or machine for the enterprise's asset investment

	ITI3	The ability to access to land for investment
	ITI4	The diversity of financial and insurance services to facilitate the implementation of the enterprise's asset investment.
	ITI5	The convenience of administrative procedures related to the enterprise's asset investment activities.
	ITI6	The orientation / support of all associations, investment and trade promotion centers for the enterprise's asset investment activities
	ITI7	The frequency of meetings between the local government and enterprises and the perceive level of the government of some issues related to the enterprise's asset investment activities
	ITI8	The frequency of inspection and examination by the local authorities for the enterprise's asset investment activities
<i>Preferential policies</i>	PP1	The preferential levels of the state/ local governments on taxes (e.g., corporate income tax, business license tax, agricultural land use tax, ect)
	PP2	The preferential levels of the state/ local governments on local labor training
	PP3	The preferential levels of the state/ local governments on input and output prices
	PP4	The strict level of state/local government regulations for enterprise's asset investment
	PP5	The relevance between state/ local socio-economic development objectives and enterprise's asset investment orientation
<i>Local social-cultural</i>	SC1	The level of local socio-economic development
	SC2	The attitude of the local people towards the expanding investment of the enterprises
	SC3	The customs and traditions of local people
	SC4	The living standard/ income of local people
<i>Market</i>	MK1	The level of fair competition in the market among SMEs and large enterprises, state-owned enterprises and foreign-invested enterprises
	MK2	The ability to increase demand for goods and services of the enterprises in the market (i.e the ability to expand their market share)
	MK3	The availability of local and neighboring workforce
	MK4	The qualifications of local and neighboring workforce
	MK5	The ability to cooperate with raw material and input service suppliers in local and neighboring areas
<i>Accessibility of loans</i>	AL1	The borrowing cost (including interest rate and other costs related to borrowing money from banks and other sources)
	AL2	The convenience of the loan procedure

	AL3	The level of collateral requirement
	AL4	Disbursement time
	AL5	The level of priority of banks for SMEs

To evaluate the impacts of factors on SMEs’ investment decision, which is a binary variable, the research uses the logistic regression model as below:

$$\Pr(I = 1/X_i) = \frac{1}{1 + \exp(-X_i' \alpha_k)}$$

in which I equals 1 when a firm increases its investment and equals 0 otherwise (determined by the answer of respondents to the question: “In the past year, how did your business invest in assets?”). X is a vector of determinant factors that are derived from the EFA.

Table 2. List of determinants that SMEs pay attention to as making decisions on investment

Factor groups	Items	Factor Loading	Factor groups	Items	Factor Loading
FAC 1	ITI3	0.883	FAC 2	ITI 5	0.849
	ITI2	0.849		ITI7	0.833
	ITI1	0.823		ITI 6	0.829
FAC 3	PP2	0.851	FAC 4	SC4	0.790
	PP4	0.843		SC2	0.742
	PP1	0.834		SC1	0.719
FAC 5	MK2	0.875		SC3	0.717
	MK1	0.870	FAC 6	AL1	0.781
	MK3	0.832		AL2	0.767
	MK4	0.653		AL3	0.719
AL4				0.717	

4. Results and Discussion

4.1. Results from Logistic regression analysis

Table 3 shows the Logistic regression results.

Table 3. Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step FAC 1	2.120	0.368	33.128	1	0.000	8.329

1 ^a	FAC 2	2.604	0.385	45.878	1	0.000	13.524
	FAC 3	-0.079	0.260	0.093	1	0.760	0.924
	FAC 4	3.099	0.431	51.806	1	0.000	22.178
	FAC 5	2.925	0.447	42.798	1	0.000	18.627
	FAC 6	2.985	0.458	42.493	1	0.000	19.788
	Constant	-35.751	3.923	83.035	1	0.000	0.000

The significant tests for the coefficients of six factors indicate that five factors (FAC 1, FAC 2, FAC 4, FAC 5, and FAC 6) significantly affect the probability of an increase in SME's investment in assets. Signs of coefficients of these five factors show that each of them positively and significantly increases the probability of SMEs' investment expansion in the Northwestern provinces of Vietnam.

4.2. Discussion

4.2.1. Infrastructure and technology development encourages SMEs to increase asset investment

According to Amado (1989), Galan et al. (2007), and Le (2012), local infrastructure and technology improvements have positive effects on SMEs' asset investment. Infrastructure conditions such as transport, electricity, water, telecommunications, and technology accessibility have been significantly improved in the four Northwestern provinces (i.e., Hoa Binh, Son La, Dien Bien, and Lai Chau), becoming an important factor to encourage their enterprises to increase investment.

* Impacts of infrastructure services

First, the transportation system has been continuously upgraded to facilitate the circulation of goods inside or outside the Northwest sub-region, benefiting local SMEs. Considered to be a key strategic region in terms of politics and military in the North of Vietnam, the Northwestern provinces have recently received great investment from the state budget for building and upgrading transportation infrastructure. Transport network has spread to 100% of communes and villages and national highways and provincial roads account for about 50%. More and more road systems have been upgraded so that they can be used all year round, which maintains the connection with isolated residential areas in the rainy season. The 1,300 km long waterway system along the Da River and hydropower projects are also connecting all provinces in the big region. Dien Bien Phu airport in Dien Bien province connects Hanoi, Dien Bien Phu, Vientiane, and Luong Pha Bang (Laos). The airport started to upgrade in early 2020 and is expected to reach a capacity of 300,000 passengers and 500 tons of cargo per year.

Second, locating in areas where there are more than 95 hydropower plants, SMEs avoid the shortage of electricity for production. Hoa Binh and Son La hydropower plants are

ranked the first and second-largest capacity plants in Southeast Asia. Third, regarding telecommunication infrastructure, by the end of 2019, all four provinces in the Northwest sub-region have used public administrative portals to connect data for administrative procedures at all levels. All communes in remote and isolated areas already have postal agents. Wards and communes in urban areas have daily newspapers. 100% of communes have telephone coverage. 95% of communes have a broadband internet connection to the commune center. Thanks to the rapid growth of BTS (Base Transceiver Station), the 3G and 4G networks have reached many remote locations, enabling individuals and businesses to update information and carry out promotion activities as well as e-commerce transactions. In short, all of these positive changes help the production and business of SMEs become more convenient, thereby promoting their asset investment in the long term.

**** Impacts of technology and modern machinery/ equipment accessibility***

According to the statistics of the Vietnam Chamber of Commerce and Industry in 2015, more than 80% of machines used in SMEs (including those in the Northwest sub-region) were produced 30 years ago. The main obstacles for SMEs to access to technology advance are the shortages of capital barriers and technology knowledge. In response, the local governments of the four Northwestern provinces have supported SMEs to access advanced technology to develop competitive products on the sectors of agriculture, forestry and fishing sector, and crafts. Typically, in Son La, by 2019, automatic watering systems were applied for more than 430 hectares of plants; net houses and greenhouses were used for raising 50 hectares of vegetables, fruits and flowers; grafting and graftage were applied for 10,000 hectares of high-quality fruit trees; VietGAP, GlobalGAP, and some similar standards were also applied to more than 9,800 hectares of plants; 61 safe agricultural product supplying chains were developed; 16 agricultural products were protected by the National Office of Intellectual Property.

The local governments have also supported SMEs and cooperatives to invest in building 31 establishments, workshops, and exported agricultural product processing plants with an output of more than 100,000 tons of products per year. In Dien Bien province, 38 projects of SMEs have received technical support from the provincial Department of Science and Technology, among them, agriculture, forestry, and fishery projects account for 50%. Many of them are successful, namely "Building advanced technology model in sturgeon farming in cages and rafts in Pe Luong irrigation reservoir", "Applying technological advances in production medicinal plants" (e.g., *Angelica sinensis* and *Angelica dahurica*). In Lai Chau province, many technology introductions and transfer activities have been carried out to SMEs in remote communes such as "Building demonstration models of unburnt bricks production technique", "Supporting advanced machine application in corrugated iron sheet production", "Application of advanced machinery in wood carvings", etc. The projects of applying advanced technology and modern machines have contributed to higher productivity, better product quality, and limited material wastage in SMEs, helping them accumulate

capital for long term investment.

**** Impacts of access to land***

Preferential land and premise policies help businesses reduce initial investment and production costs and then motivate other long-term asset investment. According to the Ministry of Planning and Investment, the number of newly registered businesses in the Northwest sub-region has increased over time. From 2015 to 2018, the scores of the "Land access" component in the Provincial Competitiveness Index (PCI) of Northwestern provinces all have a higher than the central cities or provinces such as Hanoi. In particular, in 2015 and 2017, this index was higher than the national average. This proves that the accessibility of land, as well as production and business premises in the Northwest sub-regions, is easier than many other areas in the country. Besides, the local governments also implement preferential policies to attract investment into the area by exempting land and water surface rent for up to 15 years for investment projects in difficult areas. In Lai Chau, investors are allowed to select sites for project implementation. Hoa Binh also offers the land rental exemption policy for construction projects in aviation and transport service areas (i.e., car parks and stations).

4.2.2. The more transparent, convenient and effective the local institution is, the more SMEs increase their asset investments

The quality of local institution is reflected through the convenience of administrative procedures related to enterprises' asset investment, the support of associations and investment promotion centers, and the response of the local government to issues raised by SMEs. According to the result of the logistic regression, the better the local institution is, the more businesses are likely to increase their asset investment. This result is consistent with the research of Sachs and Warner (1995).

**** Impacts of simplifying administrative procedures at provincial and district levels***

The local administrative procedures of the Northwestern provinces have been significantly simplified. According to a survey of the Vietnam Chamber of Commerce and Industry, the proportion of enterprises in the Northwest sub-region agreeing that administrative procedures are "simple procedures" has increased over time and reached the national average. Before 2015, the administrative procedures of those provinces were complicated, time-consuming, and costly. This situation allowed local officials and administrators to harass business enterprises. However, since the web portal was implemented, the provinces have removed a lot of unnecessary documents and procedures and enterprises can limit direct contact with local officials, helping SMEs search and fulfill investment procedures more easily and less costly.

**** Impacts of associations and investment promotion centers***

More and more businesses have received great support from public services. Trade and industry associations and the provincial Department of Industry and Trade play critical roles in promoting networking among manufacturers, distributors, and consumers. Thanks to

the positive actions of the local government, the proportion of enterprises in the Northwest sub-region using trade promotion services to develop production and business has increased significantly. Dien Bien and Lai Chau governments have made great achievements in promoting trading and investment, bringing new opportunities for business development.

**** Impacts of local government awareness on enterprise issues***

The government-to-enterprise dialogues are held more frequently as a part of solutions to improve the local investment environment. The government in each province of the Northwest sub-region held from-one-to-three direct dialogues with businesses each year. In Son La, the Chairman of the provincial People's Committee has a semi-annual direct dialogue with local businesses. In August 2017, the People's Committee of Son La province opened the hotlines of the relevant departments and agencies to receive all feedback and answer the questions about administrative procedures of investors. In response to the statement “problems and difficulties of enterprises have been promptly resolved through the dialogues between authorities and enterprises” in the provincial competitiveness survey of the Vietnamese Chamber of Commerce and Industry, more and more enterprises in the Northwestern provinces agree with this assessment. Even though the Northwest sub-region is among underdeveloped areas, the authorities have made great efforts to improve the investment environment, making it as attractive as the other regions. It is expected to be a good place for long term investments in the coming years.

4.3.3. The social, cultural, and economic developments encourage SMEs' asset investment

The regression result shows that the variable FAC4 (Local social-cultural factor) has a positive effect on the probability of SME's investment expansion. In other words, favorable socio-cultural conditions can motivate enterprises to increase asset investment. This finding is similar to that of the previous studies of Galan et al. (2007). In underdeveloped areas, the social-cultural development paves the way for SMEs to establish and develop their businesses.

**** Impacts of local socio-economic development and income per capita***

The Northwest region is a particularly difficult area with the highest poverty rate in Vietnam. In 2004, the Politburo issued Resolution No. 37-NQ/ TW on the direction of socio-economic development and national security in the Midlands and Northern mountainous regions. After 15 years of implementing this Resolution, the local socio-economic conditions and income per capita have significantly improved. The growth rates of gross regional domestic product (GRDP) of Hoa Binh, Dien Bien, Son La and Lai Chau provinces in the 2004-2018 period were 8.74%, 8.73%, 13.2%, and 11.75%, respectively. Correspondingly, the provincial per capita income reached the levels of VND 50.7 million (Hoa Binh), VND 22.69 million VND (Dien Bien), VND 38 million (Son La), and VND 33 million (Lai Chau). Although per capita incomes of the Northwestern provinces are still lower than the national average, they have increased from 10.8 times to 14.2 times compared to the levels of the year 2004. This spectacular development has attracted businesses to invest in this potential market.

**** Impacts of customs, traditions, and attitudes of local people***

Ethnic minorities, mainly Muong, Thai, H'mong and Dao, account for over 80% of the total population in the Northwest sub-region. In the past, they scattered in high terrain, steep hills, and mountains and live on agriculture, forestry, and fishery so their average income is very low. Besides, they were limited in accessing training and education opportunities and science and technology advances. These issues became the most challenges for enterprises to establish production and product selling. In recent years, thanks to achievements in poverty alleviation and universal education programs, the situation has markedly changed. The literacy rates for the population aged 15 and above in the four provinces increased from 77.2% in 2015 to 78.3% in 2018. The proportion of trained employees in the labor force increased from 14.72% in 2015 to 15.43% in 2018. Local people have gradually changed their perceptions and lifestyle: they begin proactively produce goods and become more involved in the production and trading process with other enterprises. The cultural tourism models have widely spread in ethnic minorities' villages in Son La, Lai Chau, and Hoa Binh provinces, attracting many visitors especially international visitors. The development of tourism services has contributed to increase people's income and also promote their goods trading. People now realize the importance of enterprises for local economic development and very welcome enterprises' investment. In short, the local socio-cultural development is a factor that is both attractive and conducive for businesses to invest in expanding production and business.

4.2.4. Fair competitive market and availability of labor and materials will encourage businesses to increase asset investment

The model result shows that the more the market develops, the higher the probability of asset investment is. This finding is consistent with that of Dunning (1993), Dunning and Narual (1994), and Le (2012). Market development is reflected in the level of competition and the availability of essential inputs (i.e. labor force and raw materials).

**** Impacts of fair competition***

Creating a fair playing field for all types of enterprises is a crucial factor for attracting investment activities, especially for the small ones like SMEs. According to the survey of the Vietnam Chamber of Commerce and Industry, most of the surveyed enterprises in the Northwest sub-region think that large-sized enterprises, state-owned enterprises, and enterprises that have a close relationship with local governments are more favored than SMEs in accessing production resources (i.e. legal procedures, land, capital). The situation has recently positively changed. The score of the "Fair Competition" component in PCI has increased in each province. From 2015 to 2018, the score rose from 4.38 to 5.63 in Hoa Binh, from 4.71 to 5.33 in Son La, from 4.8 to 5.3 in Dien Bien, and from 5.24 to 5.73 in Lai Chau. Although the level of unfair competition is still higher than the national average, the proportion of enterprises that are discontent about this problem has decreased over the past 4 years.

**** Impacts of availability of labor, materials, and services***

Accounting for over 62% of the region's population, the labor force aged over 15 in the Northwest sub-region increased by 1.74% from 2015 to 2018. The local labor supply can ensure human resources for SMEs in agriculture, forestry, and fishery areas. At the same time, labor quality has been gradually improved. The proportion of surveyed enterprises agreeing that local labor meets the enterprise's requirement is high, from 75.29% to 91.92%. Besides, enterprises in the fields of agriculture, forestry, fishery, and tourism can take advantage of locally available materials. Essential inputs such as electricity and water are promptly provided by a dense network of water and hydroelectric plants in the four provinces. For industrial and service enterprises, although some materials have to be transported from other places, the rapid development of transportation infrastructure will soon remove this obstacle for businesses in the Northwest sub-region. These positive changes create incentives for investors to set up new businesses and expand current production scale.

4.2.5. The easier access to loans can support businesses to increase asset investment

The variable FAC 6 has a positive effect on the enterprise's asset investment. The more easily enterprises access to loans, the greater the probability of their asset investment is and vice versa. This result is similar to that of Galan et al. (2007). Formal credit is a key to SMEs' investment. In the past, SMEs in the Northwest sub-region had faced obstacles in accessing formal loans due to the lack of collaterals and high-risk profile. Their common sources of borrowings were family and relatives, friends, or the black credit market. However, the fund that could be mobilized from these sources were very limited, frustrating enterprises' investment activities. Recently, SMEs' accessibility to formal credit in the Northwest sub-region has been remarkably improved. Some credit institutions actively support SMEs such as Vietnam Development Bank, Vietnam Ban for Social Policies, People's Credit Fund, and some commercial banks. In terms of interest rate, the average short-term lending interest rate was 8% per annum in 2014, falling to 6.5% per annum in 2018. In particular, businesses operating in the fields of high-tech and clean agriculture are eligible for preferential loans with interest rates from 0.5% to 1.5% lower than normal lending rates. Regarding loan size, according to the Decision No. 307/2016/QĐ-TTg of the Prime Minister, SMEs are allowed to borrow up to VND 500 million with the lending interest rate that equals to the lending interest rate for households in difficult regions. For credit lines, enterprises investing in high-tech agricultural production are given priority to borrow up to 80% of the value of the project without collaterals. At the same time, according to the Circular No. 39/2016/TT-NHNN, the State Bank of Vietnam has authorized commercial banks to negotiate with customers on the loan security agreement and procedures to be financed, so banks have been proactively simplifying procedures. The length of time for processing applications and giving feedbacks to enterprises is also shortened, from 1 to 7 days. These positive changes help more and more SMEs in the Northwest sub-region access to formal credit and have enough capital for production and investment. Typically, in Son La, the number of businesses borrowing from commercial banks increased by 187 throughout 2014-2018 with loan size increasing by 2

times. The capital has been invested in both short-term and long-term assets to maintain or expand production and business.

5. Conclusions and Recommendations

Using the EFA and logistic regression on a sample of 370 SMEs, the research finds that when the macro and regional environment factors, including infrastructure and technology, institution, cultural – social-economic factors, markets, and loan accessibility, become favorable, SMEs will raise the scale of long-term investment. Based on the analysis in Section 4, some solutions should be considered by the local authorities as follows: (1) First, infrastructure and technology: Coordinate with State agencies to speed up the implementation of infrastructure projects, and coordinate with the commune and village authorities to call for investment socialization in upgrading or constructing new systems of inter-village roads that can use in both dry and rainy seasons; Support telecommunication companies to construct and install BTS; (2) Local institutions: Actively build and develop the e-government system at the district level, create a breakthrough in settling administrative procedures towards quick and transparent manner; Continue to promote trade promotion activities on fairs or exhibitions on technology and machinery for small and medium-sized production, acting as a bridge to introduce and transfer jobs and technology between domestic and foreign suppliers and SMEs in the area. (3) Local cultural and socio-economic factors: Provide training, vocational education on sustainable livelihoods. Replicate effective economic models associated with local customs and traditions, such as the model of community-based tourism in Mai Chau district of Hoa Binh and aquaculture cooperatives using the water of Da reservoir in Muong La district of Son La. (4) Market: Ensure a fair treatment among enterprises. Provide financial support for local public training facilities to expand on-the-job training. Connect businesses with training institutions to build suitable training content; (5) Loan accessibility: Closely coordinate with credit institution such as Vietnam Bank for Social Policies, Vietnam Development Banks, People's Credit Funds and microfinance institutions to expand the credit for SMEs and micro-enterprises, quickly handle procedures and documents to accelerate the disbursement of State support credit packages. Encourage credit institutions to lend along commodity value chains such as agricultural products, handicrafts, and tourism./.

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THE ROLE OF NATION BRANDING ON FDI ATTRACTION

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Abstract

The increasing recognition of the various advantages of FDI has led to an exponential rise in the competition among countries in attracting capital from abroad. Although the literature on FDI is full of studies on capital attracting, little is known about the intangible factors that affect the movement of capital into a country. The paper examines the impact of the nation branding as an intangible factor impacting FDI inflow together with three tangible country-specific factors, including the control of corruption, market growth rate and value of resources. OLS regression method was adopted to process panel data collected from 11 top FDI receiving countries in the world from 2009 to 2018 due to the availability of the data. The results reveal interesting findings explaining why soft factors will still play a minor role in FDI attraction.

Keywords: *nation branding, foreign direct investment, corruption, market growth.*

1. Introduction

The growth of foreign direct investment (FDI) in the global economy over the past quarter-century has been considered one of the most significant achievements of the 21st century (UNCTAD 2014, 2016). The increasing recognition of the advantages of foreign capital to both the host and home countries has sparked an exponential increase in the number of activities aimed at attracting capital from abroad (Miskinis and Byrka, 2014).

Even though the literature on FDI is voluminous, the factors that affect the flow of foreign capital into a country are still contradictory (Hosseini, 2005). Most studies on attracting FDI have focused on the factors that make a potential investment location attractive, neglecting the intangible aspects that can help attract investment, such as nation branding.

Papadopoulos (2016) states that FDI and the nation branding have at least two differences. On the one hand, FDI has been studied thoroughly from many aspects, both theoretically and empirically. At the same time, the national brand is a new concept with most studies in terms of perception and reasoning. Despite the growing interest in nation branding and FDI, both concepts are difficult to understand and operate in practice due to their numerous research gaps. Efforts to develop a universal model of factors affecting FDI decisions have not been followed through (Bitzenis, 2003). Studies on investment decisions typically focus on the factors that might influence an investment decision, such as a country's tax policy and political

stability. In contrast, studies on nation branding are rare and tend to focus on the dimensions of an image instead of the characteristics of an alternative investment destination.

Rather than attempting to address the gaps in the extant literature on nation branding and FDI, this article aims to provide a conceptual framework that can be used to discuss the intersection between the two fields. The scope of the study focuses on the top 11 countries receiving the most FDI in the world because they are distributed in many different geographical areas, with differences in size, economic growth rate, political institutions and cultures that make the research results more representative. The paper examines the impact of the nation branding as an intangible factor impacting FDI inflow together with three tangible country-specific factors which have been determined in previous research including the control of corruption, market growth rate and value of resources. The results of this study will help national governments formulate policies and strategies to attract FDI.

2. Literature review

2.1. Nation branding

Each country has its own image that is associated with its international audience. The key to successfully branding a place is to make it stand out from the crowd and engage its international audience in a manner that is consistent with its national identity (Fan, 2010). The importance of branding has been stressed in literature. Instead of letting their images evolve naturally, places should actively manage their branding. The phrase “nation branding” has become widely used by governments of different countries in the past decade. Its concept is the process of developing a name and image that can be used to manage or build a reputation (Anholt, 2007).

Nation branding is an area of study that focuses on the potential economic, political, or strategic values that can be utilized to develop a favorable image for a recognizable country (Dinnie, 2008). The objective of nation branding is achieved by establishing a solid brand identity to promote a positive image of the country (Anholt, 2003; Fan, 2010). Positioning a product or a brand to attract a market is now being utilized by countries. Scholars began to understand that branding can help a nation attract trade, investment, and tourism (Kotler & Gertner, 2002; Papadopoulos & Heslop, 2002; De Chernatony, 2008; Dinnie, 2008). Overall, nation branding concerns are the image and reputation of a country that can be used to attract potential investments (Papadopoulos, 2016).

A few research have shown that the reputation of a country can affect the decisions of investors. Kalamova and Konrad (2010) found that the stronger a country's image, the more likely it is to attract foreign investment. Eminovic Enis (2013) confirms the impact of the national image on FDI attraction in Bosnia and Herzegovina. Research by Nguyen Viet Bang et al. (2016) state that local brand is one of eight factors affecting the attraction of foreign investment in Dong Nai province. Nguyen Duc Nhuan (2017) determines that the soft factor of local brand in the Red River economic region affects FDI inflows through surveying 330 investors by quantitative research method. As a result, the following hypothesis is proposed:

H1: Perceived nation branding strength has a positive effect on FDI inflow.

2.1. Market growth rate

Some authors believe that the market growth rate is the prerequisite for attracting FDI. A high market growth rate represents a high demand for goods and services. As the demand of the one-country market increases, it will attract foreign investors to invest in that country to provide products and services to serve the increased domestic need. As a result, foreign investors often actively invest in high market growth countries to gain market share in the business sector. Alfaro et al. (2004) state market growth rates impact FDI in the case of developed countries. Pillai (2013) looks at the market growth rate as one of the critical factors determining FDI attraction level. Therefore, the following hypothesis is proposed:

H2: High market growth rate has a positive effect on FDI inflows.

2.3. Corruption

The term corruption refers to the improper use of public office for private gain. It is a severe issue that will make a country less attractive to foreign investors as it adds substantially to the cost of doing business. FDI enterprises are often reluctant to invest in countries with high levels of corruption due to fears of somber effects on asset distribution and income. Mauro (1995) studies the impact of corruption on economic growth and found that corruption reduces investment and leads to stifling economic growth. Bardhan (1997) finds the unfavorable effect of corruption on FDI inflows within the scope of business costs with corruption level measured from 0 (completely clean) to 10 (completely corrupt). The results show that the level of corruption in the host country had a negative impact on FDI inflows. Roland Craigwell & Allan Wright (2011) investigates corruption in 42 developing countries between 1998 and 2009 and points out that the level of stability of corruption is a positive factor that motivates businesses to promote investment in countries with low levels of corruption to minimize risks and costs. Therefore, the following hypothesis is proposed:

H3: Low corruption level has a positive effect on FDI inflows.

2.4. Resources

Countries with high resource value can be attractive to investors due to their abundant resources and high economic value. Many studies conclude that investors tend to target countries with high-quality resources to save costs and make their businesses more productive. Some previous studies have also pointed out that resources have a positive impact on attracting FDI inflows. For example, Hunya (2002) finds out that Southwest European countries with highly skilled workers can attract more FDI to the economy. Hailu (2010) states positive correlations between FDI flow and natural resource value in the study of African countries. Garibaldi et al. (2001) also determine valuable resources as the driver of FDI attraction in transforming economies from 1990 to 1998. Therefore, the following hypothesis is proposed:

H4: Availability of natural resources has a positive effect on FDI inflows.

3. Data and methodology

The study adopts an ordinary least squares (OLS) regression model using random effect panel data analysis of 11 top FDI receiving countries with FDI inflows as the dependent variables and four independent variables including nation branding, market growth rate, corruption, and resources (Table 1). The time range selected for evaluation is from 2009 to 2018 due to the availability of data. The proposed mathematical model of research is as follows:

$$FDI_{it} = \beta_0 + \beta_1(CBI_{it}) + \beta_2(MKG_{it}) + \beta_3(COR_{it}) + \beta_4(RES_{it}) + \epsilon_{it}$$

Table 1: Varibales and expected relationships

Variables	Description	Measures	Expected relationship	Sources
FDI	Foreign Direct Investment	FDI inflows as a percentage of GDP		World Bank database
CBI	Nation branding Index	Ranking order	+	FutureBrand reports
MKG	Market growth rate	GDP per capita	+	World Bank database
COR	Corruption	Control Corruption index	-	World Bank Worldwide Governance Indicators
RES	Resources	Value of resources	+	World Bank database

Source: Author

Eleven countries that received the most FDI in the world are selected according to Worldbank's statistics in 2018. These countries are divided into three regional groups, including Asia, Europe, and the Americas (Table 2). After collecting data, the study uses EViews software to perform descriptive statistics, correlation analysis, and regression analysis.

Table 2: Classification of countries

Area	Countries
Asia	China, India, Australia
Europe	Germany, France, England, Spain, Italy
Americas	USA, Canada, Mexico

Source: Author

4. Results and discussion

4.1. Descriptive Statistics

Descriptive statistics for variables reveal that the value of the variables has a significant difference indicating that the factors affecting FDI are unevenly distributed among researched countries. This may be due to the difference in country-specific factors such as location, size, economic growth rate, political institution, and demographic.

Many statistical techniques require variables (primarily dependent variables) to obtain a normality distribution. The results of the Jarque-Bera test show that all variables in the model satisfy the condition of normal distribution at a reliable range of 95% (p-value < 0.05).

Table 3: Descriptive statistics for variables included in the model

	FDI	CBI	COR	MKG	RES
Mean	2.197	7.627	0.880	1.696	2.036
Median	1.960	7.000	1.310	1.370	0.858
Maximum	9.996	22.000	2.070	10.103	10.805
Minimum	0.002	1.000	-0.930	-6.674	0.039
Std. Dev.	1.251	5.034	0.980	3.101	2.551
Skewness	2.320	0.744	-0.396	0.105	1.413
Kurtosis	15.073	3.181	1.534	3.744	4.143
Jarque-Bera	766.772	10.309	12.715	2.737	42.591
Probability	0.000	0.006	0.002	0.255	0.000
Observations	110	110	110	110	110

Source: Compiled from EVIEWS software

4.2. Multicollinearity and Autocorrelation testing

The multicollinearity test is performed to avoid perfect linear relationships resulting in unstable coefficients and high standard errors. The correlation matrix across all variables shows that all factors have a relatively close correlation. This is reflected through independent variables with correlation coefficients ranging from 0.16 to 0.43, and there are cohesion

relationships between the independent variables with correlation coefficients ranging from 0.15 to 0.40

Table 4: Correlation matrix

	CBI	COR	FDI	MKG	RES
CBI	1.000				
COR	-0.361	1.000			
FDI	0.169	0.152	1.000		
MKG	-0.092	-0.438	0.165	1.000	
RES	0.382	-0.150	0.405	0.248	1.000

Source: Compiled from EVIEWS software

One of the requirements of the multiple linear regression models is that independent variables are not closely related to each other. If this requirement is not satisfied, then the multiline collinearity (VIF) has occurred. VIF of each independent variable with a value of less than 8 demonstrates that the scale model does not have multiline collinearity issue.

Table 6: Variance Inflation Factor of Independent Variables

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1.553	144.264	
CBI	0.001	7.939	2.393
COR	0.083	13.298	7.333
MKG	0.003	3.054	2.346
RES	0.003	3.180	1.935

Source: Compiled from EVIEWS software

4.3. Regression analysis

The paper performed an ordinary least squares regression analysis using the proposed model. Regression results show that all four variables have positive effects on FDI with a significance level less than 1%, and the general significance level of the model is also less than 1%. Therefore, the impact factors on FDI attraction can be generalized through the linear regression equation as follows:

$$FDI_{it} = 0.818 + 0.055 (CBI_{it}) + 0.115 (MKG_{it}) + 0.515 (COR_{it}) + 0.152 (RES_{it}) + e_{it}$$

Table 7: Results of resumed sprints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.818	0.308	2.651	0.009
CBI	0.055	0.026	2.122	0.036
COR	0.515	0.134	3.828	0.000
MKG	0.115	0.042	2.750	0.007
RES	0.152	0.047	3.227	0.002
R-squared	0.271	Mean dependent var		2.197
Adjusted R-squared	0.244	S.D. dependent var		1.251
S.E. of regression	1.088	Akaike info criterion		3.051
Sum squared reside	124.333	Schwarz criterion		3.174
Log-likelihood	-162.820	Hannan-Quinn.		3.101
F-statistic	9.773	Durbin-Watson stat		1.633
Prob(F-statistic)	0.000			

Source: Compiled from EVIEWS software

4.4. Discussion

Control of corruption has the most substantial influence on FDI inflow, followed by the value of resources, market growth rate and nation branding, respectively. In short, countries with a higher ability to control corruption, valuable resources, high market growth rate and nation branding index are more appealing in attracting FDI.

Factors that are tangible country characteristics such as control of corruption, market growth rate and value of resources still play a vital role in attracting FDI. Investors are more likely to look at these factors in determining investing location rather than intangible factors such as brand. This is because nation branding is still a new concept, and a private organization does its measurement with a subjective view and complexity measurement method.

The nation branding index ranks in order with number one for the country with the highest brand value. Countries with higher brand index (lower brand value) are more likely to attract FDI. Countries with high brand value in the study are usually developed countries with prosperous economies. Therefore, they satisfy more criteria contributing to brand values. In addition, in these countries, people have high living standards, advanced labor qualifications, so the input costs for labor are high. Besides, developed countries are more likely to invest in less developed countries.

5. Conclusions

As the world has become more liberal, integration and growth have become an important issue for each country. Therefore, the need for attracting more FDI has become more significant. The study contributed theoretically and experimentally to the impact of factors on attracting FDI investment, primarily focusing on the field of nation branding, FDI,

and soft factors. The current study is only one example of the many studies that can be done in different countries or regions. The top 11 countries receiving the most FDI in the world and four factors that affect FDI inflow have been collected and analyzed using EViews 10 software. The study results show that the control of corruption, the rate of market growth, the value of resources and nation branding impact attracting foreign capital flows. Notably, the study reveals that a nation branding has little impact on attracting foreign investment. Therefore, attracting investment will depend less on the national brand but the characteristics of institutions, market-related factors, and resources.

Therefore, to improve the efficiency of attracting FDI, the state needs to improve the legal system and consider applying mechanisms and measures to deal with the country's corruption. In addition, in the trend of socio-economic development towards industrialization and modernization, it is urgent to innovate and improve policies and laws on resource management continuously. At the same time, the state needs to promote competitive advantages of the country, such as abundant labor resources and a large consumption market to affect FDI inflows. In addition, for enterprises exploiting natural resources, it is necessary to actively coordinate with State agencies and departments to eliminate and denounce acts of wasting resources and harming the environment.

In the process of carrying out research, inevitably certain limitations are the basis for future studies to continue to inherit and develop. First, selecting the 11 countries that receive the most FDI may not be generalized; future studies can offer other sample selection facilities and compare results by groups of countries in different geographical and economic regions. Second, due to the limited availability of data, sample size used in analysis is a short time series (from 2009 – 2018, 10 years). Therefore, research with a larger number of samples is required to improve the reliability of the research results. Third, this research only focuses on four factors and may neglect other factors which can play an important role in attracting FDI. Therefore, future research and add more variables, choose different measurements for each variable to increase the research's reliability.

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IMPACT OF TBT AND SPS MEASURES ON VIET NAM SEAFOOD EXPORT: A GRAVITY MODEL ANALYSIS

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Abstract

This paper attempt to analyze the link between TBT and SPS measures on Vietnam's seafood export to major destinations namely the US, the EU, Korea, Japan and China. To tackle this problem, the author first offers a thorough review of the literature related to evaluation of trade barriers and specifically non-tariff barriers on trade to obtain a comprehensive view of estimation methods and data used. Secondly, the paper presents an overview of the structural gravity model as well as the existing problems associated with the characteristic of trade data such as zero trade values and heteroskedascity, and also offer estimation methods to tackle the aforementioned problems. Lastly, collected data is analyzed to show the structure of Vietnam seafood trade and the estimation results are also presented and discussed in depth. The findings solidify the idea that SPS measures have a positive impact on trade through the promotion of hygienic standard and consumers confidence.

Keywords: Gravity model, seafood export, Vietnam, Non-tariff measures.

1. Introduction

With the advancement in the number of bilateral as well as multilateral trade agreements, tariff measures have become less influential as trade barriers. This role has gradually been shifted to non-tariff measures, as countries are imposing an increasing number technical barriers to trade (TBT) and sanitary and phytosanitary (SPS). When tariff barriers are often perceived as a negative method to impede trade, non-tariff measures are more widely accepted as their primary purpose is to ensure the quality of goods as well as the health and safety of domestic consumers, animals, environment. The increasing importance of NTMs, especially TBT and SPS measures, can be verified by WTO data. As reported, the number of TBT and SPS measures initiated and notified to WTO in 2018 was at 3466, increased by 16% compared to 2017.

Despite the significant role that NTMs, specifically TBTs and SPSs play, the effect of these measures on trade has been mixed both theoretically and empirically. On one hand, TBTs and SPSs are believed to force exporters to adhere to more standards which create additional costs and decrease the competitiveness of these products in the foreign market. However, the heightened products' standard resulted from imposing TBTs and SPSs is argued to promote domestic demand for these goods, hence significantly improve trading volume. This contradicting arguments sparked the need for research dedicated to quantifying the effect

of TBTs and SPSs measures on trade, especially when NTMs are heavily applied by countries to replace tariff barriers. Furthermore, research in the field suggest that TBTs and SPS's impact is altered as data changed regarding level of aggregation and research period. Therefore, a research utilizing products level data is essential to better understand the impact of NTMs.

This paper focuses on the exportation of Vietnam seafood products to major destinations, namely the United States, the European Union, Korea, and assess the impact of TBTs and SPSs measure imposed by these countries on Vietnam's seafood trade. The main aim of the paper is to analyze whether the increasing number of SPS and TBT measures has positive or negative impact on Vietnam seafood trade, as well as quantify the magnitude of these effect.

2. Literature Review

Research dedicated to analyzing the impact of non-tariff barriers on trade are extensive in number as well as research methods. Non-tariff-barriers' effect evaluation often involve the usage of certain quantitative frameworks such as Partial Equilibrium model (PE) using SMART, computable general equilibrium (CGE) and gravity model. These methods tackle different purpose, while PE and CGE aim at analyzing ex-ante effect of policy changes on trade, gravity model often deals with ex-post impacts of different factors on trade.

A large pool of research dedicates to evaluate the ex-ante impact of NTM on different economic indicators. Chemingui, Mohamed and Dessus (2008) using CGE aims at evaluating the complete impact of NTM. Using information on domestic, international price and tariff, the research computes the tariff equivalent index of non-tariff measure for 18 basic products, which include agriculture, fisheries, textile, and other manufactured products. Inputting the computed index into CGE model with the base year of 1999, the result show that, if all NTM were to be abolished, Syria's GDP will increase from 0.4 to 4.8 percent. Furthermore, the result indicates that, non-tariff barriers have a more significant impact on price compared to tariff barriers, as on average, NTM increase prices by 22% while tariff only account for 8% in price volatility on average.

Expanding on the idea, Fugazza and Maur (2006) aimed at quantifying the influence of NTM on a global scale. Fugazza and Maur utilized data collected from World Bank and UNCTAD of 27 sectors and 26 regions in the world and created a simulation of world without NTM using CGE model. The result showed suggested that, NTMs have an exceptional influence on 2 keys economic indicator which is prices and efficiency (how effective products are manufactured). Overall, NTM will increase prices which profit the importers as well as improve production efficiency. Base on the result, Fugazza and Maur concluded that, NTMs have a net positive impact on the economy.

Similarly, Andriamanajara, Dean, Ferrantino, Feinberg, Ludema and Tsigas (2004) applied CGE model in order to analyze the influence of NTMs on the global economy. Using data of 18 regions and 14 different sectors, the research realized that NTMs have an

overwhelming effect on increasing export prices. The final result shows that, if NTMs were completely abolished, the world economy will yield a profit of 90 billion USD. This benefit is largely the direct consequence of non-tariff barriers removal from developed countries (which is the group of countries impose the highest number of NTMs) such as Japan, the European Union, etc...

A wide range of research using gravity model is also dedicated to capture the ex-post effect of NTMs on economic indicators.

Wood, Wu, Li and Kim (2017) *The impact of TBT and SPS measures on Japanese and Korean exports to China*, used structural gravity framework to evaluate the impact of TBT (Technical Barriers to Trade) and SPS (Sanitary and phytosanitary) measures on trade between Japan, Korea and China. The research yielded interesting result, as TBT and SPS measures are believed to hinder Japan and Korea export of manufactured products to China, while these measures promote Korea agricultural trade to China. The negative influence on manufactured products is the direct consequence of the increasing cost of production imposed on Japan and Korea goods by China through TBT measures. On the other hand, SPS measures increase not only the quality but also the hygienic requirements for Japan and Korea agricultural products, hence promote demand of China for import goods and ultimately propel Japan and Korea trade.

Gruber, Ghodsi and Stehrer (2016) also utilized the structural gravity model and Ad-valorem equivalent-AVE with the purpose of analyzing the impact of NTMs (with the focus on TBT and SPS) on 5221 6-digits HS lines of 118 difference nations. The research first used the collected data to estimate AVE of NTM of 118 countries between the period of 2002 to 2011. Based on the estimated AVE, the research then quantifies the influence of NTMs on trade. The results show that, NTMs have both negative as well as positive impact on trade depending on countries and product analyzed. Furthermore, the research also realized that, eventhough dwarfed by the number of TBT and SPS measures, Quantitative restriction (QR) measures have more significant role as a trade barrier. More astonishingly is the finding that NTMs have a net positive effect on global imports. This result is argued to be the product of a stronger trade creation effect compared with trade diversion which ultimately leads to a net profit of the global economy.

Using the same estimation technique and based on a panel data set of 1260 countries pairs and products, Cadot and Gourdon (2014) aimed at quantifying the price effect of NTM in African countries. The research also used two difference methods to proxy for NTMs variable, which is through dummy variable and frequency index. The result shows that after take into account the factors related to tariff differences on cost of livings between nations, and other unobservable products related characteristics, SPS measures is believed to increase the price of Africa (especially food price) by approximately 14%. Not only that, NTM measures also increase the cost of living for poorer household by 9%.

It is noticeable that, there is a certain degree of diversification on the effect of NTMs on difference products types, this has sparked the establishment of sector specific research.

Dal Bianco, Boatto, Caracciolo, Santeramo (2014) focused on finding the impact of trade costs (tariff and non-tariff barriers) on world wine trade in the period between 1997 and 2010. The research showed that, while SPS measures have no effect, TBT measures negatively impact the global trade volume of wine related products.

Arita, Mitchell, Beckman (2015) evaluate the impact of SPSs and TBTs on agricultural trade between the US and the EU. The paper used AVE to proxy for NTMs. The results suggest that EU's NTMs have a significant negative impact on US poultry, pork and corn products while US's NTMs effect on EU's export is also significant. This again reassure the importance of assessing the influence of NTMs using sectoral level data.

Oleksandr (2015) used gravity model and binomial variables to assess the effect of TBTs and SPSs on different countries in the period between 1996 and 2011. More importantly, the research concerns the concept of intensive margins and extensive margin of trade. The results suggest that SPS measures influence variable cost, increase extensive margin however, decrease intensive margin of trade. On the other hand, TBTs affect fixed cost, increase trade volume intensive margin and decrease trade volume extensive margin.

Baylis, Nogueira and Pace (2012) worked specifically to analyze the influence of NTMs on seafood trade between the EU and USA. On other words, the research aim at evaluating whether imposed NTMs have a propelling or impeding effect towards seafood trade. The results suggest that, free trade agreement between the EU and the US have a positive impact on seafood trade through the abolishment of tariff, however the application of non-tariff measures decrease this growth by 25%.

Wilson, Nober and Nguyen (2009) used gravity framework, and a panel data set in order to assess the impact of food related safety standard on seafood exports to US, EU and Japan. The results show that, the effect that SPS measures imposed varies across products types, however, shrimp export flow is the most sensitive to these measures. On average, these standard decrease seafood export to the US, EU and Japan 90.45%; 99.47%; and 99.97% respectively.

Wood, Wu, Li (2017) also utilized gravity model framework with Poission Psuedo Maximum Likelihood estimator in order to estimate the impact of SPS measures on export from New Zealand, the US, Korea and Japan to China. The results are mixed, as SPS measures imposed by China show an impeding effect on export from Japan and the US, but a promoting effect on export from New Zealand and Korea.

From the above review of literatures, it is worth noticing that research dedicated to assessing the impact of NTMs on trade are numerous, however, these research are often different in aim, scope, method and data which reflect in the diversity of result. Therefore,

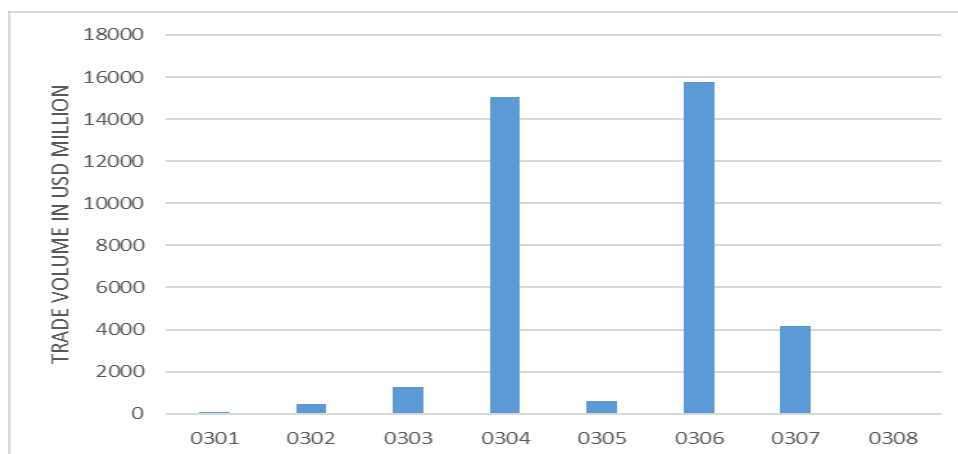
this paper attempt to use the most advanced estimation and data collection technique in order to quantify the net effect of TBT and SPS measures on Vietnam seafood trade.

3. Data

The data used in the estimation process is collected based on a variety of sources. The dataset includes bilateral trade information of seafood export flow from Vietnam to major importers namely United States, China, European Union, Japan and Korea as well as data related to trade cost, tariff; non-tariff barriers and annual GDP. These data are analyzed using a gravity model with the aim to identify any available effect that non-tariff barriers impose on seafood export from Vietnam to these destinations.

Bilateral seafood trade data is collected from United Nation COMTRADE data base for all 4 digits HS 03 code which includes 0301 (Live Fish), 0302 (Fish, fresh and chilled), 0303 (Fish, frozen), 0304 (Fish fillet and other fish meat), 0305 (Fish, dried salted or in brine, smoked fish), 0306 (Crustaceans), 0307 (Molluscs), 0308 (Aquatic invertebrates other than crustaceans and molluscs) in the 10 years period between 2009 and 2019.

Figure 1: Vietnam seafood trade categorized in HS codes, from 2009 and 2019



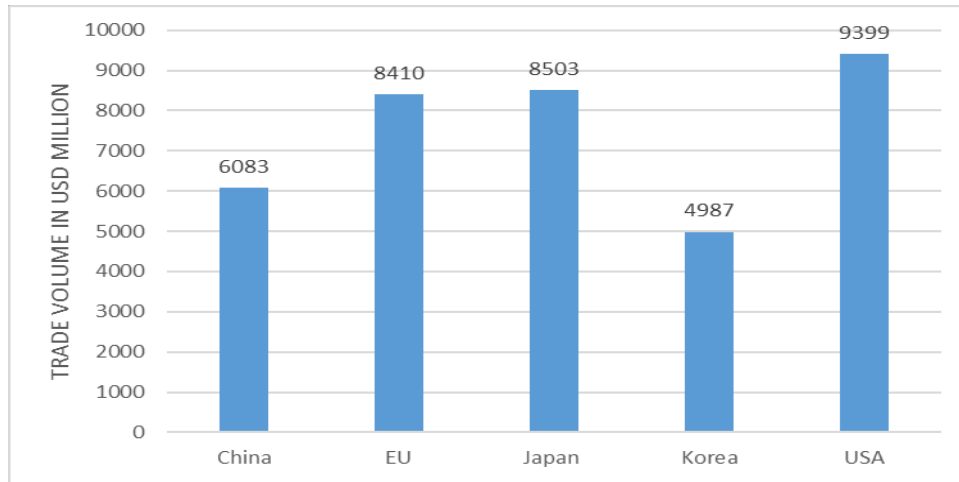
Source: UN COMTRADE data base and own calculations

Figure 1 illustrated volume of seafood trade between Vietnam and major partners, categorized based on HS4-digit codes between the analyzed period. The data shows an overwhelming demand for HS 0304 (Fish fillet) and 0306 (Crustaceans) export which was at 15072 and 15746 million dollars respectively. This reflects Vietnam’s export structure heavily focused on filleted catfish and shrimps. HS 0307 (Molluscs) ranked third in export volume at 4163 million USD, while other codes are insignificant.

Figure 2 shows Vietnam seafood export to major destinations. United States was recorded to have exceptional import volume of Vietnam seafood at 9399 million USD, while Japan and the EU ranked second and third at 8503 and 8410 million USD respectively. China, although has proximity advantage, only import 6083 million USD worth of seafood from Vietnam. And lastly Korea only imported just under 5000 million USD of seafood from Vietnam. Surprisingly, the relationships between trade flow and distance as well as demand

size are unable to be recognized based on the extracted data. This characteristic will be further analyzed using estimation techniques.

Figure 2: Vietnam seafood trade to major importers, from 2009 and 2019



Source: UN COMTRADE data base and own calculations

Data regarding GDP of both Vietnam and the importers are collected from World Development Indicators assembled by World Bank. Other variables indicating costs of international trade such as tariff and non-tariff barriers are collected from WTO data base. The challenge of most empirical research related to non-tariff measures is technique to quantify the non-tariff variable. In this research, non-tariff barriers are represented by count variables which reflect the number of measures imposed on Vietnam seafood products by major trading partners. Data in relation to regional trade agreement (RTA) is extracted from the WTO. Other variables showing bilateral characteristic between Vietnam and partners such as distance, language, border are collected from CEPII data base – Geodist

4. Theoretical framework and Methods

4.1. Gravity model

The gravity model applied in this analysis stemmed from the research of Anderson Van Wincoop on building a structured gravity model which has solid theoretical foundation. The structured gravity function regarding bilateral trade between countries under the framework of Anderson Vanwincoop can be expressed as follow

$$X_{ij} = \frac{Y_i E_j}{Y} \left(\frac{t_{ij}}{\pi_i P_j} \right)^{1-\sigma}$$

In which Y , Y_i and E_j represent the GDP of the world, country i and country j respectively. t_{ij} serves as a proxy for international trade frictions between country i and j , σ denotes the substitution elasticity, and $\pi_i P_j$ represent country i and country j outward and inward multilateral resistance terms respectively. This function can also be expressed as log-linear as follow

$$\ln X_{ij,t} = \ln E_{j,t} + \ln Y_{i,t} - \ln Y_t + (1 - \sigma) \ln t_{ij,t} - (1 - \sigma) \ln \pi_{i,t} - (1 - \sigma) \ln P_{j,t} + \varepsilon_{ij,t}$$

The variable representing bilateral trade cost can be further expressed as follow:

$$(1 - \sigma) \ln t_{ij,t} = \beta_1 \ln \text{DIST}_{ij} + \beta_2 \text{RTA}_{ij,t} + \beta_3 T_{ij,t} + \beta_4 \text{NTM}_{ij,t} + \beta_5 u_{ij,t}$$

However, as discussed, the analysis only concerns bilateral relationship between Vietnam and USA, hence, time-invariant variables like distance, border, or colonial relationship is excluded in order for the estimation to exist. As the result, the function for international trade cost can be minimized as follow:

$$(1 - \sigma) \ln t_{ij,t} = \beta_1 \text{RTA}_{ij,t} + \beta_3 T_{ij,t} + \beta_4 \text{NTM}_{ij,t}$$

With $\text{RTA}_{ij,t}$ represents trade agreement relationship between Vietnam and partners. $T_{ij,t}$ and $\text{NTM}_{ij,t}$ represent tariff and non-tariff barriers respectively.

4.2. Estimation method

The challenges in estimating the gravity model are prominent and plenty in number, however, two are most noticeable, namely zero trade flow and heteroskedascity. A handful of methods have been recommended in order to efficiently estimate the gravity model and at the same time addressing the aforementioned challenges. In this research, a Poisson Maximum Likelihood (PPML) estimator suggested by Silva and Tenreyro in their famous paper “Log of gravity” published in 2006. Through a Monte Carlo simulation, PPML has been proven to be more efficient compared to simple OLS estimator, while also producing consistence results. Furthermore, PPML is able to solve the aforementioned problems by offering a method to allow the structural gravity model to be estimated in level-log form which reliably tackle heteroskedascity and zero trade flow issue.

5. Model Results and Discussion

Table 1 shows the result regarding the effect of TBT and SPS measures on Vietnam seafood export using both PPML and OLS estimator. The utilization of both PPML and OLS estimator is to have a comparative view of the result and deeper understanding of the influence imposed by TBT and SPS measures.

The results recorded are in accordance with the findings by Silva and Tenreyro (2006), as the parameters yielded by OLS estimator are noticeably larger compared to PPML estimator. This difference is argued by Silva and Tenryro to be the consequence of the inability to address the problems of heteroskedascity and zero trade values of OLS estimator. The results of OLS estimator are believed to overexaggerate the real effect of GDP and geographic distance on trade. In this case, the parameter of Vietnam GDP (GDP_{VN}) and distance yielded from OLS estimator are 2.24 and -1.202 which empirically proven to be bias due to the sample selection problem of excluding zero value observations. Hence, this paper prefers results generated by PPML estimator, and the following discussion on the effect of NTMs on trade will base on the estimates of PPML if not specified otherwise.

Table 1: Estimation result of TBTs, SPSs effect on Vietnam seafood export

Variables	PPML (1)	OLS (2)
GDP_{vn}	0.7602 (0.021)	2.24 (0.000)
GDP_{part}	0.388 (0.160)	0.305 (0.641)
Dist	-0.323 (0.772)	-1.202 (0.725)
Tariff	-0.0098 (0.035)	-0.277 (0.077)
RTA	-0.084 (0.929)	1.599 (0.693)
Contig	-0.385 (0.659)	0.5274 (0.792)
SPS	0.0053 (0.029)	-0.0193 (0.000)
TBT	0.0040 (0.697)	-0.0145 (0.022)

Note: Column (1) and (2) record the result of PPML and OLS estimator respectively. P-values of each parameter are reported in parentheses

The estimation parameters of GDP_{VN} and GDP_{part} show that only Vietnam GDP has a significant impact on seafood export trade. On average, as Vietnam GDP increases by 1%, Vietnam's seafood export to analyzed destinations will increase by 76%. This result is in accordance with Silva and Tenreyo (2016) findings of non-unity importers and exporters coefficients. The rise of Vietnam GDP signals an expansion in overall as well as seafood production which directly impact the volume of available stock and promote trade. However, the coefficient associated with importers' GDP (GDP_{part}) which is at 0.388 is positive but not statistically significant. This is the result of the limited power of Vietnam's businesses to fully supply for the importers' demand. As Vietnam's production is inefficient and can only fulfill a fraction of demand of importers, the expansion of these destinations' market will fail to impose a noticeable effect on Vietnam's volume of trade. The role of geographic distance is also insignificant in influencing Vietnam's seafood export as the estimated parameters have a larger than 0.05 p-value. This surprising result can be the consequence of the small sample of

countries selected to analyzed, even though the chosen countries in the sample accounted for the majority of Vietnam's seafood export, the lack of diversification in geographic data might underestimate the importance of proximity on increasing cost of trade and in turn impeding export volume.

Seafood export from Vietnam is affected by tariff imposed by importers. As suggested by the result, on average, as tariff increases by 1%, the seafood export volume of Vietnam will decrease by 0.9%, which is also statistically significant. This is a negligible effect, due to the low tariff applied to seafood originated from Vietnam. Considering the variables of interest which is SPSs and TBTs, the parameters associated with TBTs is positive however not statistically significant. This suggests that TBT measures don't have significant impact on Vietnam's seafood trade which can be explained by several reasons. *Firstly*, the TBT measures imposed on Vietnam's seafood are relatively not restrictive in nature and do not impose unreasonable additional cost to businesses. These measures are imposed purely to ensure quality of products, not to act as barrier to trade, hence do not reflect on trade volume. *Secondly*, Vietnam's seafood products are already complied with requirements presented by TBTs measures, hence no significant effect of TBT can be seen on trade volume. On the other hand, SPSs variable show a positive and statistically significant coefficient. On average, and hold other variables constant, if the number of SPS measures imposed by importing countries increase by 1, Vietnam's seafood export will increase by 0.36%. SPS measures enhance the confidence of consumers for importing products and ultimately lead to a positive influence on trade volume of sea food products.

6. Conclusion

Even though research regarding the effect of trade barriers and specifically non-tariff measures (NTMs) are not considered to be novel and not limited in number. However, the diversification of methods, and data makes correctly quantifying the net effect of NTMs on trade a challenging feat. Using a gravity framework offered by Anderson, van Wincoop in tandem with PPML estimators suggested by Silva and Tenreyo, this paper aims at analyzing the effect of TBT and SPS measures imposed by major importers on Vietnam's seafood products.

The model shows a positive relationship between the growth of Vietnam's GDP and seafood export, however variable related to GDP of Vietnam trading partners fails to show any significant influence. Variables associated with international trade cost such as distance and tariff all show significant and negative impact on Vietnam seafood export. The variables of interest namely TBT and SPS show surprising result. The estimation suggests that while TBT measures don't have any noticeable effect, SPS measures have a positive impact on Vietnam seafood trade. This unusual effect is believed to be the product of heighten importing standard which leads to increase in consumers' confidence and demand.

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THE RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT, PRIVATE DOMESTIC INVESTMENT AND PUBLIC INVESTMENT: EVIDENCE FROM VIETNAM

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Abstract

This study attempts to apply the Autoregressive Distributed Lag (ARDL) model to examine the relationship between Vietnam three investment sources, Foreign Direct Investment (FDI) and Private Domestic Investment (PDI) as well as Foreign Direct Investment (FDI) and Public Investment (PI) in Vietnam over the period from 1995 to 2019. The experimental data was collected from World Bank and Vietnam General Statistics Office in 25 years starting from 1995. ARDL model has rarely been used in Vietnam researches to examine the mutual impact of FDI, PDI and PI even though ADRL can automatically distribute lag order to variables and ADRL can also work well with small sample size. Besides that, this study also takes precursor for filling the void of analysing causal impacts between investment sources in Vietnam. The findings suggest a crowd-in effect between FDI and PDI as well as FDI and PI in the long run. In the short run, while FDI shows a complementary impact on PDI, it has a crowd-out effect toward PI. These results show that special emphasis should be given to improve the investment environment and they also imply policymakers that the short-run trend of impact from FDI on PI should not determent long-term goals of policy design.

Keywords: *ARDL; cointegration; Foreign Direct Investment; Private Domestic Investment; Public Investment.*

1. Introduction

Globalization is driving upward the total amount of global direct foreign investment which in theory, exists many noticeable impacts on economic development, especially in developing countries. Moreover, some papers indicated the two-way impact of this source of investment not only for recipient countries but also for investors. For instance, it facilitates the updated process in the technology of recipients, and by extension, provides stimulus for the research and development activities in developed countries to innovate those that already exist. In addition, it helps recipient countries, which typically are developing countries with scarcity in capital, accumulate more rapidly while helping investors gain profits from their idle capital. Direct impacts aside, FDI also has indirect impacts such as acting as a basement for a peaceful trading environment, maintaining political stability, prompting better diplomatic ties among countries, enhancing the position of both recipient and investment countries on the international market (Campos & Kinoshita, 2002; De Mello, 1999; Duasa, 2007; Pradhan, 2009)

Owing to the importance of this kind of investment, resource-rich and populated countries in both Asia and Africa are competing for the scarcity stream of foreign direct investment. As a result, analyzing country domestic factors that causal relationship with FDI, which more specifically is PI and PDI, become increasingly important to economic development. Owing to this reason, there are a lot of international research emerged to demonstrate the relationships between foreign direct investment and domestic investment (DI) which is the combination of Public Investment and Private Direct Investment. The findings indicated a diversity in the impact of FDI and DI which mostly depend on the condition of recipient countries namely the average level of education, national financial health, domestic laws and policies, the competition between domestic and foreign firms. On the one hand, foreign investment can stimulate the domestic investment activity in some cases such as introducing a new industry in recipient countries which can tempt local investors to spend their money into a wholly new field for competition and getting profit. On the other hand, the relationship between foreign and domestic capital could be a substitute due to the competition for rare and limited resources between local and foreign firms, which can lead one or some of them to go bankrupt or merge into the dominant ones. In this case, the impact of FDI on DI is somewhat questionable. To better analyze the linkage between FDI and DI, DI should be divided into PI and PDI for being analyzed more precisely. However, there is still a scarcity of research that follow this way (Ali et al., 2015; Saglam & Yalta, 2011).

The collected data from Vietnam could partly indicate the relationships between PDI, PI, and FDI are not significant in the short run, but statistically significant in the long run. Fundamentally, PDI is positively correlated with FDI because the willingness to invest domestically in a country's private sector manifests a country's stable business environment. Especially in Vietnam, Decree 09/VBHN-BTC, Decree 78/2014/TT-BTC, Profit Tax Law, Investment Law have been useful for both investments from both the foreign sector and private sector. For instance, over the period from 1995 to 2019, the amount of investment into the Vietnamese economy of investment. In 1995, FDI accounted for 30,4% out of the national capital. Once having significantly decreased to just 16,2%, the percentage of FDI out of total capital rose regularly to reach the vicinity increased twenty-eightfold. However, a striking contrast can be seen in the trend of these kinds of 23% in the last few years. On the contrary, Domestic Investment which is the combination of PI and PDI rocketed from 69,6% in 1995 to reach its peak at 89,8% in 2006. This figure, then, witnessed a downward trend by 10% in the following period. These data informed a crowd-out effect between FDI and the remaining parts of national investment including PDI and PI. However, this cointegrated statistical relationship was rarely investigated in Vietnam literature. The prevalent subjects that are concerned about sources of investment are mostly related to Gross Domestic Product (GDP), in which FDI, PDI, and PI are separated independent variables.

The objective of this research distinguishes itself from other studies in Vietnam because it aims to examine a relationship between private domestic investment, public

investment, and foreign direct investment whether these relationships would be positive, negative, or neutral as some former public research. The rationale why Vietnam is a typical example to examine these relationships is because Viet Nam is a developing country which means this country has a demand for an enormous amount of money to lay a foundation for the socio-economic development process. Hence, after gaining liberty in 1945, Vietnamese authorities have implemented a series of financial policies to mobilize capital from all sources of investment. Thus, it is imperative to have specific research into the casual interaction among kinds of them. Moreover, the question refers to if these relationships would change in the long or short run also should not be ignored. To answer these questions, firstly this research applies the conventional unit root test to check the stationarity of each series. And then ARDL model would be adopted in this research to address the small-sample issue which is one of the key culprits behind the shortage in the quantity of specific research. Moreover, ARDL would be perfect to compare the short and long-run relationship via using the cointegration bound test.

This research work as a contribution to fill the void in the literature about the connection between foreign and other kinds of investment. It will not only shed light on the connection between PI, PDI, and FDI. It will also play a role in the development of a research model which can be applied to other subsequent studies in this field. This, I think, is the most important contribution of this research to the body of knowledge.

Following this main idea, section 2 would discuss the related studies and theoretical framework; then section 3 would show the methodology of this article before the findings would be show in the next section. The conclusion and policy recommendations would be drawn at section 5.

2. Literature Review and Theoretical Framework

2.1. Literature Review

Most of the former articles in the related field indicated a positive causal relationship between direct foreign investment and private investment. Rath and Bal (2014) examined the relationship between foreign direct investment, private investment, and public investment in India from 1978 to 2009. Rath and Bal (2014) found that foreign direct investment, private domestic investment is positively correlated in their study period. They applied Zivot and Andrews test to analyse the structural breakpoints in the time-series data and then used Vector Auto Regression (VAR) model to find the positive relationship between foreign direct investment and private direct investment. However, they failed to detect any statistically significant correlation between private direct investment and public investment. Similarly, based on VECM framework, Ang (2009) detected a statistical significant correlation between foreign direct investment (FDI), private direct investment (PDI), and public investment (PI) in Malaysia from 1996 to 2003. In his study, Ang (2009) found that the magnitude of positive impact of FDI on PDI is strong than the impact of PI on PDI. Ali et al. (2015) also found a

very similar result to Ang's study when applying the autoregressive distributed lags model for Pakistani data from 1977 to 2011.

On the other hand, there were also several studies found the impact of FDI on PDI is statistically insignificant. For instance, according to Saglam and Yalta (2011), FDI does not have any contributions to the investment path, and by extension, no long-run interaction between FDI and PDI. Their findings were examined by using multivariate VAR model in tandem with time-series data over 40 years in Turkey. Chen et al. (2018) and Liu (2008) found that due to competition imbalance, foreign investment tends to phase out domestic companies in China, led to a decrease in private direct investment. Kosová (2010) used firm-level data from 1994-2001 in Czech to test whether foreign direct investment has negative implications on the domestic investment. She found evidence for a strong crowding-out effect of foreign investment on domestic investment of firms. However, her finding demonstrated that domestic investment would rebound in the long run because of the overall growth of domestic industries (Kosová, 2010).

While the relationship between FDI and PDI is constantly examined in the literature. Researchers underestimated the impact of FDI and PDI on public investment (PI). The key reason for this is the shortage of relevant data FDI and PDI impacting on PI. Akkina and Celebi (2002) studied the link between fixed public investment and fixed private investment. Their finding indicated that fixed public investment crowds out fixed private investment due because there is a substitutability effect between the two sources of investment. In another study, Saglam and Yalta (2011) also found an unclear correlation between PI and PDI in the long run.

2.2. Theoretical Framework

The statistical relationship between FDI, PDI, and PI has been featured in various models. Rath and Bal (2014) used a vector autoregression model to examine the relationship between FDI and PDI. Vector autoregression model has also been used to study the relationship between FDI, PDI and PI. One positive contribution of VAR is that it increases the robustness of the estimation of coefficient of correlation between FDI, PDI, and PI. VAR also shows a great capacity to estimate the short-run and long-run impacts between FDI and PDI, FDI and PI and PDI, and PI. In addition to vector autoregression model, other studies also used other methodologies such as vector error correction model (VECM). Mojanoski et al. (2017) used VECM to evaluate the degree of cointegration between foreign direct investment, central or public investment, and other forms of investment in Macedonia. They believed the VECM is more advantageous than other methodologies because of its robust estimate both in short-run and long-run analysis.

Recently, researchers started to adopt autoregressive distributed lag approach to study the impacts of foreign direct investment on other forms of domestic investment. Raza (2015); Nilofer and Qayyum (2018) used ARDL to investigate the impacts of foreign direct investment on public investment and economic growth of Pakistan. ARDL helped them to

detect both long-run and short-run positive impact of FDI on Pakistanis economic growth and domestic investments. ARDL trumped other models in evaluating the impacts of foreign direct investment on domestic investments in Vietnam because it is able to overcome the country data problem such as small sample size and limited time period. Peseran and Peseran (1997) stated that ARDL provides a consistent estimation of variable impacts and estimations are indifferent between mixed stationary and small number of observations. In addition, each variable would be automatically distributed optimal lag period whereas other methods treat lags as separate outputs (Gonzalo, 1994). Therefore, applying ARDL model seems to be an efficient method to address the drawbacks of other models.

This study will employ the ARDL model to investigate the impacts of FDI on private domestic investment (PDI) and public investment (PI) in Vietnam. ADRL has not been featured previously to investigate the relationship between FDI and other forms of domestic investment in Vietnam. Peseran and Peseran (1997) were the creators of the autoregressive distributed lag model in their analysis of long-run sustainability of capital accumulation on Saudi-Arabia economic growth. Thus, this model is suitable for this study where our attention to long-run impacts of foreign direct investment remains the key focus.

Fundamentally, FDI, PDI, and PI are essential elements of a country's economy (Howitt & Aghion, 1998). Besides FDI, both PDI and PI are main sources of investment to countries' infrastructures such as road, electricity, and technology infrastructures. These infrastructures are part of core foundation for economic development of a country (Fitriandi et al., 2014; Kirkpatrick et al., 2004). Therefore, PDI and PI are reliable variables that can be used to estimate the contribution of FDI to economic development. According to these theoretical considerations, the below equation can be formulated to detect the relationships among variables:

$$FDI_i = f(PDI_i, PI_i)$$

Where:

FDI, PDI and PI stand for Foreign Direct Investment, Private Direct Investment and Public Investment.

$i = 1, 2, \dots, T$.

3. Research Methodology

3.1. Data

This data was collected from the general development indicators panel of World Bank (WB) and annual summarized data from the Vietnamese General Statistics Office over 25 – year period, equivalent to 25 observations, from 1995 to 2019. The time-series data was set annually instead of quarterly or monthly based on the finding of Hakkio and Rush (1991). Where FDI is symbolled for Foreign Direct Investment and is estimated by the net FDI inflows. Two domestic sources of investment are PDI and PI standing for Private Direct Investment and Public Investment and are proxied by using GFCF. GFCF or Gross fixed

capital formation is a macroeconomic concept used in official national accounts. The concept dates back to the National Bureau of Economic Research (NBER) studies of Simon Kuznets of capital formation in the 1930s, and standard measures for it were adopted in the 1950s. Statistically, it measures the value of acquisitions of new or existing fixed assets by the business sector, governments. GFCF is a component of the expenditure on the gross domestic product (GDP), and thus shows something about how much of the new value-added in the economy is invested rather than consumed. All these above variables are transformed into a ratio with GDP, which is measured by constant price in 2010. Technically, the rationale why all variables are divided with the real GDP is that it would show us the relative figure which would be far more relevant to indicate the impacts of these kinds of investment on the general development over time and space than using absolute figures. Moreover, the GDP ratio would play as a chief factor to reflect generally the long-run impact among variables than just using the absolute figure which deems to be relevant for short-run impact. Owing to these reasons, the above equation can be illustrated by the equation below:

$$FDIGDP_i = \beta_0 + \beta_1 PDIGDP_i + \beta_2 PIGDP_i + u_i$$

This is a line-ear formulation to show the mutual impacts among variables based on GDP ratio. Where FDIGDP, PDIGDP, and PIGDP stand for Foreign Direct Investment, Private Direct Investment, and Public Investment to GDP ratio respectively.

3.2. Methodology

Spurious relationship among variables is one of the prevalent errors in regression when examined variables are nonstationary or mixed stationary. This drawback can bring us to a wrongful regression result with a highly meaningful R² value and one or some meaningful statistical constant figures based on ordinary F-test and t-test. This error normally occurs when using the basic OLS model with the assumption that all the variables are stationary. The most prevalent way to recognize the spurious regression is by evaluating the d value of the Dusbins-Watson test. If $d < R^2$, it could be suspected that this regression is a spurious one. However, it is not always that any regressions with nonstationary data series are valueless. In some cases, regressing a nonstationary series with others could bring back a value economic result due to the existence of co-integration which means there is a balanced or long-run relationship between them.

There are several ways to test the presence of cointegration among nonstationary variables comprising the Johansen (1992) system framework, Engle and Granger (1987), or Phillips and Ouliaris (1990) residual-based test statistics which can be obtained from the SOLS estimation. Therefore, a test of the null hypothesis of no cointegration against the alternative of cointegration corresponds to a unit root test of the null of nonstationary against the alternative of stationarity. The main difference between the two methods is the way of accounting for serial correlation in the residual series. The Engle-Granger test inherits the Dickey-Fuller approach with parametric methodology, whereas the Phillips-Ouliaris test uses the without parametric Phillips-Perron approach. However, there are some drawbacks of these

methods that make it will not work properly in this examined case. Firstly, the Engle-Granger would optimally work within 2 variables, equivalent to only one cointegration that could be existed between variables. This condition is not ensured when the equation has more than 2 variables, equivalent to the co-existence of co-integration. Moreover, the orders of variables in regression equations take responsible for the final result, which means rearranging the orders could bring other final results. However, these downsides could fully tackle through the Johansen cointegration test method which is estimated via this vector autoregressive model.

$$\Delta y_t = \pi y_{t-1} + \sum_{j=1}^k A_j \Delta y_{t-j} + u_t$$

Where:

Δ is the first difference operator, A is a matrix of VAR parameters for lag i and π is a coefficient matrix which shows information's about the long-run effect of variables in the vector, and y_t is the vector of the three endogenous variables (FDIGDP, PDIGDP, PIGDP). Additional statistical tests such as unit root test and bound test have been employed to test the robustness of this study's statistical model.

Unit Root Test: is a test for stationary in time-series data. A time-series data has stationary when it does not show any evidence of the shift in distribution including mean, variance and covariance, irrespective of the changes in time, and significant level. Unit root is considered to be the main culprit behind the non-stationary of time-series data which results in the low statistical power of model. This research applied ADF model which was formulated by Dickey and Fuller (1981) to analyse the unit root. The precise equation was illustrated below.

$$\Delta y_t = \alpha_0 + \beta y_{t-1} + \sum_{j=1}^k \phi_j \Delta y_{t-1} + \varepsilon_t$$

Where: $\Delta y_t = y_t - y_{t-1}$

y_t is the examined time-series data, k is the length of lag and ε_t is white noise errors

Bound Test

The next step in process is testing for the long-run relationship between variables by conducting F-test for coefficient of lag level in each variable. The test was constructed on null-hypothesis based on the following conditional VECM of interest.

$$\Delta y_t = c_0 + \delta_1 \text{FDIGDP}_{t-1} + \delta_2 \text{PDIGDP}_{t-1} + \delta_3 \text{PIGDP}_{t-1} + \sum_{i=1}^k \phi_i \Delta \text{FDIGDP}_{t-i} + \sum_{j=1}^k \omega_j \Delta \text{PDIGDP}_{t-j} + \sum_{l=1}^k \varphi_l \Delta \text{PIGDP}_{t-l} + \varepsilon_t$$

Where:

δ_t are the long run multipliers, c_0 is the drift and ε_t is white noise errors

The null-hypothesis can be expressed as follows:

$$H_0: \delta_1 = \delta_2 = \delta_3 = 0$$

against the alternative:

$$H_1: \delta_1 \neq \delta_2 \neq \delta_3 = 0$$

The critical value is ranging from 0 to 1. If the value of F-statistic is higher than 1, the null-hypothesis of long-run relationship can be rejected, whereas, if this value is lower than 0, the null-hypothesis cannot be rejected. In the case, F-value is sandwiched between 0 and 1, the result is inconclusive.

4. Results and discussion

4.1. Descriptive statistics of the variables in the model

Table 1: Descriptive statistics of the variables in the model

Variable	Obs	Mean	Std. Dev.	Min	Max
FDIGDP	25	8.403577	2.087073	5.726728	13.4644
PDIGDP	25	11.83445	2.825905	7.700468	16.41884
PIGDP	25	7.504187	1.625616	5.274545	10.22254

Source: Author's calculation

Selection of the delay of the ARDL model: based on the AIC and SBC criteria, the optimal delay of the ARDL model is (1, 0, 1).

Descriptive statistics of the variables in Table 1 show that FDIGDP has an average value of 8.404, the smallest value is 5.73 and the largest value is 13.46. Next is PDIGDP with the mean value of 11.834, the smallest value is 7.7 and the largest value is 16.42. Finally, the PIGDP with the mean, maximum and minimum values being 7.504, 5.275, and 10.223, respectively.

4.2. Unit root test results

Table 2: Unit root test results

Variable	Degree of difference	Augmented Dickey Fuller test statistic	
		t-Statistic	Prob.*
FDIGDP	I(0)	-4.44	0.0021***
PDIGDP	I(1)	-3.99	0.0058*

PIGDP	I(1)	-6.39	0.0000*
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(*, *** corresponds to the 1% and 10% significance level)

The results of the unit root test according to ADF by Dickey and Fuller (1981) show that the variable FDIGDP stops at the original series, the other two variables are PDIGDP and PIGDP stop at the first difference at 1% significance level. Thus, the dataset in this study to ensure stationarity has both series I(0) and series I(1). Therefore, it is reasonable to apply the ARDL bound test method.

4.3. Bound test results

Table 3: Bound test results

F-statistics	Level of Significance	Bound Critical Values* (Restricted Intercept with no trend)	
		I(0)	I(1)
9.0846	1%	3.41	4.68
	2.5%	2.96	4.18
	5%	2.62	3.79
	10%	2.26	3.35

Source: Author's calculation

The test results in Table 3 show that $F = 9.0846$ larger than the value of the upper envelope $I(1) = 4.68$ at 1% significance level, which means there exists cointegration between variables with confidence reaching 99%. According to Pesaran et al. (2001), cointegration between variables is because there is a long-run relationship between them.

4.4. Model fit test

Table 4: Model fit test

Test Statistics	Statistical	Statistical value	Probability	Conclusion
Serial Correlation	CHSQ (1)	.11337	.736	The model is not affected by variance
	F (1,19)	.090174	.767	
Functional Form	CHSQ (1)	.096045	.757	The model does not omit variables
	F (1,19)	.076341	.785	
Normality	CHSQ (2)	1.9903	.370	No structure point

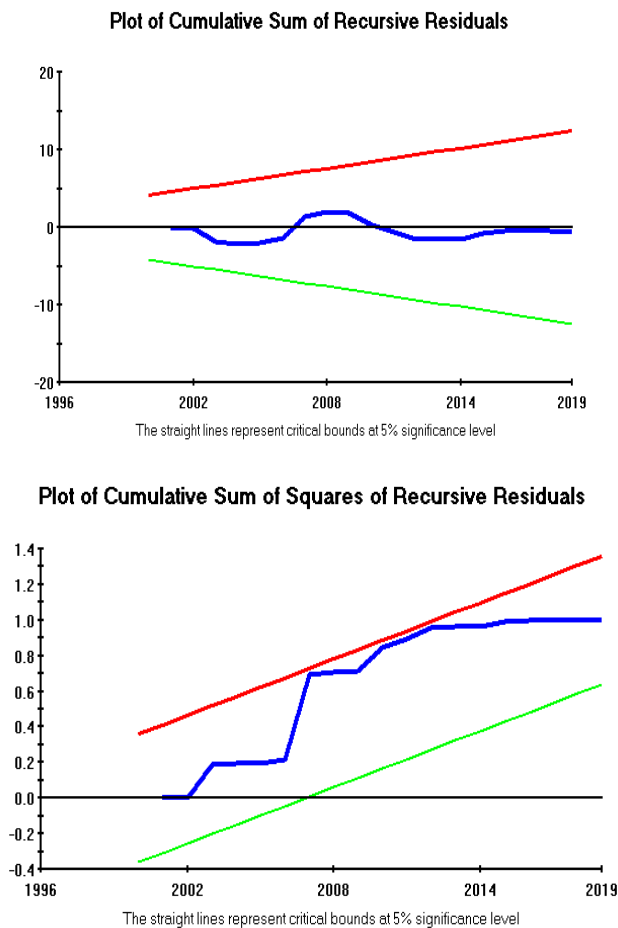
Heteroscedasticity	CHSQ (1)	.41130	.521	The model is not autocorrelated
	F (1,22)	.38360	.542	

Source: Author's calculation

4.5. Cumulative Sum of Recursive Residuals (CUSUM) and Cumulative Sum of Squares of Recursive Residuals (CUSUMSQ)

According to Brown et al. (1975), the stability of the regression coefficients is tested through the cumulative sum of residuals (CUSUM) and adjusted cumulative sum of residuals (CUSUMSQ). Figure 1 shows that the regression equation is stable because both histograms have the residual accumulative sum curve and the adjusted cumulative sum curve of residuals within the bounds of the envelope (2 cut-off lines) at 5% significance level.

Figure 1: Test of cumulative sum and adjusted cumulative sum of residuals



Source: Author's calculation

4.6. Estimate the long-run and short-run coefficients in the model

Table 5: Estimate the long-run and short-run coefficients in the model

Regressor	Coefficient	t-Statistic	p-value
Long run relationship			
PDIGDP	.43044	1.2573	.223
PIGDP	.29440	.52752	.604
Short run relationship			
FDIGDP (-1)	.76186	7.7439	.000
PDIGDP	.10250	1.3236	.201
PIGDP	-.24470	-.86465	.397
PIGDP (-1)	.31480	1.0691	.298
ECM (-1)	-.73814	.098383	.025
R-Squared = .57675		R-Bar-Squared = .51327	
Log-likelihood = -37.8601			

Source: Author's calculation

The research model explains 51.3% of the fluctuation of FDI in Vietnam's GDP in the period from 1995 to 2019. The ECM coefficient with a significance level of 1% shows that 23.8% of the difference between the short-run value and the long-run equilibrium value of FDIGDP will be adjusted each year.

The results in Table 5 show that both PDIGDP and PIGDP have a positive relationship with FDIGDP in the long run. When FDIGDP increases by 1%, PDIGDP increases to 0.43%, and PIGDP increases to 0.29%. This finding is relatively similar to some former studies about the complementary effect of FDI on PDI such as those of Lipsey (2004), Changyuan (2007). However, in the short run, PIGDP shows a negative relationship with FDIGDP. The coefficient of ECM (-1) is -0.738 which is highly significant and also confirming the existence of co-integration and it shows that a deviation from equilibrium during the current year will be corrected by 73.8% in the next period.

5. Conclusions and policy implications

This research has investigated the causality between three Vietnam sources of investment, foreign direct investment (FDI), private direct investment (PDI), and public investment (PI). Firstly, the research found a robust cointegrated relationship between PDI and PI during the period 1995-2019. Secondly, results show that there are positive effects from FDI to both PDI and PI. Therefore, it creates a significant incentive for Vietnamese Government to introduce policies that attract FDI. Consequently, these policies can simultaneously encourage both domestic investment (PDI and through enacting favourable conditions for international finance and trade. In the short run, while FDI has a complementary effect on PDI, it has a substitute effect on PI. This can be explained by a slight short-run shock of the Vietnam economy when receiving a noticeable amount of capital. Because of the influx of new foreign direct investment, the public sector develops a tendency to cut down on their investment to re-explore the new market. Meanwhile, FDI open opportunity for private sector to increase output of production from becoming a part of international supply chain.

Results indicated that there is a significant positive long-run relationship between foreign direct investment (FDI), private direct investment (PDI), and public investment (PI). These results convinced the researcher that there are a number of actions that could be taken by policymakers to improve the flow of foreign direct investment into Vietnam in the near future. There are two current factors that could potentially slow down the flow of foreign direct investment into Vietnam. Firstly, the imbalance development of infrastructure between different economic zones of Vietnam is an obstacle to the incremental production capacity and consumption. For example, the lacklustre network of highways increased the cost of transportation and slowdown transportation time. Secondly, complimentary goods production is underdeveloped and underinvested by domestic entrepreneurs create an unfavourable condition for the production of final goods. In this study context, imbalance development of infrastructure presents the quality of public investment while private direct investment includes domestic investment in complementary products. Policymakers can improve the investment environment for the foreign investor by improving the quality of public investment in infrastructure and encourage domestic entrepreneurs to invest in complementary good production. Alleviation of strict administrative procedures on public investment can enhance the amount of investment in infrastructure. Balance allocation of public investment budget between different economic zones can lead to total improvement of infrastructure system. Financial support, tax break, and technological support from the government to the private sector can encourage domestic entrepreneurs to invest in producing complementary products. In brief, by following policy guidance that is supportive for public investment and private direct investment, Vietnam Government will be able to attract higher flow and better quality of foreign direct investment.

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VIETNAM'S TRADE IN SERVICES FROM A COMPETITIVE THEORY APPROACH

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Abstract

This paper examined Vietnam's trade in services during 2005 - 2019 from the theory of comparative advantage and its development by employing the calculation of revealed comparative advantage, relative trade advantage and revealed competitiveness indexes. The main findings implied that the indexes are partial but useful measurement in determining Vietnam's possession of advantage and competitiveness in services trade. While different calculation result in different assessment, it also showed that Vietnam's comparative advantage and competitiveness in trade of services tended to decrease, which was a notification for an unstable pattern of services trade. Overall, this paper contributed to both existing literature of comparative advantage and empirical investigation of trade in services of Vietnam.

Keywords: comparative advantage, competitive theory, trade in services, Vietnam

1. Introduction

David Ricardo's theory of comparative advantage has formed a framework for classical and modern studies on international economic integration. Policies and patterns of international trade of almost all countries worldwide are founded and shaped by comparative advantage theory as well as its extension in theories and models. Although this theory has been widely applied to study the patterns in commodities trade, there are not many such studies applied to examine the services trade - which has become an undeniably significant component of the global economy with a considerable contribution to the economies' gross domestic product, at the same time, the most dynamic segment on the global market. The global trade in services during 2005 - 2019 increased in term of exports from 2.68 trillion USD to 6.14 trillion USD and in term of imports from 2.62 trillion USD to 5.83 trillion USD (at current price, according to UNCTADstat). In general, trade in services increased largely during the last decade across all categories of services, but still mainly dominated by travel and transportation.

With great potential and remarkable advantages, Vietnam has been among the most open economies to international trade as measured by the ratio of the mean of exports and imports to the GDP (UNCTAD, 2020). During 2005 - 2019, both Vietnam's services exports and imports increased from 4.45 billion USD to 27.60 billion USD and from 4.45 billion USD to 18.77 billion USD respectively. Service trade balance turned from a deficit of 185 million

USD into a surplus of 8.83 billion USD (at current price, according to UNCTADstat). Services are among the most fast-growing sectors within Vietnam's economic structure with great potential for future development; however, its share in the total nation's trade has been decreasing for both exports (from 11.62% to 9.46%) and imports (from 10.80% to 6.88%) within the same period (calculated by the author using data from UNCTADstat). This implied a preponderance of merchandise trade over services trade in the structure of Vietnam's international trade, or a greater dependence of Vietnam's international trade on commodities rather than on services.

In 2020 due to the severe impact of the COVID-19, trade in services continued to lag substantially below averages and still accounted for a much lower share of the international trade; however, was more resilient than trade in goods (UNCTAD, 2021). Additionally, services trade has been restrained by a number of policy responses in order to control the pandemic, such as border closure that disrupted the international travel and tourism. As a result, Vietnam's 2020 international trade in services decreased 68.4% for exports (equal to 6.30 billion USD) and 14.5% for imports (equal to 18.30 billion USD) with a trade deficit of 12.00 billion USD (GSO, 2021). This indicated an instability in Vietnam's services trade balance and the sensitivity of Vietnam's service exports to international market fluctuations and external shocks.

Within the above-mentioned context, it is important to review Vietnam's services trade and measure its advantages on global market in recent years. Ricardo's comparative advantage theory and its extension have been proved as a useful approach to address the tendency and patterns of trade in services and provide a scientific basic for policy makers. In order to study the dynamics of Vietnam's trade in services, this paper provided a descriptive overview of Vietnam's services trade status in the period of 2005 - 2019 with the application of existing calculation models for the Revealed Comparative Advantage (RCA) indexes to examine the change in Vietnam's services trade position as well as trade structure and correlation between Vietnam's trade in goods and services during the above-mentioned period.

This study contributed to the existing literature by offering an empirical investigation of comparative advantage in services trade to address and recommend on competitiveness of Vietnam's services trade based on the exploitation of comparative advantages. Also, this study examined the extended calculation models of comparative advantages proposed by Bela Balassa (1989) and Thomas Vollrath (1991) as more preferable to the original calculation on both theoretical and practical foundations (Balassa & Nolan, 1989). Therefore, it emphasized the value of comparative advantage theory in explaining the trade dynamics in the case of Vietnam as well as highlighted the gap between this theory and the reality while approaching to services study, which in return, could help understanding international trade patterns on global markets.

2. Literature review, analytical framework and research methods

2.1. Literature review

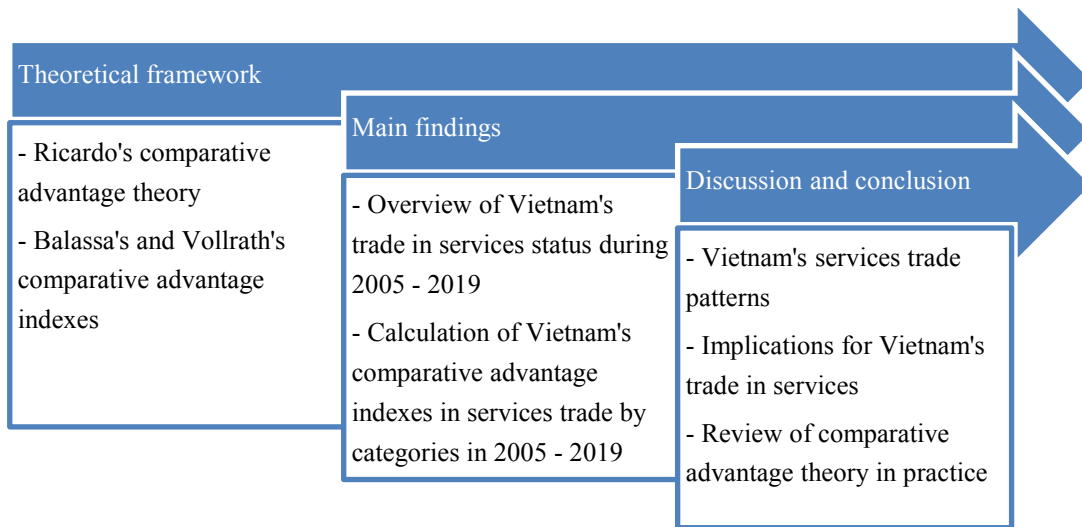
The main concept of comparative advantage was proposed by Ricardo (1817). According to this, a country should specialize in production of a particular product when it is able to produce and export that product at lower opportunity costs compared to other countries. As emphasized by Ricardo, all countries should trade and gain from trade because international trade would benefit all countries even when they don't have absolute advantage in production for all products.

Ricardo's theory has created a basis approach that has never been absent in studies of international economies as long as there are global differences in production efficiency among countries (Algieri et al., 2018). Also, it has been further developed into numerous theories and models to study global trade and economics based on opportunity cost by Gottfried Habeler in 1930, on factor abundance by Bertil Ohlin in 1933, Eli Heckscher in 1919 and Jaroslav Vanek in 1968, on differences in prices of input factors among countries by Paul Samuelson in 1954, etc. With respect to this evolution, two literature views are distinguished indicating that (i) comparative advantages are confined to Ricardo and Heckscher-Ohlin international trade models are not related to other factors and (ii) competitive advantage are originated from a lower production costs (in terms of equilibrium factor prices) than those of a foreign competitor regardless of its origin of cost advantage (Siggel, 2006).

Since the second view is a more general interpretation of the theory, most of existing studies include a descriptive analysis based on the examination of the RCA indexes (Webster et al., 2007). Also, among approaches to this theory including basis of production cost advantage, export market share and internal resources, the application of the second one is a more preferable measurement to the original connotation on both theoretical and empirical grounds in studies of comparative advantages (Algieri et al, 2018). While Balassa's index represents the exports composition of a country by measuring its relative advantage in a specific industry as evidenced by trade flows (Reyes et al, 2013), Vollrath's index also includes imports composition of the country into the calculation. Both measure comparative advantage at a certain time point; still, there has been no relevant theoretical justification and/or generally appropriate direct use of RCA values at different times to measure its variation, although it is normal to examine the changes in RCA values during a period (Cai et al., 2009).

2.2. Analytical framework

Based on Ricardo's comparative advantage theory and its expansion models, this paper applied desk-research method with secondary data and comparative advantage analysis with Balassa's and Vollrath's indexes to measure comparative advantage of Vietnam's trade in services. After a descriptive overview of Vietnam's trade of services status during 2005 - 2019, this paper calculated selected Vietnam's comparative advantage indexes then examined and discussed about patterns in services trade of Vietnam for the above-mentioned period.

Figure 1. Analytical framework

Source: Author (2021)

2.3. Research methods and data

Basically, the RCA index of a specific industry is measured by a country's trade outcome (competitiveness) of that industry on the global market compared to the world's trade outcome of the same industry. This study approached Vietnam's trade in services by calculating Balassa's and Vollrath's comparative advantage formulas, which have been the most popular calculations among those extensions of Ricardo's theory of comparative advantage.

(1) Formula 1 - Balassa's Revealed Comparative Advantage (RCA) index for Vietnam's trade in a particular service, which is measured by Vietnam's trade outcome of that service on the global market compared to the world's trade outcome of the same service, is calculated as:

$$RCA_{VN_S} = \frac{X_{VN_S}/X_{VN}}{X_{W_S}/X_W}$$

in which:

RCA _{VNS}	Vietnam's Revealed Comparative Advantage index in export in service S
X _{VNS}	Vietnam's export value of service S
X _{VN}	Vietnam's total export value of goods and services
X _{WS}	World's export value of service S
X _W	World's export value of goods and services

The value of RCA_{VNS} above 1 indicates that Vietnam has comparative advantage in service S (in other words, Vietnam's export proportion of service S is greater than the world's export proportion of the same service) and vice versa. The higher the index value is, the greater the comparative advantage is for that particular service.

Also, the RCA index value scale (Hinloopen & Marrewijk, 2001) was employed to evaluate the levels of comparative advantage, including four levels: $0 < RCA \leq 1$ indicates no

comparative advantage, $1 < RCA \leq 2$ indicates weak comparative advantage, $2 < RCA \leq 4$ indicates average comparative advantage and $RCA > 4$ indicates strong comparative advantage.

(2) Formular 2 - Vollrath's Relative Trade Advantage (RTA) index for Vietnam's trade in a particular service, which accounts for both exports and imports, is calculated as:

$$RTAVN_S = RXAVN_S - RMAVN_S = \frac{XVNS/XVN}{XW_S/XW} - \frac{MVNS/MVN}{MW_S/MW}$$

in which:

RTAVNS	Vietnam's Relative Trade Advantage index of service S
RXAVNS	Vietnam's Relative Export Advantage of service S (equal to RCAVNS)
RMAVNS	Vietnam's Relative Import Advantage of service S
MVNS	Vietnam's export value of service S
MVN	Vietnam's total export value of goods and services
MWS	World's export value of service S
MW	World's export value of goods and services

The positive value of RCAVNS indicates that Vietnam has a comparative advantage in trade of service S and vice versa.

(3) Formular 3 - Vollrath's Revealed Competitiveness (RC) index for Vietnam's trade in a particular service, which is the simple logarithm of the RXA and RMA that is considered to be a symmetric measure of advantage (Ferto & Hubbard, 2002), is calculated as:

$$RCVN_S = \ln RXAVN_S - \ln RMAVN_S$$

The positive value of RCVNS indicates that Vietnam has competitive advantage in trade of service S and vice versa.

This study employed data collected by UNCTAD (United Nations Conference on Trade and Development) through its database (UNCTADstat). Data was selected and retrieved for the calculation of RCA indexes in services trade of Vietnam, including data on trade flows in services of Vietnam and the world during 2005 - 2019 (due to the data availability). The currency unit is USD millions at current price.

The following services are under this study's examination: Goods-related services (S1 - including manufacturing services on physical inputs owned by others, maintenance and repair services n.i.e.), transport (S2 - including all modes of transport (sea transport, air transport, rail transport, road transport...) of passenger and freight), travel (S3) and other services (S4) corresponding to the four main categories of services according to UNCTAD. Other services are further disaggregated for more details.

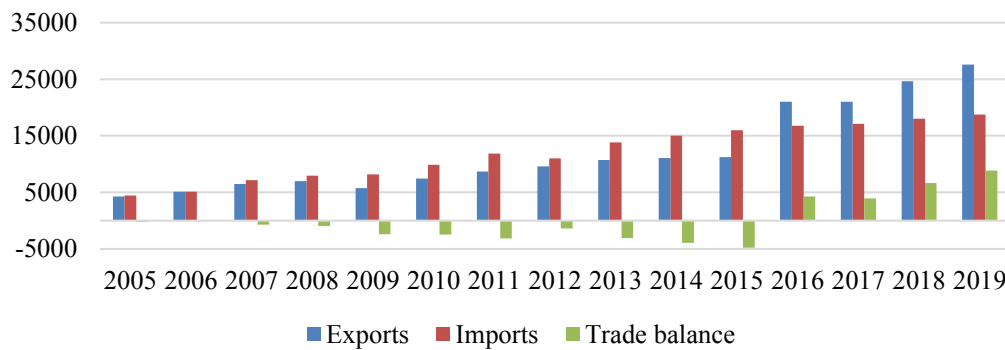
3. Results and discussion

3.1. Vietnam's trade in services during 2005 - 2019

During 2005 - 2019, Vietnam experienced a significant rise in trade of services from 4.27 billion USD to 27.60 billion USD of exports and from 4.45 billion USD to 18.77 billion USD of imports respectively; resulting in an improvement in Vietnam's balance of services trade. From a deficit of 0.19 billion USD in 2005, the balance of services trade worsened and bottomed out in 2015 with a deficit of 4.77 billion USD but immediately turned around in the following year with an upward trend and reached a surplus of 8.83 billion USD in 2019 (Figure 2).

Figure 2. Vietnam's trade in services 2005 - 2019

(Unit: USD millions)

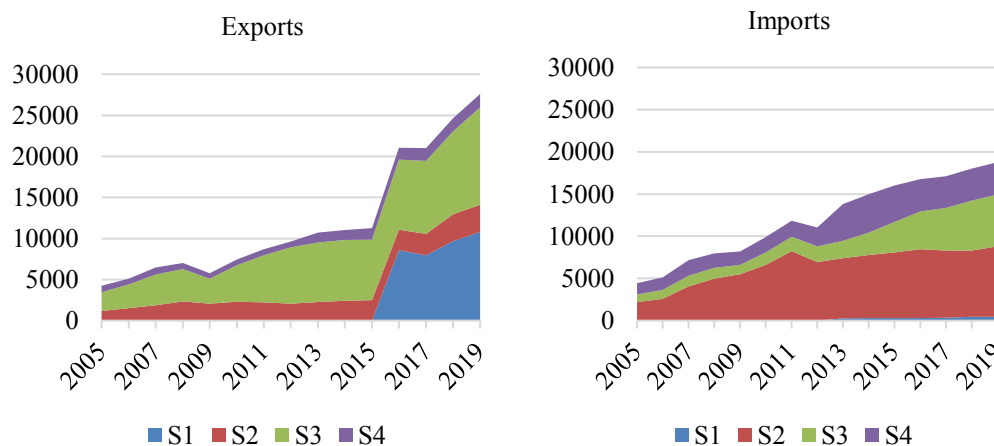


Source: UNCTADstat (2021)

In term of Vietnam's services export, the descending order of value was S3 (travel) > S2 (transport) > S1 (goods-related services) > S4 (other services); meanwhile, in term of Vietnam's services imports, the order was S2 > S4 > S3 > S1 (Figure 3). Among other services, top 3 largest exports sub-categories were telecommunications, computer and information services > financial services > government goods and; while top 3 largest imports sub-categories were construction > insurance and pension services > charges for the use of intellectual property.

Figure 3. Vietnam's trade in services by categories 2005 - 2019

(Unit: USD millions)



Source: UNCTADstat (2021)

Among the categories, only S3 (travel) during 2005 - 2019 and especially S1 (goods-related services) during 2016 - 2019 experienced increasing trade surplus, while S4 (other services) and especially S2 (transport) suffered large trade deficit (Figure 4).

Figure 4. Vietnam's services trade balance by categories 2005 - 2019 (Unit: USD millions)



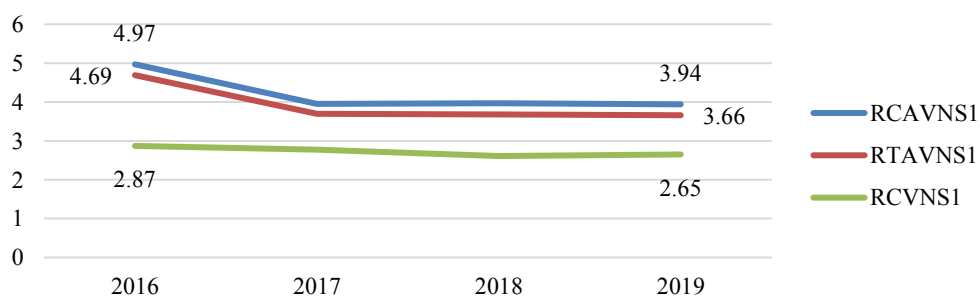
Source: UNCTADstat (2021)

3.2. Vietnam's comparative advantage indexes in services trade during 2005 - 2019

Below is the calculation result of Vietnam's comparative advantage indexes in trade of four services categories with the data retrieved from UNCTAD database during 2005 - 2019. It is noticed that the calculation for S1 (goods-related services) were only for the period of 2016 - 2019 due to data availability (Table 1).

For goods-related services (S1) trade: Vietnam's S1 indexes decreased during 2016 - 2017 and remained until 2019. In term of value, both RCAVNS1 and RTAVNS1 were indicated as strong comparative advantage in 2016 but fell slightly into medium comparative advantage in the next 3 years. In a more symmetric formula, RCVNS1 was also indicated as medium comparative advantage at lower level and more stable despite a slight decline in value. Overall, Vietnam's comparative advantages in goods-related services faced a downward tendency (Table 1 & Figure 5) presenting a significant yet decreasing comparative advantage for Vietnam.

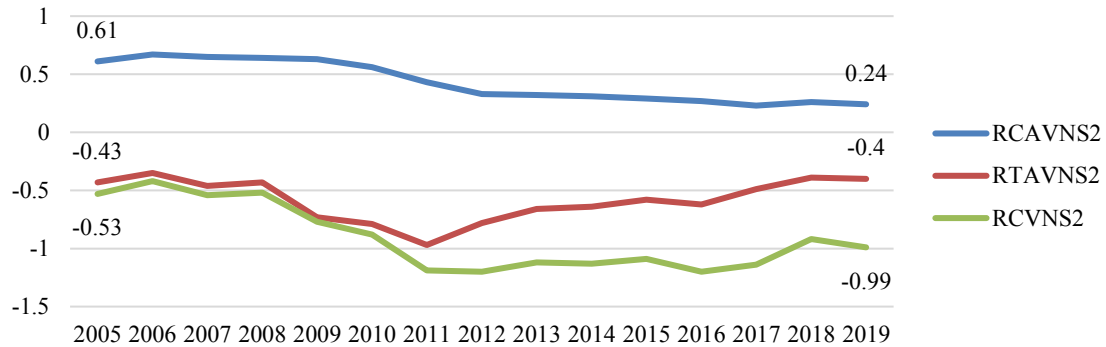
Figure 5. Vietnam's comparative advantage indexes in trade of goods-related services 2016 - 2019



Source: Calculated by the author using data from UNCTADstat (2021)

For transport (S2) trade: Vietnam's S2 indexes faced slight fluctuations and all were indicated as no comparative advantage. While RCAVNS2 kept dropping during 2005 - 2019, RTAVNS2 and RCVNS2 showed some improvement since 2011 (Table 1 & Figure 6). Overall, it showed that Vietnam didn't possess comparative advantage in trade of transport.

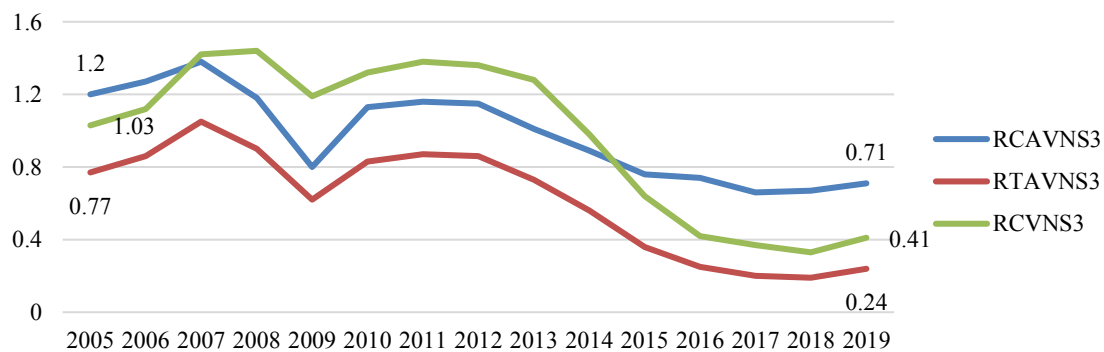
Figure 6. Vietnam's comparative advantage indexes in trade of transport 2005 - 2019



Source: Calculated by the author using data from UNCTADstat (2021)

For travel (S3) trade: Vietnam's S3 indexes experienced strong volatility with same tendency. All indexes increased during 2005 - 2007 then turned downward until 2009, recovered during 2010 - 2012 then fell until 2018 with a slight rise in 2019. RCAVNS3 was less than 2 until 2014 indicating a weak comparative advantage and then kept decreasing below 1 indicating no comparative advantage; meanwhile, both RTAVNS3 and RCVNS3 remained positive despite a downward trend, indicating a comparative advantage (Table 1 & Figure 7). Overall, it is uncertain to claim on Vietnam's comparative advantage in trade of travel.

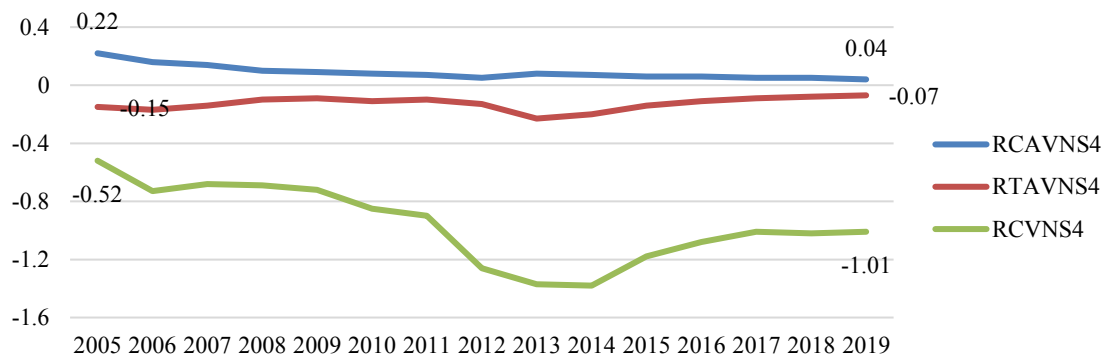
Figure 7. Vietnam's comparative advantage indexes in trade of travel 2005 - 2019



Source: Calculated by the author using data from UNCTADstat (2021)

For other services (S4) trade: Vietnam's S4 indexes showed a downward trend. All indexes indicated no comparative advantage for Vietnam in trade of other services; RCAVNS₄ was less than 1 while both RTAVNS₄ and RCVNS₄ were negative (Table 1 & Figure 8). Overall, except for RTAVNS₄ showed a negligible rise, the situation wasn't improved especially RCVNS₄ kept falling.

Figure 8. Vietnam's comparative advantage indexes in trade of other services 2005 - 2019

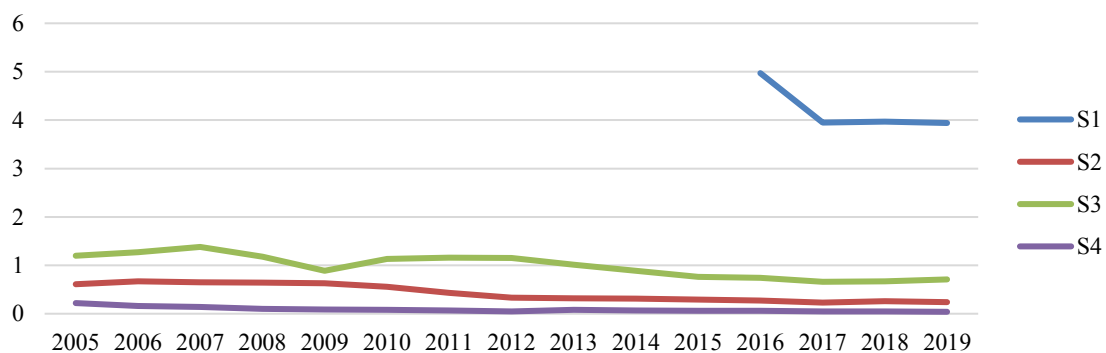


Source: Calculated by the author using data from UNCTADstat (2021)

3.3. Discussion

In term of comparative advantage, Vietnam had quite strong comparative advantage in trade of goods-related services during 2016 - 2019, weak and no comparative advantage in trade of transport, travel and other services during 2005 - 2019. However, there was a decreasing trend for all categories (Figure 9). Because RCA calculation only includes exports flow in relative correlation with exports and imports of both goods and services, it can be interpreted that Vietnam's share of services exports on the global market shrank; implying Vietnam's decline in the proportion of services compared to commodities in the international trade structure, since the volume of services trade continuously increased within the same period.

Figure 9. Vietnam's comparative advantage in services exports by categories 2005 - 2019

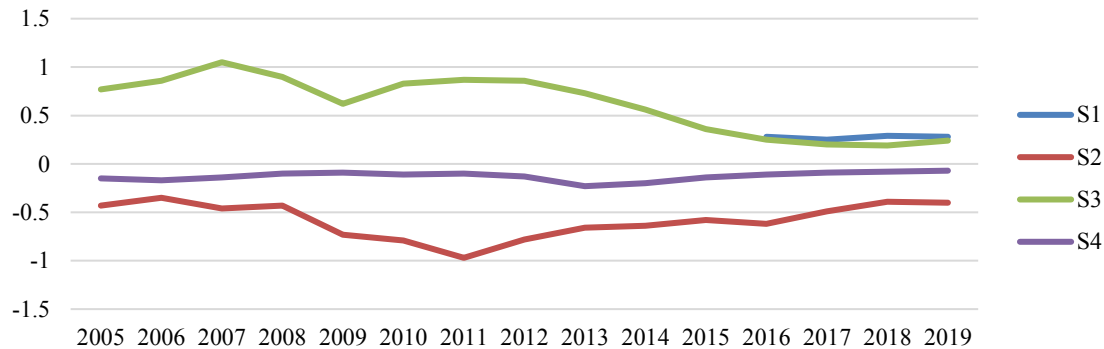


Source: Calculated by the author using data from UNCTADstat (2021)

In term of trade advantage, Vietnam only had trade advantage in trade of goods-related services and travel, and no trade advantage in trade of transport and other services. However, trade advantage in both trade of goods-related services and travel decreased, while trade advantage in trade of transport and other services showed negligible improvement (Figure 10). Since RTA includes both exports and imports in the calculation, it can also be understood that positive value indicates that share of exports is larger than share of imports on global market of the particular sector, and vice versa. During 2005 - 2019, Vietnam had larger proportion of travel exports (the value that Vietnam gained the from purchase of goods and

services by foreign travelers within Vietnamese boundaries) than travel imports (the value that foreign countries gained from the purchase of goods and services by Vietnamese travelers outside Vietnamese boundaries) on global travel market. A similar situation occurred for trade in goods-relative services but it was difficult for a more definitive assessment since the time length was not sufficient (2016 - 2019). For both trade in transport and other services, it implied that Vietnam's services imports share exceeded its exports share of the global market, showing a dependence of Vietnam on foreign-provided supply in transport and other services.

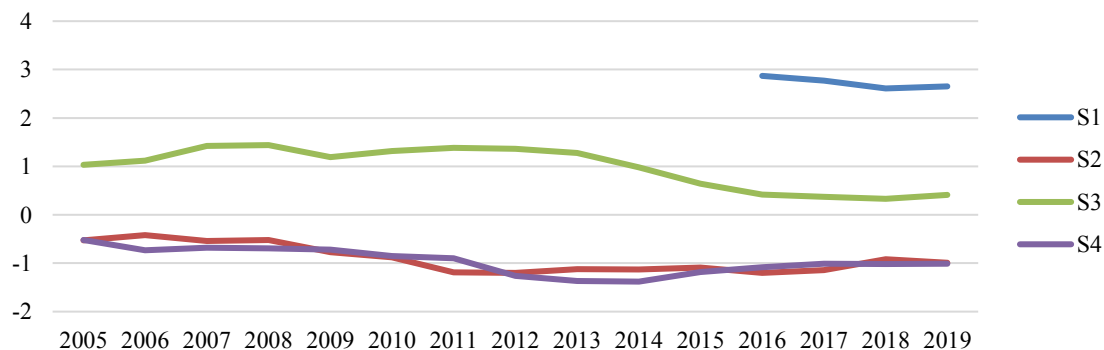
Figure 10. Vietnam's trade advantage in services by categories 2005 - 2019



Source: Calculated by the author using data from UNCTADstat (2021)

In term of revealed competitiveness, RC index is a log-transforming measurement of RTA that also includes both exports and imports. During 2005 - 2019, Vietnam faced a worsening change for all categories since the value of indexes decreased (Figure 11). The interpretation of the RC values was similar to that of the RTA values. It is noticed that while RC indexes of transport and other services tended to remained unchanged over the period, RTA indexes of those categories were both downward. It also showed that Vietnam's competitiveness in trade of services on global market tended to decline in correlation with the changes in market shares of services exports and imports.

Figure 11. Vietnam's revealed competitiveness in services trade by categories 2005 - 2019



Source: Calculated by the author using data from UNCTADstat (2021)

According to the original theory, Vietnam should specialize only in exports of goods-related services because of the possession of comparative advantage. Nevertheless, Vietnam still gained from trade in transport, travel and other services with a highly growing rate and increasing

volume. Promoting the diversification of multi-sector and multi-industry economies is no less important than specializing in production for not only economic but also political and social benefits, even for sectors and industries that don't have comparative advantage.

Therefore, comparative advantage has not been the fully foundation for specialization, production and international trade under globalization. Also, since it cannot explain the sources of comparative advantage in international trade, it has rather been a descriptive indicator for trade patterns by examining the share on the global market in correlation with trade flows including commodities which already account for the larger proportion in the trade structure.

Nevertheless, despite the fact that RCA index as well as other calculations have been argued as inapplicable measurement of comparative advantage because it's better to measure competitiveness of a particular industry of countries (Siggel, 2006) and observed trade dynamics cannot be fully represented due to trade distortion by policies and interventions of the governments (Ferto & Hubbard, 2002), the above-mentioned measurements are still employed widely in the study of comparative advantage (Zhang & Jensen, 2007). Despite of the calculations developed on the market outcome perspective in the literature review of comparative advantage that lack of the input side of the market, all aim at identifying key sectors with advantages, building their competitiveness, constructing policies and negotiating basis in international trade on the global market.

In the case of Vietnam, the calculation of above-mentioned indexes is to measure Vietnam's market share in international trade, with the particular sample of services. The excess of imports share over exports share implied that Vietnam's competitiveness in services was still modest on global market. Additionally, the decrease in indexes' value represented a shrinking share of Vietnam on global services market, implying a rise in competition pressures and a potential dependence of Vietnam on foreign supply of services, especially in transport other services. Trade in travel seemed to be a more positive story for Vietnam; nevertheless, the advantage was losing. Vietnam possessed a noticeable advantage in goods-related services, which can be leveraged to support commodities trade for greater trade return.

Besides, the assumptions of Ricardo's theory fall into some gaps with modern economy. Services have a lower level of commitment for market openness (or higher level of domestic market protection) than commodity production under economic integration and globalization, in many countries worldwide not just in Vietnam. For example, within the commitment of World Trade Organization's General Agreement on Trade in Services (which is the broadest band for trade in services), Vietnam committed in 11 sectors of only 110/155 sub-sectors in services at different level of openness as well as protection. This can be a factor determinant on Vietnam's share of services trade on global market, which was not assumed in the theory.

4. Conclusion

International trade is one way for Vietnam to participate more deeply in the process of

economic globalization and opening up the services market is no exception. Trade in services allows Vietnam to leverage its comparative advantages and contributes to a more stable and sustainable economic growth through efficient allocation of the national resources. By calculating Balassa's revealed comparative advantage, Vollrath's relative trade advantage and revealed competitiveness indexes, this study investigated Vietnam's trade in services during 2005 - 2019 from a competitive theory approach. It showed the position of Vietnam's services by categories in the structure of both national and global trade markets, with a generally downtrend in advantage and competitiveness of all categories, namely goods-related services, transport, travel and other services. Therefore, it is crucial for Vietnam to adopt appropriate policies, strategies and measures to overcome this situation and gain from services trade in multiple ways.

Overall, Ricardo's comparative advantage theory and its extension are still practical to study the patterns of international trade for particular sectors of countries and provide a perspective on competitiveness. Empirical study also highlighted the gap of theory - reality which could promote further understanding of global trade. Since this study focused on the market outcome of comparative advantage, similar researches can be conducted with the inclusion of the market input, explanation of advantage origin and factor determinants, etc. for services as well as other sector and countries.

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**Table 1. Vietnam's comparative advantage indexes in trade of services by categories
2016 - 2019**

Year	S1 (Goods-related services)				S2 (transport)				S3 (travel)				S4 (other services)			
	RCA	RMA	RTA	RC	RCA	RMA	RTA	RC	RCA	RMA	RTA	RC	RCA	RMA	RTA	RC
2005					0.61	1.03	-0.43	-0.53	1.20	0.43	0.77	1.03	0.22	0.36	-0.15	-0.52
2006					0.67	1.02	-0.35	-0.42	1.27	0.41	0.86	1.12	0.16	0.32	-0.17	-0.73
2007					0.65	1.11	-0.46	-0.54	1.38	0.33	1.05	1.42	0.14	0.29	-0.14	-0.68
2008					0.64	1.07	-0.43	-0.52	1.18	0.28	0.90	1.44	0.10	0.20	-0.10	-0.69
2009					0.63	1.35	-0.73	-0.77	0.8	0.27	0.62	1.19	0.09	0.18	-0.09	-0.72
2010					0.56	1.35	-0.79	-0.88	1.13	0.30	0.83	1.32	0.08	0.19	-0.11	-0.85
2011					0.43	1.40	-0.97	-1.19	1.16	0.29	0.87	1.38	0.07	0.17	-0.10	-0.90
2012					0.33	1.11	-0.78	-1.20	1.15	0.30	0.86	1.36	0.05	0.19	-0.13	-1.26
2013					0.32	0.98	-0.66	-1.12	1.01	0.28	0.73	1.28	0.08	0.30	-0.23	-1.37
2014					0.31	0.94	-0.64	-1.13	0.89	0.33	0.56	0.98	0.07	0.26	-0.20	-1.38
2015					0.29	0.87	-0.58	-1.09	0.76	0.40	0.36	0.64	0.06	0.20	-0.14	-1.18
2016	4.97	0.28	0.28	2.87	0.27	0.88	-0.62	-1.20	0.74	0.49	0.25	0.42	0.06	0.16	-0.11	-1.08
2017	3.95	0.25	0.25	2.77	0.23	0.72	-0.49	-1.14	0.66	0.46	0.20	0.37	0.05	0.14	-0.09	-1.01
2018	3.97	0.29	0.29	2.61	0.26	0.64	-0.39	-0.92	0.67	0.48	0.19	0.33	0.05	0.13	-0.08	-1.02
2019	3.94	0.28	0.28	2.65	0.24	0.64	-0.40	-0.99	0.71	0.47	0.24	0.41	0.04	0.11	-0.07	-1.01

Source: Calculated by the author using data from UNCTADstat (2021)

LEGAL PROTECTION OF FOREIGN INVESTMENT: A STUDY OF NON-DISCRIMINATION STANDARDS IN VIETNAMESE INVESTMENT TREATIES

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Abstract

The non-discrimination treatment, inter alia, is an important element of legal protection of foreign investment, which is a matter of considerable public concern. National treatment (NT) and Most-favoured-nation treatment (MFN) constitute the cornerstone of non-discrimination standards enshrined in international investment treaties. These standards provide a level playing field between foreign and domestic investors, and among different foreign investors, which have been found in Vietnamese investment treaties. However, modern practice and problems of these standards in Vietnamese bilateral investment treaties (BITs) and investment chapters in foreign trade agreements (FTAs) have not been fully explored. This article explores the general legal framework of MFN and NT in Vietnamese investment treaties. It examines the extent to which NT and MFN standards - have been applied to the practice of Vietnamese BITs. From that, a reform of the non-discrimination treatment for protecting foreign investment is proposed.

Keywords: Foreign investment; legal protection, most-favoured-nation treatment; national treatment; non-discrimination treatment; Vietnamese investment treaties

1. Introduction

Protection of foreign investment is a matter of considerable public concern. The non-discrimination treatment, inter alia, is an important element of legal protection of foreign investment. Modern bilateral investment treaties (BITs) and investment chapters in foreign trade agreements (FTAs) are often based on the standards of non-discrimination, which aims at providing a level playing field between foreign and domestic investors, and among different foreign investors.¹ National treatment (NT) and most-favoured-nation treatment (MFN) are two major substantive standards of non-discrimination. As the comparative standards, the content and application of NT and MFN depend on its subjects and scope of treatment.

Foreign investors could face some challenges and barriers when making an investment. Surviving in a competitive market can become near impossible if foreign firms suffer unfair regulatory treatment at the hands of the domestic government. Therefore, eliminating discrimination in the application of laws imposed on foreign investors is necessary in

¹ Stephan W. Schill, *The Multilateralization of International Investment Law* (CUP 2009) 76.

international investment law.² Protection against discrimination is the responsibility of the host states and also the concern of foreign investors.

National treatment (NT) and Most-favoured-nation treatment (MFN) constitute the cornerstones of non-discrimination standards enshrined in international investment treaties. These standards provide a level playing field between foreign and domestic investors, and among different foreign investors, which have been found in Vietnamese investment treaties.

It is worth considering that some NT and MFN clauses in Vietnamese investment treaties have exposed the shortcomings. However, little research has been done about the modern practice and its problems of these standards in Vietnamese investment treaties. This is called the reformation of the non-discrimination provisions of the current Vietnamese BITs. For protecting foreign investment, this article examines the extent to which NT and MFN standards - have been shown in the practice of Vietnamese BITs, and proposes reforming the non-discrimination treatment.

The article has two fundamental objectives. The first objective is to examine the MFN and NT standards in general legal framework, modern practice and its problems for the case of Vietnamese BITs. The second objective is to propose reforming the current MFN and NT standards in Vietnamese BITs. This lay a legal basis for protection of foreign investment in Vietnam.

After the introduction, the second and the third section of the paper provides the literature review of this research and methodology respectively. The fourth section presents the results of this article. This section initially explores the general legal framework of MFN and NT standards. It is followed by an analysis of modern practice and striking problems of these non-discrimination standards in Vietnamese investment treaties. The last sub-section submits a proposal for reforming non-discrimination standards in Vietnamese investment treaties, which lays the legal basis for protecting foreign investment.

2. Literature Review

There is an increase of scholarly concern about the legal protection of foreign investment. It can be noted the studies of the legal protection of foreign investment in Mongolia, South Africa and Zimbabwe (Bajar Scharaw, 2018; Chidede, Talkmore, 2016). Some scholars study about standards of non-discrimination in international economic law (Nicolas F Diebold, 2011). In addition, there are many studies and reports about the NT and MFN treatment that have been published by the United Nations Conference on Trade and Development (UNCTAD), such as: World Investment Report 2021 (UNCTAD, 2021),³ National Treatment - UNCTAD Series on Issues in International Investment Agreements

² David Collins, *An Introduction to International Investment Law* (CUP 2017) 95.

³ UNCTAD, World Investment Report 2021, available at https://unctad.org/system/files/official-document/wir2021_overview_en.pdf, last visited 20 October 2021.

(UNCTAD, 1999),⁴ Most-Favoured-Nation Treatment - UNCTAD Series on Issues in International Investment Agreements II (UNCTAD, 2010).⁵ However, there is little researches about modern practice and problems of non-discrimination guarantees, embodied by MFN and NT standards in Vietnamese BITs and investment chapters in FTAs. This would be deserving of discussion in the article.

3. Methodology

The doctrinal method is mainly adopted in the article. This approach explores the specific legal issues on MFN and NT treatment and its application in the practice of Vietnamese BITs and investment chapters in FTAs. Furthermore, the article also uses the comparative analysis, interpretation method and empirical research.

4. Results and Discussion

4.1. The General Legal Framework of NT and MFN

Compared with the NT standard, the MFN standard is more commonly adopted in Vietnamese BITs. Generally, the MFN clause can be stand-alone⁶ or combined with the NT clause,⁷ but the latter formulation is more prevalent. There are some analogies between MFN and NT standards.

First, NT and MFN both establish the equal competition for the investors⁸ and their investments⁹ regardless of their nationality. The wording ‘no less favourable’ is often found in the MFN and NT clause, which allows the host state to grant more benefits to the foreign investors (regarding NT standard) or investors of any third State (regarding MFN standard).

Second, NT and MFN both are comparative standards. More specific, their contents and application depend upon the subjects and scope of treatment. For instance, MFN treatment in the Vietnam-Japan BIT is accorded to both investors of any third country and to their investments,¹⁰ whilst the Vietnam-Bangladesh BIT¹¹ merely accords this treatment to investments made by investors of any third country.

Third, a number of BITs employ the appropriate comparator through variable phrases in both MFN and NT clauses, such as ‘in like circumstances’,¹² ‘in the same circumstances’,¹³ and ‘in like situations’¹⁴ to confine the application of these standards. Nonetheless, there

⁴ It is available at <https://unctad.org/system/files/official-document/psiteiid11v4.en.pdf>, last visited 20 October 2021.

⁵ It is available at https://unctad.org/system/files/official-document/diaeia20101_en.pdf, last visited 20 October 2021.

⁶ See e.g. Vietnam-Japan BIT, art. 2.

⁷ See e.g. Vietnam-UK BIT, arts. 3(1) and (2); Vietnam-India BIT, art. 4(1); Vietnam-Netherlands BIT, art. 3(2).

⁸ See e.g. Vietnam-Egypt BIT, art. 3(2).

⁹ See e.g. Vietnam-Australia BIT, art. 4.

¹⁰ See e.g. Vietnam-Japan BIT, art. 2(2).

¹¹ See e.g. Vietnam-Bangladesh BIT, art. 3(1).

¹² See e.g. Vietnam-Japan BIT, art.2.

¹³ See e.g. Vietnam-Netherlands BIT, art. 4.

¹⁴ See e.g. Vietnam-Oman BIT, art. 4(1).

is a lack of interpretation or guidance on these phrases.¹⁵ Consequently, the host state seems to be allowed to discriminate between domestic and foreign investors or between foreign investors on the ground of different circumstances without defeating the purposes of MFN and NT. Even where the phrases such as ‘in like circumstances’ or ‘in like situations’ does not appear in the provision, the treatment of comparable investments or investors should be treated as implicit.¹⁶ Finally, the scope of protection that MFN and NT propose to provide could be restricted by treaties’ Annexes designating specific sectors or activities to which they exercise.¹⁷

4.2. Distinctive Characteristics of NT and MFN

4.2.1. National Treatment (NT)

National treatment (NT) constitutes one of the most fundamental investment standards in international investment agreements (IIAs). Its objective is to prevent discrimination between foreign and national investors by the host state. In modern IIAs, NT often obliges the host state to grant foreign investors treatment that is ‘no less favourable than’ its domestic investors. By this way, the host state can provide foreign investors with favourable treatment than its own nationals.

There are two NT models in BITs, namely the post-entry (or post-establishment) model and the pre-entry (or pre-establishment) model. The NT typically applies to the post-entry treatment of foreign investment, i.e. after the admission of investment in the territory of the host state. In such circumstances, the host state can shield the domestic industries from competition by the uncontrolled entry of foreign investment. This post-entry model has been known as the controlled entry model.¹⁸

In addition, the NT obligations can be extended to the pre-establishment stage. This can be seen in several instruments, such as the NAFTA, and US and Canadian Model BITs.¹⁹ These NT clauses articulate their pre-entry model by the words such as ‘establishment’ and ‘acquisition’. This model grants foreign investors and their investments access to the domestic markets no less favourable than those enjoyed by national investors. Compared to the post-entry model, the pre-entry models in IIAs express much more tentative and general commitment.²⁰ NT clauses embedding the pre-entry model thus promote investment

¹⁵ The two appear interchangeable, e.g. in U.S BIT practice. See Kenneth J. Vandeveld, *U.S International Investment Agreements* (OUP 2009) 252.

¹⁶ Kenneth J. Vandeveld, *Bilateral Investment Treaties: History, Policy, and Interpretation* (OUP 2010) 340-341.

¹⁷ See e.g. Vietnam-Japan BIT, Annexes I and II.

¹⁸ Ignacio Gomez-Palacio and Peter Muchlinski, *Admission and Establishment* in P Muchlinski et al (eds), *The Oxford Handbook of International Investment Law* (OUP 2008) 240-242.

¹⁹ See e.g. NAFTA, arts. 1102(1) and 1102(2); 2004 US Model BIT, arts. 3(1) and 3(2); 2003 Canadian Model FIPA, arts. 3(1) and 3(2).

²⁰ Jeswald W. Salacuse, *The Law of Investment Treaties* (OUP, 2nd ed., 2015) 217-218.

liberalization in the territories of the contracting parties.²¹ This is also called the liberalized entry model.²²

Moreover, the host state can prohibit certain areas to foreign investment due to political or strategic reasons, or for protecting national enterprises.²³ In such circumstances, the host state reserves the right to discriminate against foreign investors when applying the domestic laws in the specified spheres of economic activity.²⁴

4.2.2. *Most-Favoured-Nation Treatment (MFN Treatment)*

Most-Favoured-Nation Treatment (MFN) has been regarded as the cornerstone in the standards of investment protection in IIAs. This standard means that the host state grants the substantive treatment to the investors of the contracting parties and those from other third states in an identical manner.²⁵ MFN aims to ensure equality of competitive opportunities between investors from different foreign states. For foreign investors, MFN clauses harmonize the legal framework controlling their business activities among different foreign countries and create the uniform standard of investment protection in the host state.²⁶ The application of the MFN standard can be excluded from certain areas, such as customs unions, free trade areas or economic communities.

As with NT, the MFN treatment commitment in many IIAs is circumscribed to the post-establishment stage and does not apply to the admission stage. In some situations, the broad definition of MFN embeds not only substantive treatment but also dispute settlement procedures, which has aroused controversy.²⁷ To prevent such issues, some IIAs explicitly states that MFN shall not apply to procedural matters, particularly those involving dispute settlement procedures.

4.3. *Modern Practice of NT and MFN in Vietnamese BITs and its Problems*

4.3.1. *National Treatment (NT)*

The NT clause has not been a very prevalent standard in Vietnamese BITs. Nevertheless, this standard is found in some of them.²⁸ For example, Article 2(1) of the Vietnam-Japan BIT, which provides that each Contracting Party shall in its area accord to investors of the other Contracting Party and to their investments treatment no less favourable than the treatment it accords in like circumstances to its own investors and their investments

²¹ David Collins, *An Introduction to International Investment Law* (CUP 2017) 99-104.

²² Gomez-Palacio and Muchlinski, *supra* note 43, at 240, 242-244.

²³ Jeswald W. Salacuse, *The Law of Investment Treaties* (OUP, 2nd ed., 2015) 221-225.

²⁴ David Collins, *An Introduction to International Investment Law* (CUP 2017) 102-104.

²⁵ Rudolf Dolzer and Christoph Schreuer, *Principles of international investment law* (OUP 2012) 206; David Collins, *An Introduction to International Investment Law* (CUP 2017) 109.

²⁶ Stephan W. Schill, *Multilateralizing Investment Treaties through Most-Favored-Nation Clauses*, 27 *Berkeley Journal of International Law*. 496 (2009) 518.

²⁷ *Maffezini v. Spain*, Decision on Jurisdiction, 25 Jan 2000.

²⁸ See e.g. Vietnam-Denmark BIT, art. 3(3); Vietnam-UK BIT, arts. 3(1) and 3(2).

involving the establishment, acquisition, operation, expansion, use, management, maintenance, enjoyment, and sale or other disposal of investments.²⁹

The majority of Vietnamese BITs do not explicitly indicate if the pre-entry or post-entry model is adopted.³⁰ Article 3(4) of the Vietnam-Bulgaria BIT, for instance, stipulates: In addition to the provisions of paragraphs 1 and 2 of this Article each Contracting Party shall accord, in compliance with its legislation, treatment to the investors of the other Contracting Party and their investments no less favourable than that accorded to its own investors and their investments.³¹

The NT clauses in several Vietnamese BITs explicitly adopt the post-entry model.³² In this regard, Article 3(2) of the Vietnam-UK BIT provides that neither Contracting Party shall in its territory subject nationals or enterprises of the other Contracting Party, with respect to their maintenance, management, enjoyment, use or disposal of their investments, to treatment less favorable than that it grants to its own nationals or enterprises.³³

Notably, the pre-entry model is adopted in Article 2(1) of the Vietnam-Japan BIT. This Article states that each Contracting Party shall in its Area grants to investors of the other Contracting Party and to their investments treatment no less favorable than the treatment it grants in like situations to its own investors and their investments regarding the establishment, acquisition, operation, expansion, maintenance, management, use, enjoyment, and sale or other disposal of investments.³⁴ It is worth noting that the Vietnam-Japan BIT restricts the application of NT to particular sectors, which are listed in its Annexes.³⁵

4.3.2. *Most-Favoured-Nation Treatment (MFN Treatment)*

The MFN standard can be found in many Vietnamese BITs. For example, Article 3(1) of the Vietnam-Denmark BIT provides that: Neither Contracting Party shall accord to investments made in its territory by investors of the other Contracting Party, treatment less favourable than that accorded to investments made by investors of any third State.³⁶

Regarding the scope of application, MFN treatment can be accorded to investors involving the use, maintenance and management of their investments in the host state's territory. This formulation is stipulated in Article 3(2) of the Vietnam-Bulgaria BIT, which stipulates that 'Neither Contracting Party shall accord to investors of the other Contracting Party, as regard maintenance, use and management of their investments in its territory, treatment less favourable than that accorded to investors of any third State'.³⁷ A wider scope of protection provided through the MFN standard can be found in the Vietnam-Poland BIT.

²⁹ See e.g. Vietnam-Japan BIT, art. 2(1).

³⁰ See e.g. Vietnam-Bulgaria BIT, art. 3(4); Vietnam-India BIT, art. 4(1).

³¹ Vietnam-Bulgaria BIT, art. 3(4).

³² See e.g. Vietnam-Denmark BIT, art. 3(3); Vietnam-Finland BIT (2008), art. 3(1); Vietnam-UK BIT, art. 3(2).

³³ Vietnam-UK BIT, art. 3(2).

³⁴ Vietnam-Japan BIT, art. 2(1).

³⁵ Vietnam-Japan BIT, Annexes I and II.

³⁶ See e.g. Vietnam-Denmark BIT, art. 3(1).

³⁷ See e.g. Vietnam-Bulgaria BIT, art. 3(2).

Article 3(2) of this BIT states that each Contracting Party shall in its territory accord to investors of the other Contracting Party, regarding management, maintenance, use, enjoyment or disposal of their investment, treatment which is fair and equitable and not less favourable than that it accords to investors of any third State.³⁸

The MFN clauses in Vietnamese BITs often adopt the post-entry model.³⁹ In other words, MFN treatment rarely extends to the pre-establishment stage in these BITs. An example of the pre-entry model can be identified in Article 3(2) of the 2008 Vietnam-Finland BIT. This Article provides that each Contracting Party shall accord to investors of the other Contracting Party and to their investments, a treatment no less favourable than the treatment it accords to investors of the most favoured nation and to their investments with regard to establishment, acquisition, operation, expansion, maintenance, management, use, enjoyment, and sale or other disposal of investments.⁴⁰ The language ‘establishment’ and ‘acquisition’ imply the MFN’s application to the pre-establishment phase.

Some Vietnamese BITs do not explicitly indicate if the pre-entry model or post-entry model is adopted in respect of MFN treatment.⁴¹ For instance, Article 3(1) of the Vietnam-Cuba BIT stipulates that each Contracting Parties shall, in its territory, accord a treatment to the investments made and the returns obtained by investors of the other Contracting Party no less favorable than that accorded to investments made and the returns obtained by investors of any third state.⁴²

Vietnamese BITs also impose the limitation to the application of MFN treatment. Specifically, MFN treatment would not be included if any preference or benefits come from an economic union, a customs union, regional economic integration or free trade area agreement to which the Contracting State belongs; or the double taxation agreement provisions with a third state.⁴³

The exclusion of applying MFN treatment to procedural matters has been not stated in Vietnamese BITs, except for Article 4(2) of the Vietnam-UAE BIT, which provides that: ‘The Most Favoured Nation Treatment shall not apply to procedural or juridical matters.’⁴⁴ However, this BIT was signed but remained not in force. In contrast to this, Article 3 of the Vietnam-Japan BIT extends the application of MFN treatment to procedural matters.⁴⁵

³⁸ See e.g. Vietnam-Poland BIT, art. 3(2).

³⁹ See e.g. Vietnam-Bulgaria BIT, art. 3(2); Vietnam-Denmark BIT, art. 3(3); Vietnam-Thailand BIT, art. 4(1)(b).

⁴⁰ 2008 Vietnam-Finland BIT, art. 3(2).

⁴¹ See e.g. Vietnam-Australia BIT, art. 4; Vietnam-Cuba BIT, art. 3(1); Vietnam-Singapore BIT, art. 4.

⁴² Vietnam-Cuba BIT, art. 3(1).

⁴³ See e.g. Vietnam-Cuba BIT, art. 3(2); Vietnam-Netherlands BIT, art. 3(3); Vietnam-Malaysia BIT, art. 4.

⁴⁴ Vietnam-UAE BIT, art. 4(2).

⁴⁵ Article 3 of the Vietnam-Japan BIT mentions that each Contracting Party shall in its Area accord to investors of the other Contracting Party treatment no less favorable than the treatment which it accords in like circumstances to its own investors or investors of any third country regarding access to the courts of justice and administrative tribunals and agencies in all degrees of jurisdiction.

4.3. Proposal for Reforming MFN and NT standards in Vietnamese BITs

4.3.1. Post-entry and Pre-entry Model

In Vietnamese BITs, both NT and MFN clauses often adopt the post-entry model. Regarding the NT standard, it is rarely extended to the pre-establishment stage except for the Vietnam-Japan BIT with a limitation on the exceptional sectors attached in Annex I and Annex II.⁴⁶ This raises the question whether Vietnam should extend the application of the NT and MFN standards to the pre-establishment phase to promote investment liberalization.

It is impossible for a state to commit treaty unconditionally to acknowledge all investments from contracting state.⁴⁷ In general, two approaches are adopted regarding the investor's right of admission.⁴⁸ One method is to identify all the sectors that are open to the investors of the other party (positive list). Another method is to specify all the sectors that are closed to the investors of the other party (negative list). The adoption of these approaches implies that the host state remains free to restrict the entry of foreign investors in certain sectors. The pre-entry or post-entry models are only applied to the sectors allowed in the treaties.

In practice, developing countries tend to apply NT only after the investor is allowed to establish in the host state (i.e. the post-entry model).⁴⁹ For instance, Article 4.1 of the 2016 Indian Model BIT provides that “Each Party shall not apply to investor or to investments made by investors of the other Party, measures that accord less favourable treatment than that it accords, in like circumstances, to its own investors or to investments by such investors with respect to the management, conduct, operation, sale or other disposition of investments in its territory”.⁵⁰ The absence of the ‘establishment’ and ‘acquisition’ means that the host state is free to discriminate against foreign investors on whatever reasons it wishes prior to the business's entry into its territory.

Generally, developing countries, such as Vietnam, have taken the view that the treaty applies only to the investments duly approved pursuant to the host state legislation.⁵¹ Under such circumstances, the foreign investments are subject to certain restrictions specified in the host state laws. For example, the 2020 Vietnamese Law on Investment designates a range of closed certain sectors for the reason of national defense and security, social order and safety, social ethics or community well-being.⁵²

Based on the above discussion, the proposed Vietnamese BITs should specify that NT only applies to the post-establishment stage and combined with a negative list. In this way,

⁴⁶ See Section 4.2.1.2.

⁴⁷ Salacuse, *The Law of Investment Treaties* (OUP, 2nd ed., 2015) 218.

⁴⁸ Rudolf Dolzer and Christoph Schreuer, *Principles of international investment law* (OUP 2012) 89-90.

⁴⁹ David Collins, *An Introduction to International Investment Law* (CUP 2017) 100.

⁵⁰ 2016 Indian Model BIT, art. 4.1.

⁵¹ Jeswald W. Salacuse, *BIT by BIT: The Growth of Bilateral Investment Treaties and Their Impact on Foreign Investment in Developing Countries* 24 Int'l Lawyers 655 (1990) 666.

⁵² The 2020 Vietnamese Law on Investment, art. 7(1). The list of sectors and trades subject to conditional business investment is provided for in Appendix IV to the Law on Investment.

foreign investors can be treated in an identical manner as the host state's nationals only after its entry into the host state. The host state still preserves its rights to protect domestic investors from foreign competition. Meanwhile, the negative list can ensure that the investments of foreign investors to be kept within national control.

With respect to MFN standard, developing countries feel more comfortable to grant MFN treatment to foreign investment than NT treatment. Nonetheless, a question arises when considering extending the applicability of MFN treatment to the pre-entry model.

The pre-entry model involves the investor's right of establishment. This right involves the conditions under which the investors are allowed to carry out their business.⁵³ This concerns issues such as expansion of the investment, the payment of taxes and transfer of funds.⁵⁴ Meanwhile, the genuine liberalization leads to some concerns about the weak domestic industry being 'crowded out'. There are some drawbacks involving the national security such as issues of moral, health and environment.

As discussed above, the proposed new clause should apply MFN treatment only to the post-establishment phase. In such circumstances, foreign investors are granted with equal benefits after establishing their business in the host state. Furthermore, a specific list of areas in which foreign investors be prohibited to invest have to been included in the draft. This list could be specified in the Appendix or another provision of the draft.

4.3.2. *The Exclusion of Procedural Matters from the Scope of MFN Treatment*

The MFN standard in Vietnamese BITs is often worded in a general way and typically specified its application to the substantive guarantees of investments. Whether procedural matters should be excluded from the scope of MFN clause, this was not clearly specified in most Vietnamese BITs.⁵⁵

The definition of MFN clauses in Vietnamese BITs leaves an unanswered question of whether the effect of MFN clauses should extend to dispute settlement. The scope of the MFN clauses has been a controversial issue in practice. There are two divergent views in the arbitral practice involving the scope of MFN treatment.

One school of thought supported the extension of MFN treatment to dispute settlement. This was addressed in *Maffezini v Spain*.⁵⁶ The case *Maffezini* involves an Argentine national who invested in an enterprise for manufacturing and distributing chemical products in Spain. The Argentina-Spain BIT required the investor had to resolve the claim first within the host state's domestic courts within an 18-month period before submitting to international

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Two notable exceptions of this trend are the Vietnam-UAE BIT (This BIT was signed but not in force) and the Vietnam-Japan BIT. Article 4(2) of the Vietnam-UAE BIT provides that "The Most Favoured Nation Treatment shall not apply to procedural or juridical matters". Article 3 of the Vietnam-Japan BIT does not specifically exclude access to ISDS from the scope of MFN, but provides that MFN applies to access to the courts of justice and administrative tribunals and agencies.

⁵⁶ *Maffezini v Spain*, Decision on Jurisdiction, 25 January 2000.

arbitration. However, investor did not follow the dispute resolution provisions of this BIT. He claimed that the MFN clause in the Argentina-Spain BIT⁵⁷ allowed him to invoke the dispute settlement provisions in the Spain-Chile BIT⁵⁸ to submit the dispute to international arbitration without submitting it first to Spanish courts. After considering the wording of the Argentina-Spain BIT, the Tribunal held that the MFN clause could extend to dispute resolution provision, because the MFN clause in this BIT explicitly refers to “all matters subject to this Agreement”.⁵⁹ The Tribunal endorsed that the MFN clause which was contained in the Argentine-Spain BIT covered the dispute settlement provisions of this treaty.⁶⁰

Another standpoint is narrowing interpretation on the applicability of MFN treatment to dispute settlement. An example of this group was *Plama v Bulgaria*.⁶¹ In this case, the Tribunal took the view that the MFN provision cannot be construed as providing consent to submission of a dispute to international arbitration.⁶² In contrast to *Maffezini v Spain*, the investor in the present case could not rely on dispute settlement provisions in other host state’s BITs to submit a dispute to the ICSID arbitration.⁶³

Maffezini and Plama cases demonstrate opposite approaches to the scope of application of the MFN clauses. The Maffezini decision enabled investors to import favorable procedural clauses of other investment treaties by focusing on a broader formulation “all matters”. Nevertheless, the scope of MFN treatment has extended to dispute settlement only in cases where investors sought to bypass the procedural issues, such as waiting periods to submit a dispute to arbitration.⁶⁴ By contrast, in the *Plama* case, the Tribunal found that the MFN clause was not sufficient clear to allow the importation of dispute resolution provisions from other treaty.⁶⁵ It also held that the consent of the parties to arbitrate was the prerequisite for invoking arbitration.⁶⁶ The inclusion of dispute settlement in the MFN clause thus would be permitted only when the intention of the parties to the BIT express clearly and unambiguously their willingness.⁶⁷ The parties in the treaty have negotiated both substantive

⁵⁷ Article IV(2) of the Argentina-Spain BIT states that: In all matters subject to this Agreement, this treatment shall not be less than favourable than that extended by each Party to the investments made in its territory by investors of a third country.

⁵⁸ The Spain-Chile BIT does not contain the requirement to seek redress in the host state’s courts for 18 months, which is more favourable to the protection of the investor’s rights and interests than those in the Argentina-Spain BIT.

⁵⁹ *Maffezini v Spain*, Decision on Jurisdiction, 25 January 2000, at para 60.

⁶⁰ *Ibid* para 64.

⁶¹ *Plama v Bulgaria*, Decision on Jurisdiction, 8 February 2005.

⁶² *Ibid* para 227.

⁶³ *Ibid*.

⁶⁴ İnci Ataman Fıganmeşe, *The Impact of the Maffezini Decision on the Interpretation of MFN Clauses in Investment Treaties*, 8 Ankara Law Review 221 (2011) 221-237.

⁶⁵ *Plama v Bulgaria*, Decision on Jurisdiction, 8 February 2005, at para 223.

⁶⁶ *Ibid* para 198.

⁶⁷ *Ibid*.

matters and procedural matters.⁶⁸ However, there is no justification for deriving the parties' intention from one of these two elements alone.⁶⁹

Based on the abovementioned analysis, to avoid the over-expansion of the scope of MFN treatment, its application to procedural matters should be explicitly excluded, as the manner expressed in the CPTPP. Article 9.5(3) of Chapter 9 in this treaty stipulates that: For greater certainty, the treatment referred to in this Article does not encompass international dispute resolution procedures or mechanisms, such as those included in Section B (Investor-State Dispute Settlement).⁷⁰

5. Conclusion

MFN is often combined with NT in Vietnamese BITs as a parallel structure. MFN and NT standards aim to preclude discrimination among investors based on nationality, thereby fostering equal competition. Because of the comparative standards, the content of MFN and NT treatment, and its application depend on its subjects and scope of treatment. The application of these standards can be circumscribed by a comparator, such as 'in like circumstances', 'in the same circumstances' and 'in like situations'.

The presence of NT provisions is somewhat less frequently than MFN treatment provisions in Vietnamese BITs. Meanwhile, both of these standards often follow the post-establishment model. Moreover, the exclusion of applying MFN to procedural matters has been not stated in Vietnamese BITs, except for the Vietnam-UAE BIT.

To reform the existing MFN and NT standards, the post-entry model should be adopted in both of them, accompanied by the negative list. Furthermore, the scope of MFN's application should not cover issues of dispute settlement.

⁶⁸ Rudolf Dolzer and Christoph Schreuer, *Principles of international investment law* (OUP 2012) 209.

⁶⁹ *Ibid.*

⁷⁰ CPTPP, Chapter 9, art. 9.5(3).

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CHANGING DYNAMIC OF FOREIGN DIRECT INVESTMENT IN VIETNAM IN RESPONSE TO THE CHINA – US TRADE WAR

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Abstract

A dramatic increase of FDI inflows into Vietnam in last two decades has played an important role in promoting economic growth. However, since the last two years, the happening of the China-US trade war has affected the global economy and FDI flows over the world. This study aims to investigate the current FDI inflows in Vietnam and the impacts of the China-US trade dispute to the Vietnam economy as well as its FDI flows. Moreover, the paper also discusses why and how multinational companies choose Vietnam for their investing destinations by making use ownership-location-internalisation paradigm which is developed by Dunning. As a result, it is proved that the China-US trade dispute does have influences on global economy and Vietnam economy in which, the negative impacts outweighs the positive impacts. The reasons why international firms pick Vietnam for their investment are also listed including good location, government incentives and cheap labour forces.

Key words: *FDI changes, multinational enterprises, OLI model, the China – US trade war and impacts, Vietnam*

1. Introduction

Foreign direct investment (FDI), mostly performed by multinational corporations (MNCs), has been proved to have a vital role in enhancing economic growth of recipient countries. Because it is a crucial vehicle for the transfer of technology, business know-how and capital, it contributes relatively more to a country's growth than domestic investment (Borensztein, E., De Gregorio, J., & Lee, J. W., 1998). However, in recent years, there are continuously serious global issues that significantly affect economy and then, cause obstacles in transferring FDI flows. In the last three years, two biggest events including the China-US trade war and the Covid-19 pandemic has put global economy into difficulty. Initially, the China-US trade dispute has changed global supply chain and manufacture process. Then, due to the spread of Corona virus, global growth has decreased considerably due to the Great Lockdown in many countries. In this context, Vietnam is not an exception. There are many outside influences to Vietnam since the happening of the China-US trade war in both positive and negatives sides. Moreover, investors now concern about their factories in China, worried about higher tariffs will be posed on their products which are made in China. Hence, it is highly likely that investors is going to find replaced countries. With a special geographic location and redundant labour force, Vietnam is one of the countries which is taken into account.

Therefore, this study aims to investigate how FDI changes in Vietnam under the situation of the China-US trade war and Covid-19 pandemic. Since *Doi Moi* in 1986, a new phase of activities and opportunities evolved for the Vietnam economy, including greater levels of international market engagement, and this has results in a considerable economic growth and higher FDI inflows (Anwar, S., & Nguyen, L. P., 2011). However, in recent years, how FDI flows in Vietnam has changed due to two big events is the main problem that is discussed in this paper. Then, solutions will be given for relevant parties to consult.

The main objectives of this paper are to examine the nature of FDI flows in Vietnam and the reasons why Vietnam becomes an appealing country for multinational enterprises (MNEs) in the South-East Asia region. Particularly, worldwide economies are experiencing the China-US trade war. This trade war not only affects two biggest economies in the world but also have indirect impacts on relating countries, as the world becomes more integrated now and supply chains of firms are established globally. Therefore, the research will specifically investigate the influences of the trade dispute on the Vietnam economy on both positive and negative sides. Moreover, it also discusses the FDI trend in Vietnam changed before and after the trade war. In addition, by making use of ownership-location-internalisation (OLI) model developed by Dunning, this paper will analyse both external and internal factors that lead to FDI decisions in Vietnam of MNEs based on the case of Samsung Electronics and Hon Hai Precision Company (Foxconn). In this way, the research will provide a practical insight about MNEs' operations in Vietnam. Although there are few studies that conduct about FDI trends in Vietnam in response to the China-US trade war, however, there is no fully report on this problem by using OLI model. Therefore, it is expected to build a base for further research relating to this topic.

The study attempts to answer these questions, from which the answers could be used by policy makers to offer suitable policies to overcome problems (if any) for Vietnam.

First, what are the influences that Vietnam has to incur due to the China-US trade dispute?

Second, how foreign direct investment capital has been changed in Vietnam since the beginning of trade war? And why?

Third, how does the movement and supply chain of MNEs change in response to the China-US trade war?

The remainder of this paper is organised as followed: Section 2 provides an overview of Vietnam economy in recent years and FDI trends in the world. Section 3 gives overall information relating to FDI and relationship to economic growth as well as the impacts of MNEs' activities in Vietnam. Section 4 will discuss current FDI trends in Vietnam, Vietnam economy in the context of this commercial dispute and impacts of the trade war on the economy, both positive and negative sides. Section 5 includes data and methodology. Section 6 will analyse two specific case studies by making use of the OLI model. The final section contains a summary, limitations and further research suggestions.

2. Literature review, Theoretical framework and Methods

2.1 Literature review

2.1.1 Foreign direct investment and dynamic of foreign direct investment in Vietnam

According to the United Nations Conference on Trade and Development (UNCTAD), foreign direct investment is defined as an investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate). Today, with the widespread of globalisation, worldwide countries tend to trade more with oversea partners. They exchange goods, services, knowledge, technology, capital, and FDI is definitely an effective channel for transferring (Borensztein, E., De Gregorio, J., & Lee, J. W., 1998). In general, FDI is noticed to be a necessary factor for economic growth in developing and under-developing nations (Development, 2000; Lall, 2000; Zhang, 2001). World economies are witnessing an increasing number of countries, particularly developing ones, in an effort to create favourable environment to attract FDI.

Dynamic of FDI refers to both internal (firm's resources) and external resources (host country's resources), or it also known as motivations for FDI in this study. As investing in international market, companies should own some specific advantages in order to be unique and sustainable compared to other firms, their capabilities regarding to capital and labour force, their decision on choosing internalisation (Dunning, 1977). Regarding to external factors, it could be favourable environment of other countries to attract FDI, incentives for taxes and regulations of both home country and host country, and other benefits that firms can earn in host country when investing. The motivations that help Vietnam is becoming more attractive to investors are listed below:

Firstly, in terms of geographic location, Vietnam is located in a very favourable area. The nation has more than 3,000 km of coastline and is the gateway of the region, there are many advantages to build and benefit from deep-water ports as well as expanding global trade.

Secondly, after more than 30 years since the Doi Moi phase, Vietnam has achieved a lot of outstanding achievements. The economy is constantly growing at high speed compared to the average of the region and the world. Besides, it is noticed to have success in maintaining the stability of politics and macroeconomics indicators.

Additionally, Vietnam's population has so far reached the milestone of 100 million people, ranked 14th in the world with about 60% under the age of 35. Therefore, it is said that this nation benefits from the youth, healthy, dynamic and full of the potential workforce. Moreover, with more concentration on education, the labour force in Vietnam now is

educated at a high level and high skilled in order to meet the requirements of a knowledge based economy, especially when the Industrial Revolution 4.0 is booming.

Lastly, the participation into many bilateral and multilateral free trade agreements (FTAs) facilitate Vietnam to approach foreign partners and reinforce economic relations.

2.1.2 Foreign direct investment in Vietnam

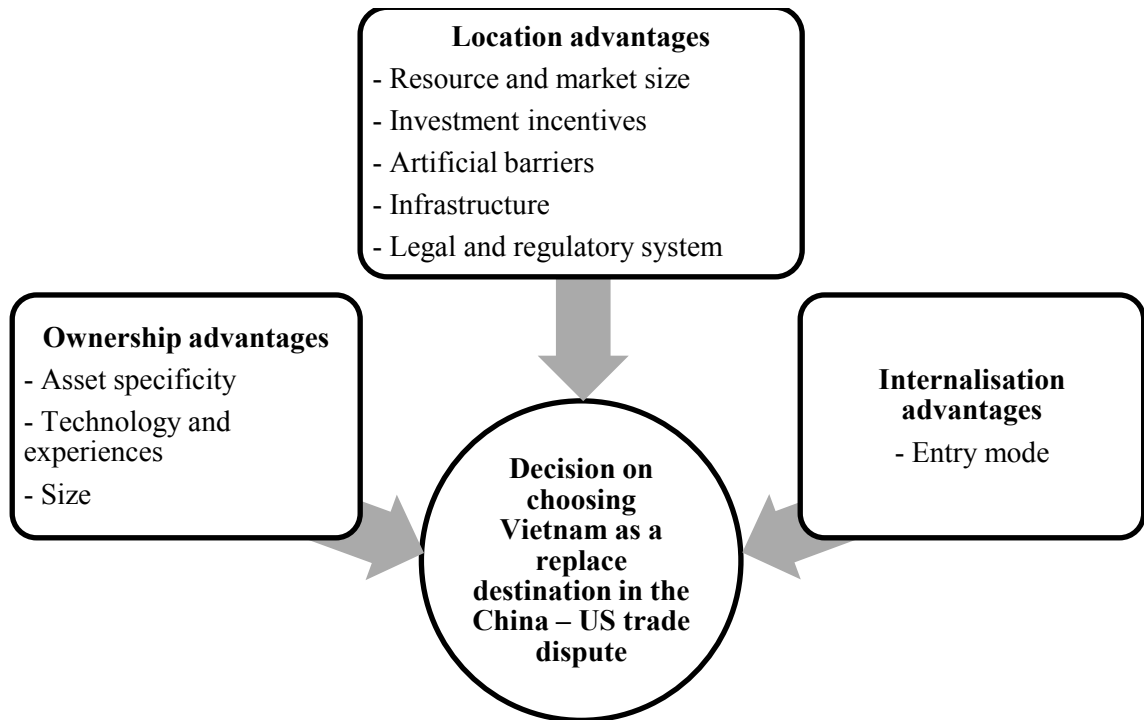
To fully understand dynamic of FDI in Vietnam in the context of the US-China trade dispute, ownership-location-internalisation model is utilised to explain the decision of a firm to go abroad through FDI (Dunning, J. H., 1982). By explaining this decision, this model provides an overview about both internal and external factors that affect a company. Ownership advantage relates to specific assets that be unique to firms and it can be tangible or intangible (Johnson, 1968). Moreover, assets might be specific to a particular location (location-specific advantages). And internalisation is used to describe the extent to which firms will directly control their assets in a foreign market or sell their rights of property for the host country. In other ways, I advantage discusses entry mode of MNCs in the recipient economy (Dunning, J. H., & Lundan, S. M., 2008). Furthermore, based on the OLI model, Dunning also builds the “investment development path” (IDP) theory of FDI. The main idea of this theory is that the country’s economy improves over years and as a result, a host country of FDI will be an export of capital (Dunning, J. H., 1982; Dunning, The investment development cycle revisited, 1986).

In Vietnam, there are several papers making use of OLI model to investigate FDI in Vietnam. Meyer and Nguyen (2005) focus on using locational advantage in OLI model to propose a theoretical framework emphasises interaction between companies and institutions at a sub-national level, and impact on FDI. Then, the result indicates the institutional perspective (a part of locational advantage) suggests that firms only understand business strategies in host country if firms understand the context (Meyer, K. E., & Nguyen, H. V., 2005). In another study, based on three OLI components, Chien and Tu (2012) imply a list of explanatory variables and these variables play an important role in fully explaining the MNEs’ entry mode choice. They indicate that eclectic theory clarifies the decision to invest under the form of international joint venture or wholly owned subsidiaries of companies. The results also help local government or local firms to establish a favourable environment or cooperative strategy to attract FDI (Chien, V. M., & Tu, P. T., 2012). Additionally, Ba et al., (2020) investigate solutions to attract investment capital for tourism development in Thanh Hoa province by developing a theoretical framework derived from OLI model and they figure out a system of policy solutions to attract FDI (Ba, H., Thu, P., Chi, T., Thanh, H., & Huy, C., 2020). Bui (2012) also build econometric model to test how determinants of FDI affect decisions of foreign investors in line with the judgement of locational advantage in OLI paradigm and figure out these determinants have positive impacts of FDI inflows in Vietnam (BUI, 2012). In addition,

Bui (2011) assesses case studies of Honda and ANZ Bank through the traditional OLI model and indicates factors relevant to OLI advantages have positive impacts of FDI inflows in Vietnam (Bui, 2011).

2.2 Theoretical framework

Ownership-location-internalisation model is employed in this paper because it describes different connections and interactions among three international business perspectives (Hymer, 1972; Buckley, P. J., & Casson, M., 2016) in a single framework, bringing an overview of multinational companies and their activities (Eden, 2003). In general, the first factor O in the theory is to explain why firms invest outside the borders instead of maintaining in the home market or licensing a foreign firm to manufacture (the “why” factor of MNE activity). Comparing to tangible assets, intangible assets help firms more in competing with others in the foreign markets. Normally, firms may choose to license foreign producers to make their goods or services in order to maximising ownership advantages. However, firms have to cope with high costs relating to negotiation, monitoring, and enforcement of contracts with foreign companies, then the company can choose FDI with its own multinational subsidiary as a superior alternative to licensing. The next factor L will help determine where to invest. This is a function of location-specific conditions in the recipient country. Companies must benefit from their chosen place for FDI capital. These benefits should include cheaper workforce, natural resources, cheaper inputs, favoured policies of the host government, favoured in taxes and tariffs, if not, it is better to invest in their home country instead of the host country (the “where” of production). Furthermore, the last aspect, internalisation, is now being recognised as the most important factor that distinguishes FDI from other types of foreign investment (Batra, 1986). The central idea behind internalisation is that a firm must want to keep possession of its advantage, rather than simply selling or licensing it to foreign companies. In another way, the company must want to internalise its advantages across different markets (the “how” of involvement). As this paradigm is viewed as the preeminent theoretical framework for foreign investment decisions, it will be employed in this research to investigate some problems relating to international expansion of companies to Vietnam.

Figure 1 - Research model based on OLI model

Source: (Dunning, The eclectic paradigm as an envelope for economic and business theories of MNE activity, 2000)

2.3 Methods

The trade war officially started in July of 2018, and until 2021, it has lasted for three years. It can be said that the impacts of the trade war on the global economy in general and Vietnam economy in particular has been shown considerably. However, since the beginning of 2019, the Covid-19 spreads in the entire world, therefore, almost of the countries have to place the first priority for handling the pandemic. It causes considerable reduction in economic productivity worldwide. The trade war is still going on but it is not the most interesting issue anymore. Moreover, three years are quite a short time to collect enough observations for a quantitative study and there is no fully updated data of world economy in 2020. Therefore, conducting a quantitative method by utilising econometric equations and models does not meet the requirements of the study and may cause bias results. Hence, in this study, the qualitative method is applied to investigate the impacts of the trade war on the movement of FDI enterprises from oversea to Vietnam, especially the movement of global supply chain to the country.

2.3.1 Data

The study employs secondary data to conduct overview research. There is a wide range of secondary data including document (text and non-text), survey (censuses, continuous and regular surveys, ad hoc surveys), and multiple sources (snap shot, longitudinal) (Saunders, M., Lewis, P., & Thornhill, A. , 2009). Based on the objectives of the study and data needed, each type of secondary data will be employed. The purpose of this study is to

investigate issues relating to macro issues such as politics, labour force, investment environment, economic index, and current affairs, hence, data will be retrieved from a lot of sources consisting of organisations' databases, reports, governments' censuses, governments' investigation and survey on national statistic, data compiled in country report, government publications, industry statistic and report, newspaper, books, and journals. The advantages of secondary data including fewer resource requirements, unobtrusive, longitudinal studies may be feasible, comparative and contextual data provide, unforeseen discoveries, and permanence of data (Saunders, M., Lewis, P., & Thornhill, A. , 2009). In addition, the case study of Samsung Electronics Vietnam Co., Ltd (Samsung Vietnam) and Hon Hai Precision Co., Ltd (Foxconn) will be discussed and then compared. The case study will provide a deeper insight about the operations of one of the biggest international companies in Vietnam before and after the trade war. Furthermore, based on the specific case of Samsung and Foxconn, the research indicates the general investment environment of Vietnam, one of the outstanding rising countries in South East Asia.

Data about FDI and investment environment in Vietnam is retrieved from all of the listed secondary data above of the General Department of Vietnam Customs, General Statistic Office of Vietnam, Ministry of Planning and Investment, UNCTAD, World Bank, and ASEAN Secretariat. Data relates to Samsung Electronics Vietnam and Foxconn is taken from the official website of Samsung Vietnam, Foxconn, MarketLine, and other related official newspapers as well as organisations.

2.3.2 Method

This study is designed as an exploratory study because this type of research design will help understand an issue, problem or phenomenon. This method is valuable to answer questions that are likely to begin with "What" or "How" which is suitable with the aim of this paper. Therefore, a case study is applied. According to Yin (2017), a case study is normally used for exploratory research (Yin, 2017). A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not evident (Yin, 2017). Conducting a paper by making use of case study provides detailed information about the topic as well as insight for further research; hence, it contributes more value to the research and the outcomes of this study.

There are two MNEs operating in Vietnam have been chosen. There are several criteria in selecting these MNEs. Firstly, it is limited to the top biggest international companies in Vietnam because the bigger the company is, the easier in collecting data. Secondly, the company should be in the manufacturing and processing sectors, particularly in electronics because this sector is heavily influenced by the trade dispute and it is also receiving a large proportion of foreign capital (MPI, Brief on foreign direct investment of the first nine months of 2018, 2019). Thirdly, these companies must be in Vietnam a long time enough to observe their operation before and after the trade war. In addition, it is also limited

to those MNEs that have gone through merger and acquisitions to the Vietnamese market. Based on these criteria, Samsung Electronics Vietnam and Hon Hai Precision have been chosen. Moreover, they are now listed in the biggest MNCs in Vietnam operating in the electronics sector. Additionally, manufacturing and processing in electronics is a labour-intensive industry, thus examination of these firms will provide an overall result for the research.

3. Results and discussion

3.1 The influences of the China-US trade war on the economy

3.1.1 Positive impacts

In general, Vietnam is expected to benefit from the trade dispute between the two biggest economies in the world. Possessing a large number of the young, high-skilled and cheap workforce as well as located in the gateway of the South East Asia area, Vietnam, along with other neighbours in the regions such as Thailand, Malaysia, and Indonesia, is becoming the replace destination for giant foreign investors.

Firstly, there is a wide range of industries that gain advantages from the trade dispute, especially the items in the tariff-imposed list. Therefore, Vietnam companies that operate in electronic assembling, chips, semiconductors, garments, footwear, children's toys, aquaculture, furniture, etc. can take opportunities to export at this time. For example, China is imposed a 25% tariff on aquaculture products, including shrimp and tuna. Therefore, according to the Vietnam Association of Seafood Exporters and Producers (VASEP), breaded shrimp is the item benefiting from the US-China trade war. In the first eight months of 2019, the export of breaded shrimp to the US reached 7,098 tons, worth \$50.8 million, up to 57% in volume and 52% in value compared to the same period in 2018 while China recorded a reduction of 33% in volume and 36% in value. Similarly, tuna export also increases. America was the biggest market of Vietnam tuna, accounts for 44.5% total export value of Vietnam. Until November of 2019, tuna export to America increased 42.6%, worth \$297.6 million. Turning to 2020, due to the outbreak of the Covid-19, export of aquaculture products from Vietnam to European Union countries, China, South Korea and Japan decreased slightly while the biggest market America continued increasing, more than 10% compared with 2019. Similarly, other markets such as the UK, Australia, and Canada increased significantly, from 10% to 32% compared with 2019 (VASEP, 2021). In the first five months of 2021, the US market accounted for 21% of total shrimp export, worth \$270 million, increased 21% compared with the same period in 2020 (Fisheries, 2021).

Secondly, the trade dispute is breaking the global supply chain, especially to the Chinese enterprises as well as the MNCs who are operating in China. Products, which are produced in China, are much more expensive than the ones originated from other countries, thus both Chinese and MNEs are highly likely to shift their factory outside the border. In this context, South East Asia is the potential region in which, Vietnam is one of the destinations. The moving of industrial plants, at the same time, move the supply chain to Vietnam. As

reported by the Vietnam Ministry of Planning and Investment (MPI), in 2019, the total FDI capital invested in Vietnam was \$38.02 billion, rose 7.2% compared with 2018. The largest investor is South Korea, followed by Japan, Singapore, Taiwan and Hong Kong (China). Moreover, in 2019, implemented FDI capital in Vietnam reached more than \$20 billion (approximately increased 6.7% compared with 2018), an outstanding milestone that never been before. Furthermore, according to the Vietnam Ministry of Industry and Trade (MOIT), M&A activities are also promoted in recent years, account for a large number of proportions of total registered capital. In 2017, it accounted for 17.02%, in 2018 was 27.78% and in 2019 was 56.4% (MOIT, Việt Nam thu hút FDI: Cột mốc mới 2019 và dự báo 2020, 2019). It can be said that the scale of domestic enterprise has been improved, creates abundant supply for M&A. Additionally, open-door policy in the stock market facilitates more opportunities for foreign investors. However, in 2020, the Covid-19 pandemic has caused global economic stagnation, therefore, FDI inflow to Vietnam decreased considerably 25% compared with 2019, stayed at \$28.5 billion (MOIT, 2020).

3.1.2 Negative impacts

First, it affects Vietnam domestic companies, especially small and medium enterprises. According to MOIT, until 2018, there are more than 520,000 domestic companies in Vietnam. However, only 10% of the total number of enterprises are big size, small and medium enterprises account for 98.1% in which, medium enterprises are approximately 8,500, small enterprises are 114,100 and super-small enterprises are 385,300 (MOIT, 2018). However, there are 73,000 companies closed or suspended in 2017, 107,000 firms in 2018 and in the first five months of 2019, the number was 24,000, increased 18.3% compared to the same period in 2018. Apparently, it is not good news for Vietnam. The increasing number of foreign companies is one of the main reasons for the closing of domestic firms. MNEs with big size, advanced technology equipped, higher capital creates a stricter competitive market to Vietnam companies. Moreover, although the 4.0 Revolution is booming globally, 85% of Vietnam domestic enterprises have not approached new methods and technology in doing business. This is a drawback compared to foreign firms that possess modern equipment. Additionally, domestic firms also face to the limitation of approaching financial resources, labour force, and lower competitiveness, thus make them difficult to compete with MNEs.

Secondly, it is very important to notice that Vietnam is coping with origin fraud from Chinese products. In other words, it is possible to say that China is using Vietnam as a transshipment country where it exports products to Vietnam, labels Vietnamese goods, then export to the US. In fact, Vietnam Government is warning massive flows of Chinese products to Vietnam in order to export to a third country. Vietnam Customs also puts several items under special control such as plywood, bicycles, electric bicycles, leather and shoes, computers, electronic products and components, electrical appliances and components, phones and components, aluminium, iron, and steel.

Thirdly, since May 2019, the US Treasury has added Vietnam to a currency manipulation monitoring list, citing the country's trade surplus with the US as a factor (US Department of the Treasury, 2019). The US labels a country as a currency manipulator if it meets two of the following three criteria: a current account surplus with the US equivalent to 2% of GDP, a trade surplus of at least \$20 billion, and persistent market intervention on behalf of the nation's currency (US Department of the Treasury, 2019). The US did not label Vietnam as a currency manipulator but named the country in its monitoring list. In fact, from 2009 to 2019, it was recorded that there was a significant surplus between the US and Vietnam. In 2019, the US imported more than \$60 billion of goods from Vietnam but only exported \$10 billion, equalled to more than \$50 billion of surplus for Vietnam (Bureau, 2019). Therefore, Vietnam has been listed in the monitoring list. China has been imposed tariffs due to its big surplus amount of trade to the US, and now, Vietnam is in the same situation. Additionally, China is using Vietnam as a transshipment place, thus it raises a concern about Vietnam is being the next country incurring US punishment.

In conclusion, the trade war does not have many positive influences on the global economy in general and to the Vietnam economy in particular. Vietnam can benefit from the trade dispute in aspects such as exporting, attracting FDI capital. However, these activities also include some potential risks that lead to unexpected consequences. Therefore, it is essential for the Vietnam Government to pay more attention to foreign investment policies in order to protect domestic firms and prevent risks.

3.2 Case study and analysis

3.2.1 Ownership – what the firm have? (home country factor)

There are three main kinds of ownership advantages (ownership advantages) that MNEs can possess:

- Monopolistic advantages: foreign firms have ownership of their products, especially in trademark, brand name, patent rights, and natural resources.
- Advanced technology, high-quality manufacturing chains, knowledge, business know-how, and experiences.
- MNCs are usually big companies; therefore, they have benefits in large size and corporate governance. These benefits may include scale and scope of the economy, capital, good organisational structure and deep penetration in international markets.

Samsung is one of the most successful electronic manufacturing companies. Its products ranging from household devices to smartphones, screen to electronic chips. Samsung is known for its wide range of products, large scale, technological advances, and efficient production. Customers can choose the most suitable products with their budget. Therefore, Samsung can reach more customers segment. The main ownership advantages of Samsung

including advanced technology, cost-effectiveness (as it hires employees in cheaper workforce countries), economy of scale, brand name, patent rights, and supply chain system.

Regarding to Foxconn, it is widely known as the manufacturer for Apple's iPhone. Foxconn does not sell directly their products to consumers, but the company produces, supplies and assembles products for a lot of electronic retailers such as Apple, Samsung, Huawei, and Dell. Similar to Samsung, Foxconn's ownership advantages are economy of scale, technological advances, cost-effectiveness, brand name, and supply chain system. In addition, Foxconn's main customers are big electronic retailers, hence, the company can save retail costs. Moreover, Apple now is the main customer of Foxconn and the revenue of Apple is good in general in recent years, the evidence is that in 2018, Apple sold 218 million iPhones, revenue was more than \$265 billion. Apple now is the leading company in smartphone segment. Being the main supplier of Apple could be considered as one of the ownership advantages of Foxconn that not all of the electronic manufacturers can benefit from.

As possessing resources mentioned above, foreign firms are highly likely to connect their ownership advantages with foreign factors to earn the benefits of these advantages. As a result, the location advantages of different countries are major in determining which will become host countries for the MNE.

3.2.2 Location (host country factor)

Resource endowments and market size

Market size is one of the first factors that MNEs think about before choosing an invested country. The population and economic growth rate will show investors whether or not they should invest in a country, as the bigger the market is, the higher the revenue earned. In other ways, investing in big market size will benefit MNEs from selling products or services, and utilising labour force. Vietnam is a market with more than 95 million population, high economic growth, and is one of the attractive tourist destinations in the world with more than 8 million international arrivals in the first half of 2019. Regarding to the resources, for developing countries, one of the biggest advantages is the abundance of human resource endowments, which is the primary target of FDI seeking cheap labour. The population in Vietnam is more than 95 million in 2019 with more than 57 million labour force will provide firms high-skilled workers and semi-skilled workers. However, according to GSO, there is only 22.37% of the total workforce has been educated in which, employees with tertiary or higher degrees accounted for 10.82%, college 3.82%, professional secondary 4.65% and professional primary 3.08%. The number of educated workers is only one-third of South Korea, Taiwan, and Singapore while in many other countries, the rate reaches over 50%.

Input prices, quality and productivity (labour aspect)

In an export-oriented MNE, the most important factor cost in the determination of FDI flows is the wage rate. As reported by GSO, in 2018, average salary amount of Vietnamese

people was 6.6 million VND per month, approximately \$300 (the exchange rate in 2018) while monthly salary in China in 2018 was \$1,025, Thailand was \$875 and Malaysia was \$781 (Tradingeconomics, 2019). Apparently, compared with other countries in the region, salary in Vietnam is lower. Employing workers in Vietnam plays an important role in saving costs for MNEs, especially firms working in labour-intensive industries. In 2020 and 2021, the outbreak of pandemic causes increasing unemployment rate in Vietnam. There are a large number of people who want to find another job. Therefore, in this phase or later on, foreign recruiters are able to recruit workers easier. Moreover, after a long time experiencing economic stagnation, Vietnam economy will be busier.

Investment incentives and disincentives

According to MPI, Investment incentives for FDI enterprises in Vietnam are provided in the following forms: lower tax rates for the whole duration of investment term or part thereof, exemption from and reduction of tax rates; import duty exemption for fixed assets; and reduction/exemption of land rental. As one of the biggest MNEs in Vietnam working in the high-technology sector, Samsung Electronics benefits a lot from Vietnam Government policies for FDI enterprises. The company now enjoys the corporate income tax of 10% for 30 years, the exemption for 4 years and reduction for the next 9 years. Moreover, localities also give Samsung land rental incentives and continue giving Samsung a 50% reduction of corporate income tax for the next three years after a nine-year period (Cafef, 2017). These incentives help the company to save a large amount of money from tax and contribute significantly to further projects of Samsung in Vietnam. In fact, now, Samsung just need to pay 5-6% corporate income tax, a very low rate compared with 20% of other companies (CafeF, 2020).

Artificial barriers

Until May of 2021, there are 14 free trade agreements (FTA) that Vietnam has signed and come into force, 1 signed, not ratified and soon come to force, and there are 2 being launched (VCCI, 2021). With these free trade agreements, products that made in Vietnam will benefit from tariff when exporting to these countries and regions. For example, in the Vietnam-Korea FTA, it indicates a wide range of Vietnamese products as well as Korean products will benefit favourable tax rates or even no taxes. Moreover, Vietnam is also belonged to ASEAN organisation, hence once established a good trade relationship with Vietnam, countries may have linkage with other nations in the region.

Infrastructure

Vietnam has a long coastline with more than 3,000 km. Therefore, the country has an advantage in exploiting sea operations. In fact, there are many big seaports in Vietnam including Hai Phong Port, Quang Ninh Port in the north, Tan Cang-Cai Mep Port, Sai Gon Port in the south, Da Nang Port and Quy Nhon Port in the middle in which, Quang Ninh Port, Tan Cang-Cai Mep are two biggest deep-water ports in Vietnam. Ports in the south of the country plays an important role in connecting Vietnam with others South East Asia countries

while Da Nang Port in the middle plays a vital role in being the main gate to East Sea and being the final destination in the East-West Economic Corridor, connecting 4 countries in the region: Myanmar, Thailand, Laos, and Vietnam. The government now gradually focuses more on building and improving road traffic in order to adapt to increasing cargo flow need transferring. In recent years, new roads and highways have been built and enhanced, ways to industrial zones and seaports. Moreover, in Vietnam, the free land is still relatively large, facilitates in building transportation and buildings.

Economic system and strategies of government

Vietnam is a socialist republic country in which, the market is an open market under state guidance. Historically, the government used to control and decide all economic issues in the country. However, today, it is controlled by demand and supply. Specifically, there are two core elements of official thinking consisting of industrialisation and modernisation and socialist-oriented market economy (SOME). The party defined industrialisation and modernisation (IM) as means and formula to achieve the goal of a better life, for the liberation and all-round popular development. In terms of the social-oriented market economy, the Party's leading role is manifest in forms such as state-owned enterprises (SOEs) and collectives (cooperatives). However, the number of SOEs now is gradually reduced. Vietnam now is more appealing with foreign investors and businesses due to its incentives in terms of tariffs, taxes, and rental fees.

Legal and regulatory system

Protection of property rights: The Law of Intellectual Property Rights has been passed in 2005 and came into force on 1st July 2006. It stipulates copyrights, industrial property rights, rights to plants varieties and the protection of these rights. Nevertheless, enforcement of this law is not strict enough to control well the fake products, brand name imitation, and the rights of products' owners. The government should pay more attention to this problem to create a fair and safe investing environment for international investors and promote domestic enterprises to register and protect their products.

Regarding to regulatory system, from the 1990s until now, laws of Vietnam have been legislated and improved to catch up with changes in socio-economic problems. On the other hand, the regulatory system is still inconsistent and need updating to get better in enforcing and managing laws.

3.2.3 Internalisation (home country factor)

Both companies formed joint venture with local partners in Vietnam at first step. There are several reasons to explain this situation. Firstly, Vietnam started opening its economy since 1986, thus in the 1990s the country is relatively new to foreign investors. Therefore, by forming joint venture business, it is better for MNEs to overcome difficulties such as language barrier, culture barrier, risk reductions, and cost saving. Secondly, in the 1990s, according to the Vietnam government policy, international enterprises only had one

option to enter the Vietnam market: joint venture. In this way, the government might want to protect domestic firms from being dominated by foreign companies. Moreover, it was also expected that by a joint venture, domestic companies could learn advanced knowledge and technology from foreign firms, then contributing to the socio-economic improvement of the nation. However, since the 2000s, the policies about FDI have changed in order to facilitate foreign firms to invest more in Vietnam, create jobs and enhance economic growth. Indeed, the penetration of MNEs has played an important role in increasing Vietnam GDP and reducing the unemployment rate. Samsung and Foxconn also established its first factory in Vietnam in 2008 and 2007, respectively. With FDI, these two firms can take control over its manufacturing plants, supply chain, and operations in Vietnam. Moreover, products of Samsung and Foxconn are required high quality and performance, hence by establishing factories in Vietnam, both companies not only get better control, but they also ensure the global standard for outputs.

In brief, Samsung and Foxconn are two big MNEs working now in Vietnam. Samsung produces and sells products itself while Foxconn is mainly the provider of electronic components and assembler for electronic retailers, especially for Apple. Therefore, in Vietnam, Samsung is more popular compared with Foxconn. Both companies choose Vietnam to place manufacturing plants not only to avoid influences of trade dispute but also for the incentives provided by the government. In other ways, although there is no existence of trade war, Vietnam is invested by because it satisfies a lot of criteria that one firm expects as discussed above. The trade dispute has broken the global supply chain and make international firms consider about moving supply chain system. However, when this dispute finishes, will these firms and other firms continue investing in Vietnam? The answer maybe yes and maybe no. Yes, because Samsung and Foxconn establish and operate well in Vietnam. In addition, Samsung also develops research and design in Vietnam, make the country become the hub in South-East Asia. No, because compared to China, technology and facilities in Vietnam are not good enough to meet the high standard requirements of investors. In fact, China is the global supplier in terms of electronics components and devices, even assembling in Vietnam, inputs are still imported from China. Therefore, factories located in China will help cost savings.

4. Conclusion

This paper researches on the influences of China-US dispute on the changes of Vietnam FDI and economy. Moreover, it also examines the operations and global business of multinational companies under the impacts of the trade war, particularly MNEs in Vietnam. By making use of secondary data and the OLI model, the research reveals both positive and negative impacts of the China-US trade war on the Vietnam economy. Regarding to the positive side, Vietnam can benefit from exporting and attracting FDI from international investors, mainly Asian investors including South Korea, Japan, Singapore, Taiwan, Hongkong (China) and China. On the other hand, there are significant negative influences that

should be taken into consideration. Firstly, the higher inflow of FDI into Vietnam may cause harm for domestic firms, as the market becomes more competitive. Domestic companies, with smaller size and limited capital, find it difficult to compete with bigger MNEs. Furthermore, it is recorded that there is an extraordinary increase of Chinese FDI into Vietnam, posing a threat to origin fraud from Chinese products. Additionally, in recent years, Vietnam has been added to a currency manipulation monitoring list of the US Treasury due to the considerable trade surplus with the US. Therefore, there are a lot of threats to Vietnam in the context of the trade war, especially when Vietnam is China's neighbour and has a relatively close business relationship with this country.

Regarding to the operation of MNEs in Vietnam, the OLI model defines ownership advantages, location advantages, and internalisation advantages in which, ownership and internalisation are source country advantages, location is the recipient country advantage. The research applies this model to analyse the ownership and internalisation advantage of Samsung Electronics and Hon Hai Precision Company to identify what the companies are possessing and why they choose to invest in Vietnam, and under what form. This model also discusses the investment environment in Vietnam to indicate both the positive and negative impacts of FDI policies on the domestic economy. There are a lot of incentives provided for foreign investors, however, this promotion somewhat brings disadvantages for domestic firms. MNEs receive a wide range of incentives more than domestic ones including land rental fees, tax rates, and corporate income tax. When the duration of incentives finishes, some MNEs pose a threat of withdrawing capital from Vietnam if the government does not extend the duration. They also move manufacturing plants or build new factories in another province in Vietnam to benefit from local incentives. Samsung and Foxconn are both big companies in the world. They have advanced technology, know-how, and a good supply chain system, thus these companies choose to enter Vietnam by FDI to benefit local incentives, meanwhile, still maintaining its ownership on patents, knowledge and other relating possession. However, the penetration of multinational enterprises also plays an important role in solving the unemployment rate for Vietnam, improving living standards, enhancing economic growth and export, and bringing Vietnam closer to the global supply chain.

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VIETNAM'S PARTICIPATION IN GLOBAL VALUE CHAIN: A FOCUS ON ICT INNOVATION IN THE MOVIE INDUSTRY

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Abstract

The Information and Communication Technologies (ICT) sector has undergone a dynamic process of globalization and fragmentation, which leads to the creation of global value chains (GVCs). This paper presents the findings of Vietnam's evolving role in global value chain in the context of digital age innovation in the "creative industries", taking the movie industry as an example. The study attempted to track the various forms of film's value chain within an environment disrupted by the ICT sectors. The study aimed to identify where Vietnam's movie industry is located in the global film value chain based on the digital technologies introduced in the three main streams (production, distribution, and exhibition) that characterize the value chain of the cinema industry. Finally, the research offers a set of policy recommendations aimed at supporting entrepreneurship, skills development, and technological upgrading for Vietnam's movie industry in the global value chain.

Keywords: *Global value chain, GVCs, ICT, movie industry.*

1. Introduction

ICT has become the economic driving force of the current agenda. It is widely considered as a tool for modernizing the whole economies: a motivation of innovation and productivity, a stimulant for global integration, as well as a source of well-paid and knowledge-intensive jobs. Meanwhile, ICT sector has experienced an energetic development of "globalization and fragmentation, which leads to the creation of global value chains. The global economy is gradually structured around GVCs that explains for a rising share of international trade, global GDP and employment. Emerging economies are now able to join the existing supply chains instead of creating entire chains domestically. Besides, developed countries can rely on GVCs to recover their growth without major innovations.

During the last three decades, in many developing nations, the services sector has developed faster than manufacturing. According to World Bank (2021), in these economies, services accounted for 55 percent of GDP and 45 percent of employment in 2019. Services make for an even bigger part of economic growth in industrialized economies—roughly 75% on average. In terms of service sector, the term "creative industry" has been widely used in the academic world and in practice. Amongst the historical "creative industries", cinema is the most technological-based. Its historic development has been marked by technical improvements in some extents. The ubiquity of technology has contributed to create a

complex ecosystem that combines a variety of players in fields of technology, production and distribution.

In practice, although the presence in the Vietnamese economy has varied, in recent years it has strengthened. In Vietnam, the service sector accounted for 41.63 % of GDP in 2020, higher than previous years but much lower than the average of 50% in low income countries and 71% in developed economies (statista.com). Like other emerging markets, Vietnam is coming to play an important role in this global movie industry. With an average rate of growth from 20 to 25% per year, Vietnamese cinema is expected to get more records to contribute to 7% GDP for the country and become one of the leading cinema industries in the regions of Southeast Asia and Asia through innovative film creation, production, distribution and exhibition, etc. by 2030 thanks to the technological achievements of industrial revolution (Prime Minister's Decision 2156/QĐ-TTg dated November 11, 2013). It has great potential, not only in terms of its contribution to economic activity, but also in exports, since Vietnam enjoys recognized static and dynamic comparative advantages in the film production. A significant portion of these advantages were developed over a long period of time, allowing for the development of specialized human resources as well as related facilities and services. Other attractions include Vietnam's diverse scenery and very low film production expenses. As a result, Vietnam enjoys potential position in the globalization of film production chains. The Vietnamese film industry has enhanced its chances of becoming more sophisticated and deepening its role in the industry's GVCs thanks to the development of new technologies. It's also worth noting that the film industry is growing globally, which encourages participation in this market niche. Audiovisual exports are exhibiting greater growth trends than that of other creative industries, both in developed and developing countries.

Within the very wide range of activities included in the services sector, and in an effort to identify niches that could help diversify Vietnam's service exports, the author have chosen the film industry, which belongs to the audiovisual service sector for this study. Among the reasons for selecting this industry is the fact that it is culturally important in Vietnam; it has been considered a strategic sector and a number of public policies were designed to support it. Standing Vice Chairman of the National Assembly - Tran Thanh Man (8/2021) stated that it is necessary to consider cinema as a part of the cultural industry, which requires a mechanism to promote and operate cinema as an economic sector, following the market rules, contributing to the country's socio-economic development. Besides, National Assembly Chairman- Vuong Dinh Hue also said that cinema should be accessible on both traditional and digital platforms. On that basis, the key issue to consider in order to amend the Law on Cinema is to regulate cinematographic activities in the digital technology environment in order to encourage the rapid development of cinema and create a legal corridor for the development of the film industry of Vietnam.

However, despite the significant contribution of cinema to the socio-economic development, in the theoretical perspective, statistics and analyses of the sector's economic

impact have not always adequately captured the sector's expanding importance. This is partially owing to the difficulties of measuring the creation and movement of intangibles like services, and partly due to the dynamic nature of the sector's evolution being difficult to capture in surveys and censuses. Up to now, Vietnam has not had any research paper related to Vietnam's position in the global value chain of cinema. It is crucial that cinema must be viewed not only from the perspective of literary and artistic works, but also as a cultural service product, as a driven factor for economic development. This situation suggests the economic role of the film industry by studying the position of Vietnamese cinema in the GVCs in the context of ICT era.

The research is aimed to answer the question: Where Vietnam's movie industry fits in the GVCs of global film industry, as well as the possibilities of increasing its contribution to service exports through better and greater insertion into GVCs. The specific objective of this paper is to explore Vietnam's movie industry current and potential position in ICT GVCs, and provide forward-looking recommendations for improving that position. The paper provides the various forms of GVCs in movie sector- a high tech industry, situates Vietnam's movie industry in the global information and communications technology industry, and identifies several constraints to future growth, including the limited availability and quality of trained information and communications technology professionals, ineffective supplier development initiatives, and weak entrepreneurial ecosystem, especially in management skills. The specific analysis of Vietnam's movie industry is based on the three main streams (production, distribution, and exhibition) that characterize the value chain of the cinema industry. The paper concludes with a set of policy recommendations and forward-looking statements aimed at helping Vietnam's movie industry move into higher-value activities in the coming years.

2. Literature review

This section will examine the main issues surrounding the characteristics of the GCVs in general and the film industry's value chain in particular in the context of digital transformation through existing theories.

2.1. Global Value Chains - GCVs

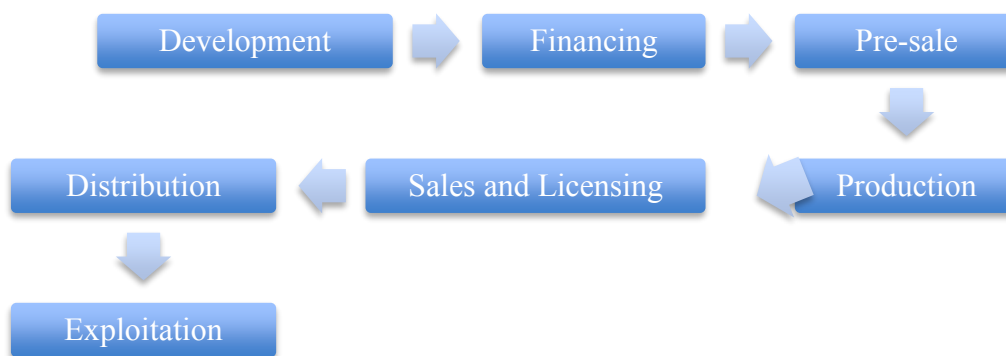
The value chain describes the full range of activities that enterprises and staff perform to bring a product from its conception to end use and beyond. This includes activities such as design, production, marketing, distribution and support to the final consumer. The activities that comprise a value chain can be contained within a single firm or divided amongst various companies (Gary & Karina, 2011). In the globalization context, the series of actions that create a value chain have generally been implemented in "inter-firm networks" on a global scale. By focusing on the sequences of tangible and intangible value-adding activities, from conception and production to end use, GVC analysis provides a integrated view of global industries – both from the top down, things like: examining how the leading firms "govern" their global-scale affiliate and supplier networks; and from the bottom up, for example, asking how these business decisions affect the trajectory of economic and social "upgrading" or

“downgrading” in specific regions or nations. There are four fundamental dimensions that GVC methodology explores: (1) an input-output structure; (2) a geographical consideration; (3) a governance structure; and (4) an institutional context (Gereffi, 2001, p.3). Using these four basic aspects, contributions from Humphrey & Schmidt (2002, pp.1017-1027) developed an additional factor of analysis regarding “upgrading”, which describes the dynamic movement within the value chain by examining how producers shift between different stages of the chain. Early use of GVC methodology basically focused on economic and competitiveness issues, while lately social and environmental aspects have been covered.

2.2. The Models of Film Industry Value Chain

According to Mickevičienė (2011, p.8), the value chain helps explain “the notion that elements connecting different links have a decisive influence on competitive advantage”. Film industry distinguishes various models of value chain. The value chain of independent film sector is provided by Finney in Figure 1.

Figure 1: The existing film value chain model with seven stages



Source: Finney (2014, p. 5)

The main phases of film industry is introduced in this graph, including: production (developing feature films), distribution (supporting logistics for circulating copies and providing financial intermediation to collect revenues from ticket), and exhibition (network of the screens). However, the author identifies the main stages of film industry without putting the emphasis on the main factors of its constituents. It starts from the development step, followed by financing (which mostly involved by the producers and writers). It is noticeable that there is no guarantee that the work of producers and writers will create value. Usually film projects do not even reach the production stage if one of the mentioned preceding stages has not been completed successfully. Production is followed by sales and licensing, distribution, and exploitation. Exploitation stage can be considered as a screening stage. Notwithstanding, these stages are not described in detail. As a result, Finney suggests another value chain model represented in Figure 2.

Figure 2: The new value scheme

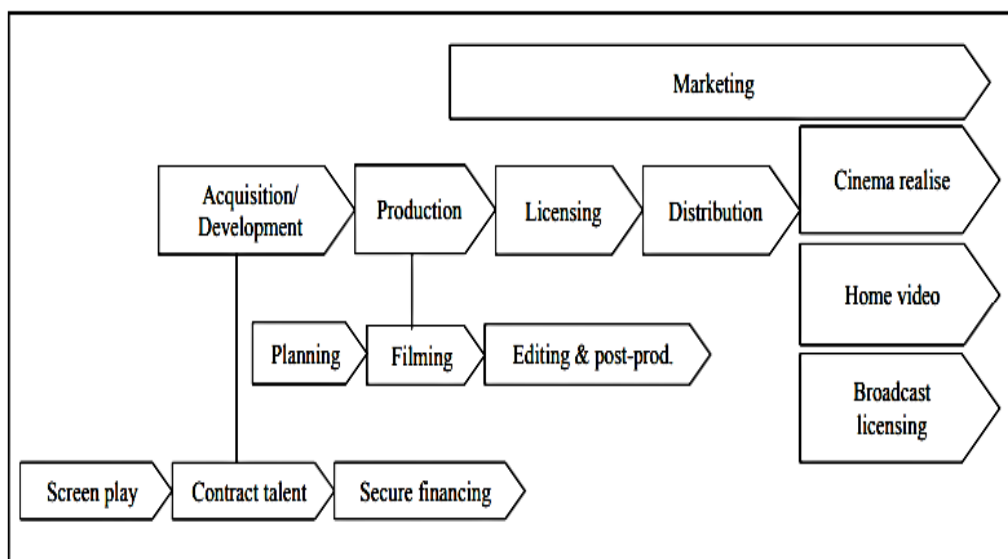


Source: Finney (2014, p.6)

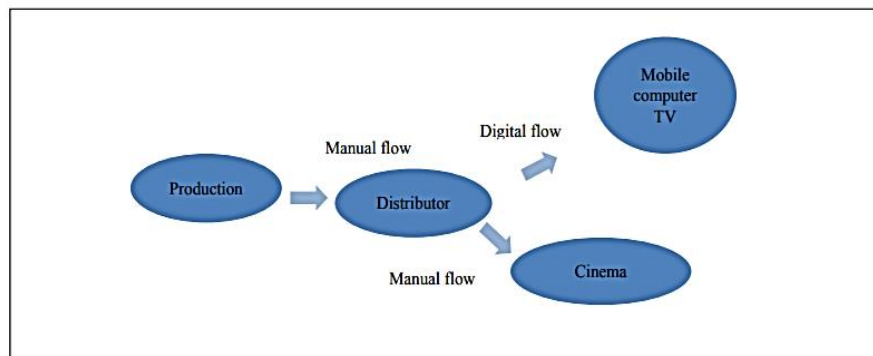
The New Value Scheme highlights the main participants of film industry, namely: “producers, aggregators, and consumers”. In this case, the role of aggregators is filled by the likes of Google, Amazon, Apple, etc. (Finney, 2014) wedged between the producer and consumer, thus reaching the widest audience possible. Film industry is closely related to technologies; however, to achieve accuracy, one value chain should include all of its elements. However, there is a difference with Finney’s value chain (Figure 1). It is emphasized that marketing is mentioned by Küng (2008) in the distribution stage; however, it is also included in the screening and licensing stage. Thus, marketing takes an important role in film industry because it is a process starting from the production stage and following throughout the next stages.

In Figure 3, the value chain gives more details on what it concludes a certain stage and its main features. However, not only should the chain include screening in cinema theatres and home videos, but it should also distinguish the digital (through IT) film distribution and screening from the chain in Figure 2. Nilsen and Smistad (2012) notice that the Internet, IT and other similar factors tend to edit the value chain. All of it enables the development of innovations in film production, licensing, distribution, and screening. The flow of digital content in film industry is revealed in Figure 4.

Figure 3: Value chain - the film industry



Source: Küng (2008, p.72)

Figure 4: Digital cinema - Content flow

Source: Nilsen and Smistad (2012, p.6)

Figure 4 shows a difference between manual and digital distribution. IT, television and other media-related are considered as a part of “the flow of the digital content”. Cinema theatres use external drives for screenings; as a result, they are assigned to the category of manual flow. In terms of the digital flow, the film reaches the audiences at any place without the use of external drives or cine-films required to watch them. However, this is more often with short videos, short-length films or trailers. There are a number of channels for distribution besides cinema theatres, such as the Internet, cable television, etc.

In conclusion, there is a variety of value chain models. The value chain of independent film project combines the development, financing, pre-sales, production, shooting, post-production, international sales, licensing, international distribution, exhibition, exploitation and consumption. Legal advisors, accountants, and consultants work in all stages through the work. It is noteworthy that marketing takes an important role in the film industry. Audiences who join in the final stage via various channels (thanks to ICT innovations) contribute as determiners of film’s reputation.

2.3. Movie sector- a high tech industry

From the beginning, cinema has combined an important technological component, and determined by a number of significant technological breakthroughs. Neal et al. (2012) argues that a series of technological inventions, combined to projection of moving pictures, have created the film industry. To illustrate this, US Trade Association gives a famous quote that: “If you love films, you love technology”, stressing “It comes as no surprise to us that movie lovers love tech – the movie going experience itself is a high tech one. From digital sound to 3-D to CGI, movies are on the cutting edge of technological innovation” (MPAA, 2014). All of these innovations were adopted over relatively long periods of time and built upon previous technological and other evolutions in the movie industry. Significant factors of technological adoption comprise “the transition costs, the availability of technological standards, the audience response and availability of content, and the willingness of filmmakers/ producers to embrace the new technologies”. Besides, as stressed by De Vinck and Lindmark (2012, 20): “periods of technological transition usually bring about opportunities for smaller or independent sector players to achieve a more competitive position in the film value network”.

According to EAO (2014), the relationships between technology and content appear more positive as the number of digital projection screens has been increasing very quickly, reaching 97% in China. New distribution channels are progressing as well. This more optimistic mood is grounded in the growth of the international market: “the international market has grown 33% over the past five years and was up 5% in 2013 to a historic high of \$25 billion. Growing markets in Russia, Brazil, Mexico, and China are responsible for the meteoric rise” (MPAA, 2014).

Unlike other sectors of the media or IT industries, characterized by a rather strict division of labor within its value chain, the cinema industry seems to blend in a specific way science and technology with the artistic dimension. The balance between the two visions may shift occasionally especially at times of fast technological changes, thereby creating tensions between two dimensions. Therefore coordination is a key aspect although its scope may vary in time and space.

2.4. The economic impact of technology on movie industry

Despite the increasing contribution to GDP, the growing importance of the service sector has not always been registered adequately by statistics or by studies of its economic impact. This is partly due to the difficulty of quantifying the creation and movement of intangibles such as services, and is partly because the sector’s dynamic evolution is difficult to register in surveys and censuses. Some progress is being made, as shown by the fifth edition of the International Monetary Fund (IMF)’s Balance of Payments Manual, which classifies three groups within cross-border trade in services: transportation, travel, and other services. The latter is the most diverse, and includes the longest list of services: communications, construction, insurance, financial, cultural, and recreational services, among others.

From an economic point of view, amongst the creative economies, the film industries appear to be very first creative sector and heavy industry because it normally needs a huge investment regarding capital, IT, time, space, human resources, etc. At the very beginning of the 20th century, cinema is organized as a service, on a rental basis, for the copies to be released in theatres and for the viewers to pay for an admission (“renting their seats”).

During the past three decades, digital technologies have been introduced in the three main streams (production, distribution, and exhibition) that characterize the value chain of the cinema industry (De Vinck and Lindmark, 2012, 2014). The 'streams' are implied in film-related value adding activities. The “negative” stream (pre-production, production and post-production) accumulates value through the production stage. Other players may participate in the next two streams (distribution and exhibition) even if in the case of integrated firms, the players were already involved in the negative “stream”. The industry is also characterized by a “reversing cost structure” whereby only a small part of the price paid by consumers is dedicated to creation and production. This “reversed cost structure” is linked to the rental model under last in/ first out allocation of revenues (Ilott, 2014).

Digital production comes with cost-efficiencies, increased flexibility and quality improvements. It also decreases the costs for distribution, and duplicating prints. The theatrical “digital print” or DCP is around ten times less expensive than a 35 mm film print (De Vinck and Lindmark, 2012). The general view towards digitizing production has been positive. The production stream is now digitized and this is moving downstream, reaching the exhibition stream. Digital-cinema advocates say that the technology not only lowers costs, but adds piracy protection, and provides new sources of revenue to theatre owners by helping them show live events such as concerts and soccer matches. It becomes potentially easier for producers to connect with business partners as well as with the audience at the earliest stages of a film project (Mc Coskey, 2014).

The distribution and exhibition segment is faced with disruptive technological innovations supported by digital technologies and calling for huge investments (VoD platforms, 3D equipment...), but it benefits from worldwide distribution of attractive blockbusters. On the other hand, the production segment gains widely from technological innovations brought by other economic factors. However, the rise of new players from the world of broadcasting, media, telecommunication and computer industries contributes to broaden further the gap between production and distribution. As stressed by Simon (2012a) and De Prato et al. (2014a), on a global scale, the balance of power has shifted towards the downstream, away from the upstream, or from the production side of the media toward the distribution side. Fortunately, this downstream domination does not interrupt innovation and specific models of innovation to develop on the production side.

3. Data and methodology

After identifying research objectives, the next task is to select appropriate research methods for collecting and analyzing data to answer the research questions: “Where is Vietnam’s movie industry current and potential position in ICT global value chains (GVCs)?” As is common in GVC analysis, the paper focus on the roles played by Vietnam’s movie firms in the value added chain and highlight if and how specific stages have come to specialize in various activities, such as production, marketing, exhibition, etc.

The GVC framework allows understanding how global industries are organized by examining the structure and dynamics of different actors involved in a given industry. In today’s globalized economy with very complex industry interactions, Lee (2010), Mayer & Gereffi (2010) suggested that the GVC methodology should be a useful tool to trace the shifting patterns of global production, link geographically dispersed activities and actors of a single industry, and determine the roles they play in developed and developing countries alike. The GVC framework focuses on the sequences of value added within an industry, from conception to production and end use. The comprehensive nature of the framework allows policy makers to answer questions regarding development issues that have not been addressed by previous paradigms; additionally, it provides a means to explain the changed global-local dynamics that have emerged within the past 30 years. This methodology has been adopted by a range of

institutions and governments, who have commissioned GVC studies to understand global industries and to guide the formulation of new programs and policies to promote economic development.

Base on research aims and objectives, qualitative method is decided to be used. By examining the theories of GVCs in general and film industry in particular and studies on economic impact of technology on movie, researcher can analyze access and identify the position of Vietnam's in the GVCs. It is decided that secondary data should be used to make an analysis. The data would be collected through different sources, but primarily on official database of Vietnam Cinema Department. The literature theories used in this research is accessed online from Google Scholar, policies of institutions and Government. The analysis is based on relevant statistics published by Box Office Vietnam and Box Office Mojo, a website specializing in independent box office revenue tracking.

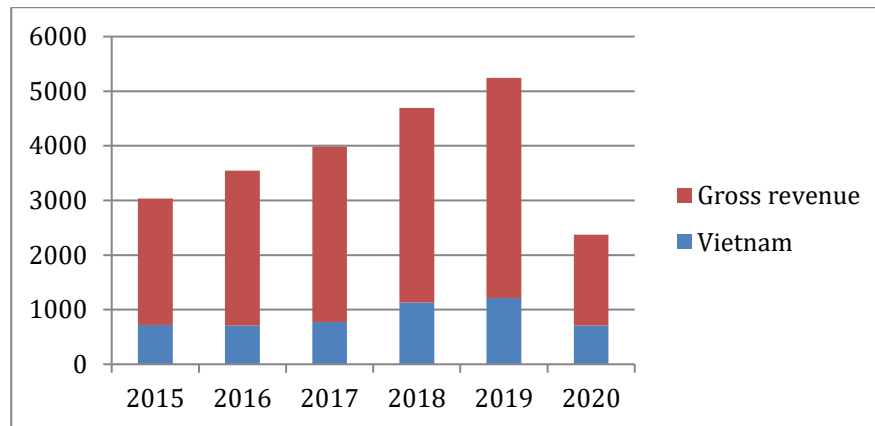
4. Results and discussion

4.1. Vietnamese movie industry in the context of ICT innovation

With an average rate of growth from 20 to 25% per year, Vietnamese cinema is expected to get more records in the near future thanks to the technological achievements of the 4th industrial revolution. Being considered as a cultural industry, which is expected to contribute to 7% GDP for the country by 2030 (Deputy Minister of Culture, Sports and Tourism -Ta Quang Dong), the goal set for Vietnamese film industry in domestic market is 125 million USD by 2030. This is also the content in the Draft of "Strategy to develop Vietnamese film industry to 2020, vision 2030" (Prime Minister's Decision 2156/QĐ-TTg dated November 11, 2013) with the aim of building Vietnamese cinema to become an influential one in the regions of Southeast Asia and Asia through innovative film creation, production, distribution and exhibition by 2030. In the context of digital transformation, the visual effect of Vietnamese films is supposed to be developed under two prominent trends.

Firstly, based on the high-grossing film series over the years, it can be seen that studios are increasingly qualified to meet the audiences' great demand for movie with eye-catching images and spectacular effects. Writers and directors are given many unique ideas into movies. The Vietnamese film market has been growing rapidly at average 25% per year since the last 10 years. Regarding Vietnam's film revenue, in the last 10 years, there has been a remarkable growth (Figure 5).

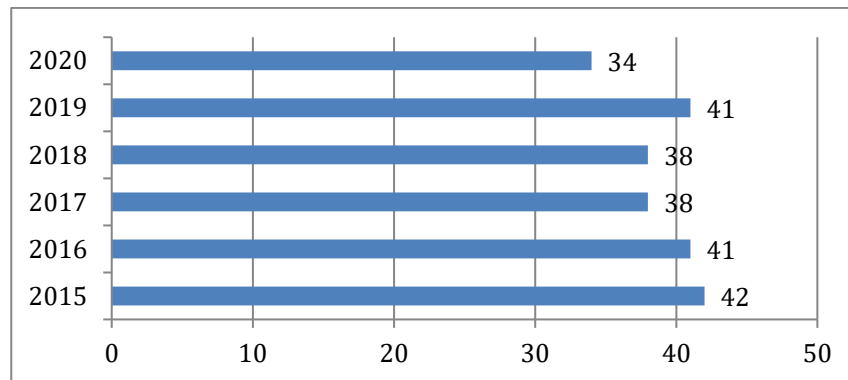
Figure 5: Vietnam's box office revenue compared to gross revenue in domestic market (billion VND)



Source: Own compilation, using information from Box Office Mojo

Regarding number of films production, according to statistics of the Cinema Department (Ministry of Culture, Sports and Tourism), from 2009 to 2014, Vietnam produced 15-25 films each year, accounting for about 15% of the total number of films shown in theaters; in 2015 increased dramatically to 42 films, exceeding the target of 2020 by the Government. In the context that the world film industry is almost at a standstill with many "blockbusters" and film projects being canceled or postponed due to Covid-19 epidemic, the efforts of Vietnamese filmmakers are even more remarkable when completing 34 movies and putting them in theaters in 2020.

Figure 6: Numbers of Vietnamese movies by year

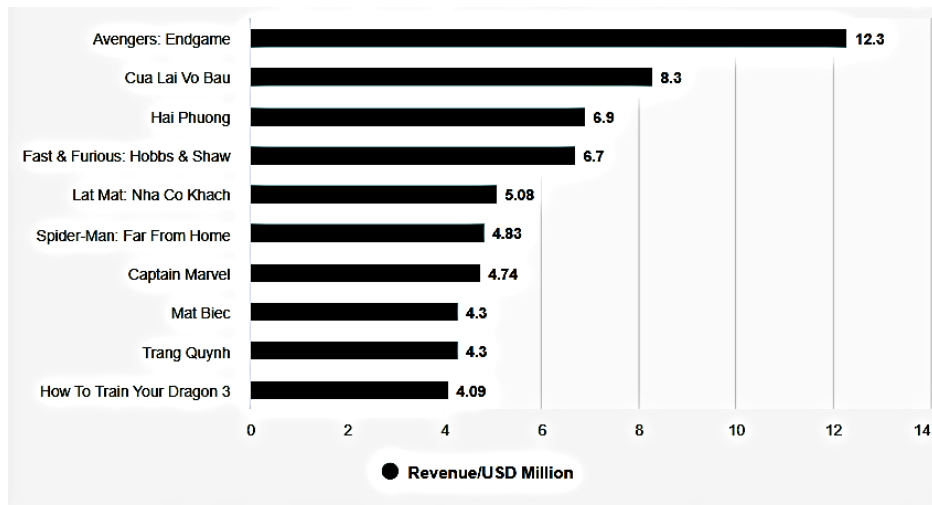


Source: Own compilation, using information from Vietnam Cinema Department

The second trend is that the higher demand for hiring of high quality digital and visual effects artists also helps boost the country's economy. With the 4.0 revolution, cinema has had a "spectacular" transformation. In recent years, Vietnamese cinema has tried to catch up, in which, the digitized film production process from pre-production to post-production has been successful. Since 2010, many movies made on digital platforms have been born. The 4.0 revolution also helps to remove creative limitations in the stages of screenwriting. Thanks to the applications of ICT in making movie, Vietnamese films are increasingly entering global

markets as well as competing foreign films in the domestic market. The top 10 box office hits in 2019 in Figure 7 saw a neat symmetry: It comprised five Vietnamese and five foreign films.

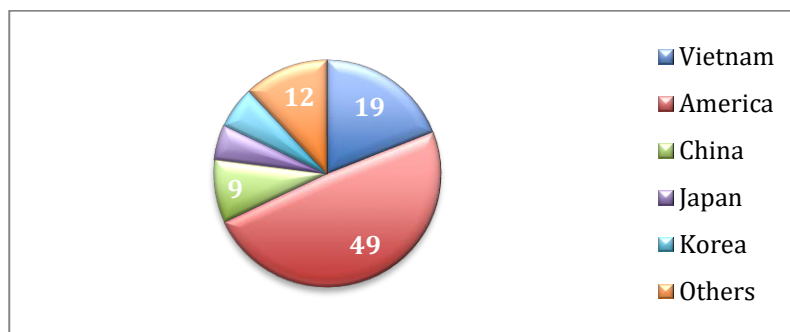
Figure 7: 10 highest-grossing movies in Vietnam 2019



Source: Box Office Vietnam

According to the Department of Cinema (Figure 8), currently, foreign films are still dominating the theatrical film market.

Figure 8: Movies shown in Vietnam by production countries (%)



Source: Own compilation, using information from Vietnam Cinema Department

Besides advantages gained by the applications of ICT, Vietnamese cinema is also facing with many challenges, such as: high requirements for confidentiality, copyright, censorship, production costs, and technical regulations. According to some experts, cinema is a combination of three fields: art, technology and economy. In the 4.0 era, this formula is even more important, contributing to promoting the development and integration of national cinema. However, at present, Vietnam domestic cinema has mostly just reached the "shell" of the industrial revolution. ICT approaching and adopting to cinema is still limited, leading to confusion in the process of deploying and applying new technologies to cinematographic works.

4.2. Where Vietnam’s movie industry fits in the ICT GVCs

Technology affects every stage of the filmmaking process from production, post-production to release and exhibition. Nowadays, the definition of a blockbuster is not only

investing in big budgets, experienced actors, but also heavily dependent on visual effects. These factors are an important measure of whether the film is a success or not. After describing Vietnam's current movie situation, the paper will identify the location of Vietnam's movie industry in the global film value chain interfered with the advance of ICT. The analysis is based on the digital technologies introduced in the three main streams (production, distribution, and exhibition) that characterize the value chain of the cinema industry.

4.2.1. Production

Up to now, Vietnam has more than 500 enterprises licensed to do business in film production (about 15 - 20 enterprises produce cinema films, the rest mainly produce television programs and advertisements). One of the most significant milestones of cinema is the transition from plastic films to digital films. This is an application that changes every part, every stage in the process of making a film. Digital film can help the director much more convenient and easier in the filmmaking process such as changing, cutting, editing the film. Digital also helps a lot in post-production. Vietnamese cinema has taken advantage of the rapid development of science and technology. At the conference titled "Potential of cinematographic and animation techniques for the period 2020-2025", organized by MAAC and Bad Clay Studio (2020), it was agreed that thanks to the technology suite, animation and visual effects industry is becoming one of the fastest growing segments in the media and entertainment market in the world and in Vietnam. Recently, Hollywood cares about Vietnamese human resources. According to research by Research and Markets, 90% of American cartoons and TV shows are produced in Asia. India and China currently have the biggest advantage in Asia. Next come Indonesia, Philippines, Malaysia, Thailand and Vietnam. Currently, companies and artists in Vietnam can connect and cooperate with Hollywood producers entirely via the Internet. In Vietnam these days, "the demand for entertainment content production is becoming more pressing than ever" (MAAC, 2020). The rapid and strong development of technology for film production, projection and archiving in cinema on digital platforms is not only an opportunity but also a challenge that requires the national cinema to invest and find its way on the basis of national culture.

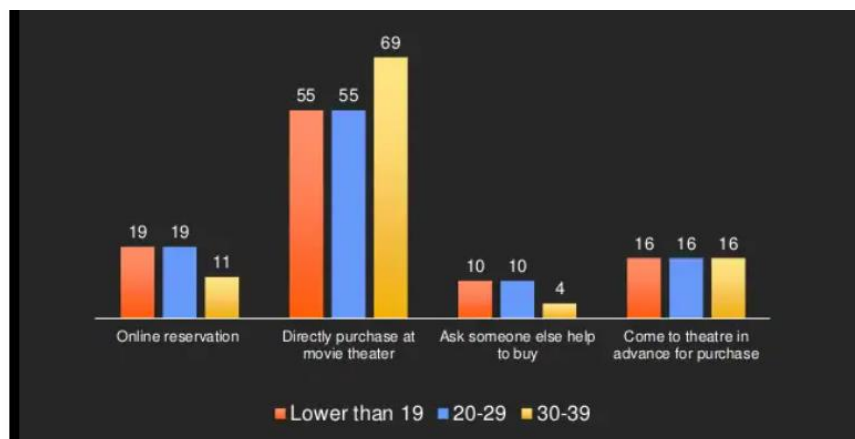
4.2.2. Distribution

The 4.0 revolution has changed both the mindset of filmmaking and the mindset of film reception in Vietnam. Vietnam has quickly caught up with the most advanced technology in supporting logistics for circulating copies and providing financial intermediation to collect revenues from ticket. In the great development of technology with convenient applications of satellite fiber optic cables, mobile phones, high-tech projection equipment, etc. it seems that the audiences can bring the whole movie theater to their home. Accordingly, film production companies will gradually become factories that apply all the optimal capabilities of digital technology. In the old days, every time there was a movie, we had to go to the theater and book the show, pay in cash and then wait for the movie to show. But today, whatever you are doing, just open the movie app, check the show time, tick the options, book the slot and then

go to the cinema and enjoy it. The development of technology in general has strongly contributed to the optimization of time, procedures, etc. Nowadays, going to cinemas is no longer just for the elite but for all people, all ages.

Besides the breakthrough in thinking about filmmaking and watching movies, the way to promote cinema before the 4.0 revolution also has many other changes. One of the most prominent strengths of the 4.0 revolution is artificial intelligence (AI) and the Internet of things (IOT). On the basis of the rapidly increasing use of social networks, Vietnam's firms (especially marketing companies) utilize IOT and AI to connect the data of millions of users, creating a large data warehouse, from which each user is analyzed by behavior, age, interest, etc. thereby giving suggestions about movies closest to user preferences. From there, optimize the effectiveness of movie ads. Or in addition, a current film is also evaluated, influenced in many ways. The development of social networks allows people to review, discuss, and evaluate movies openly and enthusiastically online. This can become a revenue-stimulating lever for the films, but on the contrary, if not used properly, it will be the stone that sinks the success of the film to the bottom of the tank. Technology transformation must also be associated with the retraining of projector technicians; invest in a modern ticketing system, online payment, etc to meet the needs of the public quickly and conveniently. According to the survey of Q&Me in 2021 conducted about Vietnamese behavior in making seat reservation, there is more than half buy tickets directly at cinema, the ratio of booking online ranks second with the most of audiences less than 30 years old (Figure 9).

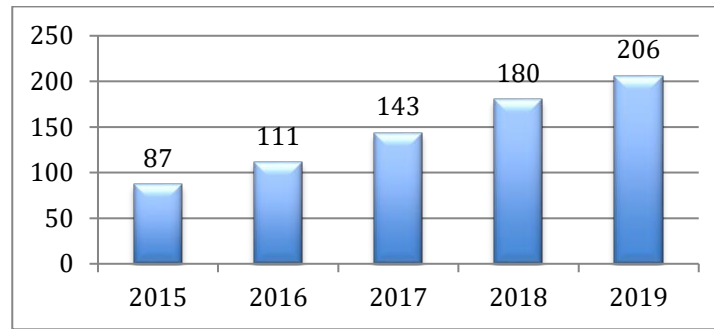
Figure 9: How Vietnamese audiences make seat reservation



Source: Q&Me survey (2021)

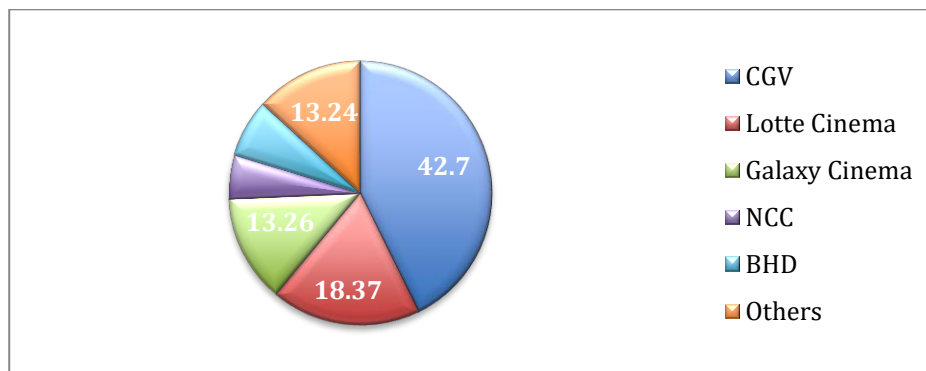
4.2.3. Exhibition

Entering a new phase, the film market in Vietnam has become one of the hot growth markets in the world. According to the statistics of CJ CGV Vietnam Co., Ltd., after 10 years, the number of cinema halls increased by more than 12 times; revenue increased 13.5 times (Figure 10).

Figure 10: The development of cinema infrastructure

Source: Vietnam Cinema Department (2020)

Cinemas in big cities are mainly owned by foreign companies. Currently, CGV cinemas and Lotte Cinema are the market leaders. These two companies accounted for a total of 77% of cinemas in Vietnam at the end of 2017. On February 2019, the number of CGV theaters was overwhelming with 74 theaters nationwide. CGV is also currently the dominant theater cluster in the market, with more than 40% of the cinema market share and more than 60% of the movie distribution market share in Vietnam (Figure 11).

Figure 11: Vietnam cinema market share (%)

Source: Galaxy Cinema (2019)

Thanks to the development of technology, viewers can easily access cinema through online movies, instead of going to theaters. Audiences now prefer watching streaming or show from apps like Netflix, Amazon Prime over TV series from studios because of the convenience and comfort, especially because of the rise of all kinds of networks. The proof is the rapid rise of service companies such as Netflix. They now not only rents videos, DVDs or streaming anymore, but has begun to produce its own series. The ascendancy of online movie platforms, led by Netflix during the global outbreak of the Covid-19 pandemic, has brought new glimmers of hope. In many cinemas, especially in Asia, online film platforms have boosted production and opened the way to bring domestic films to international audiences. Vietnam can also seize this opportunity to make a breakthrough. This is also an effective issuance channel to help manufacturers recover capital. It can be seen that Netflix is gradually increasing its interest in the Vietnamese film market through activities to buy rights to fill up the Vietnamese movie store. Currently, on this platform, there are more than 70 Vietnamese

titles and will increase gradually in the future. On December 2019, Netflix, the worldwide streamer of movies and TV shows, has added seven more Vietnamese movies to its library. This has brought the total number of Vietnamese movies it streams to 13. The movies will now have a reach of 190 countries and territories. However, in order to success in this channel, Vietnam's cinematic works must be of high quality and attract investors as well as distributors. The fact that Vietnamese films shown commercially abroad or on major online movie channels like Netflix will contribute to building and positioning Vietnamese film brands in the international arena.

As the paper has discussed, digital technologies have been introduced in Vietnam in the three main streams, namely production, distribution, and exhibition which implied in "film-related value adding activities". In the first stream (production), Vietnam now step by step take advantages of the ICT in creating films with prominent visual effects and high quality which meet higher and stricter demand of the audiences from Vietnam and foreign countries. However, in terms of legal (rights clearance, negotiations, etc.) and commercial issues, Vietnam firms still lack of awareness, knowledge and experience in dealing with these matters. The characteristic of the industry is known as a "reversing cost structure" where only a small part of the revenue dedicated to creation and production. Thus, Vietnam is making full use of ICT innovation to make breakthrough in the next two streams (distribution and exhibition). The distribution and exhibition segment in Vietnam's movie industry is countered with ICT innovations and calling for huge investment, but it benefits from international distribution of attractive "blockbusters". On the other hand, the production stage achieve much from technological innovations brought by new economic players, whose appearance of broadcasting, media, telecommunications and computer industries contributing to broaden further the gap between production and distribution. Despite the shift from the upstream towards the downstream, or from the production toward the distribution, the domination of downstream does not prevent innovation to develop on the production side, which brings more and more value for the movie industry of Vietnam.

5. Conclusions and policy recommendations

From the study of movie sector in ICT era, it can be supposed that Vietnam's film industry now quite fits in the GVCs and it witnesses the increasingly evolving role of Vietnam in the global film value chain. In order to meet the needs of cinema development in the new situation, the research offers a set of policy recommendations aimed at supporting entrepreneurship, skills development, and technological upgrading for Vietnam's movie industry in the GVCs:

(1) Strengthen associations and the ability to develop joint efforts by those who contribute to the different components of the value chain within the Vietnamese film industry.

(2) The public sector must have an active role. The author suggests that designing, executing and evaluating policies that increase the ability of Vietnamese producers to carry out higher-quality projects with the potential to be marketed abroad, since currently there is

only a small number of productions that are successfully exported and that are profitable in economic terms.

(3) The government could help reinforce the industry by issuing the laws designed for its support. Some examples are: complying with screen time for Vietnamese productions, protecting intellectual property, and avoid importing copies of movies for exhibition in the domestic market.

(4) Greater exhibition in movie theaters and non-pay television must be guaranteed for domestic productions, so that the internal market can serve as a stepping stone for internationalizing the industry.

(5) There must be greater incentives for attracting large foreign productions.

(6) Creating in-depth training courses for talents and human resources of the film industry in application of high technology; focusing on composition, film production, technical experts, etc. with high qualification to adopt ICT in filmmaking.

To sum up, technology is an indispensable component in the current filmmaking process. In order to affirm the position the world cinema, Vietnam needs to actively apply the scientific achievements and advances brought by technology, plan strategies to develop the film industry in accordance with the requirements of society and the development trend of the world cinema. It would be useful if future research should look into the connections with other audiovisual industries, particularly those in television (commercials, short films, soap operas), new formats for film services (the Internet, new e-readers and screens), competition and market access regulations, and improving sector statistics.

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THEME 2A

BUSINESS ADMINISTRATION AND INNOVATIVE START-UP

THE INFLUENCES OF STORE ENVIRONMENT ON CUSTOMER PERCEPTIONS AND BEHAVIORAL INTENTIONS IN RESTAURANTS

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Abstract

The purpose of this study is to examine the effects of store environment on customer perception of store, service quality and food quality, and their influences on customer behavioral intentions in dining service. This study extend the existing literatures by developing a model that accounts for the influences of three restaurant's store environment factors on customer's perceptions, including perception of store, food quality and customer service quality and their effects on customer's behavioral intention. The result shows that the three components of store environment in restaurant have influences on customer's perception, then affect their behavioral intentions such as intention to revisit, recommend to others and spread positive words of mouth.

Keywords: *behavioral intention, customer perception, store environment.*

1. Introduction

The increase in the variety and richness of products on the market has led to the increase in customers' demanding when choosing one brand over another. Instead of focusing solely on product attribute benefits, customers now perceive shopping and consumption as a unique product and service experience (Lin and Chiang, 2010; Prasad and Madhavi, 2014; Sachdeva and Goel, 2015). In such a competitive situation, brands are forced to identify the unique selling points in their products and services in order to better compete with other brands. One of the ways to achieve this is through in-store brand strategy or experiential marketing, in which brands use marketing efforts to create a great experience for customers in-store (Burt and Davies, 2010; Kumar and Kim, 2014; Ogruk, 2018).

In addition, market trends in developing countries like Vietnam have changed drastically in recent years, giving consumers more convenient options for purchasing, not only at the store, but also through the internet and mobile devices. However, for some business areas such as restaurant services, the role of in-store marketing cannot be completely denied. Prasad and Madhavi (2014) argue that the natural human desire is to enjoy and have enjoyable experiences. In some cases, the location, or more specifically, the atmospheric of the place where product/service is provided, has more influence than the product itself in the purchase decision (Kotler, 1973). That is why many customers prefer to dine at a restaurant or sit at a cafe than to take-away or buy online. Therefore, in order to optimize direct sales channels, merchants want to provide customers with experiences that they cannot get through other channels.

Nicholls et al. (2000) pointed out in their study that the majority of survey respondents specify store environment as one of the important factors in deciding where to buy. Studies also show that the store environment makes an important contribution to the perception of products and service quality (Baker et al., 1994; Grewal and Baker, 1994; Dong and Siu, 2013; Hooper et al., 2013). According to Kim (2001), knowing which in-store cues can most enhance or minimize experiences will help managers design an environment in which consumers can enjoy a high quality experience. In this way, retailers will be able to add value to their products (Gentile et al., 2007), influencing customers's future behavioral intentions (Lacher and Manneski, 1994; Ha and Jang, 2012; Hooper et al., 2013), increase their loyalty (Pullman and Gross, 2004), improve store reputation (Terblanche, 2009), market share (Grewal et al., 2009), and develop competitive advantage (Tsaur et al., 2007). For the service sector in general and restaurant in particular, Bitner (1992) also points out store environment to have a strong impact on behavior and image building. Unlike buyers of tangible products, service customers are limited to a small number of cues for evaluating their overall experience because of the intangible nature of the service. In many cases, price and physical environment (e.g. decoration, design, spatial layout, and ambient conditions...) are the only tangible cues available (Bitner, 1992; Zeithaml, 1981, Ariffin et al., 2012). Store environmental factors may not be the sole determinants of customer behavior, but are increasingly important for today's customers when choosing where to dine (Kwun and Oh, 2007). Understanding how environmental factors in a restaurant affect customer behavior will have both theoretical and practical implications.

A review of studies on the store environment and customer behavior shows that the use of store environmental factors as an effective tool to influence customer psychology and behavior has been receiving increase attention. It is not only in the marketing strategy of shopping malls, retailers and service providers, but also the topic of interest of many researchers around the world. The literature has discussed the influences of store environment on customer perceptions, emotions, and behaviors. Most of the studies focus on the influence of the store environment directly on customer behavior (Shailesh and Taruna, 2016; Katyal, 2018) or indirectly through one of two factors either customers' perceptions of products/services or their feelings (Donovan et al., 1994; Sherman et al., 1997; Osman et al., 2014; Lin and Chiang, 2010; Ogruk et al., 2017). A few studies are interested in both cognitive and emotional aspects such as Kim and Moon (2009), Liu and Jang (2009), Marthur and Gupta (2019) and confirm that store environments can have influences on both customers' perceptions and emotions, then affect their behaviors. However, based on literature review, there are still some gaps in the research: Firstly, among the research studies on customer perception influenced by the store environment, the majority do not clearly define "customer perception", but mainly study in the form of "perception of service quality". In addition to the impact on customers' evaluations of service quality, whether the store environment makes a difference in store perception (store

image) with product quality and/or service quality perception? This question is rarely addressed in previous research. The few studies found on this issue are in the retail sector (Kumar and Kim, 2014; Haryono and Sihombing, 2018). Thus, answering this research question will enrich the understanding of the customer experience created in the store environment. Secondly, although Wakefield and Blodgett (1999) suggest that different aspects of the service environment may be more important depending on the particular context, few studies have examined the influence of individual factors and consumption context to consumer response in the service environment. Studying the influence of regulatory factors will help determine the differences in the relationships between store environment factors for different customer groups and in different contexts.

From the research gaps as discussed, this study aims to bridge these gaps by developing an model that accounts for the influence of three restaurant' store environment factors on customer's perception, including perception of store, food quality and customer service quality and their effect on customer's behavioral intention. This study is important both theoretically and practically. Practically, this study can provide various insights into the important role of store environments on customers' perceptions towards the restaurant image, customer perceived quality of service, customer perceived quality of food and their behavioral intentions.

2. Literature Review

2.1. Store environment

The term "store environment" comes from environmental psychology and is also known as other names such as "atmospheric", or "servicescape". "Store environment" is defined as the physical and unphysical factors in a store that can be controlled to effectively enhance the behaviors of customers and employees (Heidari et al., 2016; Lin and Chiang , 2010). According to Hooper et al. (2013), the first term commonly used was "environmental psychology" by researchers in psychology - Mehrabian and Russell, 1974. Later studies on the store environment have applied Mehrabian and Russell's theory (1974) in the context of consumption. According to Han et al. (2018), the research on the store environment for service businesses comes from the study of Kotler (1973) and Baker (1986). Kotler (1973) emphasized the importance of the store environment, referred to as "atmospheric", as an important marketing tool. "Atmospheric" is defined as the deliberate design of a space to influence customers' emotions in a positive way to increase the likelihood of a purchase. This is achieved through design that engages the senses of sight (color, light, shape, size), hearing (sound), smell (smell) and touch (temperature). This concept is similar to that of Mehrabian and Russell (1974) as both deduce that environmental stimuli can be controlled to induce certain behaviors. Baker (1986, 1994) also emphasizes the role of the "store environment" in service marketing and how the physical environment affects customers' perceptions of the service. Bitner (1992) argues that building a store environment for service organizations is extremely important because services are produced and consumed at the same time. This feature implies that customers will be exposed to the environment at the place of service, and

their response is related to environmental perception. She has developed a new concept of the environment applicable to service organizations called “servicescape”, focusing on the elements of the physical environment and consisting of three elements: ambient conditions (such as temperature, music), spatial layout and functions (such as layout, furniture) and signs and symbols (such as signs, decorative style). The “servicespace” is defined as the combination of factors affecting the customer’s overall perception of the service, and it describes the man-made physical environment (as opposed to the natural or social environment) affects customers’ perception of service, and can increase or decrease customer satisfaction (Bitner, 1992). Basically, this name doesn’t make too much difference and is all about interactions or relationships between customers and the environment. However, the term “servicescape” only focuses on the physical environment and ignores social and emotional factors. According to Slatten et al. (2009) and Bigdeli et al. (2014), although the servicespace is related to the customer experience, the environmental structure covers more than the physical environment where services are delivered. Baker (1986) mentions that the design of the store environment is to affect the customer’s feelings, so it is impossible to ignore human factors or social interactions including employees and customers. Therefore, this research use later researchers’ agreement on store environment components with three factors: ambient, social, and design (Slatten and et al., 2009; Heide and Gronhaug, 2006; Bigdeli et al., 2014).

Ambient factors include stores environmental factors affecting one of the five senses (Bitner, 1992) such as scent, light, music, temperature, cleanliness... Studies show that when ambient factors are maintained at a satisfying level, they do not directly enhance consumer purchasing ability, however if any ambient cues are beyond their acceptable limits, they may have a negative effect on consumer behavior (Baker, 1986; Hightower et al., 2002).

Unlike ambient factors, **design factors** are more visual. The design element plays an important role as it facilitates the transmission of messages to consumers about the level of service they receive (Bitner, 1992). Researchers often classify design elements as functional or aesthetic, including elements from architectural design, to materials and colors used in decoration (Baker, 1986). Space and layout are also elements of design, often related to how furniture and equipment are arranged and the spatial relationships between these objects (Bitner, 1992; Ryu and Jang, 2007). A customer-friendly layout design can improve service reliability, thereby facilitating better service delivery. Conversely, if the layout interferes with the customer’s time in the store, it can lead to an unsatisfactory experience for them (Bitner, 1992).

Social factors refer to human factors, including consumers and employees, two-way transaction behavior, density of a store, privacy, entrances, and even the noise of children (Lin and Chiang, 2010). Social cues show how employees appear to customers and how employees communicate with customers during service. The interaction between employees and customers is confirmed to influence consumers’ evaluation of service quality (Baker, 1986). Customers are likely to infer the reliability of the service they receive based on their

evaluations of store employees. This is because the appearance and behavior of employees can reflect the value of service received by the customer. Verbal and nonverbal communication, politeness, neat attire, enthusiasm and empathy in service, attitude, tone of voice, ability to handle complaints and friendliness of the waiter are often used to measure the influence of social factors in the environment on customers' perception of service quality (Baker et al., 2002).

2.2. The research on influence of store environments on customers' perception and behaviors

Service perception and service quality are mentioned by many researchers as mediators of the relationship between store environment and behavior. Kwun and Oh (2007) state that improving service quality, product quality and store environment increases customers' perception of overall quality of the restaurant and customer behavioral intentions such as returning to the store and recommending to other customers. Besides, the influence of customers' perception on their behavioral intentions also depends on the consumption experience and perception of the customer's personal image. Ha and Jang (2012) have developed a research model of store environments' influences on customers' perceptions of service quality and food quality at ethnic specialty restaurants, and at the same time consider the extent to which perceived quality mediates the relationship between perceived service environment and customer behavioral intentions (including returning behavior, spreading positive information about the restaurant and recommending it to others). Research results show that the interior design and store layout have a positive influence on the perception of food quality and service quality, thereby positively affecting customer behavior. Hooper et al. (2013) studied the influence of servicespace at the petrol station and related products on behavioral intentions to test whether the servicespace should be considered as a component in service quality or as a predictor of service quality and behavioral intentions. Similar to the study of Ha and Jang (2012), the results of this study show that the service space has a positive effect on the perception of the overall service quality, thereby affecting the behavioral intention. Nguyen and Nguyen (2020) also conducted a similar study for a cafe. Similar to the approach and model building of Hooper et al. (2013), the study once again confirms that the store environment is a predictor of service quality and customer behavioral intentions. In a recent study, Tran et al. (2020) examine the role of servicespace and perception of social interaction on customer experience at coffee shops. The research results indicate that the servicespace of the cafe significantly affects the perception of the quality of social interactions, including the perception of customer-employee and customer-to-customer interactions. Besides, social and environmental interactions have significant influences on customer experience quality, satisfaction and loyalty.

Kim and Moon (2009) study the influence of servicespace on perceived service pleasure and quality and the influence of these two factors on customers' intention to return to the restaurant. The research results prove that the perception of servicespace directly affects customers' perception of service quality, thereby indirectly affecting the intention to return to

the store. In this study, the authors also examined the moderating effect of restaurant type on the relationship between perception and behavioral intention. Liu and Jang (2009) examine the relationships between restaurant environment, emotional responses, perceived value and behavioral intentions of customers, using Chinese restaurants as the research context. Research results show that the environment in the restaurant has a significant influence on customers' emotions and perceived value of the service received. Furthermore, both positive and negative emotions and perceived value also influence the behavioral intentions of customers after dining at a restaurant. Perceived value not only has the strongest influence on behavioral intention, but also mediates the relationship between affective response and behavioral intention. Liu and Jang (2009) state that service quality and the perception of value are affected by store environment factor, which has an impact on customer behavior. Marthur and Gupta (2019) studied the influence of restaurant environment and food quality on perceived value, emotion and intention to return of customers in budget restaurants. Research results show that store environment factors have a significant influence on perception of food quality. In addition, food quality also affects the perceived value of customers.

Lin and Chiang (2010) conclude that social cues would have little effect on customer perception of price and emotions, while ambient cues had a small effect on perception of product quality. Research also shows that emotions not only mediate between design cues and perceived price, but also directly or indirectly influence perceived experiential value, which in turn contributes to behavioral intention.

3. Theoretical framework

3.1. The model of customer behavior

According to Kotler (1997), customer is affected by the stimuli by the marketer and the environment. This stimuli is then dealt with by the buyer's black box. The buyer's black box is defined by two sub components - buyer's characteristics and the buyer decision process. The buyers characteristics could be personal, psychological, cultural and social. The buy's decision process could be problem recognition, information search, evaluation of alternatives, purchase decision and post purchase behavior. What happens in black box results in customer's decision.

Kotler (1973) also explains in the model of the causal relationship between the store environment and purchase intention that: (1) Customers are placed in spaces with certain sensory qualities. This sensory quality can be either endogenous to the space or designed for the space by business owners. (2) Each different customer will have different perceptions of the sensory quality of the space. (3) Perceptions of the sensory quality of the store environment can influence personal information and emotional states. (4) Changes in customer information and emotional state can lead to changes in purchasing ability. Besides, there are some models developed by Bitner (1992), Mehrabian and Rusell (1974) to explain the influences of store environment on customer behavior. In general, literatures show that although the theoretical models of the influence of store environment on customer behaviors are built by independent

scientists and developed at different times, they all assume that store environment can influence internal evaluation of customers, which in turn affects customer behavior. From related theoretical models, Lam (2001) summarized into an integrated model of the influence of the store environment in which store environment acts as the stimuli created by marketer, affecting the customer's black box, thereby influencing the customer's decisions.

3.2. Hypothesis development

3.2.1. Store environment factors influence on customer perception of store

There are relatively few studies looking at the relationship between store environment and customer perception of the store. Despite this, previous studies show that store environment is one of the inputs for customers' perception of store image, or in-store attitude (Baker et al., 1994; Areni and Kim, 1994; Mulyani et al., 2019) argue that store environment helps define the image of the store and position the store in the mind of the consumer, attracts consumers, makes them comfortable and reminds them the products that need to be purchased.

In the service business, design influences consumers' perceptions and attitudes toward service providers (McElroy, Morrow, & Eroglu, 1990). Kumar et al. (2014) conclude that design cues such as color, layout and in-store setting can help customers form some positive perceived store evaluations in the customer's mind. Similarly, research by Baker et al. (1988) shows that expensive facilities at banks are a sign for banking customers to infer that they have chosen the right bank. Convenient navigation, relaxing space design and sophisticated layout will strengthen customers' confidence in the store's trustworthy image. Customers often infer the reliability of a store by its appearance as well as its layout (Lin and Chiang, 2010). Research by Baker et al. (1994) shows that employee-related factors (number of employees, staff in professional attire and one employee greeting customers at the store entrance) can affect to the customer's perception of the overall image of the store. Ryu et al. (2012) show that the quality of the store environment such as a well-designed restaurant, relaxing music, clean restaurant space, and neatly dressed restaurant staff have an influence positive to the store's image.

Therefore, it is hypothesized that:

Hypothesis 1: Store environments positively influence on customer's overall perception of the store.

Hypothesis 1a: Social cues positively influence customers' overall perception of the store.

Hypothesis 1b: Design cues positively influence customers' overall perception of the store.

Hypothesis 1c: Ambient cues positively affect customers' overall perception of the store.

3.2.2. Store environment factors influence on customers' perception of restaurant's quality

Marzursky and Jacoby (1986) point out that the image inside the store is a signal for customers to judge the quality of goods and services. Research by Baker et al. (1994) shows

that employees have influences on customers' perceptions of product quality and service quality. The results of this study show that a store equipped with qualified social elements (e.g., more salespeople, salespeople dressed in professional clothing, and salespeople greeting customers at the store entrance) was rated to provide a higher quality of service than a store characterized by social factors with a poor image (e.g. few salespeople, salespeople not wearing uniform). Ha and Jang's study (2014) in the restaurant environment also found the positive relationship between restaurant's environmental cues with customers' perceptions of service quality and food quality. Similarly, Singh (2006) demonstrated that the social factors has an impact on customers' perception of service quality.

Consumer psychology has explained that people are likely to judge a store based on observing the characteristics and dress of the people serving in the restaurant as well as those who visit it. When there is not enough information in a restaurant, consumers can infer service quality according to the attire of waiters and guests. Besides, when customers sit in a restaurant and have a meal, staff's service attitude, facial expression and appearance can affect their assessment of service quality (Lin and Chiang, 2010).

Therefore, it is hypothesized that:

Hypothesis 2a: Social cues positively influence customers' perceptions of restaurant quality (including customer service quality and food quality).

Design factors influence an individual's assessment of objects in the environment (Baker et al., 1994; Kumar and Kim, 2014). The design elements used in the store can influence the customer's perception of perception of goods and service quality, perception of price, and perception of efficiency (Bellizzi et al., 1983; Singh, 2006). The same merchandise may be considered to be of higher quality when purchased from a designer store (e.g. plush rugs, clear signage) than from a designer store. (e.g., concrete floors, unclear signage) (Gardner and Siomkos, 1985). Furthermore, customers are willing to pay higher prices for goods sold in a luxury store even before they know the actual price (Baker et al., 2002). Besides, in the food service business, interior decoration and amenities such as tables, chairs, restrooms, open spaces, kitchens, layout and painting on the walls will bring to consumers a comfortable dining space. Furthermore, in a neat and orderly restaurant, customers are more likely to believe that they are being served fresh food that is carefully prepared during the cooking process (Lin and Chiang, 2010).

Therefore, it is hypothesized that:

Hypothesis 2b: Design cues positively influence customers' perceptions of restaurant quality (including customer service quality and food quality).

Results from researchers (Baker, 1986; Sweeney and Wyber, 2002; Lin and Chiang, 2010) indicate that ambient factors can affect consumers' perception of service quality and quality of goods. Although not separating specific components in the restaurant environment, Kim and Moon (2009) and Ha and Jang (2014) show in their research that the restaurant environment has a positive influence on customer perception in terms of service quality and

food quality. Research by Lin and Chiang (2010) shows that a bright restaurant environment, relaxed atmosphere and pleasant music will positively affect customers' perception of the quality of both products and services provided.

Therefore, it is hypothesized that:

Hypothesis 2c: Ambient cues positively influence customers' perception of restaurant quality (including customer service quality and food quality).

3.3. The influence of customer perceptions on behavioral intention

According to Dong and Siu (2013), a positive evaluation of a service experience will satisfy customers by creating a sense of joy and leaving memorable memories. A poor service experience frustrates customers and can even make them consider leaving the service provider, while a positive experience encourages customer loyalty and prompts them to return to purchase. According to Chang and Wildt (1994), perceived value is the main factor affecting purchase intention. It has a positive effect on customer satisfaction and determines whether they want to return to that store (Iglesias and Guillén, 2004). Inferring from the SOR model and research by Zeithaml (1988), previous studies show that the store environment will determine behavioral intentions through cognitive or emotional processing.

Therefore, it is hypothesized that:

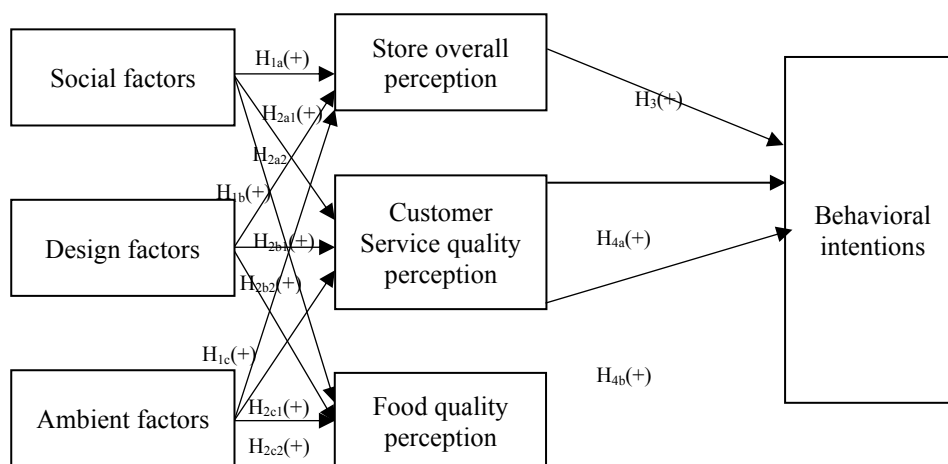
Hypothesis 3: Customers' overall perception of store positively influence customers' behavioral intentions.

Hypothesis 4: Customers' perception of restaurant quality positively influence customers' behavioral intentions.

3.4. Proposed conceptual model

Based on the proposed hypotheses, the proposed conceptual model was created. In which, the restaurant environmental factors will impact customer's perceptions. Then, these perceptions will impact behavioral intentions.

Figure 1. Conceptual model



Source: author's research

4. Methodologies and Data

4.1. Measurement

The scales used in this study were developed from a review of studies related to the topic and, in some cases, modified to suit the Vietnamese food service context. In addition, to ensure the validity of the content, the author consulted experts through interviews with restaurant managers, staff and customers. Some modifications to the scale content were made thanks to the interviews to ensure that the generated scales accurately reflected the contents of the variables. The questionnaire consists of 4 parts: (1) restaurant environmental factors (social, design and ambient), (2) assessment of customers' perceptions of restaurants in overall and in quality; (3) customer behavioral intentions; (4) Personal information. All items were measured using a 5-point Likert scale, ranging from "Strongly disagree" (1) to "Strongly agree" (5).

Table 1. Measurement items

	Variable	Items	Sources
1	Social factor (EM)	7	Heung and Gu (2012), Ryu and Jang (2008), Sigh (2006)
2	Design factor (DE)	9	Heung and Gu (2012), Huyn and Kang (2014), Ha and Jang (2009), Hooper et al. (2013)
3	Ambient factor (AM)	7	Heung and Gu (2012), Huyn and Kang (2014), Kim and Moon (2009), Lin and Chiang (2010), Chang (2016), Reimer and Kuehn (2005), Kumar and Kim (2014)
4	Store overall perception (CER)	4	Wakefield and Baker (1998), Kumar and Kim (2014)
5	Customer service quality perception (CES)	4	Ha and Jang (2012), Hooper et al. (2013)
6	Food quality perception (CEF)	5	Jang and Namkung (2009), Huyn and Kang (2014), Marthur and Gupta (2019)
7	Behavioral intention (IB)	4	Ryu et al. (2012), Huyn and Kang (2014), Jang and Namkung (2009), Liu and Jang (2009), Ha and Jang (2014)

Source: Author's research

4.2. Data

This research uses stratified random sampling method. 447 responses are collected from customers who use food services at medium to high-class restaurants in Hanoi (with an average spending per guest of VND250,000), specializing in cuisine of a country/ethnicity/region or by theme (Asian-European style). According to Tabachnick and Fidell (1996), the sample size needs to reach the minimum according to the formula $n=50 + 8*m$ (m is the number of independent variables) to be able to conduct multivariate regression analysis. In this research model, the author uses 6 independent variables, so the minimum sample size is $50 + 8 * 6 = 98$ observations. According to the study of Hair et al. (1998), the sample size for exploratory factor analysis (EFA) needs to be at least 5 times higher than the

total number of observed variables. Thus, with a questionnaire consisting of 40 questions as in this study, the sample size should be at least 200 observations. Therefore, the number of responses in this data is satisfied.

4.3. Data analysis

This research use descriptive analysis to explore of the characteristics of the sample through the SPSS 26 software. Next, the scales are tested for reliability by Cronbach’s Alpha coefficient, then evaluated through the Exploratory Factor Analysis (EFA) method, which evaluate two important types of the scale's values: convergent value and discriminant value; on that basis, it is possible to reduce the scales into meaningful factors. Next, the author uses AMOS 24 software for confirmatory factor analysis (CFA), in order to determine whether the measured variables reliably reflect the hypothesized latent variables. Finally, structural equation modeling (SEM) is used test the hypotheses.

5. Results

5.1. Descriptive statistics

Table 2. Sample characteristics

	Variables	Frequency	Percentage
	Gender	447	100
1	Male	157	35.1
2	Female	290	64.9
	Age	447	100
1	<25 years old	250	55.9
2	25 – 34 years old	128	28.6
3	35 – 44 years old	49	11.0
4	From 45 years old	20	4.5
	Job	447	100
1	Student	209	46.8
2	General/unskilled labor	2	0.4
3	Civil servant	65	14.5
4	Office staff	137	30.6
6	Freelance business sectors or ctivities	2	0.4
7	Others	20	4.5
	Marital status	447	100
1	Single	310	69.4
2	Married and no children	22	4.9
3	Married and had children	115	25.7
	Income (VND)	447	100
1	<5,000,000	190	42.5
2	5,000,000 – <15,000,000	149	33.3
3	15,000,000 – <25,000,000	74	16.6
4	>25,000,000	34	7.6

Source: Author’s research

The total number of valid responses is 447 and distributed for different gender, age, occupation, marital status and income level. The socio-demographic characteristics of the respondents found that 64.9% of respondents were females and the others were males. The respondents were mainly less than 35 years old, which were the ones who dine out most. The

majority of them are students, office staff or civil servant (991.9%). More than half of respondents were single. The income of respondents were mainly from 15 million VND and below. In summary, the socio-demographic characteristics of sample accurately represented the research restaurant population.

5.2. Measurement model

Table 3. Exploratory factor analysis and Cronbach's alpha

Constructs	Indicators	Standardized factor loading	Cronbach's alpha
Design factors (DE)	DE6	.825	.935
	DE5	.787	
	DE4	.761	
	DE7	.745	
	DE2	.733	
	DE1	.720	
	DE8	.714	
	DE3	.706	
	DE9	.693	
Social factors (EM)	EM5	.957	.930
	EM4	.866	
	EM2	.829	
	EM6	.783	
	EM7	.704	
	EM3	.650	
Ambient factors (AM)	AM3	.983	.924
	AM4	.936	
	AM2	.881	
	AM7	.592	
	AM6	.556	
	AM5	.520	
Store overall perception (CER)	CER1	.938	.950
	CER2	.935	
	CER3	.934	
	CER4	.926	
Customer service quality perception (CES)	CES4	.906	.919
	CES5	.904	
	CES3	.878	
	CES2	.836	
	CES1	.827	
Food quality perception (CEF)	CEF4	.886	.907
	CEF3	.869	
	CEF1	.868	
	CEF5	.851	
	CEF2	.798	
Behavioral intention (IB)	IB2	.956	.939
	IB1	.942	
	IB3	.935	

Source: author's research

To check the reliability of the scale, the three indicators for Cronbach’s Alpha coefficient, total variable correlation coefficient and the Cronbach’s Alpha coefficient if item deleted are tested. After removing three items (AM1, EM1, IB4), all Cronbach’s Alpha coefficients are from 0.9 the correlation coefficient of the total variable ≥ 0.3 , Cronbach’s Alpha coefficients of the scale if item deleted are less than the Cronbach’s Alpha coefficient of the scale. The author then use EFA analysis to detect observed variables loaded in multiple factors, and redefine the value of variables in the model. The results are shown in Table 3.

After that, to assess the construct validity and internal consistency, confirmatory factor analysis (CFA) was applied. The Chi-square statistic for CFA was 1626.674 with 644 degrees of freedom ($p = .000$), Chi-Squared/df=2,778, GFI = 0.819, CFI = 0.929, TLI = 0.923, RMSEA = 0.063. All indices indicated that the model’s fit was acceptable.

To assess the convergent validity for the scale items, standardized factor loadings, average variances extracted (AVE) were checked. The results show that all values for factor loading were more than 0.5 (from 0.72 to 0.91), AVE values >0.5 , therefore, convergent validity for the scale items had been achieved. Comparing AVE values for each construct and the squared correlations between the paired constructs shows that AVE for each construct was greater than the squared correlations between paired constructs, demonstrating discriminant validity. All of the constructs’ composite reliability exceeded 0.7 thresholds, thus confirming internal consistency (Table 4).

Table 4. Model Validity Measures

	CR	AVE	EM	DE	AM	CER	CES	CEF	IB
EM	0.932	0.696	0.835						
DE	0.936	0.618	0.763***	0.786					
AM	0.925	0.675	0.639***	0.748***	0.821				
CER	0.951	0.828	0.673***	0.673***	0.612***	0.910			
CES	0.920	0.897	0.676***	0.669***	0.551***	0.848***	0.835		
CEF	0.908	0.865	0.663***	0.718***	0.596***	0.835***	0.866***	0.815	
IB	0.940	0.839	0.612***	0.567***	0.502***	0.822***	0.785***	0.749***	0.916

Source: Author’s research

Significance of Correlations:

† $p < 0.100$, * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$

5.3. Structural equation model (SEM)

The Chi-square statistic for the structural equation model was 2225.691, with 650 degrees of freedom ($p = .000$). $\chi^2/df = 3.424$, CFI = 0.903, TLI = 0.895, RMSEA = 0.074. All indices indicated that the model’s fit was acceptable.

Table 5. Structural equation model

Hypothesized path	Standardized path coefficient	P	Results
<i>H₁: Store environments → store overall perception</i>			<i>Supported</i>
H _{1a} : Social → store overall perception	.37	***	Supported
H _{1b} : Design → store overall perception	.33	***	Supported
H _{1c} : Ambient → overall store perception	.13	.02	Supported
<i>H_{2a}: Social → restaurant quality perception</i>			<i>Supported</i>
H _{2a1} : Social → customer service quality perception	.40	***	Supported
H _{2a2} : Social → food quality perception	.28	***	Supported
<i>H_{2b}: Design → restaurant quality perception</i>			<i>Supported</i>
H _{2b1} : Design → customer service quality perception	.39	***	Supported
H _{2b2} : Design → food quality perception	.50	***	Supported
<i>H_{2c}: Ambient → restaurant quality perception</i>			<i>Not Supported</i>
H _{2c1} : Ambient → customer service quality perception	.01	.90	Not Supported
H _{2c2} : Ambient → food quality perception	.05	.40	Not Supported
<i>H₃: Store overall perception → behavioral intention</i>	.55	***	<i>Supported</i>
<i>H₄: restaurant quality perception → behavioral intention</i>			<i>Supported</i>
H _{4a} : customer service quality perception → behavioral intention	.30	***	Supported
H _{4b} : food quality perception → behavioral intention	.10	.03	Supported

Source: Author's research; *** $p < 0.001$

The results show that:

- All of three restaurant environmental factors have a positive influence on the overall perception of customers about the restaurant. In which, social factors have the greatest influence ($\beta = 0.37$), next is the design of the restaurant ($\beta = 0.33$) and finally the ambient factors ($\beta = 0.13$).

- Only two factors, social and restaurant design, affect customers' perception of customer service quality, in which social factor ($\beta = 0.40$) has a greater influence than design factor ($\beta = 0.39$).

- Only two factors, social and restaurant design have positive influence on customers' perception of food quality, in which design has greater influence ($\beta = 0.5$) than social factors ($\beta = 0.28$)

- Customer perception has a positive influence on their behavioral intention. In which, customers' overall perception of store has the strongest influence on behavioral intention ($\beta = 0.55$), followed by perception towards customer service quality ($\beta = 0.3$) and food quality ($\beta = 0.1$).

6. Discussion and implications

6.1. Theoretical implications

From theoretical perspective, the most important contribution of this study is to provide a more comprehensive view to understand the influence of the restaurant environments on consumer behavioral intentions. It shows the role of store environment factors on customers' overall perception of store, their perception of customer service quality and food quality. Through these perceptions, customers have behavioral intentions towards the restaurant.

Restaurant environmental factors include social, design and ambient cues have statistically significant positive impact on customers' perception of the restaurant. Among the restaurant environmental factors, social factors have the greatest influence on customer's overall perception towards restaurant image. This result is completely compatible with the results of previous researchers such as Baker et al. (1994), Lin and Chiang (2010), Ryu et al (2012)... Only social and design factors have positive influence on customer's perception towards restaurant quality. Social factors have more influence on customer service quality perception than design factors, however design factors have more influence on food quality perception than social factor. All of the customer perceptions have influence on behavioral intentions.

This study also shows the differences in customer perception due to the influence of restaurant environmental factors by separating the three factors of store perception, customer service perception and food quality perception. The result shows that customer service quality and food quality are differently affected by restaurant environment cues. Although increase quality of environmental cues of can increase both customers perception towards customer service quality and food quality, the level of increasement will be different.

6.2. Managerial implications

All three environmental cues have important roles in customer's overall perceptions and behavioral intentions. As a result, improving these three factors results in the increase in customer's perceptions and behavioral intentions.

Skills and attitude training for employees is extremely important. Improving the factor relating to employees (e.g. staff attitude, number of employees, initiative, friendliness, courtesy of staff and understanding about products/services of employees) will have the impact on the overall perception of customers about the restaurant, perception towards customer service quality, perception towards food quality and behavioral intentions. Business practitioners can ensure professionalism by having uniforms for employees and training staff to be polite, friendly, understanding and helpful to customers. In addition, it is extremely important to ensure that there are enough staff to help in case a customer needs assistance. Restaurants need to communicate to their staff the image they want to present to their customers and ensure that the staff fits the restaurant image. More specifically, if a restaurant positions its image, the staff needs to show that image; if a restaurant caters to a particular

customer segment, it is important to ensure that the way its employees present themselves appeal to that customer segment.

Factors that affect customers' perception of restaurant design include the arrangement and layout of the restaurant, the decoration to show the restaurant's aesthetic and distinctiveness... should be ensured at high level to have the increase in the overall perception of customers about the restaurant, perception towards customer service quality. The layout of the dining table and chairs should focus on ensuring the comfort of customers during the meal. At the same time, it should be noted that when a customer wants to move in the restaurant, or a later customer enters any table position, it will not affect the dining process of previous customers. Interior decoration such as plants, paintings, lights, wall decoration also need special attention to create visual stimulation. Similarly, restaurant interior and table design, including tableware such as bowls, chopsticks, knives, plates, tablecloths are factors that attract customers' visuals. In addition, the cleanliness factor inside the restaurant is something that cannot be ignored.

When the music, temperature, smell and noise inside the restaurant satisfy customers, their perceptions towards store will increase. Hence, environmental factors related to music, temperature, scent must be adjusted so that customers feel most comfortable. If consumers perceive that the music played in the store does not match the restaurant's image (e.g, entering a restaurant specializing in Vietnamese country cuisine and playing Korean music), consumers may form negative comments about the store. Furthermore, it is also important to pay attention to noise control in the restaurant for auditory comfort. Noise can make customers feel uncomfortable during a meal or interfere with communication with their companions. Restaurants need to have ingenuity in reminding groups of customers loudly to create a polite and civilized restaurant environment. Besides, the scent from the restaurant is a difficult factor to control because it depends on the characteristics of the food, but it can also cause inconvenience to customers. Restaurants therefore need to minimize this impact by providing customers with robes, aprons, etc. Finally, it is necessary to pay attention to the temperature in the room to create the most comfortable feeling in the restaurant.

6.3. Limitations and recommendations for future research

First, the study only considers the influence of store environment factors on customer behavior, so it is difficult to compare the influence or importance of these factors to other factors in the retail environment on consumer behavior. Later research projects can develop research models by combining some other factors that affect the service experience and customer behavior.

Second, the study only focuses on studying customers at restaurants in Hanoi and the sample is 447. Therefore, the conclusions or solutions outlined in the study can only be applied to restaurants in Hanoi. In the future, if it is possible to expand the scope of the research and the research sample, the topic will have a better meaning, and at the same time, it will be possible to compare the research results for different groups of customer samples.

Third, measuring the evaluation and perception of customers based on the agreement scale has limitations in that customers sometimes may not be able to accurately assess their feelings or they tend to respond based on what they think is right, not how they feel.

7. Conclusion

This study explored the relationship between store environmental factors (including social, design and ambient cues) and customers' internal perception evaluations, and customer behavioral intentions. According to the research results, the environmental factors in the restaurant have an influence on the customer's perception in all three aspects: the general perception of the restaurant, the customer service quality and the food quality. In particular, the social, design and ambient factors all have impact on customers' overall perception of the restaurant. However, only social and design cues have influence on customers' perception of customer service quality and food quality. All three factors of customer perception have positive influences on customer behavioral intentions, such as intention to revisit, willingness to recommend and spread positive words of mouth.

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APPLYING USES AND GRATIFICATIONS THEORY TO EXPLORE THE EFFECT OF DIGITAL CONTENT MARKETING ON PURCHASE INTENTION: THE ROLE OF BRAND TRUST AS MODERATOR

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Abstract

Social media platforms have become a popular and effective marketing tool for brands to attract target customers. In order to have a successful social media marketing campaign, it is essential to understand the behavior of customers online and what factors motivate them to engage in social media, which ultimately leads to the intention to purchase the brand's products. This research aims to investigate the impact of digital content marketing (DCM) motivations on customer purchase intention through their engagement. In which, moderator effect of brand trust is considered. Applying Uses and Gratification Theory (UGT), the DCM motivations were classified into information, entertainment, social interaction, and remuneration. By using quantitative methods with a sample size of 417 respondents and Partial Least Squares (PLS-SEM), the relationship between the DCM motivations, customer engagement, and purchase intention; especially the moderating effect of brand trust were tested. The findings offer various implications for academic research and practice. In particular, help brand managers build effective DCM strategies.

Keywords: Brand trust, Customer engagement, Digital content marketing, Purchase intention, Social media.

1. Introduction

With the passage of time, new trends of digital technologies have begun to encroach into traditional modes of doing business, taking even more advantage. Among them, social media is currently described as a big boom in online business, especially for marketing purposes. Social media platforms such as Facebook, Instagram, and Youtube are growing at a rapid pace and now connect millions of people together. In addition to that, social media has not only changed the way people interact but also the way customers interact with brands and companies. As a current report by We Are Social (2021), there were 88% Vietnamese internet users engaging with or contributing to social media, and around 45.60 million people purchasing products online in 2020. In that way, it is obvious that customers are getting used to engaging with brands online, then leading to intention to purchase. Especially during the Covid-19 pandemic, this phenomenon has surged significantly. From these views, it is

important to understand how social media marketing can influence consumer engagement, which in turn leads to purchase intentions.

In the context of online shopping, Kim and Ko (2012) described purchase intention as a combination of an individual's interest and willingness to engage in an online transaction for a certain product or service. While competition among brands on social media platforms is getting stronger, understanding customer behavior via their motivations as well as purchase intention is becoming crucial. Previous research have investigated and confirmed the positive relationship between customer engagement and purchase intention (Mishra, 2019; Husnain and Toor, 2017). However, research on moderating effects which may strengthen this relationship is still lacking. Studies by Laroche et al. (2013), Ng (2013), See-To and Ho (2014) examined customer engagement on social media with respect to various moderating factors. Specifically, See-To and Ho (2014) argued that in context to social media, scholars consider trust as a moderator. Alsaad et al. (2014) also proposed that trust play a moderator role in online contexts where behavioral motivations are not well established. From a marketing point of view, brand trust is considered as a key factor to generate successful long-term relationships between customers and brands, which is also a very critical component for customers to engage and purchase online (Pennanen et al., 2007). Thus, the present research will plug the gap and propose to determine the effect of DCM motivations on customer engagement via social media, which aims to enhance purchase intention. In particular, the impact of brand trust as moderator will be explored to help managers create effective DCM strategies.

2. Literature review

2.1. Digital content marketing

According to Denning (2016), customers are gradually becoming skeptical of native advertising (e.g. advertorials, infomercials), and other traditional marketing communications; Thus paving the way for the development of digital content marketing (DCM). From that perspective, DCM is based on a desire to transmit value to consumers in some relevant way (e.g., through consumer entertainment or education). In that way, facilitating customer contribution, attraction, involvement, acquisition and retention via online or social media (Hollebeek and Macky 2019, Rancati and Gordini, 2014). DCM is described as a strategic marketing approach key on creating, distributing, and sharing relevant, consistent, and valuable online content to promote target customers in fostering productive their activity, and profitable their action (Wang et al., 2017). In addition, research by Lieb (2012) indicated that DCM is not applied for selling or advertising, but as a means to engage customers using content. Therefore, these concepts of DCM aim to add knowledge and value to customers' life, satisfy their motivations, attract their engagement, and then foster sales. This paper considered DCM as a marketing tool to create and distribute relevant and valuable online content via social media in order to attract clearly defined customers for the purpose of motivating their engagement, ultimately purchase intention (Wang et al., 2017; Rancati and Gordini, 2014).

2.2. Uses and Gratifications Theory

Uses and Gratifications theory (UGT) was introduced in the 1940s as means to test relationships between respective audiences and mass media (Quan-Hasse, 2012). The main objective of UGT is to explain individuals' psychological needs that shape why people use specific media and that motivate them to engage in certain media-use behaviors for gratifications that meet their specific needs (Rubin, 1994; Katz et al., 1974; Plume & Slade, 2018). Commonly applied to traditional media, UGT is considered as an appropriate approach for exploring the why and how of social media use (Cheung et al., 2011; Gao & Feng, 2016; Ruggiero, 2000). In particular, UGT assumes that people actively use social media (Muntinga, 2016). Along these lines, it is suitable to explain social media use & gratification because social media platforms are more allowing and requiring active user contribution than any other mediums (Muntinga, 2016). UGT is also used in some scientific paper in Vietnam to find out motivational aspects of internet users that relate to their behavior and psychology towards social community (Nguyen & Dang, 2017) and social media, especially Facebook (McCauley, 2016).

UGT is grouped into several categories. In line with this and other recent research (e.g., Buzeta & Dens, 2020; de Vries et al. 2017; Piehler et al. 2019), which examine UGT as an appropriate approach to engage customers by valuable and relevant contents, we propose four UGT categories as fostering motivations of people' use of social media platforms, including information, entertainment, social interaction, and remuneration.

To date, some scholars have used UGT to explain the characteristics of DCM (Hollebeek & Macky, 2019). In other words, the UGT motivations of customers in using DCM are also the characteristics of DCM. Therefore, this study proposes that UGT could help to explain customers' motivations towards DCM on social media from these four factors.

2.3. Customer engagement

Vivek et al., (2012) defined customer engagement as the intensity of individual contribution and connection with the activities and offers of a brand. Customer engagement is also determined as a process of cognitive, emotional and behavioural (Hollebeek, 2011). Most prior research examined customer engagement from the behavioural perspective, which considers all contribution behaviours that can affect a brand (Van Doorn et al., 2010). In the context of this study, consumer engagement refers to "behaviors go beyond transactions, and may be specifically defined as a customer's behavioral manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers". Customer engagement can be measured via actions such as "reading", "reacting", "sharing", and "commenting" on brand pages (de Vries et al. 2012, Barger et al., 2016).

We adopted the definition by Van Doorn et al. (2010), which considers the behavioural aspect of customer engagement because these behaviours are commonly observed

on social media. Besides, some studies (e.g. de Vries et al., 2017; Dolan and Goodman, 2015; Barger et al., 2016) also summarised these behaviours in the context of social media research.

2.4. Purchase intention

Purchase intention has been evaluated as an outcome variable in this study, which is considered as a combination of an individual's interest and willingness to buy a certain product or service (Kim and Ko, 2012). Husnain and Toor (2017) also indicated that purchase intention is an effective tool in predicting the buying process, the higher the purchase intention, the higher a consumer's readiness to purchase a product. Thus, most of the industry focuses on fostering purchase intention.

With the growth of social media platforms such as Facebook, Instagram, and Youtube; Consumers were provided remarkable opportunities to read, share, and distribute content about a product or brand used (Husnain and Toor, 2017). As a result, consumers have become more concerned and informative about seeking information on products before making any purchase (Ahmed & Zahid, 2014). This phenomenon demonstrates the appropriate role of DCM, consumer engagement, and brand trust on social media in disseminating information to other customers, thereby enhancing their preferences and choices of purchase.

3. Proposed research model

Even though DCM research is new, there has been some progress in evaluating the importance of DCM in driving consumer behavior (Du Plessis, 2017). Nevertheless, DCM research, especially study that use UGT to explain the characteristics of DCM on social media in Vietnam has been scarce. Besides, research on the relationship between customer engagement and purchase intention, which is moderated by brand trust is lacking. Instead, most studies about this field have focused on the direct relationship, but analysis of the factor moderating purchase intention (i.e. brand trust) has been scarce. Therefore, based on previous studies, the present research plugs the gap and proposes to examine the effect of DCM motivations on customer engagement via social media, which aims to foster purchase intention. In particular, the impact of brand trust as moderator will be explored in order to test whether it strengthens the relationship between customer engagement and purchase intention.

The proposal includes:

Independent variable: Information, entertainment, social interaction, remuneration.

Intermediate variables: Customer engagement.

Dependent variable: Purchase intention.

3. Hypothesis development

3.1. Digital content marketing and customer engagement

According to Cawsey and Rowley (2016), brands can play an active role in generating rich social media tactics and strategies in order to influence customer engagement. Piehler et al. (2019) also confirmed that whether or not customers engage with the content on social media platforms is affected by how informative, entertaining, social interactive, and remunerative the content is. A research by Koch and Benlian (2015) further determined the customization of content may impact customer engagement with the content on social media. To be more specific;

Firstly, the information motivation is considered as consumers' information search regarding products, services, and even other advice which is relevant to their purchase or usage intention (Muntinga et al., 2011; Tsai and Men, 2017). Because information seeking fosters the usage of social media, contributions to Facebook groups (i.e. clicking "like", share, comment), as well as participation in virtual communities of customers (Park et al., 2009; Cvijikj and Michahelles, 2013; Dolan et al., 2016); Informative content about brands which is available on social media platforms will surge customer engagement.

Secondly, the entertainment motivation covers pleasure, relaxation, escapism, fun and enjoyment, which also lead customers to use, participate, and contribute to social media platforms in order to seek fun (Muntinga et al., 2011; Cheung et al., 2011; Park et al., 2009). Thus, entertaining brand-related posts will increase customers' social media engagement.

Thirly, the social interaction is defined as gratifications related to other people, such as social identity, interaction (with both like-minded people and brand representatives), and exchange (knowledge or experience) (Muntinga et al., 2011; Tsai and Men, 2017). Social interaction is the core of social media, which allows consumers to build connections, communicate, enhance social identities, share experiences and exchange knowledge related to brand (Piehler et al., 2019). In addition, customers with high social interaction motivation are more likely to engage in online conversation (Dolan & Goodman, 2015). Thus, the social interaction motivation will enhance customer engagement.

Last but not least, the remuneration motivation refers to economic incentives or rewards, including coupons, discounts, promotions, giveaways and gifts (Tsai and Men, 2017; Muntinga et al., 2011; Kang et al., 2014). In order to receive them, customers have to engage in brand posts (e.g. clicking react, share, and comment). A research by Cvijikj and Michahelles (2013) found that remunerative posts impact positively on the comment ratio. The following hypotheses can therefore be made:

H1a: Information has a positive impact on customer engagement

H1b: Entertainment has a positive impact on customer engagement

H1c: Social interaction has a positive impact on customer engagement

H1d: Remuneration has a positive impact on customer engagement

3.2. Customer engagement and purchase intention

A research by Tsai and Men (2013) determined that consumer engagement on social media can raise the likelihood of future brand purchases which leads to the building of significant consumer-brand relationships, offering firms remarkable opportunities to achieve relationship marketing objectives, hence to the creation of value for both consumers and marketers. In that way, consumer engagement has gradually become a significant concern for online retailers in predicting the behavioral response of the consumer, as purchase intention (Mishra, 2019). Some researchers found that there existed a relationship between customer engagement and purchase intention in the context of social media marketing (Husnain and Toor, 2017). Besides, Tiruwa et al. (2016) also confirmed that there is a substantial impact of customer engagement on Facebook online brand communities on their purchase intention (Tiruwa et al., 2016). According to Chaffey (2007), highly engaged customers spend more time or attention on social media seeking information about products or brands. In other words, customers tend to consume, react, engage in, and even comment, share brand-related posts on social media before deciding to purchase something. Husnain and Toor (2017) reported that highly engaged consumers generate 23 percent more revenues when they spend more on each purchase, and tend to buy products more frequently. The more they contribute to brand-related content, the stronger their connection with the brand and product will be (Sashi, 2012), which helps to comprise and foster their purchase intention. Consumer engagement can also be used by marketers as a reliable predictor of business performances (Sedley & Perks, 2008). Besides, according to a study in Vietnam by Nguyen and Duong (2020), consumer engagement discloses that consumer engagement has a beneficial impact on Vietnamese consumers' purchasing intention.

Hence, we based on these previous findings to propose that:

H2: Customer engagement has a positive association with purchase intention

3.3. Moderating role of brand trust

Purchase intention covers the process of predicting and analyzing customers' behaviors, specifically purchasing products or services (Lin & Lin, 2007). However, it will be different if purchase intention is influenced by customer engagement and trust toward the brand reputation itself (Foroudi et al., 2018). Previous research considered brand trust as "the willingness of the average consumer to rely on the ability of the brand to perform its stated function" (Chaudhuri & Holbrook 2001, p82). Besides, Alhidari and Almeshal (2017) found that trust is an internal judgment perceived by an individual which determines the nature of communication and the type of information shared between people. Alhidari & Almeshal (2017) further pointed out brand trust is a strong indicator in determining the intention to buy. Based on these views, this study determines brand trust as an inside judgment of customers

leading to their willingness to depend on brands to have confidence before making any decision.

Customers' inability to trust brands has been one of the main deterrents to foster purchase intention as well as a limitation which restricts customer engagement towards related brands (Rios and Riquelme, 2008). This lack of trust partly emerges from some sources such as posts or comments customers observed on social media when engaging in brand-related content. Some researchers have proposed brand trust as a contextual and conditional variable that acts as a moderating factor rather than one having direct effect (See-To and Ho, 2014; Langfred, 2004). In addition, a research by Blasco-Arcas et al. (2014) also indicated that co-creation, loyalty, and trust are some potential constructs for the relationship between customer engagement and purchase intention. Based on previous studies, the present study considers customer engagement is triggered primarily by four motivational variables, and the context in which this customer engagement occurs should play a moderating role rather than motivational role (Chahal & Rani, 2017). In other words, this research assumes that the relationship between customer engagement and purchase intention may be affected by brand trust as a moderator, which acts as a reinforcement of this relationship. When customers perceive a higher level of trust toward a brand, their engagement toward it will also be higher which in turn enhances intention to purchase. Hence, the following hypothesis is proposed:

H3: Brand trust positively influences purchase intention

H4: Brand trust moderates the relationship between customer engagement and purchase intention

4. Methods

4.1. Sample and data collection

A survey was designed and conducted offline in Vietnam. The sample was drawn from The University of Danang - University of Economics online users.

This study used a non-probability convenience sampling approach due to the convenience in geographical area as well as the ease of access at a given time of the research's subjects (Etikan et al., 2016). The participants were over 18 years of age from Vietnam, who are social media users and community members of The Coffee House on social networking sites (e.g. follow The Coffee House fanpages; like The Coffee House related posts; ect.).

4.2. Respondent profiles

Quantitative approach is used by distributing questionnaires to 450 respondents; However, only 417 questionnaires were returned validly, yielding a response rate of 92,7%. All 417 questionnaires met the threshold and were selected for data analysis. The proportion of women was slightly higher than that of men (227/190). Most of the respondents were from

18 to 22 years old, with monthly income less than 3 million VND. The percentage of participants who use social media everyday (Facebook especially) is up to 95,4%.

4.3. Measures

Measurement items for each construct are from existing sources. Drawing on previous research, the reliability and validity of the scales were established. In detail, the measurement scale for all the sections is based on the Likert Scale of 1 to 5, where 1 = strongly disagreed, 2 = disagreed, 3 = neutral, 4 = agreed, and 5 = strongly agreed. In particular, DCM motivations consist of four components: Information (3 items), Entertainment (4 items), Social interaction (3 items), and Remuneration (3 items); was sourced from Piehler et al. (2019). Customer engagement and purchase intention developed by Yoong and Lian (2019). Finally, to assess brand trust, Laroche et al. (2012) scale was selected (See Table 1).

Table 1. Core items of each dimension

Instrument	Items	Source
Information	IN1: The brand-related posts of The Coffee House on social media helps me to learn about unknown things IN2: The brand-related posts of The Coffee House on social media are a good way to do research IN3: The brand-related posts of The Coffee House on social media helps me to learn about useful things	Piehler et al. (2019)
Entertainment	EN1: The brand-related posts of The Coffee House on social media is fun to watch or read EN2: The brand-related posts of The Coffee House on social media is clever and quite entertaining EN3: The brand-related posts of The Coffee House on social media does not just sell—it also entertains me EN4: The brand-related posts of The Coffee House on social media is often amusing	
Social interaction	SI1: I believe a chat among like-minded people on brand-related posts of The Coffee House on social media is a nice thing SI2: It is fun to communicate with other people on brand-related posts of The Coffee House on social media SI3: I meet nice people on brand-related posts of The Coffee House on social media	
Remuneration	RE1: I receive incentives (e.g. vouchers, coupons, discounts) from brand-related posts of The Coffee House on social media RE2: I receive a reward from brand-related posts of The Coffee House on social media RE3: The brand-related posts of The Coffee House on social media offers me advantages that others do not have	
Customer	CE1: I often browse social media.	Yoong and Lian

engagement	CE2: I often read brand-related posts of The Coffee House on social media CE3: I often use the “like” option on brand-related posts of The Coffee House on social media CE4: I often comment on brand-related posts of The Coffee House on social media CE5: I often share brand-related posts of The Coffee House on social media	(2019)
Purchase intention	PI1: Increase my interest to purchase The Coffee House products. PI2: I am very likely to purchase The Coffee House products recommended by my friends on social media. PI3: I intend to purchase The Coffee House products as marketed on social media. PI4: I have positive purchase intentions on The Coffee House products.	
Brand trust	BT1: The Coffee House gives me everything that I expect out of the product. BT2: I rely on The Coffee House. BT3: The Coffee House never disappoints me.	Laroche et al. (2012)

5. Data analysis and results

This study uses partial least square structural equation modelling (PLS-SEM) to analyze complex relationships between observed and latent variables (Sarstedt et al., 2019). We also use SmartPLS to test the results of the data because of its most comprehensive ability to test the relationship between constructs with many measurement items (Henseler, 2017)

5.1. Testing the measurement model

Construct reliability: By using Cronbach’s alpha and composite reliability (CR), the construct reliability of each variable was measured to examine the extent to which the items are not random errors and gives consistent results. When Cronbach’s alpha and Composite reliability (CR) of all constructs are larger than 0.7, the standard of reliability meets the requirement (Peterson, 1994). In this study, Cronbach’s alpha of all constructs was greater than 0.7 and CRs ranged from 0.757 to 1.000.

Convergent validity measures the consistency across multiple operationalization, by using two criteria. First, factor loading on its specified construct, which should be greater than 0.7 (Agarwal & Karahanna, 2000), Second, averaged variance extracted (AVE), which should exceed 0.5 (Fornell & Larchker, 1981). In this study, the factor loading on its specified construct is larger than 0.7 and AVE ranges from 0.596 to 1.000. Therefore, the presence of convergent validity is supported.

Discriminant validity assesses the degree to which different constructs are a district, as measured using the square root of the AVE by a construct from its indicators that must exceed

its correlation with other structures (Fornell & Larcker, 1981; Chin, 1998). The results showed that the square roots of AVE are greater than the off-diagonal elements present. In brief, both standards of reliability and validity value were confirmed, then making the hypothesis testing to measure model acceptable.

5.2. Testing the structural model

The hypothetical structural model is tested based on the Path Coefficient and the significance levels of each factor. According to Henseler (2014), Standardized Root Mean Square Residual (SRMR) is a good index to assess the suitability of the model to its sample. This index is supposed to be < 0.08 or 0.1 (Hu & Bentler, 1999). In this study, $SRMR = 0.061$. Besides, the VIF (Variance Inflation Factor) of each item is less than 3. Therefore, the supposed model meets the requirement. In addition, the results also indicated the coefficient of determination (R square) larger than 0.45. In detail, R square of customer engagement = 0.460 and R square of purchase intention = 0.548; Which is considered as high in consumer behavior domain (Hair et al., 2014). Finally, based on an evaluation of the theoretical model, the result of path coefficient estimation (Table 2) was determined.

Figure 1. Results of analysis of the structural model

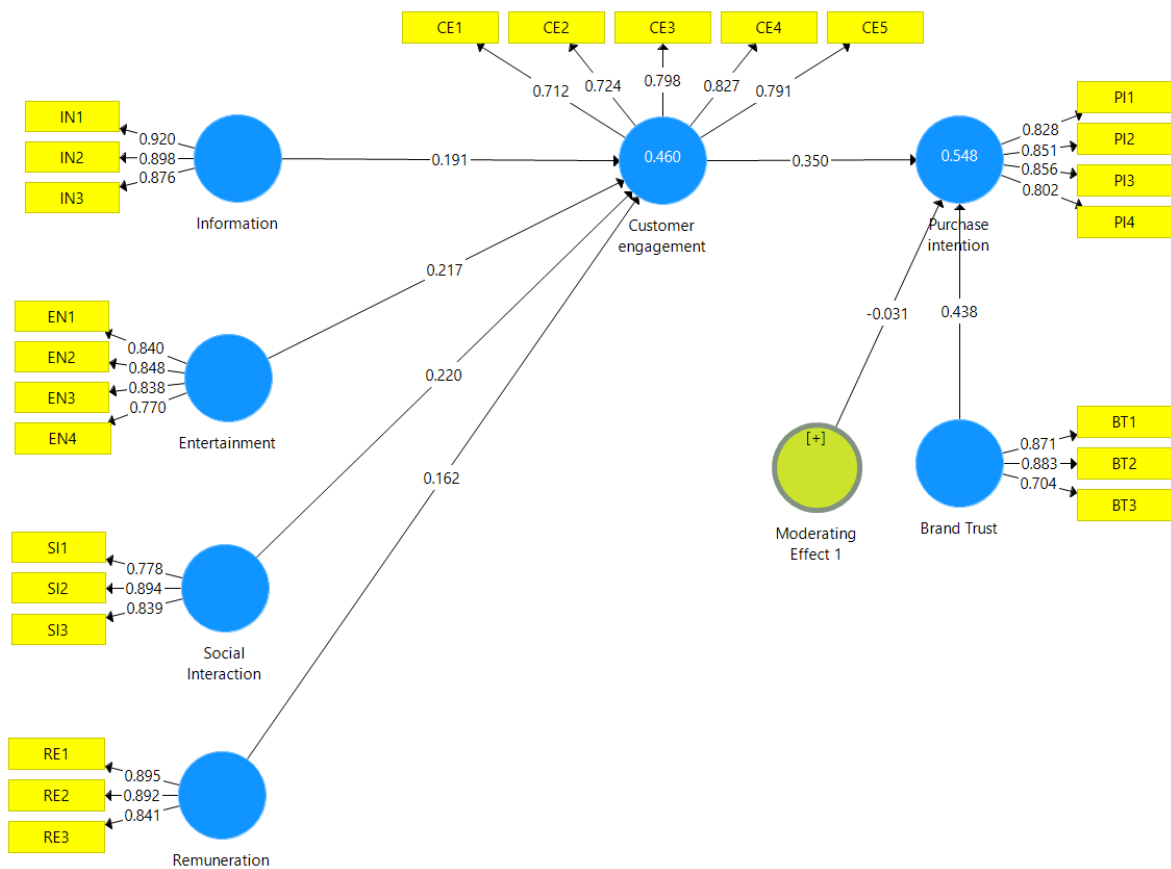


Table 2. Summary of hypothesis testing results

Path	Original samples	T-statistics	P-value	Hypothesis Support
H1a: Information has a positive impact on customer engagement	0.191	2.938	0.003	Yes
H1b: Entertainment has a positive impact on customer engagement	0.217	3.158	0.002	Yes
H1c: Social interaction has a positive impact on customer engagement	0.220	3.224	0.001	Yes
H1d: Remuneration has a positive impact on customer engagement	0.162	2.420	0.016	Yes
H2: Customer engagement has a positive impact on purchase intention	0.350	6.421	0.000	Yes
H3: Brand trust has a positive impact on purchase intention	0.438	8.063	0.000	Yes
H4: Brand trust moderates the relationship between customer engagement and purchase intention	-0.031	1.776	0.076	No

5.3. Hypothesis testing

By setting the “Perform bootstrap” in SmatPLS software, The results in Table 2 indicate that: information has a positive influence on customer engagement ($\beta = 0.191$, $t = 2.938$, $p < 0.05$), supporting H1a. Similarly, entertainment, social interaction, remuneration also exerts a positive impact on customer engagement, especially social interaction ($\beta = 0.220$, $t = 3.224$, $p = 0.001$), supporting H1b, H1c, H1d respectively.

Customer engagement has a positive influence on purchase intention ($\beta = 0.350$, $t = 6.421$, $p < 0.001$), supporting H2. Besides, brand trust positively affects purchase intention ($\beta = 0.438$, $t = 8.063$, $p < 0.001$), supporting H3.

The moderator effect of brand trust between customer engagement and purchase intention (H4) is not supported ($\beta = -0.031$, $t = 1.776$, $p > 0.05$).

6. Discussion

The results have indicated the relationship between customer' motivations towards DCM and purchase intention through their engagement on social media. In particular, brand trust is considered as a moderator between customer engagement and purchase intention.

According to the path test results, all the four customers' motivation towards DCM (information, entertainment, social interaction, and remuneration) were identified as positive predictors of their engagement with brands on social media. These findings echo previous research findings of Muntinga et al. (2011). Firstly, in terms of information, the result indicated that those who have higher information motivation, have more willingness to engage in brand-related content. Likely because customers today gradually tend to spend time seeking information online, which sources from product related content posted by earlier users or brands before making decision. It also means that customers consider social media platforms as a reliable information source. In terms of entertainment secondly, customers who have higher entertainment motivation also tend to engage in brand-related content. In this digital era, more and more brands concentrate on entertainment content to attract new customers via social media platforms. In addition, the impact of Covid-19 pandemic partly frightens and stresses people, which then makes them create the desire to be fun and relaxed. Thus, consumers who access social media with entertainment motivation will have more willingness to engage in brand-related content. Thirdly, as expected, the social interaction motivation positively affects customer engagement. This motivation generates the greatest influence, reflecting a defining characteristic of social media as a source of social interaction. Finally, the remuneration motivation also impacts positively on customer engagement. Likely because remunerative content usually requires consumers to engage more (i.e. like, share, comment) to receive rewards or economic incentives such as special deals, discounts, coupons, promotions, giveaways or gifts.

As can be seen in the results, The Coffee House is doing great in understanding customers' use of DCM. In other words, by reading The Coffee House posts on social media, customers are satisfied by the information, entertainment, social interaction, and remuneration content that the brand brings.

The result indicated that customer engagement on social media has a positive relationship with purchase intention, which is in line with the outcomes of some previous studies (Yoong & Lian, 2019; Qin, 2020). Besides, brand trust also affects positively on purchase intention. It is because brand trust is a critical component to establish a successful longterm relationship, which helps to foster purchase intention. This result is consistent with the study of Ling et al. (2010). To put it in lines with this study, the more customer engage with The Coffee House posts on social media, the more their intention to purchase The Coffee House's products increases. Moreover, brand trust will also lead to customer intention to buy The Coffee House's products.

There are still gaps that can be filled from the prior customer engagement studies. The previous marketing research only used customer engagement to look at the direct relationship with purchase intention, but did not focus on the influence of brand trust itself. Brand trust plays an essential role in forming exchange relationships between customers and marketers, which directly affect the success of marketing (Delgado and Munuera, 2001). This is the renewal of this study and becomes interesting because previous studies have not discussed the same thing. However, this research showed an unexpected result. Contrary to our assumptions, brand trust has no moderating effect on the relationship between customer engagement and purchase intention. It means brand trust does not contribute to change the effect of customer engagement on purchase intention. The proper explanation for this is the relationship between customer engagement and purchase intention is strong enough in order to put any moderator inside. Besides, brand trust is not really a proper moderator for this relationship. Customers nowadays are ready to purchase something after engaging with a certain brand on social media due to the feeling of connectedness and commitment.

7. Conclusion

This study explores which motivation factors towards DCM mostly affect customer engagement on social media and to determine the relationship between customer engagement and their purchase intention. Especially, explore the moderator effect of brand trust. The present results report that 95,4% respondents use social media regularly on a daily basic. Therefore, investigating customer behavior in the context of social media is necessary.

Based on the research results, some conclusions are drawn as follows: First, all the four customer motivations as information, entertainment, social interaction, and remuneration have positive relationships with customer engagement. To be more clear, social interaction has the greatest influence, followed by entertainment, information, and remuneration, respectively. Besides, customer engagement and brand trust can foster purchase intention positively. Finally, the moderator effect of brand trust between customer engagement and purchase intention is rejected. Future research can consider other moderators for this relationship.

Also based on the research findings, this study proposes some implications for brand managements in general and for The Coffee House in particular in order to foster customer engagement as well as their intention to purchase via brand's DCM as follows: Firstly, since content is a key factor, brand managers should pay careful attention to the DCM's characteristics, which should add valuable, reliable, and entertaining information when produced. Secondly, connectivity is also essential. Brand managers have to consider to provide a comfortable and encouraging online environment for customers to interact with brands and others. Group or fanpage related to brand are some effective ways to help marketers reach target customers, which also help to improve social interaction not only among customers and customers, but also brands. Thirdly, posts that integrate rewarded

entertainment activities have to be held regularly in order to attract customer engagement. Finally, because brands regularly active and engage customers on social media, marketers should monitor content and respond quickly to negative comments to maintain positive views towards brands of customers, as well as an active network environment for customers to engage in.

Despite the contributions, this research also comes with some limitations. Firstly, there are only four UGT dimensions determined in this research. Future studies can consider other motivations that affect customer engagement such as self-expression, empowerment, convenience, etc. Secondly, the present research was conducted in only Danang, the generalisability of these findings is still limited. Therefore, future research need to be examined in other cities or nations for more comprehensive results.

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THE IMPACT OF SOCIAL DISTANCING DUE TO COVID-19 ON ONLINE FOOD PURCHASING IN VIETNAM

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Abstract

Social distancing due to Covid-19 exposes consumers to abnormal situations and forces them to passively change their buying behaviors, leading to partly shifting to online shopping channel choices. This study was conducted right in the social distancing period in Danang City, from August 20th to September 15th, 2020. By developing a conceptual framework integrating predicting intentions models TAM, TRA, TPB with VAB model (Homer and Kahle, 1988), and theory of Perceived Risk, this study recognizes an ongoing trend in online food purchasing of Vietnam consumers during- and post-Covid 19. The findings show that there was a significant change in online food purchasing behaviors since the social distancing period. Together with a witnessed upward trend in online food purchasing behaviors during the pandemic, online food markets also anticipate a positive buying intentions after the social distancing due to the Covid-19 pandemic. These behavioral intentions are affected not only by the original anchors from TAM, TRA, TPB models but also by personal values and perceived risks.

Keywords: *Online food purchase intention, Social distancing, Covid19.*

1. Introduction

Amid the effects of COVID-19, the governments world-wide, including the Vietnamese government, have had to enforce the social distancing or lockdown. Those situations have been likely to facilitate E-Commerce as well as home delivery services (Unnikrishnan and Figliozzi, 2020). In 2020, The E-commerce sales in America's market witnessed a sharp increase of 30% (Rattner, 2020), and that for Vietnam's market rose significantly, roughly by 18%, to reach the 11.8 billion of US dollars. E-commerce have brought markable convenience which concludes reducing time, efforts in shopping, facilitating shopping with less geographic limitation (Forsythe, 2006), comfortable shopping experiences, diverse categories of items, and transparent pricing (Javadi, 2012), as well as safety during the Covid19 epidemic.

To assess the impact of Covid-19 on the behaviors, the fast-growing literature could be witnessed on studies about food consumption (Russo, 2021). Several studies are performed to consider the changes of dietary habits (Ammar, 2020; Scarmozzino and Visioli, 2020; Sidor and Rzymyski, 2020) and food shopping behavior (Cranfield, 2020; Khan, 2020; Laato, 2020; Li, 2020; Long and Khoi, 2020) but these papers are just related to the short-term

during the pandemic. Recently, Russo, (2021) have partly filled this gap by focusing on the long-term changes and their main purpose was assessing whether short-term dietary shifts would last in the long run. Furthermore, a gap relating to intention to continues adopting innovation in online food shopping (OFS) was investigated by other authors, such as Alaimo (2020). According to Alaimo (2020), in order to develop the existing literature, investigation about emerging markets whose acceptance from consumers has increased are still in demand. Therefore, it is essential to re-examine whether there was an innovation in food purchasing behaviors, especially in the online context, or not, due to the constrained condition in other countries, such as Vietnam, or not and OFS intention after the pandemic.

Food is regarded as a category which is challenging to be developed in e-commerce due to the diversity and heterogeneity of goods, consumers' high expectations on direct experience (touching, smelling, sampling...), and their sensitivity in the delivery method (Hays, 2005). Furthermore, consumers, particularly in poor nations, are accustomed to face-to-face purchases and do not trust the process of online transaction (Uwemi, 2016). Covid-19, on the other hand, has shifted customer behavior toward either the change to online approaches or increased frequency of online customers, especially OFS (Chang and Meyerhoefer, 2021; Unnikrishnan and Figliozzi, 2020). In this unique circumstance, it is unclear how Vietnamese consumers' food purchasing behaviors would alter.

Many researchers have long proposed models to study purchase intention among many categories of goods, such as the theory of reasoned action (TRA) (Fishbein and Ajzen, 1975), the technology acceptance model (TAM) (Davis, 1985), the theory of planned behavior (TPB) (Ajzen, 1991) or perceived risks (Naiyi, 2004), and the Values - Attitudes - Behavior (VAB) model (Homer and Kahle, 1988). Many writers have utilized conventional models such as TRA, TAM, and TPB to analyze the behavior and intention of online food purchasers since the 2000s (Brand, 2020; Hansen, 2008; Pauzi, 2017; Troise, 2020; Tsydybey, 2014; Zhao and Bacao, 2020). Recently, several authors have used novel models to predict the behavioral intention of consumers to buy food online, such as Kim and Hall (2021) utilizing the VAB model and Xie (2017) and Pauzi (2017) integrating the theory of risk perception into TRA, TAM, TPB models.

Consumer behavior has altered dramatically as a result of the Covid 19 epidemic. The objectives of this study were (1) to re-examine whether there were changes to OFS behavior during the period of social distance caused by Covid19 among people did not bought food online before the pandemic or not, and (2) to identify factors influencing OFS intention after social distancing period due to Covid19. The study was carried out quantitatively, with 500 samples of customers in Da Nang investigated between August 20 and September 15, 2020, during the social distancing period.

2. Literature review

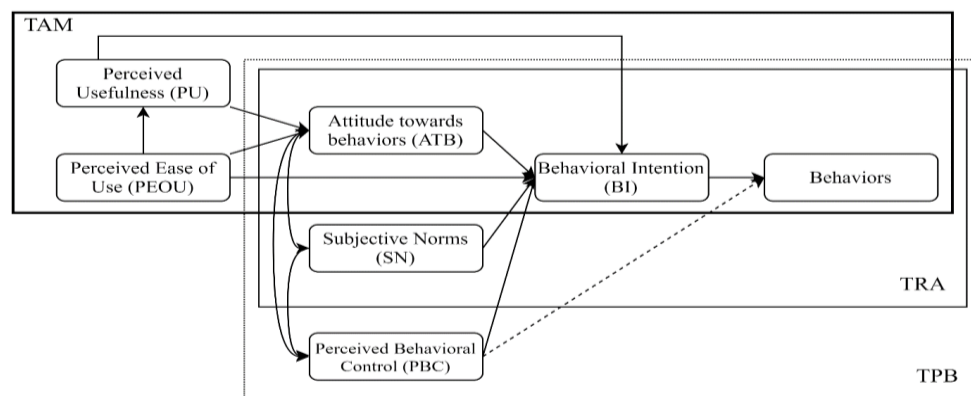
2.1. Online food purchase intention

Food is a unique commodity due to its high essentiality, limited preservation period, diverse goods, and consumers’ high demands for direct experience, and their sensitivity to delivery methods (Hays, 2005). Recently, many studies have been conducted across the world to explain the behavior of food consumers, such as the studies about the organic food buying intention (Aitken, 2020), and the intention to select a supply channel (Huang, 2020). Specifically, despite the consideration that analysing about food purchasing behaviors is less appealing (Tsydybey, 2014), several studies have attempted to explain the desire to buy food online (Brand, 2020; Pauzi, 2017; Tsydybey, 2014; Uwemi, 2016) due to increased behaviors of OFS. These studies’ findings indicated that customers intend to purchase food online and that the main factors affecting their intention are attitude toward behavior (ATB), subjective norm (SN), perceived usefulness (PU), perceived ease of use (PEOU), and perceived behavioral control (PBC). In Vietnam, researchers are likewise interested in researching online food purchasing (Ha, 2019; Nguyen, 2019).

2.2. Models used for studying purchase intention

Online purchase intention refers the degree to which a consumer is willing to purchase a product through an online store (Pavlou, 2003). The relationship between intention and actual behaviors was first mentioned by (Fishbein and Ajzen, 1975) in the Theory of Reasoned Action (TRA) with the hypothesis that individuals will behave based on attitudes and behavioral intentions. In 1989, Davsis expanded the model to TAM (Technology Acceptance Model) model with the addition of two factors affecting an individual's attitude: (1) ‘perceived ease of use’ and (2) ‘perceived usefulness’ along with explaining an individual's intention to use a new technology. By 1991, Ajzen (1991) developed the TRA model into the Theory of Planned Behavior (TPB) by adding the variable ‘perceived behavioral control’, whose definion is a perception of ease or difficulty in performing a particular behavior.

Figure 1. Framework of TRA, TPB and TAM models.

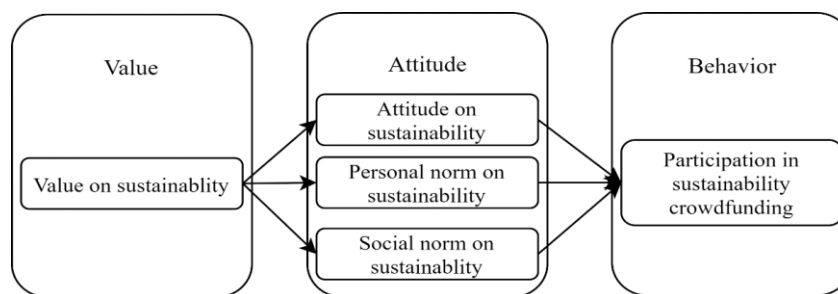


Source: Fishbein and Ajzen (1975); Davis (1989); Ajzen (1991).

In addition to the three widely used models mentioned above, behavioral intentions are explained by the relationship among Values - Attitudes - Behavior (Homer and Kahle, 1988), and could be predicted according to this model (Tudoran, 2009).

In 2014, Tsydybey used the VAB model to study food behavioral intentions, with values measured according to the theoretical framework of Hofstede (1980) and Schwartz (1992) including universal, individual and collective values. Research has found that personal values have an impact on the intention to purchase food, through attitudes, and consumers influenced by value on individualism tend to look for convenient and time-saving ways to purchase. On the other hand, consumers under collectivism value are likely to commit to preserve the world as it is and to be resistant to change if the new ideas are in conflict with the beliefs of other people who are linked to them. Furthermore, in addition to explaining the relationship between values, attitudes, and behaviors, Kim and Hall (2021) also performed their study to determine the correlation between anchors in TAM, TRA, and TPB model such as social norms, attitudes with values.

Figure 2. Framework of study of Kim and Hall (2021), adopted from VAB model.



Source: Kim and Hall (2021).

2.3. Assessing the food behavior changes related to Covid-19 pandemic situation

Recently, how the constrained conditions due to the pandemic has left effects on food behaviors attracted the attention of scholars across the world. On the one hand, several studies conducted in Spain, Poland, Italy, Brazil, Colombia, and Chile released significant findings relating to dietary habits such as the existence of consumer segments having different dietary habits (Romeo-Arroyo, 2020), changes in dietary habits relating to more consumption and snacks (Sidor and Rzymiski, 2020), the mood during the pandemic encouraging consuming comfort food (Di Renzo, 2020) which is similar to results of Ammar (2020) and Scarmozzino and Visioli (2020). In addition, Ruiz-Roso (2020) highlighted that consumers increased sweet food consumption because of the stress and boredom appeared during the lockdown.

On the other hand, how the pandemic period left impacts on food shopping behavior was focused on by authors whose studies were based on fundamental frameworks. For instance, Laato (2020) adapted the model Stimulus-Organism-Response (S-O-R) framework which was not used in the context of pandemics before by replaced the dependent variables with voluntary self-isolation and unusual purchasing to assess how environmental stimuli of online information sources led to those behaviors of Finnish consumer during the period. In

addition, other authors such as Cranfield (2020) or Martin-Neuninger and Ruby (2020) attempted to develop factors related to Covid-19 that could impact consumer food demand by conducting studies in Canada and New Zealand. Finally, TPB model was adopted for several studies to discover what factors impact the changes of behaviors during the pandemic. While Long and Huy Khoi (2020) and Khan (2020) combined the TPB with theory of perceived risks (PR) to figure out the main factors affecting hoarding food behaviors in Vietnam and Bangladesh during Covid-19 period, Li (2020) have utilized the TPB to offer initial empirical insights on changes in food purchase behaviors of Chinese consumers.

Ultimately, despite of the importance of contribution to fast-growing literature related to Covid-19, authors mentioned above have only focus on the short-term changes but long-term ones. Russo (2021) conducted a research with the efforts in providing findings on the long-run changes in consumers' behaviors related to dietary habits. The study's method was considering whether the change in food consumptions decisions due to constrained shopping conditions and psychological conditions during the lockdown could be permanent over the period after the covid-19 emergency or not.

2.4. Conceptual model and research hypotheses

Recently, Russo (2021) discovered that the pandemic exposed some customers to constrained conditions where they have had to change their habits, leading to a probability to keep the changes in the long run after the pandemic among those consumers. This study also, firstly, tries to re-examine whether some consumers changed to OFS from traditional shopping approaches during the pandemic period or not. In order to achieve that objective, testing the difference in behaviors before and during Covid-19 is due to be performed, which is a successful approach applied to assess behavior changes in the pandemic (Faour-Klingbeil, 2021; Flanagan, 2021; Russo, 2021). Therefore, the first hypothesis is:

H1: There is a difference in OFS behaviors of consumers purchasing food online since the social distancing before and during the pandemic.

Continuously, in order to predict the long-term behaviors after the pandemic, the OFS intention and the factors affecting it are due to be assessed. Most of the studies on OFS intention are based on three main models, namely TAM, TRA, and TPB, such as Troise (2020) using a combination of TAM, TRA and TPB models. Some researchers also try to add other variables to the TAM, TRA, and TPB models such as Tsydybey (2014), Hansen (2008) adding the 'personal value' variable, or Brand (2020) adding the 'personal norms' and 'experience' variables.

This study continues to re-examine the models prevalently used to predict behavioral intention, beginning with three independent variables of TPB: attitude towards behavior (ATB0), subjective norm (SN), and perceived behavioral control (PBC), which affects behavioral intention. In the context of online shopping, ATB is the attitude towards using the Internet to purchase goods or services from a retail website Lin (2007), SN refers to the

degree of perceived social pressures for performing or not performing a behavior (Ajzen, 1991) and PBC refers to a negative perception related to the degree of difficulty in planning to purchase (Brand, 2020). Individuals having more positive attitudes towards OFS have higher purchase intentions (Ha, 2019; Tsydybey, 2014; Xie, 2017), and SN also have a positive effect on online shopping intention (Ahmad, 2020; Hansen, 2008; Tsydybey, 2014). Thus, this study also proposes the following hypotheses:

H2: The attitude towards OFS has a positive impact on the OFS intentions of consumers after the social distancing.

H3: Subjective norms have a positive impact on the OFS intentions of consumers after the social distancing.

Meanwhile, Brand (2020) suggested that PBC could reflect negative aspects (i.e. the degree of difficulty in planning to purchase), the inverse of the ease of planning to perform the behaviors, related to OFS and that higher PBC, more difficulty in planning to purchase OFS, leads to lower behavioral intentions (Troise, 2020; Tsydybey, 2014). Therefore, the following hypothesis is proposed:

H4: Perceived behavioral control has a negative impact on the OFS intentions of consumers after the social distancing.

According to TAM (Davis, 1989), the author states that attitude is influenced by perceived usefulness (PU) as the degree to which individuals believe the system will enhance the efficiency, and perceived ease of use (PEOU), which is the degree to which a person believes that using the system will bring them more leisure, and less effort (Nguyen, 2019; Xie, 2017). Thus, the next hypotheses are expressed as follows:

H5a: Perceived usefulness of OFS has a positive impact on the attitude towards OFS of consumers.

H5b: Perceived ease of use of OFS has a positive impact on the attitude towards OFS of consumers.

ATB are not only influenced by PU and PEOU but also, according to VAB model of Homer and Kahle (1988), by the personal values (PV). Schwartz (1992) suggested that individuals possess a set of values that help them shape their lives. This value system influences their preferences and behaviors. In the studies of online purchase intention, many authors have found a positive impact of personal values on individuals' attitudes (Ahmad, 2020; Hansen, 2008; Lee, 2019). Thus, this study also propose the following hypothesis:

H6: Personal values have a positive impact on the attitude towards OFS of consumers.

One of the differences between online shopping behavior and traditional shopping behavior is the impact of perceived risks (PR) on purchase intention. PR is defined by Peter (1976) as a type of loss that is anticipated from a subjective point of view, while Featherman (2003) defines it as the possible loss in pursuit of a desired outcome. In online shopping,

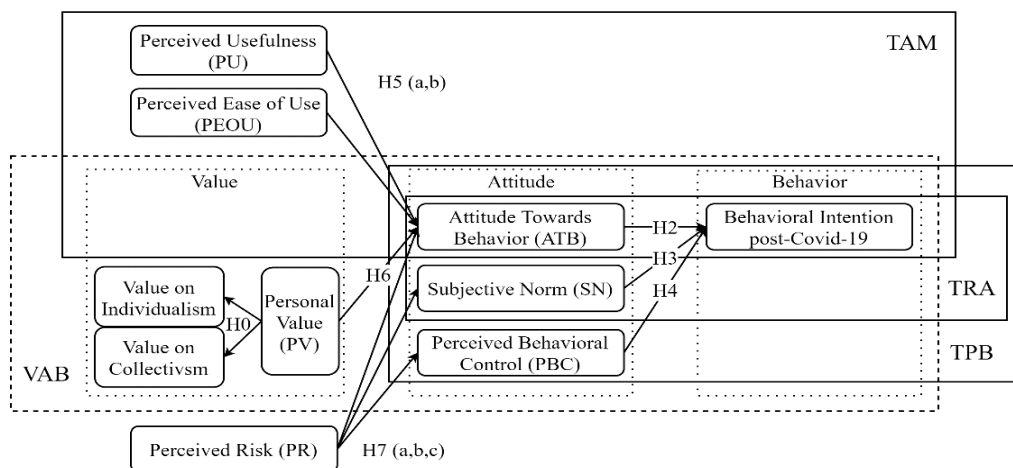
according to Naiyi (2004), PR is a personal perception of the possibility of negative and uncertain consequences, and the loss of a transaction. Many studies around the world have confirmed the role of PR with factors in TPB (Xie, 2017). Lee (2009) concluded that PR has a negative effect on attitudes and subjective norms in the acceptance of e-banking. Generally, consumers perceiving high risks in using services develop negative attitudes toward services using behaviors (low ATB) (Xie, 2017), and if the risks consumers perceived increase, they might get less approval in online purchasing from people in their social network (low SN) (Xie, 2017). Furthermore, as regards PBC, the finding in the study of Xie (2017) showed that PR had a negative impact on PBC in the case of intention to use e-government, and PBC in the study Xie (2017) reflected positivity, i.e. the ease of the behaviors, therefore it is inverse to the correlation due to be proposed in this study. In this study, PBC reflected the negative aspects, then might be positively affected by PR, meaning that the more risks in OFS consumers perceived, the more difficulty in planning to OFS they perceived. Thus, this study proposed three next hypotheses:

H7a: *Perceived risks have a negative impact on the attitude towards OFS of consumers.*

H7b: *Perceived risks have a negative impact on the subjective norms of consumers.*

H7c: *Perceived risks have a positive impact on the perceived behavioral control of consumers.*

Figure 3. Conceptual framework.



3. Data and Methodology

3.1. Measurements

The research model re-examining the effects on behavioral intention post-covid-19 includes one dependent variable, the intention to buy food online (BI) after social distancing, measured by one question in study of Brand (2020) and seven independent variables. ATB is defined as the degree to which a person has a favorable or unfavorable assessment of OFS, derived from four questions in the study of Hansen (2008) and Nguyen (2019). SN is the perceived level of social pressures for doing or not doing online grocery shopping, as measured

by three questions of Brand (2020). PBC is the perception of difficulty in planning to purchase online, as measured by five questions from the study of Tsydybey (2014). PU is the degree to which an individual believes the system will bring increased efficiency to their work, as measured by three questions of Xie (2017), and PEOU is the degree to which a person believes that using the system will bring them more leisure and less effort, as measured through three questions by Xie (2017). PR is an individual's perception of the possibility of negative and uncertain consequences, which is the loss in a transaction, as measured by five questions from Naiyi (2004) and Huseynov and Ozkan (2016) about delivery and product risks. PV refers to an individualism/collectivism structure as a second-order factor, concluding value on collectivism (PVC) emphasizes collective benefits, as measured by four questions from Schwartz (1994, 1992) and value on individualism (PVI) are independence in choice and openness to new experiences, as measured by four questions derived from Schwartz (1994, 1992).

3.2.Data collection

After 99 days of the absence of Covid-19 in nationwide society, an epidemic wave broke out in Da Nang and turned the city into the epicenter for two months. In order to prevent the spread, social distancing, according to the 19th directive from the prime minister, was applied, and citizens are limited to purchase groceries only once every three days, with a total of five food stamps for 15 days. Social distancing complicates traditional shopping, forcing people to switch to online shopping. In that situation, many retail systems have undergone rapid changes. Many supermarkets, retail systems, even small traders in the market also convert their main retail model to online retail, through Zalo, Facebook, websites... Da Nang, which has suffered the severe devastation of Covid-19 has had to implement social distancing from July 24 to September 23, 2020, the whole citizens have to go to the market using the coupon system, once every three days, while they were limited traveling. Therefore, in order to investigate the change in online food purchase behavior during social distancing and intention to purchase food online after the period, we conducted the survey from 20th of August 2020 to 15th of September 2020. The survey subjects are only people have bought food online.

The survey, whose first two section adapted from the surveys of Faour-Klingbeil (2021), Flanagan (2021), Russo (2021) and Brand (2020), was designed to captured three main information: (1) Changes to OFS; (2) Behaviors before, during Covid-19 and Intention after the pandemic; (3) Psychological observed variables measuring construct factors in the conceptual model. The first section designed to just keep the participants who have purchased food online and to classify they to two group: (A) – consumers have purchased food online before Covid-19 and (B) – ones have adopted OFS since Covid-19. In the second section of questionnaire, participants were asked to recall their OFS behaviors before and during the social distancing using a 5-point Likert scale (1=Never, 5=Always) with the phrase “...before/after the Covid-19 social distancing period in Danang”. Then the intention after Covid-19 was captured using the question of Brand (2020) in a 5-point Likert scale (1=Strongly disagree, 5=Strongly agree) with

the additional phrase “after the Covid-19 social distancing period in Danang”. In the last section, participants would answer questions based on construct measurements on a 5-point Likert scale (1=Strongly disagree, 5=Strongly agree). In addition to tests related to the proposed model, such as CFA, or SEM, parametric tests are due to be used to synthetic the Likert scale rating with means and standard deviations (S.D.) (Norman, 2010).

Respondents were asked to recall the behavior of buying food online before and during the quarantine, similarly applied by Flanagan (2021) and self-report the intention to purchase food online after the quarantine. 500 questionnaires were sent online to students whose relatives were living in Da Nang, and the obtained results included 176 valid questionnaires, with 88% female and 90% aged between 24 and 64, distributed across six districts in Da Nang city. 137 of the respondents (77.8%) bought food online before the social distancing period while 39 of the respondents (22.2%) have purchased food through online channels since the social distancing was applied. Finally, the mean score for the intention was 3.12 (S.D.=1.04), with 22,7% agree and 11,4% strongly agree with having intention to purchase food online after the social distancing. Furthermore, with 31 observed variables used for measuring construct factors, the minimum sample size, according to Hair (2014) and Memon (2020), could be 155, which is five times higher than the number of observed variables. Therefore, the full sample having 176 respondents are appropriate.

4. Results and Discussion

4.1. Innovative consumers's behaviors before and during Covid-19

The dataset included 39 observation of consumers who answered that they tried OFS since restricted condition (Group B). Because respondents self-report whether they have bought since Covid-19 or before the pandemic, to re-examine if the behaviors before Covid-19 of Group (A) and Group (B) was distinct was necessary. In order to test the different, independent sample T-Test, which is a parametric test, was applied. The results show that there is a statistically significant difference among the groups considered ($P=0.000$). The online shopping frequency of Group A (mean=3.02, S.D.=0.95) was distinctly higher than that of Group B (mean=1.67, S.D.=0.90).

Then Pair-sample T-Test, which is a parametric test, was applied to test the change in behaviors before and during Covid-19 with the 5-point likert scale. The result showed that there is a statistically significant different in the behaviors of consumers classified to group (B) before and during Covid-19 ($P<0.001$), supporting H1. The figure for during covid-19 behavior was significantly higher level (mean=3.03, S.D.=1.01), compared to that for before the pandemic behavior (mean=1.67, S.D.=0.90). The increase in behaviors due to the emergency of the pandemic was also similarly found in previous studies (Flanagan, 2021; Forakis, 2020; Unnikrishnan and Figliozzi, 2020), specially study of Russo (2021) about the innovation in behaviors due to emergency of Covid-19.

Table 1. Innovation in OFS behaviors since the social distancing.

	Before Covid-19^B	During Covid-19^B
	N (%)	N (%)
(1) Never	22 (56.4)	1 (2.6)
(2) Rarely	10 (25.6)	14 (35.9)
(3) Sometimes	5 (12.8)	9 (23.1)
(4) Often	2 (5.1)	13 (33.3)
(5) Always	0 (0.0)	2 (5.1)
Total	39 (100%)	39 (100%)
Mean	1.66	3.02
Std. Deviation	0.90	1.01

Note: ^B: Group B – consumers who have bought food online since Covid-19

4.2. Factors affecting intention after Covid-19 from the experience during the pandemic

As Russo (2021) suggested, consumer purchasing decisions after the constrained conditions would differ from the before pandemic ones partly due to the consumption experience during the period. Therefore, this study is due to re-examine the intention post-covid-19 period and the factors affecting the intention. As the conceptual framework proposed, the main factors considered are based on prevalent models which are TRA, TAM, and TPB used to predict behaviors in combination with VAB model and theory of perceived risks.

4.2.1. Evaluation of the scale

The results of exploratory factor analysis (EFA) with Varimax rotation showed that the variable ATB is measured by 04 items ATB01-04. SN exactly measured by three observed variables referencing SN01-03. For perceived behavioral control, the scale consists of PBC01-04 after the item PBC05 was excluded. In particular, the results of EFA analysis showed that the PEOU03 item was excluded and the remaining two items measuring PEOU and three ones measuring PU were combined into one group, which renamed as PWQ. PVI variable measured by PVI01-04 while PVC was measured by three indicators PVC02-04. Finally, PR was measured by five items, namely PR01-05.

4.2.2. Reliability and validity of the scale

The reliability of the scale was tested by the convergent validity (CV) – including the load factor (Factor Loading - FL), the total variance extracted (Total Variance Explained - TVE), the total correlation coefficient (TC), and internal consistency reliability (ICR) – including composite reliability (CR) and Cronbach's Alpha (CA) with the thresholds for both of which must be greater than 0.6 or, preferably, 0.7 (Hair Jr, 2016).

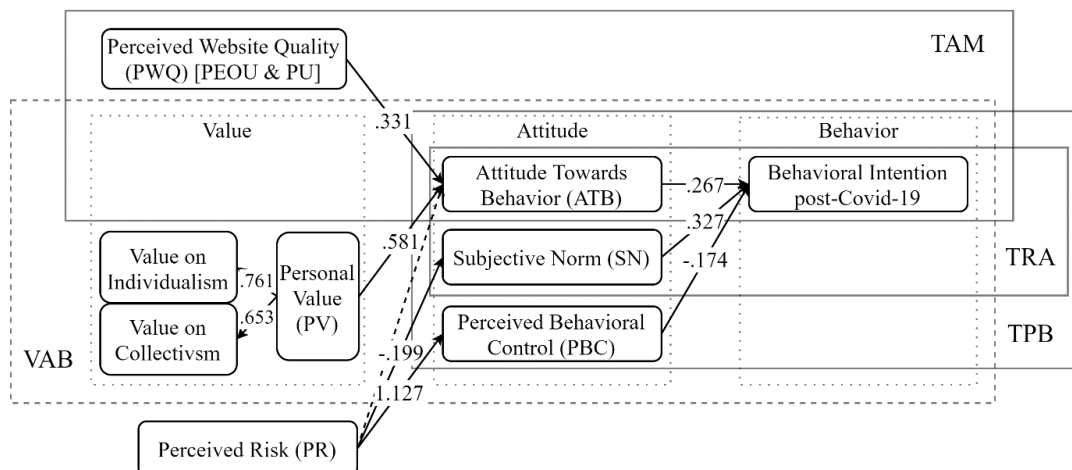
Table 2. Reliability of the scale.

Items		CV			ICR		Items		CV			ICR	
		FL	TC	TVE	CR	CA			FL	TC	TVE	CR	CA
SN	SN01	0.85	0.69	0.74	0.82	0.82	PVC	PVC01	0.53	0.37	0.56	0.60	0.60
	SN02	0.90	0.71					PVC02	0.71	0.44			
	SN03	0.80	0.64					PVC03	0.81	0.44			
ATB	ATB01	0.53	0.44	0.51	0.68	0.67	PWQ	PWQ01	0.53	0.44	0.54	0.80	0.78
	ATB02	0.61	0.50					PWQ02	0.58	0.54			
	ATB03	0.78	0.38					PWQ03	0.76	0.63			
	ATB04	0.62	0.52					PWQ04	0.82	0.60			
PBC	PBC01	0.50	0.48	0.55	0.70	0.73	PR	PWQ05	0.81	0.59	0.54	0.77	0.78
	PBC02	0.70	0.51					PR01	0.74	0.52			
	PBC03	0.73	0.51					PR02	0.83	0.46			
	PBC04	0.84	0.59					PR03	0.62	0.58			
PVI	PVI01	0.77	0.53	0.57	0.77	0.74	PR	PR04	0.59	0.63	0.54	0.77	0.78
	PVI02	0.87	0.65					PR05	0.71	0.62			
	PVI03	0.76	0.57										
	PVI04	0.58	0.44										

4.2.3. Structural model and hypotheses test

Confirmatory factor analysis (CFA) first was conducted by using AMOS version 23.0 with the observed variables to check the appropriateness of the scale for the research model. CFA results show that the scale exhibited an appropriate fit with the research data (CMIN/DF= 1.564, Integration Index (CFI) = 0.88, SRMR index = 0.07, RMSEA = 0.057, and PClose = 0.123) (Hu and Bentler, 1999). Then, structural equation modeling (SEM) was performed. The basic values of the SEM model demonstrate the appropriateness (CMIN/DF = 1.638, Integration Index (CFI) = 0.85, SRMR index = 0.08, RMSEA = 0.06, and PClose = 0.03).

Figure 4. Result of SEM analysis (standardized coefficient).



To test the hypothesis of the research model and the estimated coefficient, the standardized path coefficient and P-values were calculated. The results show that most of the model's hypotheses are accepted with P-values below 5%, except for the impact of perceived risk on ATB (see figure 4, and table 3). In turn, hypotheses H2, H3, H4 based on the TPB model theory are accepted, and this is also supported by the research of Hansen (2008), Lee (2009), or Xie (2017). ATB and SN have a positive impact on intention (BI) while perceived behavioral control developed as the negative perception. The more difficult it is to plan a purchase (higher PBC), lower the intention to online food purchase after Covid-19 (lower BI).

In addition, the contents of the VAB model also show appropriateness through the hypothesis H6 which assumed personal value having a positive effect on ATB, similar to the research results of Lee (2019) and Kim and Hall (2021). In addition, the grouping of PU and PEOU into PWQ was tested to have a positive effect on ATB (H5), which supported by TAM (Davis, 1989) and PWQ (Al-Debei, 2014, 2015). Finally, PR, which is considered as an vital importance in predicting the behavior of online shoppers (Naiyi, 2004), has a negative effect on SN (H7b) and a significantly positive effect on PBC (H7c). The findings of Lee (2009) and Xie (2017) also support similar hypotheses.

Although PR has been proven to have an impact on ATB, according to several previous studies on online choices (Lee, 2009; Xie, 2017), in this study that relationship is rejected. Some previous studies on online shopping also have similar conclusions about rejecting the effect of PR on ATB (Crespo, 2009; Marza, 2019). According to Crespo (2009), PR has a direct impact on consumers when they have never experienced online services, and for consumers who have used online channels, PR only reduces the perception of benefits but does not affect the consumers' attitude. In this study, all of respondents are individuals who have purchased goods online, and, therefore, the results of re-examining the impact of perceived risk on ATB may be influenced and lead to rejecting hypothesis H7a. Marza (2019) who studied attitudes towards online shopping also suggested the same conclusion.

Table 3. Summary of SEM's results.

Hypothesis	Path from/to	Standardized coefficient	S. E.	C. R.	P-Values	Test result
H2	ATB → BI	.267	.236	2.923	.003	<i>Supported</i>
H3	SN → BI	.327	.104	4.061	***	<i>Supported</i>
H4	PBC → BI	-.174	.168	-2.235	.025	<i>Supported</i>
H5	PWQ → ATB	.331	.132	2.279	.023	<i>Supported</i>
H6	PV → ATB	.581	.363	2.336	.019	<i>Supported</i>
H7a	PR → ATB	-.046	.110	-.317	.751	<i>Not supported</i>
H7b	PR → SN	-.199	.141	-2.145	.032	<i>Supported</i>
H7c	PR → PBC	1.127	.188	5.478	***	<i>Supported</i>
H0	PV → PVC	.761	.343	3.947	***	<i>Supported</i>
	PV → PVI	.653				

4.3. Discussion

Amid the constrained conditions where citizens found difficulties with traditional shopping due to travel restrictions of the social distancing, consumers seem to be exposed to the situation of impulsively trying online food shopping (OFS). Trying a new shopping channel in the social distancing probably brought unfamiliar experiences for consumers and leads to a probability to have new shopping intentions for them even after the social distancing period or the pandemic period has passed. Statistics show that 22% of respondents have started to buy food online during distancing with significantly increased behaviors during the social distancing (see Table.1). Generally, consumers are willing to purchase food online when the social distancing ends (MEAN(BI)=3.12).

Several anchors from the model proposed include consumer perceptions and beliefs have driven purchase intention after the social distancing. From experiences in social distancing, perception about OFS is useful and easy (MEAN(PWQ)=3.46) has led to a positive attitude towards OFS (MEAN(ATB)=3.88) (H5), which has increased the intention to OFS after the social distancing (BI) (H2). Despite the high level in PR (MEAN(PR)=3.44), this factor does not affect ATB (rejecting H7a), which could be explained by that consumer already have clear trust in online buying channels (Marza, 2019).

Furthermore, in OFS context, ATB is also affected by personal values of consumers, which is verified by accepting hypothesis H6. Consumer value orientation is quite strong (MEAN(PV)=3.84). Individuals are mostly willing to explore new ways (MEAN(PVI)=4.06) while trying preserve some aspects that are long-existing but in a lower level (MEAN(PVC)=3.55). ATB, SN and PBC were also re-examined to be anchors significantly affecting intention to OFS (H2-4), leading to appropriateness of intergrating VAB and TPB models for analysing the intention after the social distancing.

In online shopping, perceived risk plays an important role (Naiyi, 2004). The results suggest that individuals with a higher PR of OFS will have a lower SN, that means less being affected by their social network, and with higher perceived behavioral control, that means perceiving more difficulty in planning to buy fresh food online (H7b,c). This results re-examined the vital correlation of factors prevalent in predicting intention models under the context of the pandemic.

In this study, PU and PEOU was combined into perceived quality of online shopping website system (PWQ) (Al-Debei, 2015), which refers to the overall quality and performance of an online shopping website, and it is also a measurement of how simple, smooth, reliable, and effective using the website are. The PWQ factor in the study reflects the functionality of a website in terms of ease of navigation, responsiveness, interactivity and ease of access (Aladwani, 2006; Al-Debei, 2014), similar to perceived ease of use. In addition, PWQ factor is related to a website's search engine which refers to the speed and efficiency of the data collection process and information about the product's price, performance, and other aspects (Aladwani, 2006; Al-Debei, 2014), similar to perceived usefulness's implication. The significant findings mentioned above also show the appropriateness of applying TAM to predict the OFS intention after the social distancing.

5. Conclusion

Our study was one of studies first aiming to re-examine the changes in online food shopping (OFS) during the Covid-19 social distancing period and the psychological factors predicting the future behaviors after the period in Vietnam. The sample includes 176 consumers who have tried food online shopping before and during the social distancing period in Danang city, which was the epicenter for two months. With the literature review, the design, and the findings of this study, we draw the following main conclusions:

Firstly, due to Covid-19, there were consumers adopted OFS instead of traditional shopping approaches. Furthermore, the adoption to online food shopping of consumers who experienced restricted conditions due to the social distancing was affected by their attitudes, subjective norms, perceived behavioral control, perception of risks (perceived risks), perception of web quality (perceived ease of use and perceived usefulness) and their personal values. Thus, those psychological anchors based on the TPB, TAM, TRA, and VAB models, and the Perceived Risk concept can be used as factors predicting the long-term intention to OFS after the Covid-19 period.

Secondly, despite achieving the stated research objectives, this study still has limitations. Firstly, the study was conducted in only one city affected by Covid-19, so generality may be affected. Secondly, as Ajzen (1991) suggested, the prediction of behavioral intention from attitude, subjective norm, and perceived behavioral control can vary between situations and behaviors considered, leading to that the proposed model should be tested with different demographic groups of consumers, such as examining differences in behavior between age groups, education levels, and income.

Finally, it is necessary for scholars to re-assess the appropriateness of the proposed model in this study and its relationships among factors with a larger sample and with other contexts and situations.

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CUSTOMER SATISFACTION AND FIRM PERFORMANCE: INSIGHTS FROM TECHNOLOGICAL DEVICES RETAILING BUSINESSES IN VIETNAM

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Abstract

This paper is conducted to investigate the relationship between customer satisfaction and firm performance within the businesses that are the retailers of technological devices such as smartphones, laptops, desktop computers, and peripheral devices in Vietnam. The research method used in this study is a quantitative method with multivariate statistical analysis steps such as testing by Cronbach's Alpha coefficient, explore descriptive analysis, correlation analysis, exploratory factor analysis, and multi-stepwise regression analysis. From about 207 valid answered questionnaires, the research results show that there is a positive relationship between customer satisfaction and firm performance, and in more detail, customer satisfaction on factors such as pricing, the responsiveness of the firm is directly proportional to how a firm performs. Paper gave some recommendations to improve customer satisfaction on such matters in the last chapter of this study.

Keywords: *customer satisfaction; firm performance; technological devices retailing businesses.*

1. Introduction

The overgrowth of technological devices in this digital era can be observed, this claim can be backed by the growing number of phones, laptops, PC users in our society. The said devices can be attributed as the complementary products of the internet, explained by the blooming of the internet early in the 20th century seems like a lead to the development of computers and mobile devices market. Realizing the market capacity is huge and the saturation level is still acceptable, the number of newcomers as retailers in selling the aforementioned products is skyrocketing over time everywhere in the world. This paper recognized a promising field of study in the rising market, which can ideally make this research time to the current situation as the focusing of this study is on the retailers of technological devices.

In recent research, retailers recognize that customer satisfaction plays a key role in a successful business strategy (Gomez, 2004). What is unclear is the exact nature of that role, how satisfaction should be managed, and whether managerial efforts aimed at increasing satisfaction lead to higher store sales. Today, managers in the retail sector undertake substantial efforts to conduct consumer satisfaction surveys. Yet it appears that in most cases the data are used to simply monitor specific store attributes and overall satisfaction, over time. However,

unless the impact of customer satisfaction on store revenues is assessed, managers have little basis for resource allocation. The linkages between customer satisfaction and firm performance have not been firmly established in this specific industry of technological devices.

Looking at the development of the retail chain of businesses dealing in mobile digital products in Vietnam (mobile phones, tablets, laptops, and accessories), the figures are more than just noticeable (Thanh. T, 2016). According to data from market research firm GfK, in 2019, each month, the Vietnamese market consumes from 1.2 to 1.4 million smartphones. In particular, the major retail channels such as The Gioi Di Dong, FPT Shop, Viettel Store, Telecommunication A ... account for about 80%. The rest belongs to smaller retailers. Although not growing as strongly as 5 years ago, the smartphone market in Vietnam is still an attractive target to brands that are currently operating and new names who are expected to join in the future. Regarding the e-commerce platforms only, in 2019, digital products were accounted for 12% of all sales figures, and are projected to keep rising (Tran, 2020).

This paper seeks to fill up the research gap by answering the question concerning the relationship between one of the most important factors in retailing – customer satisfaction and the performance of those retailing firms in a country scale of Vietnam. The main purpose of this research is thus to determine the relationship between customer satisfaction and firm performance of the technological devices retailers who sell products such as mobile phones, laptops, desktop computers in Vietnam, and to identify which factors in customer satisfaction array have the most impact on the firm performance. With the findings, some solutions for improving competitive competency and firm performance might be drawn out if possible. The study might also suggest suitable strategies to gain more customer satisfaction for potential future retailers in the aforementioned field.

2. Theory background and research hypotheses

2.1. Customer satisfaction

Customer satisfaction is one of the most important issues concerning business organizations of all types, which is justified by the customer-oriented philosophy and the principles of continuous improvement in the modern enterprise. Early concepts of satisfaction research have typically defined satisfaction as a post-choice evaluation judgment concerning a specific purchase decision. The most widely accepted model, in which satisfaction is a function of disconfirmation, which is a function of both expectations and performance (Oliver, 1997). The disconfirmation paradigm in process theory provides the grounding for the vast majority of satisfaction studies and encompasses four construct expectations, performance, disconfirmation, and satisfaction (Caruana et al., 2000). This model suggests that the effects of expectation are primarily through disconfirmation, but they also have the effect of perceiving performance on satisfaction (Spreng and Page, 2001). Swan and Combs (1976) view satisfaction as a discrepancy between the observed and desired. This is consisting of value-percept disparity theory (Westbrook and Reilly, 1983) which was developed in response to the problem that consumers could be satisfied by aspects for which expectation never existed. The value-percept

theory view satisfaction as an emotional response triggered by a cognitive- evaluation process (Parker and Mathews, 2001). In other words, it is the comparison of the “object” to one’s value rather than an expectation. Customers want a meeting between their values (need and want) and the object of their evaluation (Parker and Mathews, 2001).

Customer satisfaction is an important theoretical as well as a practical issue for most marketers and customer researchers. It is defined as a customer’s overall evaluation of the performance of an offering to date (Johnson and Fornell, 1991, Johnson, and Roos, 2005). This has a strong positive effect on customer loyalty intentions across a variety of products and services. In a service context, overall satisfaction is similar to overall evaluations of service quality. Levesque and McDougall (1996) claim that a relationship between customer and service provider would be set up when a customer uses a service, then customer satisfaction will appear as an outcome of the interactions between these parties. For that reason, customer satisfaction can be referred to as customer attitudes toward the service provider after using the service. Many scholars and service marketers have explored consumers' cognitive and affective responses to the perception of service attributes to benefit by providing what consumers need effectively and efficiently. Consumer satisfaction (e.g. Cadott et al, 1987; Churchill & Surprenant, 1982; Fornell,1992; Oliver, 1997) and PSQ (e.g. Parasuraman et al, 1985, 1988; Rust & Oliver, 1994; Zeithaml et al, 1996) have been considered the primary intervening constructs in the area of service marketing because ultimately they lead to the development of consumer loyalty or re-patronization of a product or service.

Customer satisfaction is a collective outcome of perception, evaluation, and psychological reaction to the consumption expectation with a product or service. According to Kotler and Keller (2006) "satisfaction is a feeling of pleasure or disappointment resulting from comparing a product perceived performance or outcome with his or her expectations" early concept of satisfaction research has typically defined satisfaction as a post choice evaluation judgment concerning a specific purchase decision (Churchill and Sauprenant, 1982; Oliver 1980). Customer satisfaction on computers is the quality of product, flexibility, reliability, priorities determination, security, and expectations. In an online education structure, there are 2 more factors of transparency and communication influencing students' satisfaction and enhancing the learning process (cited in Daniel and Berinyuy, 2010).

Consumer perception of service quality is a complex process. Therefore, multiple dimensions of service quality have been suggested (Brady & Cronin, 2001). One of the most popular models, SERVQUAL, used in service marketing, was developed by Parasuraman et al (1985, 1988). SERVQUAL is based on the perception gap between the received service quality and the expected service quality and has been widely adopted for explaining consumer perception of service quality. Originally 10 dimensions of service quality were proposed (reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the consumer, and tangibles). Later these were reduced to five (reliability, responsiveness, empathy, assurances, and tangibles). There is general agreement

that the aforementioned constructs are important aspects of service quality. This research is based on the aspects that technological devices retailing businesses in Vietnam such as personal computers, laptops, mobile phone retailers, could contribute to the experience of a customer. Like most other retailing businesses, customers' satisfaction will be affected by the product and the service of a retailer, therefore, the paper has established a model to measure customer satisfaction on the technological devices retailers in Vietnam.

2.2. Effect of customer satisfaction on firm performance

A study in 1990 conducted by Anne Magi and Claes-Robert Julander demonstrated some relationship between service quality, customer satisfaction, and loyalty toward retailing sector performance. In their first analyses, it was shown that perceived service quality is related to customer satisfaction and customer loyalty. Thus it should be profitable to satisfy customers by providing higher service quality. However, in the second part of the analysis, such a relationship could not be confirmed. Furthermore, the results indicate that labor productivity is negatively related to perceived quality, customer satisfaction, and store loyalty. The lack of a positive relationship between customer loyalty and profitability could thus be attributed to the negative relationship between perceived service quality and labor productivity. They should again like to underscore the exploratory nature of the second part of the study. However, the results are intriguing and point to the fact that the relationship between perceived service quality, customer satisfaction and customer loyalty on the one hand, and profitability on the other, should not be regarded as a simple bivariate linear relationship.

Santouridis (2010) did research related to customer satisfaction and firm performance in the mobile market in Greece. The first objective of the research presented was to examine the effect of service quality and customer satisfaction on customer loyalty, in the Greek mobile phone sector. The analysis of the research data showed that service quality is a major predictor of both customer satisfaction and loyalty, with three out of the six quality dimensions of the chosen instrument (customer support, pricing structure, and billing system) having significant positive effects on both concepts. The second objective was to investigate the possible mediation role of customer satisfaction on the service quality and customer loyalty relationship. The data analysis showed that satisfaction has a very significant positive effect on loyalty by totally mediating the influence of the pricing structure and billing system service quality dimensions. At the same time, the relationship of the customer service dimension with loyalty was proved to be only partially mediated by satisfaction, therefore exposing a very strong positive effect on loyalty.

Although a few studies have found no significant relationship (Arthur Anderson, 1994), or even a negative relationship between customer satisfaction and financial performance (Ittner and Larcker, 1998), the preponderance of the literature suggests that higher customer satisfaction contributes to higher performance; for example, through lower marketing costs or due to lower price elasticity of demand. Along these lines, in their study of the Swedish market, Anderson et al. (1994), using 1989–1990 company-level market share

data, suggest that the provision of high customer satisfaction positively impacts future financial returns. Customer satisfaction can improve profitability because it influences the repurchase behavior of customers (e.g., Stank et al., 1999; Verhoef, 2003). Thus, customer satisfaction leads to customer loyalty, which in turn contributes to the profitability of a firm (Anderson et al., 1994; Mittal and Kamakura, 2001). In addition, satisfied customers may be willing to pay premium prices for products, thus also contributing to increased profitability (Homburg et al., 2005). Perhaps the most relevant literature to this study is Dresner and Xu (1995) and Behn and Riley Jr. (1999). Dresner and Xu (1995), in addition to examining the impact of customer service on customer satisfaction as noted above, also looked at the impact of satisfaction on profitability in the airline industry. Their finding suggests that increased satisfaction contributes to higher profits, even after controlling for the additional costs involved in providing that higher level of satisfaction. Supplementing Dresner and Xu (1995), Behn and Riley Jr. (1999), incorporate several operating measures into their model to determine how nonfinancial airline information, including customer satisfaction, relates to financial performance. Using an instrumental variables approach, similar to Dresner and Xu (1995), they find a positive link between customer satisfaction and operating income. Furthermore, in two airline industry studies, Yee et al. (2008, 2010) also find a significant positive relationship between customer satisfaction and firm performance. The findings from the literature suggest that higher levels of customer satisfaction will lead to improved firm performance.

H1a,b,c: There are positive relationships between customer satisfaction on a firm's pricing and firm performance (profitability, growth, customer retention/acquisition).

H2a,b,c: There are positive relationships between customer satisfaction on a firm's product quality and firm performance (profitability, growth, customer retention/acquisition).

Likewise, other previous studies examining the relationship between customer satisfaction and performance tend to report positive results. Fornell et al. (1996), for example, investigated the effects of the public release of the customer satisfaction index on firms' stock market returns. They find that the disclosure of non-financial customer satisfaction measures provides new and forward-looking information, not completely reflected by traditional accounting performance measures such as profit, for the stock market. In a similar vein, Ittner and Larcker (1998) examined whether the customer satisfaction index served as a leading indicator of financial performance. They report that customer satisfaction positively and significantly affects firm value although the market does not instantaneously react to the publication of the customer satisfaction index. Rather, the market reacts to the customer index publication ten days after the publication date.

Another recent study conducted by Sun, K., & Kim, D. (2013) investigate the impact of customer satisfaction on the hospitality and tourism companies' financial performance. To test the hypotheses, the study employed American Customer Satisfaction Index (ACSI) as a proxy for customer satisfaction and investigated the financial performance of ACSI with the

five dependent variables. Financial performance includes two concepts: profitability and firm value. Using profit margin (PM), return on assets (ROA), and return on equity (ROE) reveal profitability (Ross et al., 2003), and Tobin's q and market value added (MVA) examine the firm value (Gapenski, 1996). In other words, the study hypothesized a positive impact of customer satisfaction (ACSI) on firms' profitability (i.e., PM, ROA, ROE) and firm value (i.e., Tobin's q and MVA). Results of the panel regression indicate that the American Customer Satisfaction Index (ACSI) positively influences a firm's profit margin (PM), return on assets (ROA), return on equity (ROE), and market value added (MVA), and thus support the notion that a significant and positive impact exists from customer satisfaction on a firm's profitability and value, even though the result of Tobin's q was not significant. The results of the study are consistent with the results of previous research, which insisted that customer satisfaction has a positive impact on a firm's profitability (e.g., Anderson et al., 1997; Grewal et al., 2010), and firm value (e.g., Aksoy et al., 2008; O'Sullivan and McCallig, 2009).

This paper will be following the majority of published articles and will use financial as the main proxy to indicate firm performance, with the addition of customer retention and acquisition into the equation. Superior financial performance is a way to satisfy investors (Chakravarthy, 1986) and can be represented by profitability and growth (Cho & Pucik, 2005; Venkatraman & Ramanujam, 1986). These aspects complement each other. Profitability measures a firm's past ability to generate returns (Glick et al., 2005). The growth demonstrates a firm's past ability to increase its size (Whetten, 1987). Increasing size, even at the same profitability level, will increase its absolute profit and cash generation. The larger size also can bring economies of scale and market power, leading to enhanced future profitability. Customer retention and acquisition illustrate the potential in generating more revenue in the future.

H3a,b,c: There are positive relationships between customer satisfaction on a firm's service reliability and firm performance (profitability, growth, customer retention/acquisition).

H4a,b,c: There are positive relationships between customer satisfaction on a firm's service responsiveness and firm performance (profitability, growth, customer retention/acquisition).

H5a,b,c: There are positive relationships between customer satisfaction on a firm's service assurance and firm performance (profitability, growth, customer retention/acquisition).

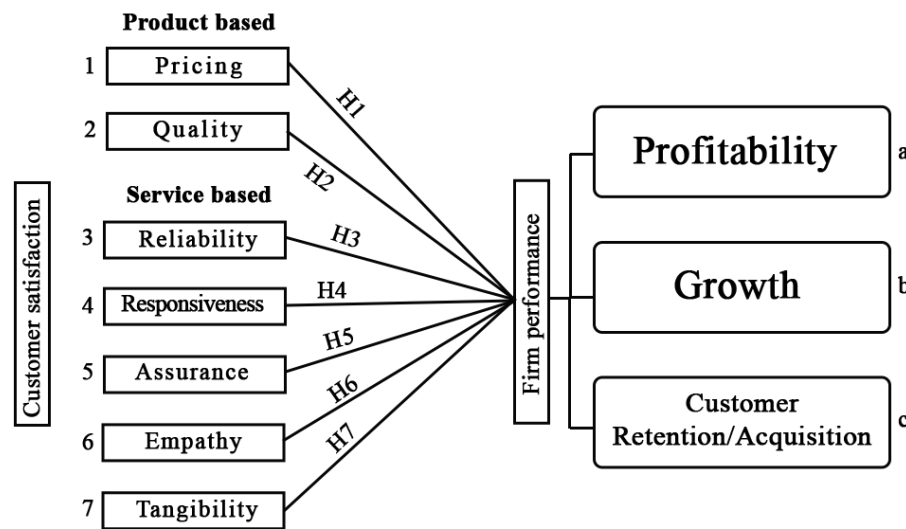
H6a,b,c: There are positive relationships between customer satisfaction on a firm's service empathy and firm performance (profitability, growth, customer retention/acquisition).

H7a,b,c: There are positive relationships between customer satisfaction on a firm's service tangibility and firm performance (profitability, growth, customer retention/acquisition).

Furthermore, while the firm performance has 3 different proxies to measure, the paper also suggested using sub-hypotheses such as H1a for the impact of satisfaction of pricing on profitability, H1b is on growth, H1c is on customer retention/acquisition, and the same goes for other factors in the customer satisfaction dimension. Research framework relevant to the

study of the relationship between customer satisfaction and firm performance of technological devices retailing businesses in Vietnam.

Figure 1. Research model



3. Research methodology

3.2. Measurement and questionnaire design

The questionnaire consisted of 3 independent sections including measurement scales is designed to assess the constructs of this study and general information.

Measurement of Customer Satisfaction: Based on the research model proposed above, the paper sorts the questions into two groups, namely product-based and serviced based. In the product-based group of questions, the paper further divides the questions into two sub-groups which are pricing and quality, since most of the retailing businesses, customers’ satisfaction will be affected by the product and the service of a retailer. The questions in these aspects are based on the questionnaire which was conducted by Herrmann et.al. (2007) and Cruz, A. (2015) respectively. Paper used 4 items for each sub-group of pricing and quality was code as CSP and CSQ. In terms of measuring customer satisfaction through service factors, the paper follows the SERVQUAL model strictly as, to many researchers, it was a reliable model for any kind of industry or business. The questions in this group are based on the questions by Sultana et al. (2016) which are customer satisfaction on (i) Reliability; (ii) Responsiveness; (iii) Assurance; (iv) Empathy; (v) Tangibility. The 5-point Likert scale is used, ranging from "very dissatisfy" to "very satisfy".

Measurement of firm performance: this research follows a 3 subscales division for the measurement of firm performance which is profitability, growth, and customer retention/acquisition. The questions are based on the following previous studies by Sun, Kim (2013), Tracey (2001), and Tsai (2002). The 5-point Likert scale is used, all of these subscales are measured from “strongly disagree” to “strongly agree” for statements and “very bad” to “very good” for questions.

Control variables: In the first section of the questionnaire there are demographic variables such as the products those firms are selling, the operating is, the scale and types of the firms, and the age of the firms to gain general information about the respondents.

3.3. Sampling and data

According to Saunders et al. (2009), there is two way of generating sample size: probability sampling and non-probability sampling. The key difference between those is that probability sampling is conducted with the assumption of which each object in the population will be received equal selection compared with other objects. On the other hand, probability sampling is often carried when the researchers understand well about social phenomenon while non-probability sampling is conducted when the social phenomenon is very new with not so many empirical researchers about it (Cresswell, 2002). In this study, a non-probability sampling technique will be used to select respondents. Considering the size of this research, the number of survey forms delivered will be 207.

Hox and Boeije (2005), data is collected from a primary source or secondary source. Primary data is collected in terms of specific research issues that are targeted to fit the research objectives. The advantage of primary data is that the chosen research objectives will be fulfilled better. Additionally, the data description and interpretation are also more in-depth. However, the major disadvantages of primary data are the high cost and time consuming as the researchers have to conduct the way to collect the primary data by themselves. Furthermore, Yin (1994) highlighted the problem of the inaccuracy of the answer of the respondents involved in this research. Secondary data, however, is considered as the data coming from other previous studies (Yin, 1994). However, the secondary data has the weakness of which they are collected from a different view of points of the researchers, leading to the inappropriateness of this data for the research objectives.

In this study, primary data is collected from a survey questionnaire with around 200 existing employees/managers/owners of technological devices retailers. Secondary data, however, is collected from previous studies about customer satisfaction and firm performance. The target population of this study is the personnel of some businesses which currently are or have a technological device retailing store. Surveys will be sent to those companies in the scale of Vietnam through an online form. Social media groups are the main method which paper used to hand out the questionnaire for small-medium retailers. For corporations or bigger companies, the paper tried to reach the person through emails, relatives, and hand-out at their stores.

To determine which among the three dimensions in independent variables is the most important in explaining the relationship between firm performance and customer satisfaction among employees, the Multi Regression Analysis is conducted. Regression analysis is a statistical technique used to relate variables (Bowerman et al., 1990). The multiple linear regressions are used for modeling the relationship between two or more explicative variables and the response variable by identifying a linear equation between the observed dates. Three

models of linear regression have been established to explore the significance of factors in customer satisfaction on profitability, growth, and customer retention/acquisition respectively.

4. Results

4.1. Descriptive statistics

Most of the variables of customer satisfaction on product-based factors have a mean value below 3.5, excepting CSP1 (Customers satisfaction about the price of your products is appropriate relative to their performance), CSQ2 (Customers are satisfied with products' features), and CSQ1 (Customers are satisfied with the durability of the products). On the other hand, it is concluded that the respondents have realized that their customers have relatively lower satisfaction (mean value of 3.38) on how the price of the product is being displayed and the origin of the product.

Almost all variables of customer satisfaction on service-based factors have mean values higher than 3.5. Among these variables, "Customers satisfaction with the individual attention given by the business" has the lowest mean value of 3.44 compared to other factors. Alongside it, CSRS1 (Customers satisfaction of knowing when the services will be performed) also has a lower mean value compares to others. Overall, the mean values of profitability variables are all equal to or lower than 3.5. The highest mean value goes to FPP4 (How is your firm's net profit) with 3.54. FPP2 (How is your business's return on assets) has the lowest mean value which is just merely 3.21.

In this aspect of firm performance, the growth of the companies is reported to be mediocre, as all of the mean values are nearly equal to 3. The lowest mean value what that of FPG1 (Our sales growth has been outstanding). Lastly, it can be seen that FPC3 (Our business has a good number of new customers) has a fairly low mean value.

4.2. Reliability and exploratory factor analysis

To test the reliability, coefficient, and consistency of variables, Cronbach's Alpha method was used. Cronbach's Alpha helps researchers to remove irrelevant variables out of research models by calculating correlation scores among variables. Based on this method, variables that have corrected item-total correlation score is greater than 0.3 and alpha is greater than 0.6 will be accepted to do further analysis. Table 1. below shows the results of reliability, Cronbach's alpha values of product-based satisfaction, service-based satisfaction, profitability, growth, and customer retention/acquisition 0.751, 0.835, 0.698, 0.715, and 0.602. It means service-based satisfaction has good reliability in their survey scale (Cronbach's alpha values > 0.8) while product-based satisfaction, profitability, growth, and customer retention/acquisition have acceptable reliability in their survey scale (Cronbach's alpha values in between 0.6 and 0.8).

Table 1. Cronbach's alpha results

Variables	Cronbach's alpha	Conclusion
Product-based satisfaction	0.751	Acceptable
Service-based satisfaction	0.835	Good
Profitability	0.698	Acceptable
Growth	0.715	Acceptable
Customer retention/acquisition	0.602	Acceptable

In terms of customer satisfaction on product-based items, all variables have Corrected Item – Total Correlation greater than 0.3 except for CSQ4 (Customers are satisfied with the origins of the products) with Corrected Item – Total Correlation at the value of 0.245. Therefore, this variable should be removed from the dimension, then after the item is deleted, the Cronbach's alpha of this dimension shall increase to 0.768. In terms of service-based satisfaction item, all variables have Corrected Item – Total Correlation greater than 0.3 except for CSR4 (Customers satisfaction on business keeping an error-free record and CSE4 (Customers satisfaction with the business's operating hours). Therefore, CSR4 and CSE4 variables should be removed from the dimension. Regarding profitability as a factor in firm performance, all variables have Corrected Item – Total Correlation greater than 0.3. Therefore, no variables should be removed from the dimension. Regarding the firm's growth in the firm performance dimension, all variables are kept as they have Corrected Item – Total Correlation greater than 0.3. Thus, no item shall be removed from the dimension. In terms of customer retention/acquisition items, all variables have Corrected Item – Total Correlation greater than 0.3. Therefore, no variables should be removed from the dimension.

Exploratory factor analysis (EFA) is a technique within factor analysis whose overarching goal is to identify the underlying relationships between measured variables. Through EFA is often recommended when researchers have no hypotheses about the nature of the underlying factor structure of their measure. Paper is desired to test the integrity of the factor structure designed at the beginning. Exploratory factor analysis has three basic decision points: (1) decide the number of factors, (2) choosing an extraction method, (3) choosing a rotation method. R-type factor analysis which is when factors are calculated from the correlation matrix will be used in the EFA test. The suppress small coefficient value is below 0.4 of the absolute value. The EFA results with Eigenvalue = 1.069, the total variance extracted of 64.525% (>50%), KMO coefficient = 0.745 (>0.5) and Barlett's test with sig = 0.000 (<0.005) indicates that all-sufficient conditions for EFA are ensured.

The EFA analysis illustrated that the items in each pre-structured factor has loaded accordingly into 7 factors, the 4 items CSP1, CSP2, CSP3, and CSP4 have been loaded in component number 4, which means the 4 items are correlated and represent the same factor of pricing in the customer satisfaction on product-based dimension. Likewise, CSQ1, CSQ2, and

CSQ3 are loaded into the fifth component. CSR1, CSR2, and CSR3 are loaded into the seventh component. The fourth component represents the satisfaction on responsiveness factor. CSA1, CSA2, CSA3, and CSA4 are loaded into the third component. CSE1, CSE2, and CSE3 are loaded into the sixth component. Lastly, the tangibility factor is loaded into the last component of the factor.

Pearson Correlation analysis is conducted with achieved results show that the correlations between pairs of factors (pricing, quality, reliability, responsiveness, assurance, empathy, tangibility, profitability, growth, and customer retention/acquisition) are statistical at 0.01 and 0.05 levels. In more detail, pricing, quality, reliability, responsiveness, assurance, empathy, and tangibility have low to a moderate relationship with other factors. Firm performance on profitability, growth, and customer retention/acquisition, however, have a moderate relationship with the customer satisfaction factors, and they have a pretty strong relationship with each other. Additionally, there is no very strong relationship between these factors. Among the independent factors, responsiveness and assurance have the highest relationship with each other with a Pearson Correlation point of 0.409, which is still in the moderate relationship threshold. Overall, pricing, profitability, growth, and customer retention/acquisition have the highest relationship with each other. Indeed, the three factors of profitability, growth, and customer retention/acquisition are highly associated with each other, since profitability is how a firm earn the money and profit, which is a premise for firm growth. On the other hand, if technological devices retailers have a good statistical number on the retention and acquisition rate, it would positively affect the profit of the companies since it means more sales and income.

4.3. Hypothesis testing

Table 2. shows the results of a regression model, this result shows that the coefficient of linear correlation $R^2 = 0.507$ which means that the independent variables in model one explain 50.7% of the variance in the dependent variable. In the model two $R^2 = 0.632$ and $R^2 = 0.531$ for model three.

Table 2. Regression results

Model	Model 1: Profitability		Model 2: Growth		Model 3: Customer retention/acquisition	
	β	sig.	β	sig.	β	sig.
(Constant)	.630*	.027	-.909**	.008	-.252	.446
Pricing	.321***	.000	.175**	.006	.387***	.000
Quality	.029	.554	.189**	.001	.021	.717
Reliability	.075	.217	.165*	.024	.228**	.001
Responsiveness	.196**	.001	.183**	.007	.152*	.020

Model	Model 1: Profitability		Model 2: Growth		Model 3: Customer retention/acquisition	
	β	<i>sig.</i>	β	<i>sig.</i>	β	<i>sig.</i>
Assurance	.033	.583	.212**	.004	.005	.947
Empathy	.057	.320	.063	.360	.123	.066
Tangibility	.062	.179	.126*	.023	.071	.185
R^2	0.507		0.632		0.531	
Adjusted R^2	0.538		0.612		0.511	
N	207		207		207	

Note: ***, $p < 0.0001$; **, $p < 0.01$; *, $P < 0.05$

In model 1, partial correlation coefficients of pricing, quality, reliability, responsiveness, assurance, empathy and tangibility are estimated at 0.321, 0.029, 0.075, 0.196, 0.033, 0.057 and 0.062. Only partial correlation coefficients of pricing and responsiveness are statistically significant at 0.05 level while partial correlation coefficients of the rest are not statistically significant as it has Sig. value of T-Test higher than 0.05. Therefore, the regression equation should be interpreted as below:

$$FPP = 0.63 + 0.321 * CSP + 0.196 * CSRS$$

In which FPP stands for firm performance on profitability, CSP stands for customer satisfaction on pricing, CSRS stands for customer satisfaction on responsiveness.

Model 2 shows partial correlation coefficients of pricing, quality, reliability, responsiveness, assurance, empathy, and tangibility are estimated at 0.175, 0.189, 0.165, 0.183, 0.212, 0.063, and 0.126. The only partial correlation coefficient of empathy is not statistically significant at 0.05 level while partial correlation coefficients of the rest are statistically significant as it has Sig. value of T-Test lower than 0.05. Therefore, the regression equation should be interpreted as below:

$$FPG = -0.909 + 0.175 * CSP + 0.189 * CSQ + 0.165 * CSR + 0.183 * CSRS \\ + 0.212 * CSA + 0.126 * CST$$

Where CSQ stands for customer satisfaction on quality, CSR stands for customer satisfaction on reliability, CSA stands for customer satisfaction on assurance, CST stands for customer satisfaction on tangibility and FPG stands for firm performance on the growth of the business.

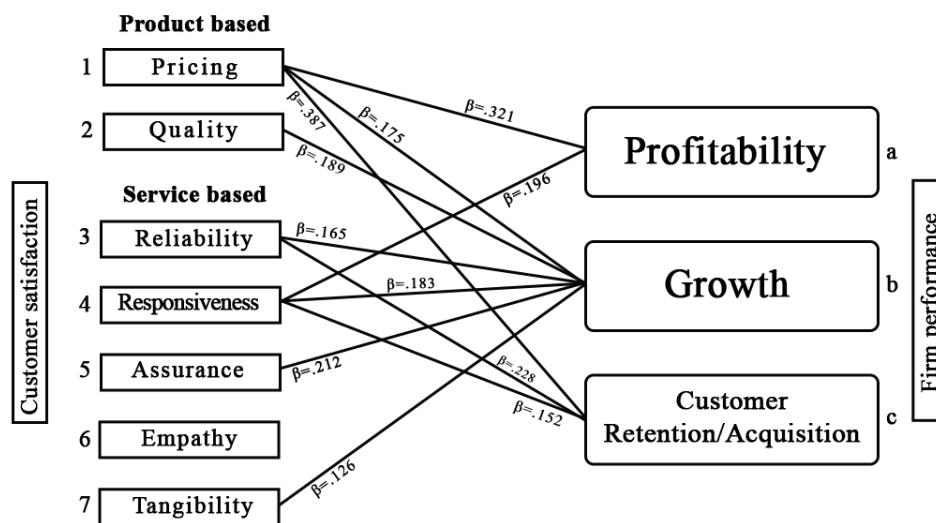
In model 3, partial correlation coefficients of pricing, quality, reliability, responsiveness, assurance, empathy, and tangibility are estimated at 0.387, 0.021, 0.228, 0.152, 0.005, 0.123, and 0.071. Only partial correlation coefficients of pricing, reliability, and responsiveness are statistically significant at 0.05 level while partial correlation coefficients of

the rest are not statistically significant as it has Sig. value of T-Test lower than 0.05. Additionally, the constant value also has Sig. a value higher than 0.05. Therefore, the regression equation should be interpreted as below:

$$FPG = -0.252 + 0.387 * CSP + 0.228 * CSR + 0.152 * CSRS$$

Along with the impact indicator (coefficient value) for each factor regarding the relationship between customer satisfaction and firm performance was described below figure. The rejected hypotheses are excluded from the figure.

Figure 2. Research model result



Source: Authors analysis

5. Discussion and recommendations

First, looking at the profitability as the proxy for firm performance, there are two factors from the customer satisfaction that have a significant positive impact on a firm's profitability, they are pricing with the coefficient of 0.321 and responsiveness with the coefficient of 0.196. The result is backed by Stank et al (1999) and Dresner and Xu (1995) as customer satisfaction does have a direct impact on a firm's financial performance, in other words, profitability. Implementing the paper study into practical rationality, it is appropriate to conclude that customer satisfaction on the pricing of technological devices retailers has the greatest impact on Vietnamese firms' financial statistics. It is reported that Vietnamese consumers are changing their shopping habits from considering cheap products to considering the true value of the products, but it was mostly on fast-moving-consumer-segment (Nguyen. Q, 2016). For the technological devices segment, Vietnamese customers seem to still opt for which retailers have a more reasonable pricing policy since the cost of products in this segment are more expensive if the consumers' income is taken into consideration. Customer satisfaction on responsiveness is also a factor that significantly impacts of firm's profitability, this can be explained by the saturated and fiercely competitive market of mobile devices retailing, the firms may lose the customers to another if their responsiveness is not on point and timely.

Regarding growth as firm performance's proxy, the paper sees this proxy as a long-term effect. Gitman (2005) also claimed that customer satisfaction is a key element in the strategic growth of the company, which required thorough satisfaction for long-term relationships with customers. To growth in the long-run, pricing alone will not be adequate since customers' habit is going to change over time. The result of this paper, in which the hypotheses H2a, H2b, H2c, H2d, H2e, and H2g are proved, is supported by Bo Edvardsson, Michael D. Johnson, Anders Gustafsson & Tore Strandvik (2000) in their paper: *The effects of satisfaction and loyalty on profits and growth: Products versus services, Total Quality Management, 11:7, 917-927*. This paper has tested a similar model to this study and found out that customer satisfaction in the product model has a coefficient of 0.135 after regression model testing with firm's growth as the dependant variable, likewise, customer satisfaction in the service model has a coefficient of 0.268 when testing the same method with growth as the dependent variable.

The last regression model testing on the relationship between all the customer satisfaction factors and firm performance's proxy which is customer retention/acquisition is also backed by a classic study by Kaplan and Norton in 1996. In which study, they stated that customer perspective consists of market share, customer retention, customer acquisition, customer satisfaction, and customer profitability. They argue that customer satisfaction is the most important measure as this measure is the prerequisite of the other measures. This is because satisfied customers will enable the firm to acquire new customers, retain existing customers, increase customer profitability, and, in turn, increase market share. The figure below shows how customer satisfaction affects financial performance (Kaplan and Norton 1996). Their study shows that customer satisfaction will eventually increase a firm's market share through the acquisition and retention of customers.

In this paper, the paper found that pricing, reliability, and responsiveness are the factors in the customer satisfaction dimension that have a direct impact on the loyalty and also the acquisition of new customers to the retailers. Practical saying, Vietnamese consumers will consider the reasonability in pricing and the trustworthiness in the provider the most. The pricing and responsiveness aspects have the same explanation above, while reliability is also an important consideration since there are frauds in products and services nowadays. Furthermore, customers often opt for retailers who deliver the products, services more promptly. To conclude, the paper only rejected hypothesis H7, while other hypotheses H1, H2, H3, H4, H5, and H6 are proved to have a relationship with some or all of the aspects in firm performance.

6. Conclusion and recommendations

Along with the increasingly strong competition in the business environment, learning about customer needs, customer satisfaction and how does it affect firm performance becomes more necessary and therefore all the more research help for the implementation of more effective managing activities as well as complete development of the technology industry in

general. The present study attempted at synthesizing the literature on customer satisfaction to develop a conceptual model which theories about the determinants of firm performance of technological devices retailers. Nevertheless, based on the empirical results, this study concludes that profitability, growth, and customer retention/acquisition in the firm performance dimension are all positively affected by the independents' variables of customer satisfaction. Through multiple linear regression and hypothesis test methods, the paper was able to determine the factors of customer satisfaction that the retailers should be focusing on the most if they want to increase their business statistics. The impact of customer satisfaction on all factors of firm performance in the research model is checked. Among all factors, only the factors of pricing and responsiveness are significantly affected on all three dimensions of firm performance: profitability, growth, and customer retention/acquisition. Furthermore, pricing seems to transcend all other factors in customer satisfaction, with a higher coefficient value in the regression equation. In practical saying, the research outcome may intersect with the fact that Vietnamese consumers are price-sensitive, as they tend to compare the price and always opt for the lower ones. Responsiveness is also backed with Vietnamese consumer behaviors, as the market of technological devices is getting saturated and the competition is fierce, the customers will always opt for the retailers who can provide prompt service and prompt feedback since they have more choices of purchasing place nowadays. A late response will cost a firm a sale to the competitor's hand.

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EFFECTS OF JOB CHARACTERISTICS TO EMPLOYEE MOTIVATION IN VIETNAM JOINT STOCK COMMERCIAL BANK

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Abstract

Joint stock commercial bank (JSCB) is a credit, money exchange institution which has the main function of receiving and refunding deposits of customers and using it to customers lending, discount and payment operations. The use of labor in JSCBs in Vietnam has currently not been really effective, as a result, many employees in JSCBs quit or move from a bank to another, especially those who are good staff. Many bank employees are not dedicated to work towards the bank's goals. Deriving from the relationship between the theory of job characteristics and work motivation, this article has applied Hackman & Oldham's job characteristics model, surveyed 901 employees in 15 different JSCBs. The paper shows the influence of the factors in the model on work motivation and performance results of employees in JSCBs. This paper has also indicated that there are four main core characteristics that positively affect the employee motivation JSCBs: variety of skills, job significance, autonomy, feedback; and employee motivation also positively affect their job performance.

Keywords: *Motivation, job characteristic, commercial bank.*

Motivation is a driving force behind all actions of people (Steer & Porter, 1983). Employee motivation are organizational policy to enhance employee efforts and willingness to work to achieve the organization objectives.

Employee motivation has an important contribution to improving productivity and employee satisfaction which are the major concerns of managers at all levels. According to the content approach to studying motivation, while factors related to working environment are hygiene, only contributing to reducing dissatisfaction of employees, retaining them, these factors directly related to the nature of job have a decisive impact in motivating employees to willingly increase their efforts to achieve the organizational goals. Therefore, it is a great significance to study the influence of job characteristics on employee motivation at Vietnamese joint stock commercial banks. The paper's result support for proposing solutions in redesigning jobs to improve working motivation for bank employees.

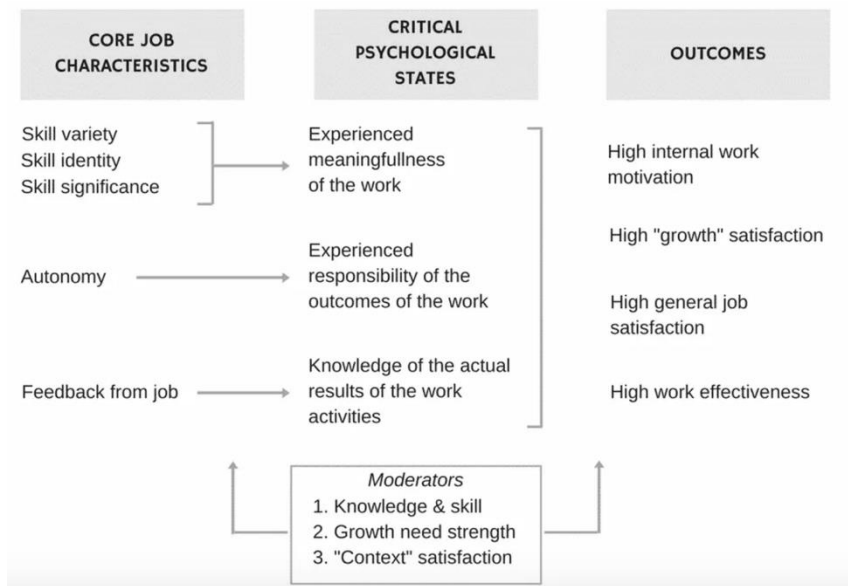
1. Theoretical background and hypotheses

1.1. Theoretical background

Hackman and Oldham built and developed a job model characteristic (JMC) in 1976. The JCM model contained the job characteristics that affected employee's performance of job as well as their psychological state - a factor that moderates the relationship between job characteristics and outcomes. The hypothesis given in the JCM model was that job characteristics factors made workers consciously think and feel about their work, such as taking responsibility for their work, knowing how well they were doing and thinking it as a meaningful job, and it was these conscious thoughts and feelings that led to personal and work outcomes, for example, work satisfaction and work performance (George, 2009). Five characteristics of the work proposed by Hackman and Oldham (1976) were: (i) skill variety; (ii) task identity; (iii) task significance; (iv) autonomy; and (v) feedback.

Proposed four decades ago, the job characteristic model (JCM) of Hackman and Oldham's (1976) has still contributed and had a great influence on the theoretical basis of job design. Hackman and Oldham's (1976) JCM model explains the job's characteristic of increasing intrinsic work motivation, implying that: "workers try to do a good job simply if they feel good mood when they perform their work and feel bad mood when they do not want to do it, because of the promise of rewards or prospects (Oldham & Hackman, 2010, p. 464). The JCM model also specifies the conditions under which employees have intrinsic motivation to perform work. In the study of Hackman and Oldham (1976, p. 256), the first part of the model explains five dimensions (skill variety, skill identity, skill significance, autonomy and feedback from job) affects the "three psychological states" as follows: (1) "skill variety", "skill identity", "skill significance" impact on "experience meaningful of work", (2) "autonomy" affect to "experienced responsibility of the outcomes of the work" (3) "feedback from job" leading to "knowledge of the actual results of the work activities". These three psychological states affect four "personal and work outcomes": intrinsic motivation, job performance, job satisfaction, low absenteeism and turnover rate. Finally, "Growth needs" is a variable which moderate: (1) the relationship between the "core job characteristic" and "psychological states", (2) the relationship between "psychological states" and "personal and work results". Thus, the hypothesis in the JCM model is job characteristics factors influenced employee that they "consciously think and feel certain things about their job (e.g feel responsible or accountable for their work, know how well they're doing and think it's meaningful), and these conscious thoughts and feelings lead to their personal results. employees and jobs (e.g job satisfaction and job performance)" (George, 2009).

Hackman & Oldham proposed JCM model and work motivation as below:



Source: Hackman & Oldham (1976) in *Organizational behavior and human performance*

Since the JCM model was introduced, many studies have tested JCM assumptions such as Alder (1991), Dodd and Ganster (1996), Arce (2002) Loher et al. (1985), Love and Edwards (2005). Alder (1991) find out that the system which provide employee job that are skill variety, significant, autonomy and feedback at high level will have satisfied and highly motivated employee. Dodd and Ganster (1996) test the relationship between feedback, autonomy, variety by maximize these factors laboratory room. House et al (2001) concluded that there is a positive relationship between job characteristic (skill variety) and employee motivation. Arce (2002) point out extrinsic reward are affected by intrinsic productivity. Loher et al (1985) found the relationship between job characteristic and employee motivation and satisfaction, these relationships is stronger with employee who have higher “growth need strength”. In the study of Morrison et al (2005) finding, job design which control employee at high level increase the opportunity to develop and practice skills. Love and Edwards (2005) concluded the job need, job control and organization support which are provided by job design with lead to high productivity. Sokoya (2000) recommend that the employee job satisfaction is identify by job characteristic and personal traits; job rotation will enhance the task and skill varitety, thus improve the employee performance. In Bassey (2002) research, skill variety, task identity, task significance, autonomy and feedback, job security salary are important factors affecting employee motivations. In a meta-analysis of 677 articles, Humphrey, Nahrgang and Morgeson (2007) strongly support for a positive relationship among the five core job dimensions and “job performance” (“job satisfaction”), “intrinsic motivation” and “work results”), with “low absenteeism and turnover” being the only exception. Next, the authors confirmed the simultaneous moderating role of three important psychological states between the four core job dimensions (“multi-skill work”, “tasks identification”, “job significance” and “work autonomy”) with work results. However, the

“psychological states” of employees are not mediators of the relationship between “work feedback” and “work results”. The moderating effect of “growth needs” is decreasing its importance in studies of job characteristics models. A few studies show a weak impact of the control variable "growth needs". They are the studies of Fried & Ferris, 1987; Johns et al., 1992; O Muffbrien, 1982; Tiegie et al., 1992. Therefore, the JCM model is often empirically tested and considered valid without including the control of “growth needs”. Thus, the JCM model and its components have been strongly tested by many studies, except for controlling for "growth needs". So this model is widely used in many researches. Based on the original model of Hackman and Oldham (1976), the authors apply core job characteristics in JCM to the real context of motivation assessment.

1.2. Research model and hypotheses

1.2.1. Hypotheses

Hypothesis 1. Skill variety has a positive effect on employee motivation at JSCBs.

Skill variety is the degree to which the job requires a variety of different activities, so the worker can use a number of different skills and talents. The more variety of the job is, the higher the employee motivation is. (Alder, 1991; Dodd và Ganster, 1996)

Hypothesis 2. Task identity has a positive effect on employee motivation at JSCBs.

Task identity is the degree to which the job requires completion of a whole and identifiable piece of work. The higher the task identity is, the more motivation employee has at work. (Arce, 2002; Loher et al, 1985)

Hypothesis 3. Task significance has a positive effect on employee motivation at JSCBs.

Task significance is the degree to which the job has a substantial impact on the lives or work of other people. The more significant the task is, the higher the employee's motivation is. (Dodd and Ganster, 1996; Arce, 2002; Loher et al, 1985; Love and Edwards, 2005)

Hypothesis 4. Autonomy has a positive effect on employee motivation at JSCBs.

Autonomy is the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and determining the procedures to be used in carrying it out. The more autonomy the task has, the more motivation the employee has at work. (Alder, 1991; Dodd và Ganster, 1996)

Hypothesis 5. Feedback from job has a positive effect on employee motivation at JSCBs

Feedback is the degree to which carrying out the work activities required by the job results in the individual obtaining direct and clear information about the effectiveness of his or her performance. (Dodd and Ganster, 1996; Arce, 2002; Love and Edwards, 2005)

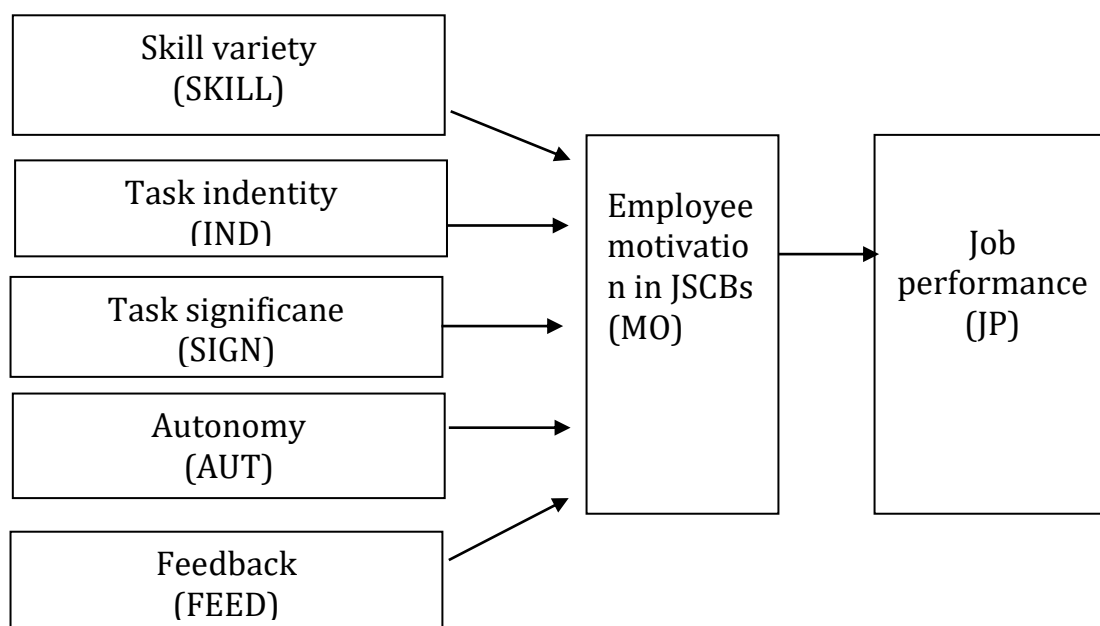
Hypothesis 6. Employee motivation has a positive effect on the job performance at JSCBs.

Motivation is a willingness to demonstrate a high degree of effort to achieve the JSCBs’ goals. Job performance is the employee working completion in comparison with their KPI that is assigned by the bank. The higher the employee motivation, the higher job performance results. Especially in the context of fierce competition in the banking industry to attract and keep customers, employees play a very important role in attracting customers while working conditions, and the product strategy does not have much different.

Based on literature review and hypotheses design, we have the research model, below:

1.2.2. Research model

Figure 2. Research model



Source: Authors’ research

2. Research methodology

This research uses quantitative method (survey with questionnaire). Quasi-random sampling with strategy sampling method was chosen for the questionnaire survey because quasi- random sampling provides a good approximation to random sampling, necessitates the existence of a sampling frame. Stratified sampling is the best method of choosing a sample in many situations. The population must be divided into strata and categories. In the survey, researchers divided the population by JSCB of different capital and owner. In each bank, the population is divided by staff who are working in different positions at staff level and manager in different branches. In the bank, staff position can be classified by 2 main groups: back officer and front officer/ sale. Front or sale staffs are employee who contact directly with customer to consults, sale bank’s products, take care and doing customer services. Back staff are employee who support sale staff and customer in completing Loan appraisal documents , or employee working in head office, in charge of human resource, accounting,

budgeting and strategy, treasury....

We sent out 1000 questionnaires and received 901 completed responses. The sample size is 901 respondents (which represented 15 JSCBs joining this survey) met the sampling size requirement of Hair et al. (1998), Tabachnick and Fidell (1996). This research applied SPSS 22 and AMOS 22 to analyse data.

Table 1. Research sampling descriptive statistic

	Dimension	Respondents	Percentage (%)
	Bank		
1	BIDV	106	11,8%
2	Techcombank	94	10,4%
3	MB bank	90	10,0%
4	Seabank	84	9,3%
5	Sacombank	75	8,3%
6	ACB bank	69	7,7%
7	ABB bank	65	7,2%
8	Vietcombank	58	6,4%
9	Vietinbank	50	5,5%
10	South Asia bank	45	5,0%
11	VP bank	42	4,7%
12	Tienphong bank- TPB	38	4,2%
13	VIB bank	29	3,2%
14	NCB bank	28	3,1%
15	PGB bank	28	3,1%
	Position		
1	Back staff	205	26,8%
2	Front staff	478	63,1%
3	Manager	75	10,1%
	Age		
1	<25	206	22,9%
2	25-30	390	43,3%
3	30-35	170	18,9%
4	35-40	88	9,8%
5	>40	47	5,2%
	Total	758	100

Source: Authors' research

In the collected sample, the Bank for Investment and Development of Vietnam (BIDV) has the highest number of respondents (106) and the Petroleum bank (PVB) has the lowest number of surveys (28) which are consistent with the size of their capital and assets. The gender structure in which 64.8% of respondents is female and the other male is also consistent with the general gender structure of the banking industry which approximately 70% is female. With the development of the banking sectors in the past 15 years, the average age of banking staff is quite young, thus, the 25-35 age group have the highest percentage while the group higher than

40 is the lowest. Position structure are 63.1% front staff, 26.8% back staff and 10% manager.

All instruments will be adopted and adapted from literature with some amendments to fit this study. Variables’ measurement and the sources can be summarized in the table below:

Table 2. Instruments

Variable	Instrument	Source
Skill variety (SKILL)	SKILL1. Opportunity to use a variety of skills SKILL2. Opportunity to use my abilities SKILL3. Opportunity to do different task	Hackman và Lawler (1971), Warr et al (1979)
Feedback (FEED)	FEED1. Recognize my job performance by the supervisor FEED2. The opportunity to find out how well I am doing in my job	
Task identity (ID)	ID1. The opportunity to do a job from the beginning to end ID2. The opportunity to complete work I start	
Task significance (SIGN)	SIGN1. The feeling of doing significant task SIGN2. The opportunity in my job, to give help to other people	
Autonomy (AUT)	IND1. The opportunity for independent thought and action IND2. The freedom to decide what I want in doing task IND3. The freedom to choose my own method of working	
Employee motivation (MO)	MO1. I often think how to do the job better MO2. I feel down when I do my job not well MO3. I take pride in doing my job as well as I can MO4. I ‘m always eager with my job MO5. I’m ready to work earlier/later to complete my job MO6. I often try my best to complete my job even met difficulties MO7. I use my great effort to complete my job to achieve my bank’s objectives MO8. I like to think about the day I do my job well	Lawler and Hall (1970), Hackman and Lawler (1971) Nguyễn Thị Kim Dung (2016), Stee and Porter (1983) , Mitchell et al (1997). Write (2004)
Job performance (JP)	JP1. Complete the work quantity JP2. Complete the work quality JP3. Complete the work ontime JP4. Cooperating and shouldering extra load JP5. Follow the legislation when working JP6. Consult extra issue for customer JP7. Followed the bank’s regulations when working JP8. Followed the legal requirement when woking	Arvey, R. D., & Mussio, S. J. (1973) and authors suggested

Source: Authors’ research

3. Research results

3.1. Reliability test

Firstly, all measurements of key variables are run with a reliability test. Variables with values for Cronbach's Alpha > 0.6 and item-total correlation coefficients of the variables are > 0.3 are reliable

After analyse Cronbach's Alpha for 901 observations, research model includes 8 variables: The “skill variety” is measured by 3 items SKILL 1, SKILL 2, SKILL3; The “feedback” is measured by 2 items FEED1 and FEED2; the “task identity” is measured by 2 items ID1, ID2, The “task significance” is measured by 2 items SIGN1, SIGN2, the “autonomy” is measured by 3 items AUT1, AUT2, AUT 3, The “employee motivation” is measured by 6 items from MO1 to MO8, and “Job performance” is measured by 8 items from JP1 to JP8.

Table 3. Cronbach alpha analysis results

Items	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Skill variety			
SKILL1	.652	.764	.815
SKILL2	.717	.699	
SKILL3	.637	.777	
Feedback			
FEED1	.487	.	.648
FEED2	.487	.	
Task identity			
ID1	.492	.	.652
ID2	.492	.	
Task significance			
MEAN1	.533	.	.694
MEAN2	.533	.	
Autonomy			
AUT1	.658	.718	.801
AUT 2	.706	.665	
AUT 3	.582	.800	
Employee motivation			
MO1	.597	.869	.879
MO2	.543	.875	
MO3	.701	.858	
MO4	.642	.864	
MO5	.590	.870	
MO6	.708	.858	
MO7	.683	.860	
MO8	.699	.858	

Items	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Job performance			
JP1	.590	.896	.900
JP2	.729	.884	
JP3	.724	.884	
JP4	.706	.886	
JP5	.687	.888	
JP6	.693	.887	
JP7	.710	.885	
JP8	.656	.890	

Source: Authors' research

3.2. Test hypothesis using linear regression

Table 4: Correlation coefficient

		SKILL	FEED	ID	SIGN	AUT	JP
MO	Correlations	.456**	.419**	.372**	.464**	.537**	.554**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.009
	N	120	120	120	120	120	120

Source: Authors' research

There is a correlation between SKILL, SIGN, ID, AUT, FEED with MO and between MO and JP. To test the 6 hypotheses, researchers apply linear regression between SKILL, SIGN, ID, AUT, FEED and MO; MO and JP. However, there are correlations among independent variables, hence there should be a revisit of the role of the independent variables on the multivariate regression model by looking at the effect of each variable on the dependent variable (Trọng & Ngọc, 2008). The authors also investigated the phenomenon of multicollinearity, the results show that there is no multi-collinear phenomenon (tolerance and VIF are satisfied)

– Test hypothesis 1, 2, 3, 4, 5.

The results show that the feedback (FEED), skill variety (SKILL), the task significance (SIGN), the autonomy (AUT) have a p-value coefficient smaller than 0.05, standardized beta is positive, proving that these factors have a positive impact on employee motivation (MO) at the significance level of 0.05. Looking at the standardized beta coefficient results: skill variety (SKILL) has the strongest impact on the employee motivation, with the standardized beta of 0.252; descending impact is task significance (SIGN- 0.178), autonomy (AUT-0.178), feedback (FEED-0.151).

The coefficient of determination measures the impact of the independent variables on the dependent variable "employee motivation" is 0.54, proving that the independent factors in the model can explain 54.0% of the variation of the “employee motivation” factor in JSCB. In social science research, especially in the study of factors affecting the dependent variable, the determination which is greater than 50% is acceptable.

The phenomenon of multi-collinearity results show that there is no multi-collinear phenomenon (tolerance and VIF are satisfied).

Table 5. Linear regression results (MO is dependent variable)

R	R Square	Adjusted R Square	SE of the estimate	Durbin-Watson
.737 ^a	.543	.540	.43420	1.846

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	SE	Beta			Tolerance	VIF	
1	1	1.486	.105		14.115	.000		
	SKILL	.214	.028	.252	7.580	.000	.934	1.068
	FEED	.114	.029	.151	3.957	.000	.629	1.589
	ID	.012	.033	.014	.365	.715	.589	1.696
	SIGN	.151	.034	.178	4.468	.000	.554	1.804
	AUT	.158	.037	.178	4.316	.000	.507	1.972
a. Dependent Variable: MO								

– Test hypothesis 6

Table 6. Linear regression results (JP is dependent variable)

R	R Square	Adjusted R Square	SE of the Estimate	Durbin-Watson
.554 ^a	.307	.306	.46801	1.749

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	SE	Beta			Toleranc	VIF
Constant	1.740	.115		15.191	.000		
MO	.569	.029	.554	19.943	.000	1.000	1.000
a. Dependent Variable: JP							

Source: Authors' research

The results shows that the sig coefficient of work motivation variable (L) is less than 0.05, meaning that this variable has a statistical impact on the work performance variable, hypothesis 6 is accepted, the coefficient is VIF equals $1 < 2$, meaning that there is no multicollinearity in the model.

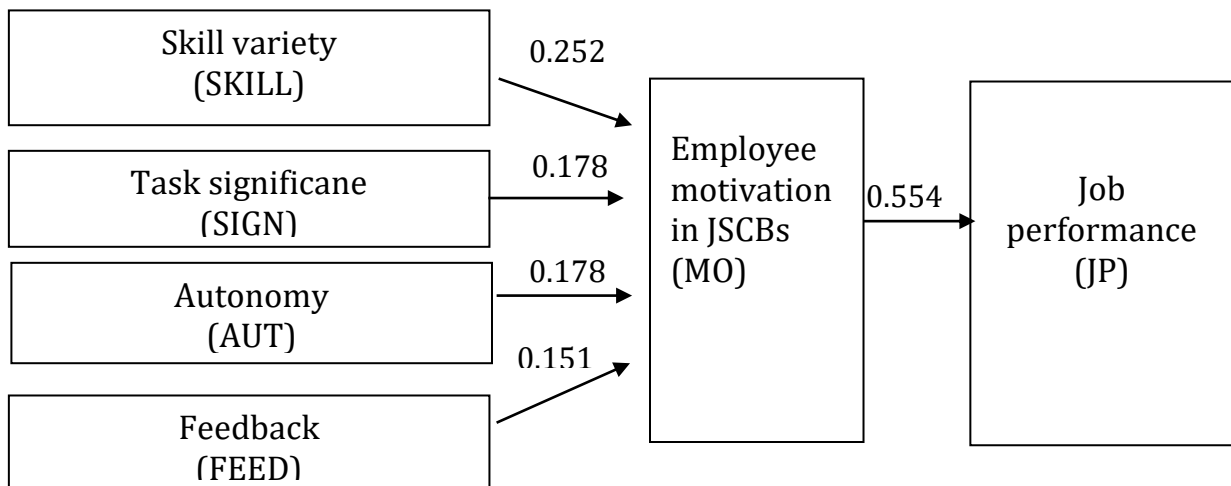
On the other hand, R-squared of the model is 0.36, showing that dynamic variation explains 30.6% of variation in job performance, which is an extremely significant statistic

because job performance is affected by many factors, in which the motivation factor explains 30.6% of job performance. A beta coefficient 0.554 explains that when motivation increases by 1 unit, work performance increases by 0.554 units.

Table 7: Results of hypothesis testing

No.	Hypotheses	Conclusion
1	H1: Skill variety has a positive effect on employee motivation at JSCBs.	Accepted
2	H2: Task significance has a positive effect on employee motivation at JSCBs.	Accepted
3	H3: Task identity has a positive effect on employee motivation at JSCBs.	Rejected
4	H4: Autonomy has a positive effect on employee motivation at JSCBs.	Accepted
5	H5: Feedback from the job has a positive effect on employee motivation at JSCBs	Accepted
6	H6: Employee motivation” has a positive effect on the job performance at JSCBs	Accepted

Figure 3. Research results



3.3. Employee motivation in JSCBs

Table 8: Employee motivation results.

Item	Mean	Std. Deviation
MO8	4.00	.812
MO2	3.84	.810
MO1	4.08	.740
MO4	3.93	.790
MO7	3.85	.805
MO3	4.12	.710
MO5	4.12	.706
MO6	4.10	.726
Mean	4.03	

4. Discussion and recommendations

The research results show that the current level of employee motivation in Vietnam SOCB is an average level with an average score of 4.03, equivalent to the response: "agree". The standard deviation is relatively low (<1) which proves that the working motivation of bank staff is quite consistent. The 5 highest score items which mean higher than 4 is MO8 (I like to think about the day I do my job well) MO6 (I often try my best to complete my job even met difficulties), MO5 (I'm ready to work earlier or later to complete my job), MO3 (I take pride in doing my job as well as I can), MO1 (I often think how to do the job better). Whereas MO7 (I use my great effort to complete my job to achieve my bank's objectives), MO4 (I'm always eager with my job) and MO2 (I feel down when I do my not well) have the average scores below 4, representing SOCBs employee intrinsic motivation is quite low.

The research also implied that applying a job characteristic model in researching employee motivation in JSCBs is significant. The R square is 0.54 means that this model can explain 54% the fluctuation of JSCBs' employee motivation. In social science research, especially in the study of factors affecting the dependent variable, the determination which is greater than 50% is acceptable because there are many factors that can affect one variable.

The study's results show that there are 4 core aspects of job characteristics which positively affect work motivation of the employees of JSCBs: skill variety, job significance, autonomy and feedback from job; employee motivation also positively affect job performance. These results are consistent with Alder (1991), Dodd và Ganster (1996), The task identity do not affect the employee motivation which are different with Bassey (2002).

Job promoting diversified skills is the strongest factor that impacts on the working motivation of the employees of JSCBs with a beta coefficient of 0.252. 1 unit increase in skill variety will increase employee motivation by 0.252 units. For example, in the position of sales staff, the job communicated with many customers to provide products with frequent updates, changes and improvements always requires sales staff to apply their diversified skills to get the job done, with support staff, the variety of products and customers also require them to flexibly apply different skills to perform the job well.

The importance or significance of the work; feedback, autonomy positively affects the working motivation of the employees in the JSCBs and the beta coefficient is 0.178, respectively; 0.151; 0.178. In four factors of job characteristics, Feedback at work has the weakest impact on the work motivation of employees of JSCBs with 0.151 beta coefficient.

The situation of work motivation and job performance of employees in JSCBs have a positive correlation. Work motivation explains 30.6% of the change in job performance. It is especially important and significant. In order to improve employees' skills, we have to invest much money and time to enhance equipment, and other inputs and the disparate departments require different effort. However, work motivation is not similar. Managers can decide

synchronous solutions that need little capital investment but result quick and wide outcome in numerous bank employees.

Thus, in order to enhance job performance, increasing work motivation is a solution that plays an extremely important role. In order to improve employee motivation in JSCBs through job design, managers need to boost the diversified skills needed in job performance through job rotation from one department to another and keep the same position, or from one position to another within the same department as well as from one position to another but another department. It will require employees to have diversified skills, contributing to improving the employees motivation. In addition, raising employees' awareness of their work's meaning and their contribution in bringing banking services to customers, helping customers to access credit service as well as other banking services. Payment and insurance services contribute to improving the quality of customers' life, not simply selling ordinary products. The bank also needs to build a better feedback system so that employees can know about their performance as well as their work quality in the process of working, thereby creating employees' motivation to improve their work as well as make more efforts when interacting with customers. This feedback can be provided directly from customers, direct managers as well as colleagues through organizational culture that encourages information exchange and sharing among employees in the bank; periodic feedback system covered all stages of work performance. The bank also needs to improve the level of authorization, creating conditions for employees to be more independent in deciding how to do work and make decisions in the framework of the bank's policies and regulations.

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GENDER DISCRIMINATION IN TECHNOLOGY COMPANIES: AN INSIGHT INTO THE EFFECTS OF PERCEIVED DISCRIMINATION ON WORK ENGAGEMENT

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Abstract

The presence of discrimination has become more pressing than ever along with the civilization of the work, especially in work context. This study is designed to study the relationship between perceived gender discrimination in the workplace (in three dimensions: Workload and Participation; Resource Access and Personal Communication) and work engagement in technology companies in Vietnam. Besides, the study also examined the moderating role of gender in the above relationships. Results indicate that there exist negative relationships between perceived gender discrimination behaviours and work engagement in two aspects: Workload & Participation and Resource Access, and no meaningful relationship between gender discrimination behaviours in Personal communication and the employees' work engagement. Second, data also shows that these relationships can be moderated by gender, where the relationship becomes weaker for men than for women.

Keywords: *gender discrimination, perceived discrimination, technology companies, work engagement, workload, participation, resource access, personal communication.*

1. Introduction

Gender equality has gradually been recognized as one of the crucial elements for sustainable growth and development of a business organization. Specifically, that men and woman employees have equal opportunities in developing their careers is becoming one of the key goals among companies nowadays (Flynn et al., 2017; Sharma, 2016). This derives from the belief in the past that women, who are now making a large part in the labour force with similar education and skills as men, has usually been left at a disadvantage.

Gender discrimination at work is mostly reported and perceived by female employees in different forms, including wages (to earn less than the counterparts doing same job), opportunities (small slights at work, to be passed over for important assignments), et cetera (Parker and Funk, 2017). This situation remains challenging as in Vietnam, and many other developing countries in general, women continue to be dominated by men in work, especially those with high income and self-development opportunities, and in various aspects: wages, power and status, for instance. Even when the situation, thanks to the laws and regulations,

seems less harsh and directed now than in the past, according to ILO and Navigos Search (2015), whether the discrimination has already been eliminated or reduced remains unclear.

Moreover, as a developing country, Vietnam may not be able to eliminate patriarchy from societies. The situation may remain worse in certain male-dominant industries, including information technology sector. For instance, in one of the leading technology companies in Vietnam and recognized as the most favourable working environment – FPT Software, the gap was quite remarkable where the male employees roughly double their counterparts with 63.7% are men for total human resources (FPT Software, 2020). Although people are aware of gender norms and inequality, the changing progress is quite slow with tremendous consequences, especially when women have limited access to decision-making positions. Not only will this demotivate women to devote and contribute at their best, but the organization may also not be able to maximize their potentials in the market (Chang and Milkman, 2020; Cohn, 2019). Therefore, it is necessary to dive into the core of these gender-based biases to understand and eliminate discrimination, hence promote equality and diversity in the IT business.

By conducting this research on gender discrimination in the workplace, it is expected to achieve three objectives. First, it would give an insight into how people perceive their gender-based discrimination through behaviours at work in three aspects: (1) Workload and participation, (2) Resource Access and (3) Personal Communication. Second, it studied the level of work engagement of employees in the company. Lastly, the research aims to investigate the effects of these perceived discrimination on employees' work engagement (of both genders). With those findings, the business can gain deeper understanding about discrimination in the workplace, hence, probably potential solutions to tackle the problems.

In terms of research scope, the study solely based on perceptions of employees, which means the viewpoints of employers are excluded. This may generate new perspectives for employers and companies on whether their actions (intentionally or unintentionally) create discriminatory perceptions and effects on work engagement. For data collection process, private online survey is used with informed consent and confidentiality of participants.

2. Hypotheses development

Equality and diversity in the workplace have become one of the main goals in most companies and organization now. In diverse workforce, employees can feel like they are the exclusion – not an integral part of the organization, maybe from job opportunities, information networks as they are considered to be a member of a minority or disfavoured group (Mor Barak, 2016). In order to limit these situations, it is required that companies give equal chances and opportunities for all, while ensuring each individual having the chance to contribute and achieve their potential (Hideg and Ferris, 2016). Not only does this mean that companies must eliminate prejudice and discrimination factors but also to actively encouraging them for open positions. This research will, therefore, study perceived gender discrimination in the workplace, specifically in three aspects: Workplace and participation, Resources access and Personal communication; and its relations with work engagement.

2.1. Gender inequality and discrimination

Gender discrimination in the workplace is defined as a situation where a person is treated unfairly comparing to other members of the group. These situations and decisions are solely based on the genders of members, rather than other characteristics like qualification or job performance (Cohn, 2019; Ngo et al., 2002). Specifically, in majority-male workplace, women are reported to be less likely to be treated fairly (Parker, 2018). Meanwhile, in Vietnam/Asia, the situation is a little bit more positive, where gender equality has become an important goal and criterion in “assessing the development of a society and sustainability of an economy” – has gained much improvement over the years (Chi, 2018). Women now account for about half of the country’s workforce, although in technology firms, the differences were still great for certain departments like IT department (Nga, 2019).

These differences in the workplace can take place in various dimensions, ranging from hiring salary and wages to promotion or provided facilities (Parker, 2018; Hameed and Waheed, 2011). They believe that men have significantly more benefits than women in the workplace, as they received more payments for the same jobs as women, et cetera. The similar viewpoints were shared by other authors, like women cannot do the same job-related tasks as men (IFC, 2017), women faced discriminatory problems in promotion, work allocation, etc. (Tiwari et al., 2018). However, many debates are still taken place about whether there are “hidden qualification or merit considerations” that can explain the differences that superficially seem discriminatory (Cohn, 2019).

2.2. Work engagement

In the work context, work engagement (WE) has long been one of the most appealing research topics. It was first proposed by Kahn in 1990 that personal engagement happens when “people bring in or leave out their personal selves during work-role performances” (Truss et al., 2013). He analysed work engagement in three aspects: physical, emotional and cognitive. Specifically, physical engagement is the willingness to “go the extra mile” for the employer; emotional engagement refers to affective involvement in one’s work; and cognitive engagement means focusing hard whilst at work (Sia et al., 2015). Besides Kahn’s need-satisfying theory, there are three other major approaches, including Maslach et al. (2001) burnout-antithesis perspective; Harter, Schmidt and Hayes’ (2002) satisfaction-engagement approach; and Saks’s (2006) multidimensional view.

In this study, the researcher will mainly use questions from the UWES-9S, which was developed in 2002 (Schaufeli et al., 2002). The measure of engagement is the Utrecht Work Engagement Scale (UWES), several items was confounded engagement with antecedent conditions. This scale consists of 17 items, divided into three parts for vigour (“levels of energy and mental resilience while working”), dedication (“being strongly involved in one’s work”) and absorption (“being fully concentrated and happily engrosses in work”) (Schaufeli, 2017). However, a short version of UWES, consisting of 9 items will mostly be used in this

study (Schaufeli and Bakker, 2004). These items were selected and developed based on the significance levels from the study of the team.

2.3. Perceived gender discrimination in workload & participation (WP) and Work engagement (WE)

Workload is widely understood as the amount of work or work units assigned over a given period, which can be classified as quantitative (the amount of work to be done) or qualitative (the difficulty of the work) (Jex, 1998). In various studies, workload has been linked to strains like anxiety and physiological reactions like fatigue, backache or headache (Ganster and Rosen, 2013).

In a study of gender-based discrimination face by females in the workplace, women perceived their work as easier than their male colleagues, less workload and fewer opportunities for development as well (Tiwari et al., 2018). When they participate in projects, women are more likely to be asked for taking “non-promotable” tasks (Babcock et al., 2017). These tasks are defined as being able to benefit the organization but do not contribute to one’s performance evaluation, including office “housework”, filling in for a colleague, mainly routine tasks that does not require much skill or impacts (Babcock et al., 2018). Even when authors like Cohn (2019) argue that these differences are justified as it based on the characteristics of the work, there remains arguments about whether these ideas of the mentioned characteristics are also perceptions or another kind of prejudices that people have, resulting the gender discrimination situation in the workplace (Parker, 2018).

Several studies pointed out that women who perceived gender discrimination in their job assignments, including workload and participation, will gradually reduce their interest in their current job (Tiwari et al., 2018; Sia et al., 2015). When studying the significance of workload and participation at work to employees, it showed that this is also considered as an existential fulfilment needs of individuals, whose absence may cause disruption at work (Tomic and Tomic, 2010).

By experiencing job challenges, employees are found to have higher work engagement (Courtright et al., 2014). Especially for those who desire achievement and self-development, by allowing and assigning them different tasks through job enlargement or job enrichment techniques, they would have more motivation to work, which partly show their interest in work – a part of work engagement. In contrast, if they think they do not contribute much, or that they do not have the chances to participate in work, employees will be more likely to have tension and feel bored of work, which directly affect their work engagement (Mullins, 2010).

H₁: There is a negative relationship between perceived gender discrimination in workload & participation and Work engagement

2.4. Perceived gender discrimination in Resource access (RA) and Work engagement (WE)

Resources are defined as stocks or supply of money, materials and other assets that are required for a person or an organization in order to function effectively (McConnell et al, 2011). In a more specific term, they can take forms of appointment, promotion or training & development programs (Hameed and Waheed, 2011). These programs are designed for participants to develop their skill and knowledge and work more efficiently (for instance, finish tasks in shorter time with high quality). The access to resources as above is particularly essential for self-development and career advancement of women (Steyn and Jackson, 2015). If women have equal access as men to these resources, they will have higher opportunities to not only develop themselves but also to contribute more to the companies and society in general.

Other aspect besides career advancement is payment. Women are likely to participate in more vulnerable jobs and were estimated to receive roughly 50% of men's wages in the informal sector (DFAT, 2016). The gap between male and female was significant, for instance, 25% of employed women said they earned less than the other, comparing to only 5% of male participants, found in a research of Pew Research Center (Parker and Funk, 2017).

Consequently, without feeling fair in receiving pay for the same job, they would feel stressful or fatigued, which leads to several negative impacts like working and contributing less (changing inputs) than their ability (Hofmans, 2012). By feeling tension, which can be boredom and even anger, and changing one's inputs, the employee may affect all three dimensions of work engagement as defined above. In contrast, without being denied for superior leadership positions and get access to higher education or training that help them develop skills, experiences and knowledge, women can enhance their self-confidence in achieving and controlling leadership positions instead of causing dissatisfaction (Mullins, 2010).

H₂: There is a negative relationship between perceived gender discrimination in resources access and Work engagement.

2.5. Perceived gender discrimination in personal communication (PC) and Work engagement (WE)

Personal communication is a crucial part of organizational communication, which involves exchanging personal information ideas and feelings, especially in the context of internal communication (happening within the organization) like between employees and managers or colleagues (Leonard, 2019). Most often, communication is based significantly on one's perceptions of another, which may leave room for discrimination and biases to arise.

The study of Tiwari and colleagues (2018) also pointed out discrimination based on gender stereotypes and prejudices have the most influences on employees' personal communication. Some factors included in the research are "promotion is done on favouritism", "male colleagues feel jealous from female and play politics" or that women "feel being discriminate at the workplace because I am female". Stated by Mor Barak (2016),

this problem we are facing is social exclusion – the perception that being implicitly or explicitly excluded and are subjects to stereotypes threat, hence low self-esteem, hopelessness, depression and heightened stress responses.

Some authors believe that this gender discrimination activities can be explained from the perspective of the social psychology theory. Steyn and Jackson (2015) stated that the most important theory here is social identity theory, supported by Schmitt et al. (2014) and Turner and Reynolds (2004), where the perceptions of gender discrimination at workplace are the consequences of the contrast one's own group towards another, then develop a favourable bias towards their own group. This may explain why men tend to employ men, as well as women employ women, but in the case where the gender gap in managerial positions are already significant, these action then can contribute much more to the differences.

Generally, studies show that employees, especially women, face gender-related difficulties at work will also bear a burden that leads to stress and negative emotions (Ravichandran et al., 2011). Tiwari et al. (2018) also pointed out that these perceived discriminatory issues resulted in anxiety, tension and panic attack at work for women, which can possibly reduce their interest at work. In another word, employees who experienced discriminatory policies and practices in organizations are found to have low job satisfaction and organizational commitment (Channar et al., 2011).

Other studies agreed with the idea of discrimination in daily communication can cause stress and other mental health issues, while also generating ideas of sex stereotypes can increase the tension in communication (Steyn and Jackson, 2015; Harter et al., 2002). They suggested statements that are gender-based like women cannot balance work and personal life, or that they are not competent and should stay at home to do housework. These ideas have been criticized a lot in equality movements in recent decades, however, there may remain core beliefs and perceptions of both employers and colleagues which are not fully eradicated. Some symptoms may lie in the daily conversations like sexist jokes, or in being ignored when it comes to recognition and rewards.

H₃: There is a negative relationship between perceived gender discrimination in personal communication and Work engagement.

2.6. Moderating role of Gender in relationships of perceived gender discrimination and Work engagement

It is assumed that gender plays a significant role in the relationship between perceived gender discrimination and work engagement, especially in the context of a male-dominant industry – which is a typical characteristic of most technology companies in Vietnam. As men and women have different mindsets and experience, partly because of the lack of knowledge about feminism and equality movement, men – as the dominant group, even when they feel being discriminated, may react less intensely. They believe that companies would not let the majority group suffer without any improvement to the issue or any trade-offs (money, etc.),

as it is expected that the company would want to retain their employees or to follow their business ethics like utilitarianism (which aims for the pleasure and betterment of the greatest number of people in society/group) (Laczniak and Murphy, 2019). Accordingly, their orientation to work and engagement to it should be different.

Besides, it is observed that most studies and research focus on perspectives of female employees, while it is possible that male employees also receive discrimination due to the affirmative actions of employers and companies with an attempt to create a more beneficial environment for female employees (Cohn, 2019). In recent decades, when feminism movements are getting more and more powerful with the goal of gaining equal treatment, it is possible for some people to acknowledge this as to give women better opportunities than men, especially with the affirmative actions. Therefore, it is possible that those who still keep a patriarchal state of mind, or getting used to receiving unfair biased treatment, fear that their position is threatened by the affirmative actions – which should assist the oppressed group and levelling the field.

This results in mixed reactions of the two group. In some cases, women who perceive gender discrimination may either choose to leave or to stay and prove herself instead, even increasing her work engagement, especially vigour and dedication, since it is possible that other workplace also have inequality – an unavoidable situation unless they fight against it. Meanwhile, for men who perceive inequality as insecure will engage in collective behaviours aimed at protecting privilege, which cause intergroup conflict and reconsider his choices of working as men generally receive more advantages and less discriminate than women at work (Schmitt et al., 2014). Therefore, men can consider changing workplace to a better environment with plenty of options – which result in lower engagement, while women may result in higher level as explained.

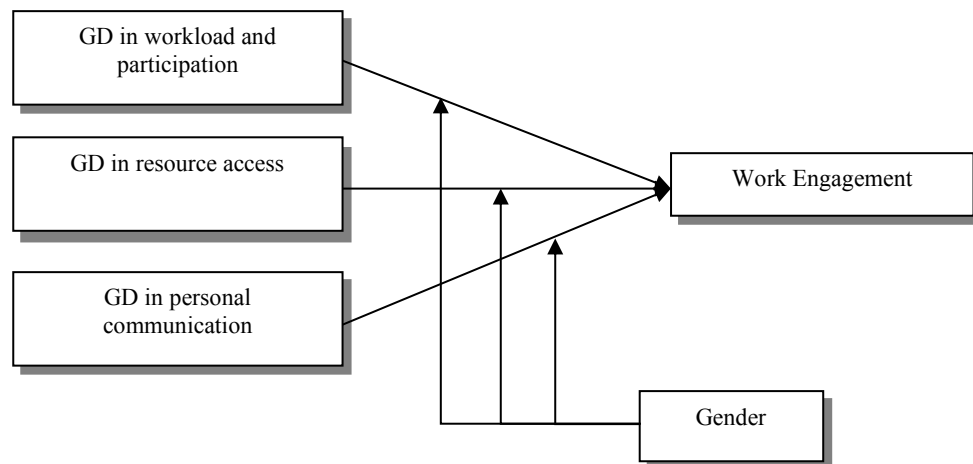
H₄: Gender moderates the relationship between perceived gender discrimination (GD) (4a: Workload and participation, 4b: Resource access and 4c: Personal communication) and Work engagement (WE) such that the relationship becomes weaker for men than women.

3. Methodology

3.1. Research Model

The model is built based on two main research: Tiwari et al. (2018) for perceived gender discrimination in Workload & Participation, where the factors for perceived gender discrimination in resource access and perceived gender discrimination in personal communication were based on the research of Steyn and Jackson (2015). The idea of dividing gender discrimination into aspects and examining its relationship with work engagement was introduced by Sia et al. (2015). All the three research emphasized the difference between male and female responses.

Figure 1: Framework for Perceived gender discrimination and Work engagement



3.2. Methodology

The present study adopted the deductive approach to test the hypotheses above for theory falsification or verification. In terms of research strategy, the research will gather information and data from participants using survey (online questionnaire). First, the researcher will contact and send the questionnaire to the representative via emails and messages, where online questionnaires (designed using Google Forms) is sent to participants. The questionnaire was presented in English and Vietnamese with back-and-forth translation for correspondence confirmation. Moreover, this study applied snowball sampling method – a non-probability group where instead of having a sampling frame, the researcher will initial contacts with participants and ask them to identify further cases. These participants are volunteered as subjects, not chosen by the researcher herself. The recruitment will only stop when there are no further cases introduced or the sample is large enough. Although there is limitation like possibilities of relative low representativeness – which had been dealt with carefully in the process of choosing initial participants, it is the most suitable in the context of the epidemic Covid-19 where people all work from home and difficult to get access to the whole population.

Specifically, the main subjects in this study were non-managerial employees working in different technology companies in Hanoi, including FPT Corporation, VNG Corporation, VNPT Technology and others. The sample size was 355 participants in total. There would be one dependent variable (Y1: Work Engagement) and three independent variables (X1: Perceived gender discrimination in Workload & Participation, X2: Perceived gender discrimination in Resources Access. and X3: Perceived gender discrimination in Personal Communication) and one moderating variable as Gender.

Table 1: Variables

Variables	Types	Items	Measurement	Sources
GD in Workload & Participation	Independent	4	Rating (Likert Scale)	Tiwari et al., 2018
GD in Resource Access	Independent	4	Rating (Likert Scale)	Steyn and Jackson, 2015
GD in Personal Communication	Independent	5	Rating (Likert Scale)	Steyn and Jackson, 2015
Work Engagement	Dependent	5	Rating (Likert Scale)	Schaufeli and Bakker, 2004
Gender	Moderating	1	Categorical	X

Source: Author (2020)

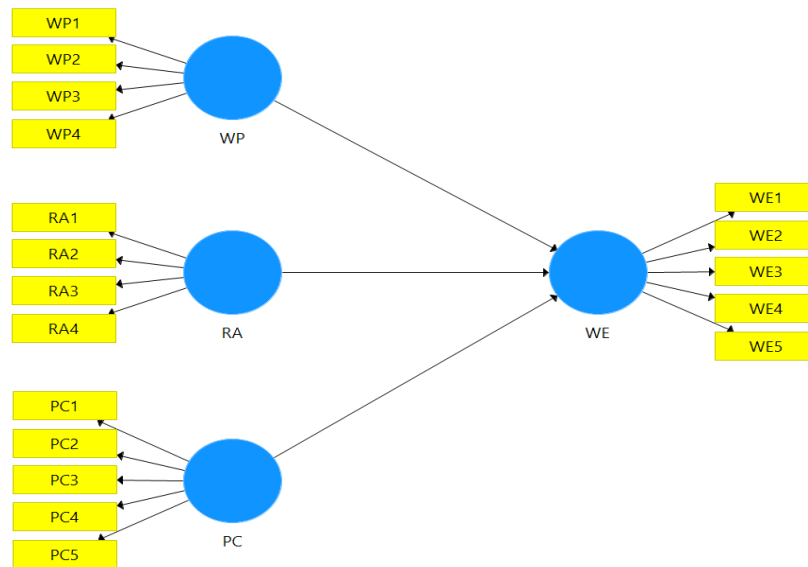
Among 355 respondents, 69% of them was female employees and 31% was male. Most of the survey respondents were between the age of 20 and 30 years old, accounting for 78% of the total respondents. The remainder were from 31 to 40 years old. In terms of years of experience, more than half of them said they have been working there for 1 to 3 years, followed by those who worked there less than a year (24%) and “3-5 years” group (20%). The departments that employees are currently working in are also examined, where around a third of them came from Legal, Risk and Compliance Department (LRC) (35%), slightly higher than the figure of next group – IT Department with 31% of the respondents. The remainders are from other departments like Accounting and Finance, Human Resources, et cetera.

The research also included regression model, where data were analysed by using PLS-SEM model (Partial Least Squares – Structural Equation Models). This is suitable for predictive models with various high-collinear factors, which is used as path models to study the relationship between these variables, by analysing if the pair of scores (the independent and dependent variables) is strong or not (Tobias, 1995). Particularly, it is divided into two models – measurement and structural models. For application, Smart PLS would be used for the analysis.

4. Results

The collected data is examined and analysed according to the following model of PLS-SEM, via the Smart PLS application. As explained above, there are two regression models to be examined in the project: the measurement model and the structural model.

Figure 2: Model examining the relationships of Gender discrimination and Work engagement (Without moderating variables)



Source: Author (2020)

4.1. Measurement Model

The reliability is measured using three indicators: Outer Loadings, Cronbach's Alpha and Composite Reliability.

First, the indicator loadings (outer loadings in reflective measurement models) examine the acceptable item reliability, in which the recommended minimum is 0.7 (Hair et al., 2019). All outer loadings values in the models, except for the WE1 in Work Engagement factor, are higher than 0.7 – indicating that the construct explains more than 50% of the indicator's variance.

Table 2. Outer loadings

	WP	RA	PC	WE
WP1	0.784			
WP2	0.902			
WP3	0.851			
WP4	0.786			
RA1		0.756		
RA2		0.92		
RA3		0.807		
RA4		0.728		
PC1			0.843	
PC2			0.746	

PC3	0.793
PC4	0.854
PC5	0.727
WE1	0.63
WE2	0.836
WE3	0.816
WE4	0.73
WE5	0.702

Source: Author (2020)

In terms of measuring internal consistency reliability, the researcher used the Cronbach's Alpha and composite reliability, where higher values indicate higher levels of reliability (Hair et al., 2019). The Cronbach's Alpha values of all four variables in this study meet the requirement of having minimum value of 0.7, indicating that the designed survey can measure the variables accurately. This was also confirmed by the composite reliability measure, which is required to be 0.70 to 0.9 (to avoid indicator redundancy) (Diamantopoulos et al., 2012). All four factors' values are in the range from 0.855 to 0.9, which is recommended as mentioned.

Table 3. Internal Consistency Reliability and Average Variance Extracted

	Cronbach's Alpha	Composite reliability	AVE
WP	0.853	0.9	0.692
RA	0.817	0.88	0.65
PC	0.853	0.895	0.631
WE	0.79	0.855	0.545

Second, for convergent validity, average variance extracted (AVE), proposed by Fornell and Larcker (1981), is used to measure the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error. The AVE values (shown in Table 3) start from 0.545 to 0.692, which is acceptable since it is higher than 0.5 (according to Hair et al., 2019). This means that the construct explains more than 50% of the variance of its items. For discriminant validity (shown in Table 4), the research used HTMT (heterotrait-monotrait) ratio, which shows the mean of the average correlation for the items measuring the same construct. All the values in the project (ranging from 0.671 to 0.825) satisfy the threshold value of 0.9 or lower – there is the present of discriminant validity (Henseler et al., 2015). In other words, the constructs are empirically distinct from other constructs in the structural model.

Table 4. Discriminant Validity

	WP	RA	PC	WE
WP				
RA	0.713			
PC	0.777	0.792		
WE	0.671	0.799	0.825	

Source: Author (2020)

It is also necessary to examine collinearity to see whether there are any biases in the regression results (Hair et al., 2019). As VIF values above 5 are indicative of probable collinearity issues while values of 3-5 are also able to cause problems, the values should be close to 3 and lower. The results below show most of factors are lower than 3, while the remainder belongs to the 3-5 group. Therefore, it is unlikely that there are any collinearity issues in the model.

Table 5. Collinearity

WP1	WP2	WP3	WP4	PC1	PC2	PC3	PC4	PC5
3.159	4.306	2.032	1.748	2.261	1.731	1.998	2.39	1.59
RA1	RA2	RA3	RA4	WE1	WE2	WE3	WE4	WE5
1.62	3.003	2.032	1.54	1.374	1.955	1.982	1.645	1.413

Source: Author (2020)

4.2. Structural Model

Table 6. Path Coefficient

	β	STDEV	T Statistics	P Values
(WP) → (WE)	-0.139	0.152	0.915	0.361
(RA) → (WE)	-0.35	0.171	2.047	0.046**
(PC) → (WE)	-0.368	0.157	2.338	0.022**
Moderating Effect 1 (Gender * WP) → (WE)	-0.884	0.367	2.413	0.016**
Moderating Effect 2 (Gender * RA) → (WE)	-0.706	0.226	3.128	0.002***
Moderating Effect 3 (Gender * PC) → (WE)	-0.601	0.281	2.136	0.033**

*Note: * $p < 0.1$, ** $p < 0.05$; *** $p < 0.01$*

In terms of p values, there are five out of six relationships show values that are lower than 0.05, making the relationship significant. The only relationship that did not meet the requirement was the one of WP and WE. Moreover, the β values of all relationships were smaller than 0, meaning there were negative effects between variables.

In the model, the coefficient of determination – or R-squared (R^2), measures the strength of the least-squares fit to the data. It ranges from 0 to 1, where the higher values indicate a greater explanatory power (Henseler et al., 2009). According to Hair et al. (2019), R^2 values of 0.75, 0.50 and 0.25 can be considered “considered substantial, moderate and weak”, although the interpretation of the result must be based on the context. In the current study, the **R^2 value of 0.576** is higher than 0.5, which is considered moderate satisfactory in research.

5. Discussion

This section focuses on analysing the results and discuss the meanings of the above information. The hypotheses with corresponding variables shall be examined in the chapter with several explanations and comparison with other theories.

Table 7. Results for Hypotheses

Hypothesis	Relationships	Result
H₁	There is a negative relationship between Perceived gender discrimination in workload & participation and Work engagement	Not Supported
H₂	There is a negative relationship between Perceived gender discrimination in resource access and Work engagement.	Supported
H₃	There is a negative relationship between Perceived gender discrimination in personal communication and Work engagement.	Supported
H_{4a}	Gender moderates the relationship between Perceived gender discrimination in workload and participation and Work engagement such that the relationship becomes weaker for men than women.	Supported
H_{4b}	Gender moderates the relationship between Perceived gender discrimination in resource access and Work engagement such that the relationship becomes weaker for men than women.	Supported
H_{4c}	Gender moderates the relationship between Perceived gender discrimination in personal communication and Work engagement such that the relationship becomes weaker for men than women.	Supported

H₁: Not Supported

Among all hypotheses tested, H₁ was the only one that was not supported by the data. It predicted that there would be negative relationship between perceived gender discrimination in workload & participation and work engagement, however, the result reveals that there is no significant relationship between these two variables ($\beta = -0.139$, $p = 0.361 > 0.05$). This is different from several past research, one of which is conducted by Tiwari and colleagues (2018). They argued that in the workplace, female believed that their male colleagues or managers tend to consider them as weak employees who cannot contribute effectively, thus, being suitable for clerical work more than decision-making roles. They are only assigned with “non-promotable” tasks – or tasks that almost no employees want since they have little to no contribution to personal or professional development. Several studies also support these views, including Babcock et al. (2018), Parker (2018) and Courtright and colleagues (2014).

However, similarly to the current study - where there is no meaningful relationship between the two factors, research of Cohn (2019) stated that the workload given to men and women may not be the same in sectors because of the characteristics of the work. Therefore, employees may or may not consider the difference in workload, including work intensity or whether the work is less or more challenging for different genders. This can explain the differences in results, since in the study of Tiwari et al. (2018), they surveyed working women in textile and apparel companies, where this study received both answers from men and women in a different department, including both female-dominant ones (like Accounting and Finance department) or male-dominant ones (IT Department).

Moreover, female employees may consider the “gender discrimination” as a normal organizational difficulty that present in every organization (Sia et al., 2015). In another words, since they believe all organizations have discrimination, it makes no differences on whether they like and feel engaged with the organization. Therefore, it is believed that the workload and intensity in technology and IT services sector, despite the differences between genders, have no significant relationships with employees’ work engagement.

H₂: Supported

Meanwhile, for H₂, as relationship between Perceived gender discrimination in resource access and Work engagement is proved to be significant and negative, it matched the assumption and supported by several authors, including Sia et al., 2015 and Hofmans (2012). It is revealed that employees who perceive sexist policies and practices in the organizations are found to have low organizational commitment and are less likely to prefer the same career if given a choice. If the employees feel that the “fundamental outcomes” in the organization is fairer, they will have more positive work attitudes. Otherwise, if employees constantly feel that there are gender-biased behaviors in aspects that can affect their career advancement, they can soon feel dissatisfied and seek other jobs, resulting in low engagement and high turnover.

In contrast, if employees perceive a fair working environment, it is unlikely for them to have stress and disturbed emotional setup at work (Ud Din et al., 2018; Hameed and Waheed, 2011). As employees believe managers and leaders are offering opportunities and benefits at work fairly (based on different characteristics) as in Adam's equity explained, they tend to feel more connected and enthusiasm at work (Mullins, 2010). The fair treatment is not necessarily equal payment for everyone, but to assign tasks based on individual abilities instead of genders. Therefore, if managers allow equal access to resources for those who share the same abilities disregarding their genders, which is evident for non-discriminative actions, the level of work engagement of employees can maintain positively.

H₃: Supported

With p-value of 0.022 and a β value of -0.368, it is proved to be a significant negative relationship between perceived gender discrimination in personal communication and work engagement. Evident in various studies, most gender discrimination behaviors in personal communication are believed to originate from stereotypes and prejudices, stated Steyn and Jackson (2015) and Mor Barak (2016). In the past, female employees often had negative emotions due to negative interpersonal relationships with colleagues and managers/supervisors, consequently affecting their work engagement. As stress is increasing in their work, including but not limited to anger, depression and low self-esteem, can impact the engagement level of the female employees.

Similarly, other studies also proved employees that experience positive emotions are also engaged in their work (Gupta and Kumar, 2012; Bakker et al., 2011). As the discriminative actions are partly influenced by the culture and other factors like age or educational levels, it is possible to explain the difference in the level of discrimination in this research and others based on generation differences. Looking at the demographic responses in this research, it shows that most respondents are relatively young, mostly ranging from 25-40 years old. Since this generation of millennials grew up by the time feminism movements around the world have gained so much attention, they can learn about the importance the gender equality quite soon with the use of social media and technology – especially about choice feminism or intersectional women empowerment, from the first to the (current) fourth wave of feminism.

H₄: Supported

H4 argues for the moderating impact of Gender upon the relationship between perceived gender discrimination in three dimensions (4a: Workload and Participation, 4b: Resource Access and 4c: Personal Communication) and Work Engagement in such a manner that the negative relationship becomes weaker for men. As the findings indicate, gender has a significant impact as a moderating factor on the relationship between perceived gender discrimination and work engagement, in all three dimensions. Specifically, the results for each hypothesis were H4a – ($\beta = -0.884$, $p < 0.05$); H4b ($\beta = -0.706$, $p < 0.01$); H4c ($\beta = -0.601$, $p < 0.05$) (coding for women and men were 1 and 2, respectively). However, as stated above, there is no evidence of the negative relationship between gender discrimination in

workload and participation (as H1 was not supported by the research data), which makes the moderating role of gender in this relationship less significant.

The findings are also in line with results of other researchers, where men and women perceive differently in terms of gender discrimination behaviors in the workplace and how that affect their attitude at work (Tshilongamulenzhe and Takawira, 2015; Schmitt et al., 2014). Since most of the discrimination behaviors are against women, they can have different influences on different genders. For male employees, if they are not the ones who discriminate against women, they are just bystanders who can sympathize their colleagues, but they are not directly affected by the actions. Another explanation for this difference is that male employees may have other priorities before gender equality as they are not the direct victims of the actions, or at least less likely to be the victims in a patriarchal society. Therefore, it is possible that men are less likely to relate the gender-biased discrimination behaviors with their work engagement.

Although both men and women can encounter gender discrimination, it is usually a more negative experience for women than for men (Sia et al., 2015; Chaudhuri and Panigrahi, 2013). Also, Sharma and Sharma (2015) revealed that there is a negative relationship between perceived gender equity and burnout in the workplace for both genders. Moreover, according to Schmitt et al. (2014), the social identity at work has significant impacts on behaviors and perceptions, specifically when both considers inequality as insecure (or illegitimate), women are likely to engage in collective behavior aimed at reducing inequality, while men aim at protecting privilege. Therefore, the relationships between discrimination and work engagement will be stronger for women where they are the ones who stay in the unfavorable position.

6. Practical implications

As the findings reveal that IT firms in this research had a relatively low level in perceived gender discrimination, which is related to high work engagement of employees, it is suggested that the companies should continue executing their employee-oriented policies and boosting equality and diversity in the workplace to maintain the positive working environment. Specifically, they should also emphasize their concern for employees so that employees understand how supportive the company is and become more open in helping to create a better working environment for all.

Moreover, as explained in the discussion, although the perceptions among employees that there is gender discrimination in workload and participation in the company is low, it has insignificant relationships with work engagement. The companies may conduct further investigation on the reasons behind these perceptions. For example, institutions may introduce platforms for employees to file their complaints or to see whether they perceive differences in workload and participation as not discriminative at all and find solutions to mitigate the negative consequences on the company.

In terms of the differences in perceptions of men and women, as explained in hypothesis 4, men are less likely to relate gender discrimination and work engagement comparing to women due to priorities at work. Therefore, IT firms can emphasize the importance of gender equality in the workplace by organizing workshops or events with a focus on protecting women.

7. Conclusion

Equality has been recognized as a global issue, one of which is gender discrimination and its impacts on the organization. Specifically, gender discrimination in the workplace usually take place under the forms of wages, positions, training opportunities and many other aspects (Flynn et al., 2017; Sharma, 2016; Mor Barak, 2016). By being treated unfairly with different discrimination behaviours, from both managers and colleagues, employees tend to have lower satisfaction and engagement at work (Tiwari et al., 2018; Sia et al., 2015; Courtright et al, 2014). Several authors believed that this is the result of perceptions and stereotypes in the society, which place women at a disadvantage more than men significantly (Cohn, 2019; Tshilongamulenzhe and Takawira, 2015; Schmitt et al., 2014).

The research aims to study the relationship between perceived gender discrimination in the workplace and work engagement in technology companies. For gender discrimination behaviours, three aspects are examined, namely Workload and Participation (1); Resource Access (2) and Personal Communication (3). As female employees have long been at a disadvantage at work, despite recent improvement and development in the modern society, there still exists gender-biased discrimination in the workplace. Therefore, besides analysing the (negative) relationships above, the research also examines gender as a moderating role in these relationships and determine whether there is any difference in the strength of the relationships between men and women.

Throughout the study, it is possible to answer all four research questions posed in the beginning of the project. For the first two questions, there is a negative relationship between gender discrimination behaviours and work engagement in two aspects: Workload & Participation and Resource Access. Specifically, employees who perceive there is little discrimination in the company have higher work engagement levels. However, there is no meaningful relationship between gender discrimination behaviours in Personal communication and the employees' work engagement (research question 3). Second, data shows that these relationships can be moderated by gender, where the relationship becomes weaker for men than for women (research question 4).

However, there still maintain several limitations in the study. First, this study was conducted in Hanoi with a limited number of respondents due to time and cost constraints. Thus, the data may not be representative enough for the whole population. Second, the research is conducted via online tools and face-to-face meetings cannot be arranged due to the COVID-19 pandemic. This may reduce the number of potential participants for the project. Because of these two limitations, further study is required to find patterns in larger scale,

which hopefully can mitigate the negative impacts on the employees' work engagement with a more nuanced approach.

Despite those limitations, this study can still contribute significantly to the understandings of gender discrimination in the workplace and work engagement in information technology industry. Specifically, new insights are generated where the results reveal the status quo in Vietnam, especially young generations where there is little to no gender discrimination in the workplace, that encourage employees at work and boost their work engagement. Meanwhile, with a more detailed inspection, that companies in technology sector in Vietnam can provide a favourable working environment is evident, regardless of the beliefs and underlying presumption of hardships operating in the technology and IT industry, which is widely considered as a male-dominant industry in the past.

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WEBSITE CONVERSION RATE OPTIMIZATION SOLUTION FOR SMES IN THE NEW NORMAL AFTER PANDEMIC: AN APPROACH FROM ONLINE CONSUMER BEHAVIOR TO MANAGERIAL PERSPECTIVES

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Abstract

Faced with the quick and ferocious growth of the COVID-19 pandemic, numerous marketing and communication professionals in various nations around the world have been forced to implement a slew of counter-measures to battle the COVID-19 pandemic. The use of digital channels has increased as a result of the pandemic. Both the provider and the buyer must alter their business practices. While, shoppers are compelled to rely on internet platforms and marketplaces to safely purchase crucial things. With more stores moving online, enticing customers has become more expensive, therefore businesses must stand out more than ever. Digital platforms must give a better user experience in order to retain clients. In this article, the author explores the RACE digital marketing framework, the ACT approach, and case studies on the success of conversion rate optimization (CRO) from several firms in the past. In particular, the author will provide firms that adapt their tactics in conditions of conversion rate optimization (CRO) to the new normal with a wealth of relevant information to assist many businesses in overcoming the terrible pandemic.

Keywords: website, conversion rate optimization (CRO), SMEs, new normal, online consumer behavior, pandemic

1. Introduction

All businesses throughout the world are suffering the impact of the coronavirus (COVID-19) pandemic. The COVID-19 pandemic altered how customers made ordinary purchases, requiring major and small companies and merchants to rethink their marketing methods. More people than ever before are buying for goods and services online, resulting in increased traffic to websites. The COVID pandemic hastened this process.

We were all filled with fear and uncertainty as the COVID-19 pandemic impacted negatively on people's lives and companies. The government used lockdowns to try to limit the outbreak. Businesses were compelled to shut down. Unemployment has risen. The stock market dropped. Price gouging became common as a result of panic buying. Everyone did everything they could to stay alive and defeat this unseen foe. Congested areas were avoided. We took refuge in our homes. To prevent contracting the fatal illness, businesses turned to remote work. Surprisingly, the unexpected rise in web traffic at the start of the epidemic was accompanied by a sense of scarcity that customers are now prepared for. Many firms that

were still transitioning to online systems at the time were running out of stock and struggling to fulfill the needs of their new consumers.

The world has permanently changed. The pandemic has pushed the use of digital channels. Both suppliers and buyers had to change their business practices. Shoppers were forced to rely on internet platforms and marketplaces to purchase vital commodities in a secure manner. Even for folks who had never purchased anything online before, online shopping has become the standard. These shifts in consumer purchasing habits and behaviors, in turn, fueled enterprise digital transformation.

In several ways, the pandemic hastened the global transition to digital. It resulted in an unparalleled surge in e-commerce, with important ramifications for online retailers: Businesses that already had a strong web presence benefited from the growth. During the early months of the pandemic, online shops claimed record sales. Other players faltered because they had neglected their online outlets for so long. They rushed to get their web presence in order so that they could stay in business. Of course, the increased demand posed new hurdles for e-commerce businesses. For example, online retailers were plagued with fulfillment concerns as a result of supply chain issues. Another difficulty was increased competition as a result of more shops shifting to digital media.

Now, imagine the economy reopening in 2021. While businesses try to solve their inventory difficulties, they're up against a new challenge: competing for the attention of online shoppers. With more stores going online, attracting customers has gotten more expensive, thus it's more important than ever for businesses to stand out. As the majority of transactions shifted online during the COVID-19 pandemic, conversion rate optimization (CRO) became a vital responsibility for enterprises. Websites have to be extremely user-friendly in order to service customers who were unfamiliar with online purchases. To retain customers, digital platforms required to provide a greater user experience. For digital marketers, conversion rate optimization (CRO) is critical since the greater your conversion rate, the less money it costs to acquire each lead or customer. This is particularly essential because many companies focus on their online presence and the Internet evolves to load up. The cost of transforming a visitor into an advance, prospect or client will continue to increase. In the new normal, having an optimized, seamless digital presence has become even more critical to success.

In this study, the author examines the digital marketing framework of RACE, the ACT method and the case study on the success of conversion rate optimization (CRO) from numerous companies in the past. In the managerial perspectives, the author shall give the companies that adapt the approaches in situations of conversion rate optimization (CRO) to the new normal with many pertinent advice. The author also recognizes additional conversion rate optimization (CRO) options and trends to help many companies overcome the horrible pandemic and to further construct a new approach in the new normal condition.

2. Literature review

2.1. Conversion rate

Conversion rate is a measure of the percentage of website visitors who have transitioned from passive to active visitors through actions such as purchases, newsletter signups, and so on. In other words, the rate of change is the number of visitors who finish the activity they want. To calculate the conversion rate as a percentage the number of conversions divided by the number of visitors of the online marketing channel (Stokes, 2011). There is a possibility that the conversion rate is derived by dividing the number of website visitors who completed the desired activity by the total number of visitors to your website (Eisenberg et al., 2006). The conversion rate is also defined as the percentage of website visitors that complete a desired action, such as making a purchase or filling out a form (Stokes, 2008). In summary, conversion rate is defined as the ratio of orders/leads to clicks. It is just as important as the ad itself in determining your site's potential to convert traffic.

The conversion rate is determined as follows:

$$\text{Conversion rate} = \frac{\text{Number of conversions}}{\text{Visitors}} * 100$$

Qualaroo (2016) gave an example that if there are 10,000 monthly visitors on the site and 1,000 monthly conversion then the conversion rate is 10% as the quotation of $(1000/10000) \times 100 = 10\%$.

2.2. Conversion rate optimization (CRO)

It has become more important and difficult for online firms to achieve a competitive advantage in today's e-commerce markets. Conversion rate optimization has evolved into a requirement rather than a luxury. The newest "it" technology and game changer for marketers around the world is the Conversion Rate Optimization (CRO). Nonetheless, only 39% of sellers see this as their primary concern (Lucas, 2016).

Digital marketing performance can be assessed with respect to customer influence using metrics such as conversion rate, engagement rate and click through rate. Transformation is described as the action that a user wants to perform from the website, which usually leads to website sales, such as purchasing a product or subscribing to a newsletter (Reddy, 2017). Conversion is the most important metric for a company that runs an e-commerce website. Conversion rate optimization (CRO) is a critical component of e-commerce strategy because it has the potential to significantly increase revenue (Kingsnorth 2019).

2.3. Website conversion optimization

The web has flat images, but the genuine thing can be obtained from a shop. Not compared to the real world, the eCommerce experiences are superior, but that the customer experience becomes an alternative yet genuine environment (Novak, T. P., Hoffman, D. L., & Yung, Y. F., 2000). Because of the intangible nature of e-Commerce, customers may be

unsure whether things acquired online will meet their needs or work as expected, and trust becomes a critical issue (Constantindes, 2004).

E-tailers want to convert an increasing number of website visitors into buyers. Website conversion is classified into two types: micro activities and macro actions. Accessing a single website, viewing a specific number of pages, clicking a specific button or link, watching a video, or following to a blog feed are all examples of micro actions. Macro actions, however, comprise the purchase of a product, the calling of an appointment, registration for a free trial, subscription payment, or download of a music and e-book. Web designers should make the priority of executing the transaction by minimizing the amount of page views necessary. Longer page views were not observed to bring users closer to a transaction completion (Bucklin, R. E., & Sismeiro, C. , 2003)

2.4. The concept of consumer behavior

The study of how individuals, companies, and groups choose, purchase, and use products, services, experiences, or ideas to meet their wants and preferences is known as consumer behavior (Kotler, 2012). Similarly, Shiffman et al. (2007), for example, have pointed out that consumer behavior refers to the actions that people take when looking for, purchasing, using, reviewing, and disposing of things and services that they believe will meet their requirements. Buyer behavior, according to Cundiff et al. (2000), can be understood as an ordered process in which the individual interacts with his or her surroundings in order to make market-place decisions on items and services. In summary, consumer behavior refers to the buying and other expenditure activities of individuals who participate in the exchange process. Consumer behavior is an important component of market research because it explains how and why customers buy or do not buy things, as well as how their purchasing processes work.

2.5. The concept of online consumer behavior

The advent of the Internet has resulted in massive shifts in consumer behavior (Chandra, 2013). Electronic commerce (e-commerce) is being used by an increasing number of people to purchase goods and services (Ingham, 2015). With the touch of such a mouse, more and more people are turning to the World Wide Web for their purchasing requirements, giving them access to both local and worldwide merchandise. Many researches have addressed online behavior difficulties by directly adapting traditional purchasing knowledge to the Internet context. Online buying is different from traditional buying behavior and current understanding is relatively restricted about online consumer behavior (Dennis et al., 2009).

In addition, online shopping (also known as online shopping and Internet shopping and purchasing behavior) refers to purchasing things or services using the internet. The attitudes of customers towards internet shopping depend on the immediate impacts of relevant online purchasing. The functional and utilitarian aspects of the online shopping features can be classed as "usefulness" or "ease of use," or as a "enjoyment" feature in customer views of

emotional and hedonic dimensions. The consumers' attitudes to Internet shopping depend on the direct impact of the important online shopping characteristics (Davis, 1993).

3. Research methodology

3.1. Review the framework of RACE in digital marketing

Smart Insights (2010) created RACE as a practical framework to assist marketers in managing and improving the commercial value that their firms obtain from digital marketing. Its purpose is to make it easier to analyze the success of internet marketing and take action to improve its efficacy. RACE is a four-step process that helps prospects, customers, and fans engage with brands across the customer lifetime.

Step 1: Reach – Intensify traffic to the Web and social media presence of a brand by growing awareness on other sites and offline media of its products and services.

Step 2: Interact – Engage a brand's audience on its website or other online presence to urge them to act or connect with the firm or other customers.

Step 3: Convert – Convert visitors into leads or sales through your online and offline presences.

Step 4: Engage – To achieve retention goals, cultivate client connections over time.

Figure 1: Reach - Act (interact) - Convert - Engage (Smart insights, 2010)



Figure 1 shows that conversion rate is a crucial KPI for determining the performance of internet marketing. It can be seen from the figure 1, convert stage indicates that convert is to achieve marketing goals on wen presences. In other words, conversion rate optimization is also a part of this stage that has an important role in the whole stage of convert in the framework of RACE.

3.2. Review the ACT Method

According to Kabani (2012), effective online marketing is based on a simple framework known as the ACT Method. Also, conversion rate is included in the ACT Method, which is divided into three distinct components.

Figure 2: ACT Method (Kabani, 2012)



- **A – Attract:** To attract implies to draw attention to oneself or to stand out from the crowd. In practice, this means driving visitors to your website, which serves as your primary internet marketing tool.

- **C – Convert:** Conversion occurs when a stranger is transformed into a consumer or customer. And there is a distinction between the two! A consumer may absorb your information or perhaps try your goods, but he or she may not always purchase it. That's fine! That consumer may eventually become a customer. The longer it takes, the more expensive the buy. This means that you must constantly seek to convert them into clients and consumers.

- **T – Transform:** When you turn previous and present triumphs into magnetic forces of attraction, you transform.

This is another strategy that focuses on hypothesizing and testing improvements to a website in order to increase conversion rates (Berezhnaya, 2016). Conversion rate optimization (CRO) is a marketing optimization strategy for analyzing, understanding and improving websites (Shukairy, 2017) and focuses on visitor's behavior and what motivates them to engage in a certain way on specific content. It utilizes a wide assortment of techniques, including persuasive design. Conversion rate optimization (CRO) refers to increasing conversion to important goals like as sales, quotes, bookings, or leads in order to improve the commercial returns from a transactional site (Chaffey et al, 2012). By arranging, structuring, and optimizing websites to persuade more visitors to take the desired action on a webpage, website or within a campaign. Conversion rate optimization (CRO) focus on taking the current traffic and persuading them into taking a desired action (Miikkulainen et al., 2018). Given this, conversion rate optimization (CRO) can be described as the regulated process of converting website visitors into potential consumers for organizations.

3.3. Case study approach

The author employed a case study approach and evaluated previous research (Yin 1984, 2002, 2014). The case study method is a great way to learn about a complicated topic by describing and analyzing a specific instance in its context and natural surroundings. A case study's objective is to explain or establish a decision: why it was made, how it was done, and what results were obtained (Schramm, 1971). The following definition is for the case study of decisions, which is the primary focus of the case study approach. Other frequent case studies include individuals, corporations, techniques, projects, and even events, among others.

4. Results and Discussion

General situation of SMEs about website conversion rate optimization (CRO)

According to HubSpot (2018) research, businesses nowadays confront numerous marketing issues. The most difficult marketing difficulty is generating traffic and leads, which is followed by calculating the ROI (return on investment) of marketing services. According to a similar study conducted by Vital Design (2016) with over 7500 respondents, getting numerous potential clients is the number one marketing issue. As a result, optimizing conversion rates is a critical issue that assists organizations in acquiring actual clients.

Despite the fact that the average conversion rate is around 2%, the top 10% of web companies have conversion rates that are four times greater than the average (Croxen-John et al., 2017). Similar to Bertelsen's prior study, the average conversion rate has stayed constant at 2% (Bertelsen, 2012). This demonstrates a large number of SMEs have the potential to enhance their online conversion rates. Furthermore, many businesses can overcome difficulties when implementing the conversion rate optimization (CRO) (Bertelsen, 2012), such as budget, technical issues, time, goals, responsibilities, and knowledge. In fact, there is an opportunity for businesses to boost their online conversion rates. I wondered if the low conversion rates were due to a lack of expertise on the subject, or if there were other factors at play.

Achievements in conversion rate optimization (CRO) before the pandemic

The first case study is titled "Multivariate testing at National Express Group increases conversion rates" (Chaffey et al., 2016). The National Express Group is the leading travel solutions company in the United Kingdom. Every year, about 1 billion journeys are made on National Express Group's bus, train, light rail, express coach, and airport operations around the world. A significant majority of ticket purchases are made online at www.nationalexpress.com/home.aspx. The company utilized Maxymiser, a multivariate testing vendor, to run an experiment to increase the conversion rate of a fare-selection page, which was the last stage in the booking process. In order to enhance the visitor commitment and to drive a larger percent of visitors through successful conversion without compromising page structure or National Express brand identity, the analytic team determined a number of subtle amendments to the page content (designated A through E).

In order to make it more efficient to market insurance supplements, changes to these calls for measures were also explored. It was concluded that a multivariate test was the most

effective way to determine the most efficient material combination. The co-created variants of Maxymiser and the customer have been checked with all visitors on the live site and monitoring of the conversion rate for each combination, testing 3500 potential page combinations and removing poor performance combinations during the live test to maximize conversion rates in each phase. At the end of the testing period, the optimal combination of features was determined with a page conversion rate rise of 14.11% - for example 14.11% more visitors were transmitted to the fourth and last step, and quickly came to fruition.

The second case study is titled "UK supermarket chain – conversion signposting" (Kingsnorth, 2019). In the United Kingdom, a major supermarket chain (name withheld), which had been in business for decades, had entered into a white-label agreement to offer financial services products. They were not, however, seeing the conversion rates that they had hoped for. It was difficult to incorporate a variety of financial services products onto their website, which was understandably focused on groceries, and conversion in the purchase funnel suffered as a result.

To resolve this, the supermarket commissioned UX research, which included both a UX company's analysis and one-on-one consumer studies. As a result, a number of issues with the journeys were identified: the navigation was not clear to many users, there was insufficient assistance when filling out difficult form fields, and errors were not clearly signposted. Users who would have happily purchased the product were simply giving up as a result of these factors. The supermarket increased conversion by 40% by making changes to ensure that signposting was clear and specific, as well as ensuring simplicity throughout the funnel. This resulted in a significant increase in sales and revenues. This was accomplished through the application of a single principle: specificity.

How businesses escaped the pandemic for improving the productivity through conversion rate optimization (CRO)

Many issues have been raised in relation to the experience of conversion rate optimization that is practical for enterprises in reality, in order to increase the productivity of the company after the pandemic. Looking at the practice, many firms are surviving the catastrophic pandemic without employing the remarkable efficacy of CRO. They may completely address the customer's pain points through their website, optimize the touch points, invest the marketing money to drive their branding efforts, and so on.

The first may be applied to Walmart Canada's recent success with CRO. Walmart recognized that their present solution did not function on mobile devices after seeing a substantial increase in traffic from mobile devices, namely tablets. Furthermore, the general appearance and feel of the mobile site is poor, and it takes a long time to load. As a result, they've tried to make the whole experience quicker. Finally, with their new design, Walmart achieved an overall conversion rate increase of 20% across all devices. On mobile, orders are up 98%. What's more, by removing distracting buttons and other elements that don't add value

or help with conversions, by removing the "View Details" button, Walmart actually increased conversions (Niggulis, 2020).

Taloon is the second successful case study on conversion rate optimization that may be highlighted. Taloon.com is a Finnish hardware eCommerce site that sells plumbing, electrical, gardening, and other related items. They wanted to improve sales on their product pages, so they experimented. Contrary to popular belief, Taloon tested the product page with and without social buttons to determine whether there was a substantial change. As a consequence, without the share button, the new version of the site boosted the conversion rate (clicking Add to Cart) by 11.9 percent.

Thus, it can be seen that the method used to optimize the conversion rate that businesses have been using really follows the framework mentioned in the literature review that when businesses realize the construction of awareness to move to their website then reach customers and importantly convert these customers into consumers or potential customers is very important and ultimately to build a loyalty relationship system with customers.

The importance of conversion rate optimization

Conversion rate optimization (CRO) has evolved into an essential component of digital marketing. Marketing efficiency ratios (net contribution/marketing expenses) are frequently greater in companies with better conversion rates (Eisenberg, 2011). The conversion rate helps organizations determine whether visitors have been persuaded by the company's website, as evidenced by the desired activities they want to do. Increased conversion rates can aid in revenue growth (Jensen, 2019).

Conversion rate optimization (CRO) is critical for a successful website and business. With escalating advertising expenditures, having a high-performance website has become critical for online success. Conversion rate optimization (CRO) makes the most of existing online traffic by focusing on getting visitors to interact with the website (Jarnvall, 2015). Rather than attracting more visitors, it is far more cost-effective to convert a higher percentage of those who are currently on the site. Working actively with conversion rate optimization (CRO), according to AB King (2008), assists you in meeting the following SMEs' objectives: Increasing sales, income and revenue; Generate more for the sales force; Increasing "opt-ins" to create your email list; Lowering customer acquisition costs; Increasing page views for marketing; Growing consumer engagement; Consistently improving conversion rates.

Approximately 23% of the greatest leads originate from the company's own website, while only 39% of organizations consider conversion rate optimization a priority. Businesses may simply enhance their lead quality, lead volume, and sales by focusing on conversion rate optimization (Lucas, 2016).

5. Implications

The author proposes some conversion rate optimization methods for SMEs based on the general situation of SMEs regarding website conversion rate optimization, context, and competition among businesses: Enhancing customer personas; offering a unique selling proposal; and optimizing the landing page and website. In order to improve SMEs' conversion rates, methods for identifying online customer behavior such as eye-tracking; heat map and scroll map must also be mentioned.

Enhancing customer personas

Customer personas have yet to be developed by many SMEs. As a result, using a common message in digital marketing campaigns may not result in a high conversion rate. As a result, customer portraits, especially online personas, must be created. Personas for SMEs are created using data from Google Analytics and personal observations during the sales process in stores. SMEs can use online customer personas to learn more about their customers, what they care about, and how to communicate with them more effectively. Place online ads on the right websites to reach your target audience, increasing advertising efficiency and lowering costs. Furthermore, each scenario has its own unique set of circumstances. In addition, every scenario is built independently for each person, including scenario search information (which leads to site registration); new customer buying scenario (sell leads); and existing customer buying scenarios (leads to sale).

Offering a unique selling proposal (USP)

SMEs and their products will benefit significantly from having a compelling USP. USP will assist SMEs in distinguishing themselves from competitors and persuading customers to purchase products. Customers will benefit from the unique selling proposition because it will help them understand the outstanding strength of SMEs. Customers who pay attention to a brand of SMEs (in the context of many brands belonging to SMEs) will pay less attention to this benefit. As a result, the unique selling proposition can attract customers, pique their interest, and prompt them to look for products.

Optimizing landing page and website

Without the right landing page, all marketing efforts will be futile and may incur additional costs, regardless of the marketing channel (search engine, social media platform, etc.). As a result, website and landing page optimization should be a top priority, as these are the "windows" that lead customers to the company's products and encourage them to convert. Landing pages are used by many SMEs on their websites. As a result, SMEs must create landing pages separate from their main website with positive customer feedback, reviews, certificates, and awards; a value proposition online; and a call to action (CTA) button are all good ideas for landing page content; reinforce the ad that the visitor clicked on; Be long enough to provide proper context, but short enough to be easily skimmed; have a strong visual focus. The website of a SME must also be updated on a regular basis. This helps visitors to

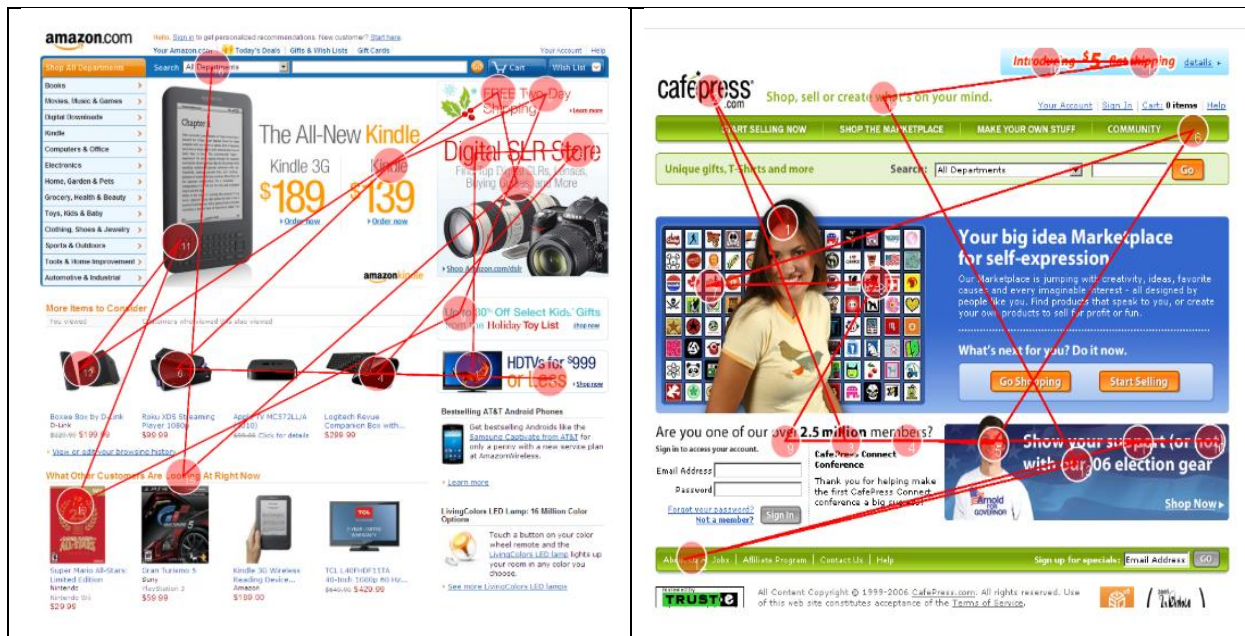
try new things on the website and prevent boredom. Regular site updates include articles that provide important information, updates in specials and promotions, and banner updates.

Identifying online customer behavior by eye-tracking

The eye-tracking technology has grown in popularity for studying and analyzing consumer decision-making and cognitive processing. Eye tracking is a method of analyzing user cognitive processes and determining how various visual cues affect eye movements (Renshaw et al., 2003), which can be utilized to determine consumer strategies and infer the underlying cognitive processes. Since 1900, eye-tracking has been used in consumer behavior science as an integral component of human computer interface (Wang et al., 2008). According to the eye-mind hypothesis given by Just and Carpenter (1975), when a person looks, it suggests that he or she is presently experiencing, thinking about, or attending to something, and recording eye movement can reveal his or her cognitive processes. According to Jacob et al. (2003), eye movement reveals human perceptual, emotional, and cognitive processes, which can therefore be used to predict and understand people's behavior.

Eye-tracking is a means of determining a user's visual attention by tracking the direction in which the user looks and measuring how long the user stares at something intriguing as well as their eye movement. According to Bojko (2013), eye tracking is a method that determines where and how a user's attention is focused. Figure following depicts some eye-tracking examples.

Figure 3: Eye tracking example



Furthermore, eye-tracking measurement should be employed by SMEs to examine site design in order to be more successful in maximizing conversion rate. An eye tracker and software to interpret the data from the eye tracker are required for this exercise.

Heat map and scroll map

According to Dossetto, F (2019), a heat map is a tool for analyzing how visitors interact with page elements, as well as a visual tool for tracking user behavior on websites. A scroll map is a form of heat map that visually displays how far users scroll down a page. The 'hottest' colors signify the most visited areas of the website.

Some advantages of employing scroll maps for SMEs include determining where visitors are losing interest - the scroll map will display how far down the page users reach: the colder the color, the less people will have viewed that portion of page; Identify false bottoms - When visitors are unaware that there is more material lower down the page, this is referred to as a 'false bottom,' and it can be caused by white space, line breaks, or blocks that confuse readers; determining whether viewers see what's above the fold - the section of a website known as "above the fold" is the section that the vast majority of people will see upon landing the "fold" is simply the cut-off point at the bottom of a user's screen before they need to scroll; determining whether the website provides a decent cross-device experience - consumers may not behave the same way on desktop and mobile. A scroll heat map will illustrate where visitors stop scrolling on mobile and desktop, allowing you to develop a cross-device experience that works for all users when optimizing a responsive website (one that re-sizes the same page to each platform).

6. Conclusion

The website conversion rate optimization, heat map and roll map, and eye-tracking solution based on online consumer behavior provide SMEs with a practical solution that takes the customers' extent of web experience and decision-making process into consideration. The solution can assist businesses in developing websites that are appealing to clients and convert more visits into buyers. Both businesses and consumers will profit from the framework. It is still important to enable SMEs to provide clients with a greater online purchase experience, which will lead to more online purchasing and earnings for SMEs. With the introduction of online purchasing, it is clear that a single piece of model will not sufficient to enable businesses to efficiently convert customers. Companies and scholars have long recognized the potential of Internet marketing for growth. Customers and businesses benefit from collaboration between researchers and organizations to improve the customer experience, which benefits both customers and businesses by providing a more effective experience for customers and increased profitability for businesses. Web experience components have been shown in previous studies to help SMEs improve Website design productivity and conversion rates, which has a significant positive effect on business performance. However, due to the complexities of e-commerce and market competition, SMEs' present models must be upgraded with the aforementioned solutions, as well as a thorough and successful conversion framework. As the foundation for delivering a solution for conversion rate optimization on SMEs' websites, this article examined the literature, reviewed different frameworks, and conducted case studies. Some new procedures and solutions have been developed to assist managers and marketers in

developing sites that would increase conversion rates. Furthermore, the effect of eye-tracking, as well as heat map and roll map, is indicated as an additional solution based on online consumer behavior to maximize the customer experience on the website and during the conversion rate optimization.

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TAX INCENTIVES FOR STARTUPS IN VIETNAM: LEGAL ISSUES AND SOLUTIONS

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Abstract

How are tax incentives for startups regulated in legal documents in Vietnam? What are the legal issues that arise during the implementation? Studies in Vietnam have not been studied and fully reviewed. So, this study is aimed at two goals: (1) assessment of the legal framework of tax incentives for startups in Vietnam; (2) recommendations on remedial measures when implementing the legislation of tax incentives for startups in Vietnam. To achieve the purposes set out in this study, the study was conducted as a survey of the Law on Enterprise Income Tax and the Law on Value-Added Tax. The research objects are the Law on Enterprise Income Tax, the Law on Value-Added Tax, decrees and circulars guiding these laws. The methods used in this study are: Desk Research and Theoretical Research. Results of this study show that the legal framework of tax incentives for startups is incomplete. Besides, results of this study also show that the legal framework of tax incentives for startups still faces many limitations and problems, which requires the need to complete the law.

Keywords: law, startup, tax incentives, enterprise income tax, value-added tax.

1. Introduction

The impact of enterprise income tax and value-added tax incentives on startups is huge. Enterprise income tax incentives increase capital accumulation, from which to reinvest in production and business activities, etc. Incentives on value-added tax will affect the prices of goods and services, making goods more competitive in the market. Determining such importance, research on enterprise income tax and value-added tax incentives for startups is necessary. “Assistance policies on national innovative startup ecosystem to 2025” in Vietnam promulgated by the Prime Minister of Vietnam under Decision No. 844/QĐ-TTg dated May, 18th 2016. Next, the Law on Provision of Assistance for Small and Medium-Sized Enterprises in 2017 promulgated by National Assembly of Vietnam; the Law on Enterprise Income Tax in 2008, the Law on the amendments to the Law on Enterprise Income Tax in 2013, 2014; the Law on Value-Added Tax in 2008, the Law on the amendments to the Law on Enterprise Income Tax in 2013, 2014, 2016. These laws prescribed tax incentives for startups in Vietnam. The lack of study on the legal aspect of tax incentives for startups in Vietnam is a research gap that needs further research. The cause of this problem is that the regulations on tax incentives for startups are scattered in different legal documents.

Therefore, this study will review and evaluate the provisions of the Law on Corporate Income Tax and the Law on Value Added Tax on tax incentives for start-ups in Vietnam to further study the research gap.

This study is important because through regulations on tax incentives, the state will influence the startups. This will promote the development of startups. However, until now, the Law on Provision of Assistance for Small and Medium-Sized Enterprises, Decision No. 844/QĐ-TTg and the tax laws in Vietnam, there are no specific tax incentives for startups. Therefore, this study will clarify the legal provisions on tax incentives for startups, find out the legal issues and recommendations solutions to overcome those legal issues.

Research problem identified in this study is that tax incentives for startups are specified in the Tax Laws, including: the Law on Enterprise Income Tax and the Law on Value-Added Tax in Vietnam.

The main content that the study will focus on solving is the following content: first, theoretical basis on the legal aspect of tax incentives for startups; second, the practice of implementing regulations on tax incentives for startups in Vietnam and legal issues; third, recommendations on remedial measures when implementing the legislation of tax incentives for startups in Vietnam.

2. Literature review, theoretical framework and methods

2.1. Literature review

Studies on tax incentives for startups in Vietnam has attracted attention in recent years:

Studies on enterprise income tax incentives:

Phạm Thị Hiền Thảo (2019). This study has analyzed enterprise income tax incentives for small and medium-sized enterprises, including: tax incentives; enterprise income tax incentives according to geographical areas, deductible expenses when calculating enterprise income tax; Evaluate the results and limitations when implementing preferential policies and offer solutions to improve the regulations on enterprise income tax incentives for small and medium-sized enterprises.

Nguyễn Thị Thương Huyền and Lý Phương Duyên (2012). This study has clarified tax incentives in supporting and for small and medium-sized enterprises, including: Use low tax rates; preferential tariff; tax exemption; tax reduction Enterprise Income Tax and Value-Added Tax. This study has also suggested continuing to use tax incentives to further support and develop for small and medium-sized enterprises.

Studies on value-added tax incentives

Lê Xuân Trường (2018). This study analyzed tax incentives for startups in Vietnam; explain the reasons why enterprise income tax incentives must be used to promote the development of startups; Proposing some recommendations to improve enterprise income tax incentives for startups in Vietnam.

Trương Bá Tuấn (2019). This study has clarified the overview of tax incentives in Vietnam in general; advantages and disadvantages of tax incentives; issues raised about tax incentives in Vietnam; orientation to improve tax incentives in Vietnam.

Lương Thu Thủy and Nguyễn Đào Tùng (2020). This study has introduced and analyzed tax policies to support creative startups in Vietnam, including policies on enterprise income tax; raised some problems and proposed to improve tax incentives to promote the activities of startups in Vietnam.

The above studies have studied tax incentives for startups in many different aspects. However, the above studies have not shown a tax incentive legal corridor for startups, and have not explained the relevant legal provisions; Problems in the implementation of the legal framework on tax incentives for startups have not been identified yet. So, this study is aimed at two goals: (1) assessment of the legal framework of tax incentives for startups in Vietnam; (2) recommendations on remedial measures when implementing the legislation of tax incentives for startups in Vietnam.

2.2. Theoretical framework

The theoretical basis for promulgating the legal framework on tax incentives for startups is: The State grants comparative tax advantages to taxpayers when certain requirements are satisfied in the same conditions, circumstances and territories. The purpose of tax incentives for these subjects is to develop new occupations, create high socio-economic value, create or create jobs for society, etc. In order to enjoy these incentives, the state prescribes specific conditions and incentives in each case for each specific preferential beneficiary in the tax laws. The combination of these regulations creates a legal framework for tax incentives for startups. In addition, this establishment is also based on the right to collect taxes according to the territory of the state, and ensures the principle of "collecting taxes but not letting taxpayers fall into poverty".

2.3. Methods

To conduct research in practice, the author uses qualitative research method. The methods used in this study are: Desk Research and Theoretical Research. The research objects are provisions of the law on tax incentives for startups in the Law on Enterprise Income Tax and the Law on Value-Added Tax. This study has been carried out in Vietnam since the Law on Provision of Assistance for Small and Medium-Sized Enterprises and Decision No. 844/QĐ-TTg was issued until now.

The research hypotheses are put forward that the regulations on tax incentives for startups in Vietnam are incomplete and not commensurate with the development of startups. On the other hand, these regulations are overlapping, contradictory and ineffective.

The data collection methods used in this study are: the author has collected legal documents, including: the Law on Enterprise Income Tax, the Law on Value-Added Tax, Decrees and Circulars guiding these tax laws. First, the author read documents and study legal

theories. After, the author compares with the theoretical basis when building a legal framework of tax incentives for startups in Vietnam, relevant legal theories and practice to find the conflict points. Finally, the author recommends how to resolve those conflicts.

3. Results and discussion

3.1. Results

First, identify innovative startups that enjoy tax incentives.

Currently, in the system of legal documents of Vietnam, there are 02 concepts of startup: First, in Clause 1 Article 2 of Circular No. 01/2018/TT-BKHCN dated April, 12nd 2018 management of "national program for startup ecosystem assistance by 2025", "Startup means an enterprise that is able to grow quickly by using intellectual property, technology and new business models and operates for no more than 05 years from date on which the first enterprise registration certificate is issued"; Second, in Clause 2 Article 3 of the Law on Provision of Assistance for Small and Medium-Sized Enterprises 2017, "Startup is a small and medium-sized enterprises (SMEs) that is established to implement its business ideas based on the exploitation of intellectual property, technology and new business models and is able to grow quickly". In short, there are two types of startups in Vietnam: Startup are small and medium-sized enterprises and startups are not a small and medium-sized enterprises. According to the provisions of the Law on Provision of Assistance for Small and Medium-Sized Enterprises 2017, startups that are not small and medium-sized enterprises will not enjoy tax incentives. This is an unreasonable regulation, because with the same taxable object (startup), the same conditions (same taxable capacity), only startups (small and medium-sized enterprises) are entitled to tax incentives; And startups (not small and medium-sized enterprises) are not eligible for tax incentives, which is against the principle of fairness and equality.

Second, there are no separate regulations on enterprise income tax incentives for startups.

In Article 10 of the Law on Enterprise Income Tax in 2008, amended and supplemented in 2013 and 2014, from January, 1st 2016 onward, the general tax rate applicable to all enterprises in Vietnam is 20%, except for enterprises enjoying tax incentives (specified in Articles 13 and 14 in this law). Enterprises enjoying tax incentives will enjoy a lower tax rate of 20% (according to current regulations, preferential tax rates are 10% and 17%) or be exempt from enterprise income tax or reduce enterprise income tax. However, in Articles 13 and 14 of the Law on Enterprises Income Tax in 2008, amended and supplemented in 2013, 2014 does not clearly stipulate that startups are entitled to tax incentives but only technology enterprises are entitled to tax incentives. Enterprises eligible for tax incentives are enterprises with: "(a) Incomes of enterprises from the execution of new projects of investment in localities facing extreme socio-economic difficulties, economic zones, and hi-tech zones; b) Incomes of enterprises from the execution of new projects of investment, including: scientific research and technology development; application of high technologies in the list of prioritized high technologies according to the Law on High

Technologies; cultivation of high technologies, cultivation of hi-tech enterprises; high-risk investment in the development of high technologies in the list of prioritized high technologies according to the Law on High Technologies; Incomes from press agencies from printing newspapers, including advertisements on printed newspapers according to the Law on Press; incomes of publishers from publishing according to the Law on Publishing etc.” This regulation does not list startups in the field of intellectual property and new business models. This is a gap in the law on tax incentives for startups.

Third, there are no separate regulations on value-added tax incentives for startups.

In Article 5 and Article 8 of the Law on Value-Added Tax in 2008, amended and supplemented in 2013, 2014 and 2016, lists tax incentives for scientific research and technological development, including two contents: First, “machinery, equipment, parts, and materials that cannot be produced at home and need to be imported to serve scientific research, technological development” are non-taxable objects; second, apply a lower tax rate than the standard tax rate for scientific and technological services under the Law on Science and Technology. While the standard value-added tax rate is 10%, the preferential tax rate is 5%. However, these tax incentives are not strictly for startups. As the provisions of the Law on Value-Added Tax clearly state, the subjects eligible for value-added tax incentives are newly established enterprises with scientific and technological activities. This regulation does not list startups in the field of intellectual property and new business models. This is a gap in the law on tax incentives for startups. In addition, specifying who is non-taxable objects to value-added tax for assets (machinery, equipment, spare parts, supplies etc.) is not effective; because taxpayers (businesses selling assets) will benefit, since value added tax is an indirect tax, input will be deducted. Therefore, the enterprises that are eligible for tax incentives are not startups, but enterprises that sell assets to startups.

3. Discussion

The results of this study show problems that need to be discussed:

First, identify innovative startups that enjoy tax incentives.

According to the analysis, not all startups enjoy tax incentives. Only startups that are identified as small and medium-sized enterprises under Article 4 of the Law on Provision of Assistance for Small and Medium-Sized Enterprises in 2017 are eligible for tax incentives. This is the problem that previous studies have also raised, “Vietnam does not offer tax incentives for all startups, but only for SMEs. This has two policy implications: (i) Vietnam does not give tax incentives to all start-ups, but offers tax incentives to newly established businesses that qualify as start-ups; (ii) Vietnam only offers tax incentives for small and medium-sized enterprises, but not for large start-ups” Lê Xuân Trường (2018).

The principle of fairness and equality in tax law clearly states that subjects with the same legal position and similar conditions must be treated equally. Therefore, startups,

whether small and medium-sized enterprises or non- small and medium-sized enterprises, must enjoy the same tax incentives.

Therefore, the provisions on tax incentives in the Law on Provision of Assistance for Small and Medium-Sized Enterprises are not consistent with the principle of fairness and equality before the law. Compliance with these principles is extremely important in building the tax legal system in Vietnam. Compliance with these principles will ensure that the tax legal system is effectively implemented, and the taxable subjects are treated fairly.

Second, separate regulations on enterprise income tax incentives for startups.

The enterprise income tax law has given special incentives to startups at the startup at the startup stage. Because this is the stage where startups need capital to purchase assets and investments, tax incentives are essential. This is an issue that previous studies have also raised, Lê Xuân Trường (2018); Phạm Thị Hiền Thảo (2019), Trương Bá Tuấn (2019), Lương Thu Thủy, Nguyễn Đào Tùng (2020).

However, the regulations on enterprise income tax incentives for startups are not specifically regulated for startups. This makes it difficult for startups, because it is possible that many startups cannot determine what incentives they are entitled to in terms of enterprise income tax. Meanwhile, not all startups are knowledgeable about tax laws to apply properly; or not every startup has a legal department to advise the business. The uniform regulation of enterprise income tax incentives for startups is extremely necessary. Because, if startup development is considered the focus of the economy, it should be considered as an object of special attention, policies and regulations on tax incentives must be clear, specific and detailed. and separate.

Third, separate regulations on value-added tax incentives for startups.

Value-added tax incentives are intrinsically indirect incentives, not direct incentives like enterprise income tax incentives. In essence, value-added tax incentives will not be as effective as enterprise income tax incentives. Because value-added tax is an indirect tax, startups will be able to deduct input tax, so the tax burden will be shifted to related enterprises, Nguyễn Thị Thương Huyền, Lý Phương Duyên (2012). Besides, the regulations on enterprise income tax incentives for startups are not specifically regulated for startups. Unclear regulations will result in startups being unable to determine whether tax incentives are available to them. In addition, the Law on Value-Added Tax Law only stipulates incentives for assets that are Machinery, equipment, parts, and materials that cannot be produced at home and need to be imported to serve scientific research, technological development; Scientific and technological services under the Law on Science and Technology. Such regulation will not promote the effectiveness of regulations on tax incentives. Because startups (property buyers) will not enjoy incentives; taxpayers (enterprise selling assets) will benefit, since value-added tax is an indirect tax, and input will be deducted.

4. Recommendations

First, amending regulations on beneficiaries of tax incentives.

Startups need tax incentives when they are first established, so identifying the right beneficiaries is extremely important. Therefore, it must be regulated that all startups are object to tax incentives without discrimination as small and medium-sized enterprises or non-small and medium-sized enterprises. Regulating all startups solves two problems: First, ensuring the principle of fairness and equality in the tax law, that is, the same subjects, with the same conditions, enjoy the same incentives; Second, ensure that tax incentives are in focus, which is a preference for innovative startups, not all businesses. The regulations on tax incentives that are start-ups must be specified in the Law on Provision of Assistance for Small and Medium-Sized Enterprises and Decision No.844. The specific provisions on tax incentives should be specified directly in the tax laws.

Second, regulations on separate enterprise income tax incentives for startups.

Incentives on enterprise income tax are direct incentives, which have a great impact on the development of startups, especially in the early stages of their establishment. The more detailed, easier to understand, and more consistent the regulations on enterprise income tax incentives are, the more beneficial their application in practice will be to startups. Therefore, it is necessary to regulations on separate enterprise income tax incentives for startups. This will solve two problems: ensure the detail, clarity and easy understanding of the Law on Corporate Income Tax. Thereby helping startups easily identify the corporate income tax incentives that they are entitled to in accordance with the law; And, as a specialized law regulating tax, the Law on Enterprise Income Tax must provide tax incentives for startups. Other laws only provide reference to the Law on Enterprise Income Tax without detailing corporate income tax incentives for startups. When applied in practice, we will apply the principle of application of specialized law and general law to resolve conflicts of law.

Third, separate regulations on value-added tax incentives for startups.

Value-added tax incentives are intrinsically indirect incentives, not direct incentives like enterprise income tax incentives. In essence, value-added tax incentives will not be as effective as enterprise income tax incentives. Therefore, regulations on value-added tax incentives must also pay attention to efficiency. In order to overcome the limitations of the regulations on value-added tax incentives for startups, it is necessary to amend and supplement the regulations on value-added tax incentives. This modification is reflected in the content: To abolish regulations on non-taxable objects for Machinery, equipment, parts, and materials that cannot be produced at home and need to be imported to serve scientific research, technological development etc. Instead, issue regulations on reducing value-added tax for startups for a certain period of time. How much tax reduction is depends on each period. The time limit for enjoying value-added tax reduction incentives must be at least the first 5 years from the time the startup is established; or a new project licensed by a competent

authority; And, clearly stipulate the incentives on tax reduction rate, how much tax reduction time is for startups. The amendment of this regulation will solve two problems: ensure the effectiveness of the provisions of value-added tax incentives, which are incentives for startups, not all enterprises; and, ensure the detail and clarity in the regulations on value-added tax incentives.

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FACTORS INFLUENCING DIGITAL TRANSFORMATION OF SMALL AND MEDIUM-SIZED ENTERPRISES IN VIETNAM

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Abstract

In the context of the Industrial Revolution 4.0, digital transformation is a trending and urgent activity worldwide. The digital transformation adoption will bring Vietnamese small and medium-sized enterprises (SMEs) many benefits such as cutting operating costs, reaching the maximum potential customers in the same period of time, supporting leaders in making decisions quickly and accurately, etc. to help enterprises improve the efficiency of their production and business activities and enhance their competitiveness. Through the survey process of 296 SMEs in Vietnam, the results show that the number of enterprises implementing digital transformation is still limited; the adoption of digital technology in activities is not well synchronized, mainly focusing on marketing and sales activities; Digital transformation is affected by management factors, organizational readiness and external environment.

Keywords: *Digital transformation; SMEs; Vietnam.*

1. Introduction

Digital transformation is currently the top concern today. According to Microsoft research in the Asia Pacific region, in 2017 the impact of digital transformation brought about 6% of GDP, in 2019 it was 25% and by 2021, this figure will be 60%. As realizing the value of digital transformation, the Government of Vietnam has issued many policies and paid attention to investment in infrastructure, development of the information technology industry, promotion of e-commerce, application modern technology in production and business activities. Currently, more than 30 cities have deployed Smart City with new technology platforms. The Prime Minister has set a target that by 2030, Vietnam will have 100.000 digital technology enterprises and develop a National Strategy on the development of Vietnamese digital technology enterprises in order to contribute to promoting economic growth and prosperous development.

It can be seen that digital transformation brings businesses a lot of benefits such as increasing transparency and efficiency in the internal management system, bridging the gap between departments, optimizing employee productivity and enhancing the competitiveness of enterprises through the application of digital technology in the fields of internal management, sales, purchasing, production, logistics and marketing. Especially in the current period, when the Covid-19 pandemic has changed a lot from the needs and shopping habits of

consumers to the production and business activities of enterprises, forcing businesses to innovate and change in operation methods according to the trend of digital technology application in production and business activities in order to survive and develop. However, Vietnamese businesses in general, and SME in particular, are still not properly aware of the role of digital transformation in the Fourth Industrial Revolution. According to Vietnam Chamber of Commerce and Industry (VCCI), currently, our country's SMEs account for about 98% of the total number of enterprises; contribute up to 45% of GDP and over 31% of total state budget revenue; attracting more than 5 million workers. However, the level of science, technology and innovation of Vietnam's SMEs is still low, with 80% to 90% of the machines used in these enterprises being imported, nearly 80% of which are old technologies from other countries. 1980 - 1990. In the study "Digital Transformation: Solutions to help businesses overcome the Covid-19 pandemic and develop", the authors conducted a survey of more than 400 businesses in Vietnam, the results were as follows: Large enterprises were earlier aware of the role of digital technology than SME, and the Covid-19 pandemic has had a significant impact on SME' digital awareness. The proof is that before Covid-19, only 42.4% of SMEs applied digital technology while large enterprises were 65.7%; After Covid-19 occurred, up to 32% of SMEs started to apply digital technology, this figure in large enterprises was 15.4% (Luong Minh Huan et al, 2020). Through a survey of 296 SMEs in Vietnam, the authors' survey shows that although the number of businesses applying digital technology is quite high (72.6%), it only stops at sales activities. and marketing leading to digital transformation is not synchronized.

From the above issues, the article focuses on researching issues related to digital transformation in SMEs; assess the factors affecting the application of digital technology by SMEs in Vietnam to make some recommendations to help improve the efficiency of digital transformation activities in SMEs.

2. Literature review; Theoretical framework and Methods

2.1. Literature review and theoretical framework

In recent years, digital transformation is a topic that attracts a lot of researchers. The number of research works related to this topic has increased sharply with many different subjects and scopes, including SMEs. This SME specific research is a subset of digital transformation research. The results' scientometrics shows that the annual scientific production in this domain grows at 80.53% and has seen a sharp rise since 2016. The concept itself started shaping in 2012 and started growing sharply since then. A remarkable volume of 53 articles in 2019 and 125 articles in 2020 was published. Thus, just these two years account for 178 articles out of 213 articles, which accounts for 83.5% of scientific production in the research area of the digital transformation of SME in the 21st century (Mo Bin et al, 2021).

According to McKinsey & Company, the integration of technological innovations were structured into four clusters of Industry 4.0 innovations such as (i) Data, computational power, and connectivity; (ii) Analytics and intelligence; (iii) Humanmachine interaction; (iv)

Digital-to-physical conversation (McKinsey & Company, 2015). Reis et al. (2018) support Ebert and Duarte (2016) and state that “the society as a whole is facing a fast and radical change due to the maturation of digital technologies and their ubiquitous penetration of all markets” (Reis et al, 2018, 411). Due to this, companies are seeking to survive and attain competitive advantages by going to be digital (Bharadwaj, 2000). Several literature review studies attempted to reveal the situation of digital transformation by revealing its concept. Digital transformation (DT) can be understood as “the transformation of socio-technical structures that were previously mediated by non-digital artifacts or relationships into ones that are mediated by digitized artifacts and relationships” (Yoo et al, 2010), which refers to the optimization of organizational processes with the aim of operational excellence by data-based workflows (Lederer et al, 2017), and by using the technology to radically improve performance or reach of enterprises (Westerman et al, 2011). In Vietnam, the definition of digital transformation is often understood in the sense that the process of changing from a traditional business model to a digital one by applying new technologies such as Big Data, the Internet of Things, Cloud Computing,... to change operating methods, leadership, working process, and corporate culture (FSI, 2020).

Reis et al. (2018) categorized digital transformation into three distinct elements:

- (i) Technological: Digital transformation based on the use of new digital technologies such as social media, mobile, analytics or embedded devices;
- (ii) Organizational: Digital transformation requiring a change in organizational processes or the creation of new business models;
- (iii) Social: Digital transformation is a phenomenon that is influencing all aspects of human life.

Hence, the main advantage of digital transformation can be seen as a transformation in processes, activities, competencies, models of a company.

SMEs play a tremendous role in socio – economic development of the country, help exploit and use effectively natural resources, capital, technology and markets; create jobs; contribute to the economic restructuring; reduce wealth disparities; support the development of large enterprises; maintain and develop traditional industries (Pham Van Hong, 2015). Although the term SME is used interchangeably worldwide, there is no common definition of these terms. The geographical placement of SMEs as well as country specific legislation influences the numerous SME definitions (Leopoulos, 2006). In Vietnam, the government provides a formal definition of SMEs in 2018 in Decree No.39/2018/ND-CP. According to this decree, SMEs are independent enterprises with registered capital of no more than VND 10 billion and employing less than 200 workers on average over a year. SMEs in Vietnam include state-owned enterprises, non-state enterprises, and foreign-invested enterprises. The SMEs are in various industries and a large number of the SMEs are in the trade, manufacturing, and services. SMEs are business establishments registered in accordance with

the law. It is divided into three levels, include micro, small and medium scale.

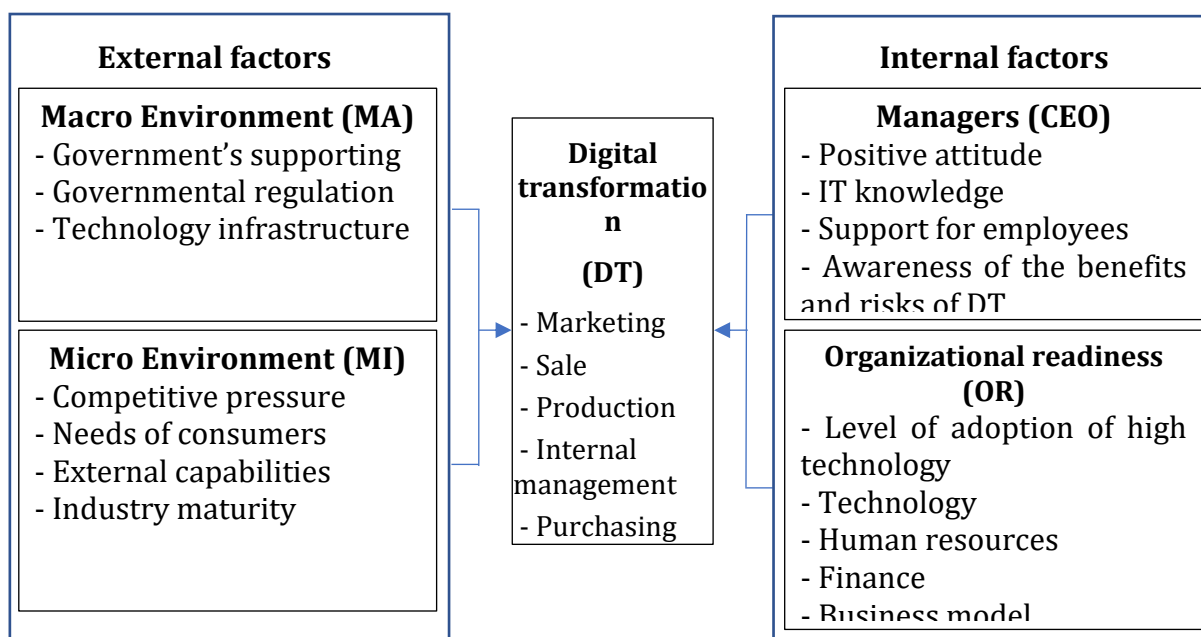
Up to now, there have not been many studies on the factors affecting the application of digital technology/digital transformation in enterprises, especially SMEs. Through the process of reviewing documents related to the research object of the article, the authors found that most of the studies pointed out the factors affecting the decision to apply digital technology or the success of the research. The success of digital transformation comes from two main groups of factors: the external environment of the business and the environment inside the business.

Nowaday, in open market economy, external factors are constantly changing and have a great impact on business activities of enterprises, forcing businesses to innovate to adapt. (Yu & Pan, 2020). For the application of digital transformation, macro-environmental factors such as government's supporting (Chen, 2021), government regulation (Taruté, 2018), and technology infrastructure (Pousttchi et al, 2019) have the best great influence. In addition, businesses also have to do digital transformation due to pressures from micro-environmental factors such as changing needs of consumers (Nadeem et al, 2018), external capabilities and resource fit like collaboration, industry maturity, needs and expectations from the industry (Taruté, 2018) and competitive pressure (Yu & Pan, 2020). In fact, macro level could create and stimulate challenges for the adoption of digital transformation at the micro level (Burns & Scapens, 2000). Hence it was disclosed that companies could face both macro and micro challenges by implementing the digital transformation.

According European Commission, it is easier for large enterprises to implement digital transformation because they have more resources (for IT infrastructure, skills upgrade) while SMEs must face a lot of challenges (European Commission, 2015). SMEs face three broad types of constraints that are limited resources, a lack of specialist expertise, and a limited impact on the marketplace (Carson & Cromie, 1990). Therefore, the internal challenges of digital transformation can be overcome through the perspectives of finance, business models, technology, and knowledge of managers (Moritz, 2016), and level of adoption of high technology, the size of a company (Nadeem et al, 2018). Another important challenge is knowledge and skills required of Information & Communication Technology (ICT) employees. On other hand, managers' view on the solutions of digital transformation such as the benefits (cost-saving, enable innovation, productivity) or the risks (data security and privacy) is very important with adoption by SMEs.

From previous studies along with the actual implementation of digital transformation activities of SMEs in Vietnam, the authors have selected the factors affecting the digital transformation activities of SMEs including: (1) Macro environment; (2) Micro environment; (3) Enterprise readiness; (4) Managers and building research model are as follows:

Figure 1: Proposed digital transformation adoption model for SMEs



Source: Compiled by the author

To evaluate the effectiveness of digital transformation in enterprises, the authors use the rating scale of Luong Minh Huan et al., with the degree of digital technology application in business activities such as internal management, purchasing, logistics, production, marketing, sales and payment (Luong Minh Huan et al, 2020) with observed variables:

T1	Businesses are increasingly applying digital technology in sales activities
T2	Businesses are increasingly applying digital technology in marketing activities
T3	Enterprises are increasingly applying digital technology in production activities
T4	Enterprises are increasingly applying digital technology in internal management activities
T5	Enterprises are increasingly applying digital technology in other activities (purchasing, logistics, administrative procedures,...)

2.2. Research methodology

To assess the current state of digital transformation and measure the impact of factors on the digital transformation activities of Vietnamese SMEs, the authors conducted a survey of managers or people in charge of IT departments of SMEs. The questionnaire was formed based on the scales of variables found through the performance of qualitative research based on an overview of research documents related to the topic. The scales for each influencing factor were formed through direct interviews with a number of SME managers who have applied digital transformation. The questionnaire was checked through the opinions of management researchers before being used for the survey.

The authors conducted a survey at the end of 2020 with 350 SMEs, mainly in Hanoi, Ho Chi Minh City and Da Nang. Due to the complicated situation of the epidemic, the survey

was conducted online through the Google form tool. The total number of answer sheets collected was 304, accounting for 86.9%; The number of votes eligible for analysis is 296. According to Hair et al (2009), this number of observations meets the minimum sample size requirement for exploratory factor analysis and multiple regression analysis in the topic.

Collected research data was then cleaned and analyzed using SPSS software. First, the authors conducted frequency statistics with identifiers to find out the percentage of SMEs by business type, revenue, and digital transformation application results. For the factors affecting the application of digital conversion, the scales are tested for reliability by Cronbach's Alpha, and then for relevance by the EFA test. Finally, the model is analyzed by multiple regression analysis to evaluate the impact as well as the direction and extent of the independent variables affecting the dependent variable.

3. Results and discussion

3.1. Sample Descriptive Statistics

In terms of business, the majority of enterprises participating in the survey operate in the service, trade and manufacturing sectors with the number of 111, 88 and 77 respectively, at 37.5%, 29.7%, and 29.7%, and 26% respectively; the number of enterprises operating in the fields of agriculture, forestry, fishery and multi-sector business is very small, totaling only 6.7%. Most businesses have revenue in 2019 below 3 billion (41.2%), only 10 businesses reach 100-300 billion (3.4%), the rest are businesses with revenue from 3 to 10 billion (24.7%) and 10-100 billion (30.7%).

When asked about implementing digital transformation in businesses, up to 215 businesses confirmed that they have implemented digital transformation, reaching 72.6%. It can be seen that this result is quite similar to the survey results conducted by the VCCI research team in 2020 on “Digital Transformation: Solutions to help businesses overcome the Covid-19 pandemic and grow” with the percentage of SMEs implementing digital transformation (compared to the total number of SMEs participating in the survey) reaching about 66.4%. Out of these 215 businesses, only 24 have digital transformation for more than 5 years, 50 have done it for 3 to 5 years, 42 have just deployed, most of the time they do digital transformation is from 1 to 3 years (99 enterprises). This is completely reasonable because digital transformation has been widely propagated and deployed in Vietnam in the past 2 years. In addition, the majority of businesses were forced to change their operating methods due to the impact of the Covid-19 pandemic, which began in early 2020.

Activities applied digital technology in Vietnamese SMEs are uneven, most of them only focus on basic marketing activities with a very high rate of 91.6% of enterprises applying digital technology for marketing activities and 59.1% of businesses digital transformation for sales activities. Not many enterprises have applied digital technology to production activities because the scale of production enterprises in our country is mostly small, operating with traditional models and old technologies. For logistics activities, although this is an area with a

lot of advantages to apply digital technology, the investment costs are very high and if not fully exploited, it will lead to a waste of resources. Thus, they often choose to use third-party logistics services provided.

Table 1: Statistics of digital transformation of SMEs

Field	Responses		Percent of Cases (%)
	N	Percent (%)	
Sale	127	24.6	59.1
Marketing	197	38.2	91.6
Manufacturing	26	5.0	12.1
Internal management	61	11.8	28.4
Purchase	66	12.8	30.7
Logistics	39	7.6	18.1
Total	516	100	240

Source: Data analysis results

3.2. Evaluate the reliability of Cronbach's Alpha scale

The results of Cronbach's Alpha analysis of 4 independent variables are shown in Table 2 as follows:

Table 2: Cronbach's Alpha results

Independent variable		Cronbach's Alpha	N of Items
Macro environment	MA	0.694	3
Micro environment	MI	0.750	4
Managers	CEO	0.840	6
Organizational readiness	OR	0.825	5
Dependent variable		Cronbach's Alpha	N of Items
Digital transformation	DT	.875	5

Source: Data analysis results

Cronbach's Alpha coefficient of the scales are all greater than 0.6 and the correlation coefficient of the sum of the observed variables is greater than 0.3. Therefore, 4 scales with 18 observed variables continue to be used in the exploratory factor analysis (EFA) step.

3.3. EFA Analysis

In factor analysis, variables with weights less than 0.5 will be excluded (Nguyen Dinh Tho, 2013). The set of 19 observed variables after testing for reliability was included in the

EFA factor analysis. The results show that most of the observed variables have a satisfactory factor loading of ≥ 0.3 except for the variable CEO3 – “Leaders actively support and encourage officers and employees to learn and apply digital technology”, so CEO3 is considered a bad variable. After removing unsatisfactory observed variables, conduct KMO test with 17 observed variables and dependent variable:

Table 3: KMO and Bartlett’s Test results

		Independent variable	Dependent variable
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.921	.820
Bartlett's Test of Sphericity	Approx. Chi-Square	2497.616	764.640
	df	136	10
	Sig.	.000	.000

Source: Data analysis results

Through the KMO and Bartlett test, we see that KMO = 0.921, satisfying the condition $0.5 < \text{KMO} < 1$. The significance level of Sig Barlett's test < 0.05 shows that the observed variables are correlated with each other in factor and factor analysis that is appropriate for real data. For the dependent variable, after analysis, KMO = 0.820 and Sig = 0.000 and EFA can only extract 1 factor from the given general variables. The results show that the scale ensures unidirectionality and the observed variables of the dependent variable converge quite well.

Test the explanatory level of the observed variables for the factor:

Through the Total Variance Explained test table, it shows that the 3 extracted factors can explain 60.039% of the variation of the data, which is an acceptable result. The break point when extracting factors is at the 4th element with an Eigenvalue of 1.126. The results of the factor analysis are completely consistent.

Exploratory factor analysis results:

The last exploratory factor analysis has variable convergence. Based on the characteristic properties of the observed variables in each group of factors, 03 groups of factors are identified as:

X1 - EX: This variable includes observed variables in the external environment of the enterprise. The results show that the influence of two groups of macro and micro environmental factors on digital technology application is similar, so we can consider it as an independent variable.

X2 – ORG: This independent variable represents the readiness of enterprises for digital transformation.

X3 – CEO: In addition to the previously observed variables, the variable CEO

represents the element belonging to the manager, there is also an additional observed variable OR5 "Enterprises must transform digitally to match the business model". This is reasonable because the business model is deployed based on the business strategy that the manager builds, so this factor is greatly influenced by the business management team.

Table 4: Rotated Component Matrix^a

Variable	Component		
	1	2	3
MI3	.718		
MA2	.682		
MA3	.649		
MA1	.632		
MI2	.615		
MI1	.529		
MI4	.502		
OR4		.740	
OR3		.705	
OR2		.688	
OR1		.625	
OR6		.574	
CEO1			.774
CEO5			.706
CEO2			.693
CEO4			.641
OR5			.543

Source: Data analysis results

3.4. Regression analysis

Check model fit: Explanatory level of the model: The adjusted R Square or R^2 value = 0.550 means that the three independent variables included have a 55% influence on the digital transformation of SMEs. Thus, this study can be used.

Table 5: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	70.903	3	23.634	111.725	.000 ^b
	Residual	58.128	292	.199		
	Total	129.030	295			

With Sig < 0.05, it can be concluded that the given model is consistent with the actual data. In other words, there is at least 1 independent variable that is linearly related to the dependent variable and has a 99% confidence level.

Regression coefficient test:

The results of the multicollinearity test showed that the variance exaggeration coefficient VIF of the control variables included in the analysis in the model was all < 2. Thus, the multicollinearity of the independent variables is insignificant and the variables in the model are accepted.

Table 6: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	SE	Beta			Tolerance	VIF	
1	(Constant)	.892	.161		5.531	.000		
	EXT	.228	.067	.211	3.425	.001	.406	1.466
	ORG	.115	.056	.113	2.041	.042	.500	1.999
	CEO	.462	.056	.490	8.251	.000	.438	1.285
a. Dependent Variable: DT								

Source: Data analysis results

The relationship between the dependent variable and the independent variables is shown in the following linear regression equation: $Y = 0.211 * X1 + 0.113 * X2 + 0.490 * X3$.

The regression equation shows that the standardized Beta coefficients of the independent variables are all > 0, showing that the independent variables have a positive impact on the digital transformation of SMEs with the order from high to low: Group of factors about manager; Group of factors on the external environment; and finally the group of factors on business readiness.

4. Conclusions and implications

Although there have been many studies in the world on the factors affecting the application of digital technology of enterprises, there are very few researchs assessing the impact of these factors on the digital transformation activities of enterprises in general and SMEs in particular in Vietnam. This study is one of the first scientific works to measure the impact of internal and external environmental factors on the digital transformation activities of Vietnamese SMEs. The results of the study indicate that the factors included in the analysis all have a favorable effect on the level of digital transformation of SMEs. The factor belonging to the manager has the greatest influence (Beta = .490), the external factor with a smaller influence (Beta = .211), the lowest influence is the readiness of the business (Beta =

.113). Overall, this result is quite similar to that of Albar et al. (2019) when it was recognized that the importance of external environmental factors such as government's supporting; governmental regulation; technology infrastructure; competitive pressure and internal environmental factors such as manager's IT knowledge; manager's innovativeness; top management support for the application of technology by the enterprise. In Prause's study, the biggest challenge of SMEs when digital transformation is the technological factor expressed through the country's technology infrastructure and the technological capacity of enterprises (Prause, 2019). These are also factors that Vietnamese SMEs are very interested in. In addition, the results of the study are also fully in line with the research of Luong Minh Huan et al (2020) when the authors said that the biggest barrier to digital transformation in the business is the change of mindset or perception of the head or Thong (1999) with the assumption that the main factor group influences the decision to apply technology/information system in the business is the manager. However, this author disagrees with the perception that the competitive environment has an impact on the digital transformation of businesses (Thong, 1999). Besides, compared to some studies of the same topic, the results that the authors discovered also have opposite point of views. For example, in the study of Nadeem et al. (2017), the factor that is arguably the biggest influence on the digital transformation of the business is the capacity of the organization including digital leadership; agile and scalable operations; digital artifacts; flexible and scalable digital platforms; dynamic capabilities; plug and play capabilities; operational capabilities. To explain this difference, the authors believes the technology platform of Vietnam's SMEs is still limited compared to developed countries, digital transformation activities are still passive under the government's policy, so the readiness of enterprises has not had a great impact.

From the above research results, the author would like to propose some recommendations to improve both the quantity and quality of digital transformation activities for SMEs in Vietnam.

For state management agencies:

Digital transformation is a task that requires the cooperation of many levels, many industries, and the whole society, not just businesses. Therefore, leaders at all levels from central to local levels need to agree to build a synchronous digital transformation ecosystem with connection, coordination and support between the parties. They need to continue to improve the legal environment for information and communication technology development. Besides, they should strengthen the legality of the Laws of Information Technology, Law on Cyber Information Security, Law on Cyber Security, etc. to ensure safety and create trust for businesses and consumers when applying digital technology. .

On the other hand, one of the great limitations of SMEs that makes these businesses hesitate in digital transformation is due to fear of costs and doubts about the effectiveness of digital transformation. Therefore, the Government needs to have specific programs and actions to propagate and raise awareness for managers of businesses about the benefits and

necessity of digital transformation in the current context. In addition, the Government also needs a budget to support SMEs to encourage these businesses to participate in digital transformation right from the start.

On the part of associations and industries, it is necessary to develop plans and regularly organize seminars and training courses on digital transformation for member businesses. They should always be ready to provide information, advice and support for digital transformation for businesses when it's necessary.

For technology training institutions:

According to data from Vietnamworks, by the end of 2018, Vietnam still lacked 70,000 workers in the field of information and communication technology (ICT). In 2020, the number of manpower shortages has reached 500,000. Not only limited in number, the shortage of highly qualified human resources and knowledge that keeps up with the changing trends of the technology market is the reason why senior ICT personnel are becoming increasingly scarce. To overcome this situation, training institutions such as universities, colleges and intermediate schools need to include information technology and technology modules in their training programs. They need to equip advanced knowledge in technology such as artificial intelligence, network security, technology application in administration, etc. for the teaching staff to train quality ICT human resources to meet the demand of “capacity” technological force” of the enterprise. In addition, the participation and support of Vietnam's large technology corporations such as Viettel, FPT, VNPT, etc., are essential in building IT infrastructure, providing technology and training human resources. This is the core factor to help implement digital transformation for SMEs.

For SMEs:

Managers themselves play a very important role in the digital transformation of SMEs. They need to actively explore and improve their understanding and knowledge of digital transformation; must have the courage to accept change; continuously update new trends and changes of the market to have a basis for building a digital strategy for businesses. This strategy needs to be implemented in parallel with the business strategy of the enterprise. Having a policy to attract and retain high-quality ICT human resources to serve the digital transformation of enterprises. Boldly invest in technology infrastructure to ensure that digital transformation goals are achieved.

In short, in the context of international integration and before the impacts of the Covid-19 pandemic, digital transformation is no longer a trend but has become a vital issue to help businesses, especially SMEs, that can be able to survive and develop. Besides the efforts of enterprises, in order for businesses to succeed in digital transformation, they need great support from State management agencies, educational and training institutions and the whole society.

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DEVELOPING RELATIONSHIP BETWEEN RELATIONSHIP QUALITY, RELATIONSHIP MARKETING, EMOTION, CUSTOMER LOYALTY AND OPPORTUNISM IN VIETNAM BANKING SECTOR

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Abstract

The article studies the relationship between relationship marketing, emotions, relationship quality, customer loyalty, and opportunism through previous studies, from which to propose the research model. Specifically, the author considers the direct and positive influence of relationship marketing on emotion and relationship quality; direct and positive influence of emotions on relationship quality and loyalty; the study also examines the direct and positive influence of relationship quality on customer loyalty; Finally, the study examines the direct and negative relationship between customer loyalty and opportunism. This study proposes a model as a premise for the author to expand empirical research empirical in the banking industry in Vietnam.

Keywords: *customer loyalty; emotion; opportunism; relationship marketing; relationship quality.*

1. Introduction

Recently, the banking industry has changed dramatically. The opening up of the banking sector in Vietnam, along with the outstanding growth of banking services, has created a significant number of businesses providing banking services to the market, leading to a fierce competition in the industry. At this time, banking service providers have found that maintaining existing customers is just as important as creating new customers. In that context, service providers are well aware of the importance of building long-term relationships with customers, which is achieved by strengthening relational marketing activities so as to improve the relationship quality between service providers and customers. Because creating relationships with customers through relational marketing activities has been shown by researchers to have an impact on the supplier's customer retention and thereby create their loyalty. In addition, according to Nguyen & Ngo (2012), relational marketing model has potentiality of different characteristics between countries with transition economies and developed economies. Therefore, it is necessary to study the relationship bonds model in a competitive service industry like the banking sector, in a transitional economy.

Indeed, the fierce competition in business environment has led to an increasing need of companies to build close relationships with customers, as only a high-quality relationship between the seller and the buyer which bring competitive advantage. This happens when the seller uses the seller-buyer relationship to obtain privileged information about the customer. As a result, sellers better understand their customers' needs and serve them more satisfactorily than competitors.

According to Ndubisi (2007), a quality relationship ensures that the seller is close enough to the customer to be able to accurately perceive and serve customer needs effectively; and customers will stick with the seller that they have a better relationship. This research to help businesses design strategies and tactics which relate to delivery banking services, and training programs that enable bank employees and managers to operate effectively as a relationship builder, nurturer, manager and supervisor in banks, as well as making a significant contribution to existing relationship quality theory.

The study of the relationship between relationship marketing, emotion, relationship quality, customer loyalty and opportunism through previous studies, through previous studies, from which to propose the research model in the context of the relationship between banking service providers and Vietnamese customers. Specifically, the author considers the direct and positive influence of relationship marketing on emotion and relationship quality; direct and positive influence of emotions on relationship quality and loyalty; the study also examines the direct influence of relationship quality on customer loyalty. Finally, the study examines the direct and negative relationship between customer loyalty and opportunism. This study proposes a model as a premise for the author to expand empirical research empirical in the banking industry in Vietnam.

2. Theoretical basis and research framework

Dwyer et al. (1987) identified five stages of the buyer-seller relationship development process: (1) recognition, (2) discovery, (3) expansion, (4) commitment, and (5) dissolution. Each stage in the above process is represented by communication/exchange activities which each party in the relationship demonstrates its value to the other. Dwyer et al., (1987) supposed three basic concepts of the buyer-seller relationship development process include: trust, commitment, and detachment. From his study, they formed a new research direction, which is the study of relationship quality. Indeed, the research direction on the relationship quality between the seller and the buyer has made very practical contributions in consolidating, strengthening and maintaining the relationship between the customer and the seller.

Summary of some previous studies related to this paper:

- Research by Berry, L.L. (1995) on relationship marketing in the service sector. This is a study the author developed from his own study in 1985 (Berry, L.L. & Parasuraman, 1991).

Berry is considered to be the first to propose the relationship marketing concept in 1983. To 1995, Berry studied the relationship marketing concept more specifically, arguing

that relationship marketing is essentially the relationship marketing activities levels. He called the relationship marketing levels as relational bonds with customers including financial bonds (level 1) is the lowest level in strengthening long-term relationships with customers; social bonds (level 2) is considered the medium level in enhancing customer relationships, and finally structural bonds (level 3) is the highest level in strengthening customer relationships. In this study, Berry, L.L. (1995) considers relational bonds as the focus and core of relationship marketing, which are specific activities of relationship marketing in enterprises. However, these are the theoretical views of Berry, in this study he has not measured and tested how these relational bonds affect customer loyalty in practice. This is considered as the foundation study for future empirical researchs on relational bonds.

- Research by Yu and Tung (2013) on relationship marketing types effects to customer loyalty via relationship quality in life insurers in Taiwan.

This research is to establish a model that identifies the causal relationship among relationship marketing types (financial bonds, social bonds and structural bonds), service quality (interaction quality, physical environment and additional services) and relationship quality (trust, satisfaction and commitment) on customer loyalty (behavioural loyalty and Word-of-mouth). Data for this study were collected using in-depth interviews and surveys from the clients of policyholder service centres of life insurers in Taiwan. A structural equation modelling approach is employed to examine the relationship posited in this study. The findings are generally consistent with the literature. This study shows that all hypotheses are accepted. Finally, the paper concludes with theoretical and managerial implications of the research findings. This study attempts to focus on policyholder service centres in the life insurance industry, which have been increasingly emphasized in Taiwan, to examine the impacts that different relationship marketing methods have on service quality, relationship quality and customer loyalty. Based on the results of in-depth interviews and surveys, this study also attempts to propose a set of references to aid the development and implementation of relationship marketing campaigns and to make further contributions to both the academic and empirical literature.

- Research by Lin and Chung (2013) on Relationship Marketing's Impact on Relationship Quality and E-Loyalty in Taiwan

This study suggests the way to build long-term relationships with customers in a virtual environment, including providing the relationship among relational bonds (financial bonds, social bonds and structural bonds), relationship quality (trust, satisfaction and commitment), and e-loyalty (behavior and attitude), while determining which bonding strategies lead to higher relationship quality in different products. A total of 493 questionnaires were found usable from customers with online shopping experience in Taiwan. The results suggest that all three relational bonds have positive impacts on relationship quality across three categories while relationship quality has a positive impact on e-loyalty. Besides, financial bonds are more powerful in affecting relationship quality and e-loyalty for search

goods/services than for experience and credence goods/services. Social bonds are more important for experience and credence goods/services than for search goods/services in the impact on relationship quality while structural bonds influence relationship quality more greatly for credence goods/services than for search and experience goods/services.

2.1. Research concepts

2.1.1. Relationship quality

Relationship quality is defined as the strength and tightness of a relationship (Hennig-Thurau, T. et al., 2002; Palmatier, R.W. et al., 2006). Grönroos, C. (2000) defined relationship quality is the driving force behind building lasting quality in ongoing customer relationships and suggests that from the customer's view, relationship quality is aware about quality which develops continually over time. Relationship quality is also seen as a higher-order construct which is made up of many other related components (Brun et al., 2014). The most commonly used dimensions of relationship quality by researchers are satisfaction, trust, and commitment (Yu, TW et al., 2013; Kwiatek, P. et al., 2020).

(1) Trust: According to Moorman et al (1993), trust is the willingness to rely on an exchange partner that they trust. Meanwhile, Alawneh A.A. (2012) argued that trust is the customer's willingness to rely on banks providing services to carry out various banking activities and transactions. Besides, Kim et al. (2009) carried out a long-term study in the United States and found that online customer trust is closely related to loyalty. Trust is an important indicator of relationship quality. Only when a person trusts the other is that person likely to perceive that there is a high-quality relationship between them. A relationship that lacks trust is hardly considered high-quality.

(2) Satisfaction: Churchill and Surprenant (1982) showed that satisfaction is the outcome of the purchase and product using, derived from a comparison between the buyer's expected results and their actual investment. Oliver (1997) defines satisfaction as the level of satisfaction of fulfillment related to consumption. Satisfaction, on the other hand, refers to overall satisfaction and it is cumulative judgments based on the purchase of a product or service or related consumer experience (Garbarino et al., 1999). Furthermore, relationship satisfaction is an affective or emotional state of being in a relationship, often assessed cumulatively in exchange history (Palmatier et al 2006). The satisfaction component of relationship quality is the user's assessment of the relationship with the service provider. The main source of relationship satisfaction is a previous positive interaction with the service provider. In his research, Alawneh A.A (2012) said that satisfaction is a positive emotional state of customers.

(3) Commitment: Commitment is the desire to maintain a relationship (Moorman et al. 1993). Meanwhile, Morgan et al. (1994) defined commitment as an exchange partner who believes that an ongoing relationship with another counterparty is important to ensure maximum effort in maintaining it. Commitment is an essential element of successful long-

term relationships because customer commitment is the basis for business continuity and future value or benefits for those with whom they have commitment (Lemon et al., 2001). Committed customers will feel loyal to the service provider and are willing to put in extra effort or even sacrifice short-term gains to maintain the relationship. They are also more tolerant of minor errors from service providers. According to Alawneh A.A. (2012), commitment is defined as the customer's intention to return in the future, a relationship that exists over time to predict the continuity of the relationship with the banks service provider in the online banking context.

2.1.2. Relationship marketing

There are differing views on the relationship marketing origin. However, most authors attribute the term's origin to Berry (1983), who first proposed it in the professional services context. Berry, L.L. and Parsuraman (1991) defined relationship marketing as the practice of bonds multiple levels which called relational bonds to cultivate customer loyalty. In addition, Berry (1995) emphasized that there are three level of relationship marketing: financial bonds, social bonds, and structural bonds. Through the synthesis and analysis process, the authors found that relationship marketing concept of Berry, L.L. and Parsuraman (1991) are the most cited and inherited by many researchers. However, there are many authors studying on relationship marketing only inherited the point of view of Berry, L.L. and Parsuraman (1991) and Berry, L.L. (1995) about the components of relationship marketing including financial bonds, social bonds, and structural bonds. They do not divide these components according to each level as Berry, L.L. (1995), they consider relational bonds as the type of relationship marketing to measure and test them in practice (Lin, N. et al., 2003; Hsieh, Y.C. et al., 2005; Yu, Tsu-Wei et al., 2013).

(1) Financial bonds:

Financial bonds primarily based on the price incentives using to encourage customers to purchase goods/services in order to maintain customer loyalty, or to provide products cheaper or free gift for the loyal customer. Financial bonds is often called frequency marketing or retention marketing, which service providers use economic benefits such as prices, discounts or other financial incentives to secure customer loyalty (Lin, N. et al., 2003; Hsieh, YC et al., 2005,...). However, the company competitive advantages are often only short-lived with financial bonds.

(2) Social bonds:

Social bonds refers to establishing lasting relationships with customers through social and interpersonal relationships. In this approach, companies treat customers as different individuals and try to meet the needs of different customer groups with customized services. Compared to financial bonds, which is built on price incentives, social bonds allows companies to enjoy a greater competitive advantage, as they are more difficult to substitute and also useful in increase the customer retention rate (Yu, T., 2013; Huang, C. et al., 2014).

Furthermore, social bond includes the benefits that customers receive through self-disclosure, proximity, support or advice, sympathy and feelings, sense of connection, attachment or association and experiences sharing. Lin, N. et al. (2003) and Hsieh, Y.C. et al. (2005) provided a more holistic view by defining social bonds as individual relationships involving service components that provide interactions between individuals, friendship and identity.

(3) Structural bonds

Structured bonds achieved when companies offer more customized services to individual customers, emphasizing providing high service quality and developing the strong and long-term relationships that include trust, satisfaction and commitment (Kumar et al., 1995). Companies must provide partners with integrated services or offer customers innovative products to meet their specific needs (Hsieh et al., 2005; Lin, N. et al., 2003). Indeed, structured bonds provides target customers with value-added benefits that are rare and costly and not available elsewhere. As such, structured bonds exists when a business strengthens customer relationships by providing solutions to customers for problems in the form of a service system, instead of the customer depending on the personal relationship with the supplier (Lin, N. et al., 2003). From the retail banking case study, Dibb, S. et al (2001) found that some banks have invested in structured bonds such as establishing new channels, integrated customer databases, and two-way information exchange technology. This approach provides customers a more convenient and flexible environment to use the service, which is considered an important advantage over competitors (Lin, N. et al., 2003).

2.1.2. Emotion

Schachter et al. (1962) described emotion as a general state of arousal, it understood through a cognitive assessment process. Then, Westbrook et al. (1991) defined emotion as a response elicited in the product using process or consumption experience belonging to different emotional experiences and expressions types. In addition, Bagozzi et al. (1999) described emotions as being “a mental state of readiness that arises from cognitive appraisals of an events or thoughts; has a phenomenological tone; is accompanied by physiological processes; is often expressed physically; and may result in specific actions to affirm or cope with the emotion, depending on its nature and the person having it”.

Therefore, Wong (2004) suggested that one's positive emotions were related to the decision to stay with a particular service provider and one's negative emotions were related to the decision to discontinue engagement. Emotions are thought to be specific for a product (Holbrook et al., 1984), service (Price et al., 1995), consumer experience (Richins, 1997), advertising (Batra et al., 1997)., 1990), or the buyer-seller relationship (Barnes, 1997; Ruth et al., 2004).

2.1.3. Outcome of Relationship quality

2.1.3.1. Customer loyalty

According to Dick, A.S. et al. (1994), customer loyalty can be towards a brand, service, store or supplier. Customer loyalty is defined as a sustained relationship between an individual's attitude and repeat purchases, representing the rate, coordination, and repeat purchases ability from the same seller.

In the banking industry, Kathleen, K. (2005) defined customer loyalty as when a customer chooses to do business with a bank and will continue to do business with that bank, recommending others to use the bank's service and when there is a need to use a new service, they will consider that bank as the first choice even though they know there may be relatively better options at other banks in terms of service prices or utilities. Customer loyalty is an bank asset. When customers are loyal, they will continue to use the bank's products/services and can introduce other customers to transact with the bank, or word of mouth good information to reinforce the existing customer trust for customers so that they become loyal customers. According to Reichheld, F.F. et al. (1990), loyalty and profitability are closely related. Therefore, banks need to work to build, maintain and strengthen customer loyalty through increasing relationship quality.

2.1.3.2. Opportunism

Opportunism is the unwarranted search for self-interest (Morgan et al., 1994), taking advantage of opportunities as they arise (Wirtz et al., 2010). Or confirmatory opportunism occurs when one party takes unilateral actions for its own benefit that do not involve negative outcomes for the other party or jeopardize their long-term mutual interests (Brown et al., 2000).

As such, opportunistic customers are more likely to want to take advantage of the rewards in the offer and when they lost, the customers easily leave to look for another company with better deals. Hawkins et al. (2008) showed in a competitive market to gain an advantage, there may be incentives for business decision makers to act opportunistically. This may limit value creation (Morgan et al., 1994), or may reduce the outcomes of trade between counterparties (Hawkins et al., 2008).

According to Heide (2000), in business, opportunism can develop in the direction: the partners do not completely keep the promises with partners; may omit some terms agreed with the partner; may neglect the relationship after having relationship with the customer/partner. It is precisely such behaviors that result that opportunism is closely related to the concept of relationship quality.

2.2. The relationship between research concepts

2.2.1. Relationship between relationship marketing and relationship quality

2.2.1.1. The impact of relational bonds on satisfaction

Berry et al. (1991) argued that relationship marketing is built by companies that offer price incentives to encourage customers to buy their products or services. They also say that the pricing strategy of the marketing mix helps convert random customers into repeat

customers. Besides, customers can become aware of the company's products and have a stronger sense of trust and commitment towards the companies involved.

In research on the banking industry, Lin et al (2003) found that in establishing long-term transactional relationships with customers by relationship marketing including financial bonds, social bonds and structural bonds which all had significant positive effects on trust, satisfaction, and commitment. Hsieh et al (2005) in a study of online shoppers suggested that all types of relationship marketing (financial, social and structural bonds) all help to increase customer satisfaction and commitment to related companies. Or as in the study on the insurance industry of Yu, T. et al. (2013), there are also conclusions about the types of relationship marketing that have a positive impact on relationship quality (satisfaction, trust and commitment). From the above summarized and analyzed, we present the hypothesis as follows:

H1: Relationship marketing (financial, social and structural bonds) has positive impact on relationship quality (trust, satisfaction and commitment) in the banking industry

2.2.1.2. Relationship between relationship marketing and emotions

Relationship marketing includes the marketing activities that service providers use to develop and maintain relationships with their customers. Previous studies have mainly addressed the emotions importance as a result of previous relationships that customers had with their service providers.

Anderson et al. (2006) argued that the buyer-seller relationship has the potential to generate positive and negative emotional responses between individuals. One of the most important aspects affecting the emotional responses intensity between buyer and seller partnerships is the nature of their previous relationships. Han (1991) emphasized that social bonds links and holds buyers-sellers together in personal relationships leading to positive emotional attachment. In contrast, the personal relationships termination in a business context is a significant emotional stress source (Dwyer et al., 1987).

As such, the more service providers build relationships with their customers through practicing relationship marketing activities, the more they encourage positive customer emotions and vice versa. Walls (2003) asserted that relationship marketing provides additional comfortable feelings, security, and belonging, while they also reduce anxiety, sadness, and alienation. According to Shammout (2007), relationship marketing (financial, social and structural bonds) has a positive impact on customer emotions in the context of hospitality services. From the above summarized and analyzed, we present the hypothesis as follows:

H2: Relationship marketing (financial, social and structural bonds) has positive impact on emotions.

2.2.1.3. Relationship between relationship quality and customer loyalty

(1) Relationship between satisfaction and customer loyalty

Gronroos et al. (1994) showed that satisfaction leads to strong relationships between suppliers and customers. Heining-Thurau et al. (1997) also demonstrated that customer satisfaction is a key factor in customer retention. Loyalty theory has shown that loyalty is one of the results of satisfaction and it has been mentioned by many authors in their research. Accordingly, in some studies, the authors have acknowledged the direct contribution of satisfaction to loyalty (Lin & Ding, 2005; Naoui & Zaiem, 2010).

(2) Relationship between commitment and customer loyalty

Research results of Naoui and Zaiem (2010) showed commitment has a positive impact on customer loyalty, and commitment is a factor that creates relationship quality, from which it is easy to see if providers commitment to customers, this means that between customers and suppliers has a good quality relationships which will easily affect customer loyalty.

(3) Relationship between trust and customer loyalty

Previous studies have shown a link between trust and customer loyalty. Several studies have shown that a direct result of trust is loyalty (Naoui & Zaiem, 2010; Liu et al., 2011). This study considers relationship quality as a multi-dimensional concept, shaped by feelings of satisfaction, trust, and commitment. As an integral part of relationship quality, the impact of trust on customer loyalty is also an indicator of the relationship quality outcome.

From the above summarized and analyzed, we present the hypothesis as follows:

H3: Relationship quality (trust, satisfaction and commitment) has positive impact on customer loyalty

2.2.1.4. Relationship between relationship quality and opportunism

(1) Relationship between satisfaction and opportunism

Previous studies have shown that there is a negative effect between satisfaction and trust on opportunism (Jena et al., 2011). Minimizing opportunistic behavior will lead to a good perception of customer on the relationship, and vice versa, if opportunistic behavior thrives, the relationship quality may worsen (Nguyen & Nguyen, 2010).

However, these risks can be avoided if there are feelings of satisfaction and trust in the relationship. When two partners are satisfied with each other, they will have more trust and raise their expectations for future transactions (Mysen et al., 2011). It is these feelings that will lead to a reduction in the partner's exploitative intentions (ie. opportunistic behaviors).

With the above arguments, Mysen et al. (2011) have shown that satisfaction is negatively related to opportunism, that is, if there is satisfaction in the relationship, opportunism behavior manifestations will be minimized. This is understood: when two parties are satisfied with each other, they will feel more confident and have higher expectations for

the outcome of good transactions in the future, thereby reducing temptations. about taking advantage of the partner.

(2) Relationship between commitment and opportunism

Mysen et al. (2011) demonstrated the negative effect of commitment on opportunism. This can be explained as once there is a commitment to the relationship, the partners have confidence in the longevity of the future relationship, and to protect that outcome, they will act honestly and reliably, so that opportunism will be minimized in this relationship. Thus, as an integral part of relationship quality, commitment contributes to built a dimension of relationship quality outcomes, that is, it helps to reduce opportunism in relationship.

(3) Relationship between trust and opportunism

Research by Mysen et al. (2011) shows an indirect effect of trust on opportunism through satisfaction. Specifically, trust has impact positive and direct on satisfaction, satisfaction has effect negative and direct on opportunism. As discussed above, previous studies have confirmed that each component of the relationship quality concept is related to loyalty and opportunism. From the above summarized and analyzed, we present the hypothesis as follows:

H4: Relationship quality (trust, satisfaction and commitment) has positive impact on opportunism

2.2.1.5. Relationship between emotion and relationship quality

According to Wong (2004) in the consumer experience, many customers different emotions types can be elicited and these emotions convey important information about how the customer will ultimately experience the service and then is the overall relationship quality.

This means that if customers express positive emotions during service exposure, they will also form positive perceptions of overall relationship quality.

In his study, Shamout (2007) made a link between emotions and relationship quality - in which relationship quality includes trust, satisfaction and commitment. Similarly, Anderson et al. (2006) found that positive emotions strengthen trust, while negative emotions weaken trust. As for satisfaction, it was found that the more customers reported positive feelings towards their supplier, the more satisfied with their service provider and vice versa (Oliver, 1993). The relationship between emotions and satisfaction was also found in buyer-seller relationships, where positive emotions were found to significantly affect relationship satisfaction (Dolen et al. events, 2004). Finally, emotions were also found to have an impact on commitment (Shamout, 2007). From the above summarized and analyzed, we present the hypothesis as follows:

H5: Emotion has positive impact on relationship quality

2.2.1.6. Relationship between emotion and customer loyalty

Sivadas et al. (2000) argued that customers who experience a satisfying service, they will have a positive brand attitude and a loyalty high level. Mattila (2001)) proposed that only emotional connection leads to true loyalty. Such an emotional bond creates emotional loyalty between service firms and customers. In addition, Morgan et al. (1994) make the point that emotional commitment reduces the relationship leave tendency of customers.

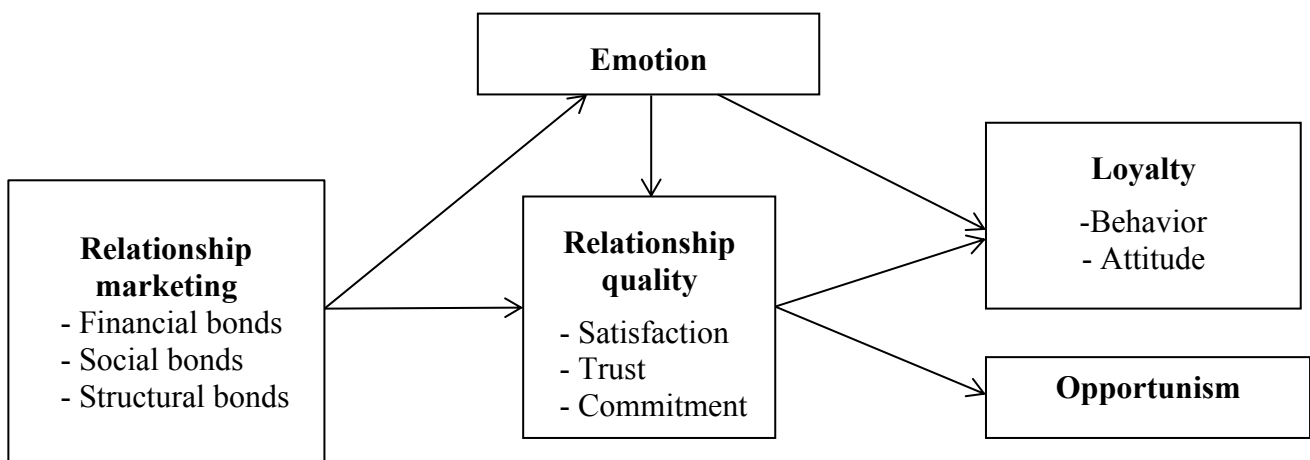
From the above summarized and analyzed, we present the hypothesis as follows:

H6: Emotion has positive impact on customer loyalty

2.3. *Research proposal model*

From the above summarized and analyzed of the literature on the relationship quality antecedents and its outcomes. The research model of relationship quality in the banking industry is proposed with independent variables including relationship marketing as a higher order variable (with a combination of financial bonds, social bonds and structural bonds). The dependent variable is emotion, relationship quality is a higher order variable (integrated satisfaction, commitment and trust) with its outcome being customer loyalty (behavior loyalty and attitude loyalty) and opportunism. The above hypotheses are modeled as Figure 1.1 below.

Figure 1. The research model



Source: Authors development

The aim of this study is to develop a model that identifies the causal relationship between relationship marketing and emotions on relationship quality, and examines the relationship between relationship quality with customer loyalty and opportunism in the Vietnamese banking industry. The author has synthesized and analyzed the available literature and discovered the relationship between relationship marketing, emotions and relationship quality, as well as the relationship between emotion and customer loyalty. Moreover, the author also found a link between relationship quality and customer loyalty and opportunism. This study will certainly strengthen the existing body of knowledge by providing some empirically tested insight. At the same time, results of the study will help service providers to design their offering in such a way that ensure high level of loyalty among customers.

In addition, review of literature revealed the dearth of empirical research in the area of relationship quality, relationship marketing, emotion, opportunism and customer loyalty. At this backdrop, the focus of this study is to present a conceptual model for empirical investigation to understand the antecedents and consequences of relationship quality in the Vietnam banks. This present study has considered various research models from earlier studies viz. Berry (1995), Hennig-Thurau, T. et al. (2002); Palmatier, R.W. et al. (2006), Grönroos, C. (2000), Yu and Tung (2013) and Lin and Chung (2013), for understanding the connection between relationship quality, relationship marketing, emotion, customer loyalty and opportunism dimensions.

However, the model needs to be conducted empirical research in the banking context in the Vietnam banking sector in order to draw conclusions consistent with reality.

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THE IMPACT OF TALENT MANAGEMENT STRATEGIES ON ORGANIZATIONAL PERFORMANCE IN VIETTEL

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Abstract

In today's dynamic and competitive business era, businesses are facing challenges in talent management. For organizations operating on a global level, talent management has become an important and essential issue. The need for key positions is increasing because those are the people who will be responsible for driving the organization to the pinnacle of success, this is why organizations are increasingly competing to attract and retain Get the best people for your company. Therefore, today's organizations continuously improve and devise strategies in talent management to improve organizational performance that can lead the organization to success. This purpose of the research is to examine the impact of talent management strategies on organizational of Viettel, especially in three main parts: recruitment and selection strategies, training courses and development strategies, and succession planning. This research used stratified sampling method to approach the respondents and applied SEM-PLS software to analyze the collected data. It found that these strategies have positive impact on the performance of the company through surveying 110 respondents at the headquarters of Viettel. Based on the research results, several recommendations and conclusions have been drawn to help Viettel improve the performance of the company. Therefore, the research has approached the important issue of talent management in enterprises today, and has high applicability for the following research papers.

Keywords: *Talent management, strategies, organizational performance, Viettel, succession planning.*

1. Introduction

In the past, corporate success was measured by financial performance. Today, however, shareholders and stakeholders require the business to have an impact not only on the financial situation but also to positively impact the human factor, which is essential to creating the sustainability of a business now and in the future (Cole and Salimath, 2013). They believe that people are the only asset to innovation in any business, and innovation is the only way to stay productive. Therefore, talent management has become one of the important sources of competitive advantage to create the value and position of the business. Talent management, which is the strategic process of a business to recognize and develop talented people, is a remarkable issue and has attracted a lot of attention in recent years, especially in the period when technology and artificial intelligence is growing faster. In the

current context, businesses need to build a competitive workforce by finding talent with the required skills, continually investing and developing skills, at the same time managing and optimizing the performance of talents (Lepak and Snell, 2002; Becker and Huselid, 2006; Bassi and McMurrer, 2007; Wang et al., 2012). Talent management is not "manager" but "support" more for employees so that they have more experience, to push them to develop their full capabilities, achieve the perfect results. As Ashton & Morton (2005) stated that, a large number of HR managers around the world believe that talent management is one of the most important human resource challenges facing businesses in the 21st century. No matter how the future of work changes and evolves over the next decade, one constant will remain. A business will not outlast and outperform its competitors without seeking, recruiting and retaining the best talent. Therefore, nowadays businesses tend to want to find ways to get the most from their employees through finding, managing, developing and retaining talented employees who can meet the goals of business to improve long-term business efficiency.

Today, the change in the basic nature of the work, the development of the new technology era comes with the need of the new generation for how to complete the work, how employees participate in the organization's activities has made businesses reimagine the performance management of employees (Collings & Mellahi, 2009). Instead of focusing on what they have done in the past, businesses focus more on assessing what employees can do to increase their contribution in the future. If the business does not have the right talent, it has a poor culture risk, low customer satisfaction and, most importantly, a lack of innovation. Businesses with a good talent management system will have a competitive advantage over those that are not well-manage. Therefore, businesses must continually invest in talent development, and quickly utilize their employees' skills to innovate and grow (Huselid, 1995). According to a study from Jacob Morgan (2017), businesses that invest in employees' experiences of culture, technology and workspace are four times more profitable than businesses that do not invest. This helps employees work more efficiently, which directly affects the profitability of the business.

Viettel established on 2009 under the decision of Prime Minister is an economic defense enterprise with 100% state capital with charter capital of 121,520 billion dong. With the full name of Vietnam's Military Telecom Industry Corporation, Viettel has become the leading telecommunications enterprise with the largest number of customers (110,000,000) and the market leader in Vietnam (Viettel, 2020). With the slogan "Speak your way", Viettel always tries its best to provide customers with the best possible service. According to Anphabe's survey (Anphabe, 2020), Viettel is in the Top 5 "Vietnam Best Places to Work 2020" for the third time. Viettel is also on the list of 50 Vietnamese Enterprises with attractive employer brands (Anphabe, 2020). Viettel's attraction comes from a dynamic and creative working environment with a professional corporate culture and discipline that has been proven over the years. Viettel also continuously improves the working environment in the direction of professionalism, meeting international standards. Many opportunities for

employees are being created when Viettel invests heavily in high technology for the goal of "Creating a digital society" (Viettel, 2020). In the field of human resources, the corporation gradually improves its working environment in compliance with global standards for personnel assessment and compensation based on consulting from leading partners in the world. Therefore, talent management is especially interested in Viettel. According to Chu Lang (2017), Viettel has a philosophy called the Sun Wukong philosophy, which does not require high with 95 people, but only needs to ask for five people. According to that philosophy, for example, with only 26,000 employees, Viettel only needs to train 1,300 people, who will create a process for the rest of the work. Currently, the portrait of talent in Viettel planned according to two points of expertise and management talents in Viettel are not only managers but also direct performers of the work.

The report researches on the talent management issue in Viettel with the desire to achieve the following goals. The objective of the study is to evaluate the impact of talent management on the success of the business at Viettel. From there, Viettel will have a more specific view of their talent management situation to offer solutions for future business development. From the above research problem, research questions are raised in this research paper: *The strategy of HR department to talent management affect the performance of Viettel*. From there, 4 secondary questions of the research were given below: "How does recruitment and selection talent affect the performance of Viettel?"; "How does training courses and development talent affect the performance of Viettel?"; "How does succession planning affect the performance of Viettel?"; "How does the talent management affect the performance of Viettel?". The study focuses on investigating how talent management strategies at Viettel affects corporate performance. The research paper will relate to the talent management strategies of HR department of Viettel affecting the company's development through three small categories in the management process: recruitment & selection strategies, training courses & development strategies and succession planning. However, the study will only survey employees from a few departments of Viettel's headquarter in Hanoi. Because the necessary conditions for the survey such as time or space are insufficient, a complete number of staffs in a few departments of the corporation will not be included in the report.

2. Literature review and hypothesis development

2.1. Literature review

2.1.1. Recruitment and selection

Recruitment process is the process to generate a pool of qualified candidates for a particular job and the organization may seek applicants from the inside the organization, outside the organization or both. Another definition of recruitment is that recruitment means seeking and obtaining eligible work applicants in sufficient numbers so that the company can choose the best applicant for the job (Schuler, 1992). Meanwhile, talent selection is the process of deciding whether or not to recruit each job applicant. The selection process, as

described by Mondy et al (1996), is the process of selecting the candidate best suited for a particular role from a group of applicants.

According to Armstrong (2006), there are many ways to attract talent, but an important aspect of which is the recruitment and selection of talented individuals. Moreover, Alruwaili (2018) also pointed out that the first thing about talent management is practices of recruitment and selection. This is seen as an important task for any business to recruit talent and then select the most potential individual who ultimately runs the business towards success (Rabbi & Ali, 2015). Attracting talents through recruitment is considered an important stage in the management of talent of an enterprise so identify who will work effectively for the businesses. Meanwhile, selection clarifies the ability to judge talent as to who properly completes the job so that businesses can hire the right individuals for the right job (Bratton & Gold, 2017). Effective recruiting is the foundation upon which any talent management program is built. According to Mondy et al. (1996), recruitment should be regarded as a significant indicator of any organization because it allows the organization to not only attract and employ qualified candidates, but also to convey a positive picture of the organization to those who encounter it.

Recruitment process can help the organization reduce the number of obviously under-qualified or over-qualified job applicants to improve the hiring process' success rate (Schuler, 1992). It also reduces the likelihood that work applicants, once hired and chosen, may leave the company after just a short time by providing applicants with enough details about the organization and target role to enable them to self-select themselves out of the process prior to being engaged. Typically, the procedure entails assessing the qualities needed for successful job results, interviewing, and then evaluating candidates based on those qualities. The selection process aids organizations in making decisions regarding individuals whose attributes are most closely aligned with the criteria of open positions (Anderson, 1996). According to Beer et al. (1984), recruiting and selection have a profound effect on the employee composition, the best alignment for the organization's requirements and culture, and long-term jobs stability.

2.1.2. Training courses and development

The training and development of a systematic job guarantee will make the employee value more favorable (Felicity, Eric & David, 2013). Training is a key factor in promoting recruiting, and "caring and nurturing" is seen as a valuable job feature. Training courses improve the ability of employees' problem solving. Given training is a kind of motivational tool for employee retention by raising the commitment of employees towards the company (Cloutier et al, 2015). This tends to be in line with their workers' desires and beliefs. Employee development is an ongoing process of assisting employees with how to do their jobs. According to Jacobs & Washington (2003), staff development is a set of integrated planning programs to ensure that all employees have the necessary competencies to perform to their fullest potential.

Research by Barringer, Jones and Neubaum (2005) has shown that a fast-growing company is highly dependent on the employee's ability and effort to maintain their growth-oriented strategies. Fast-growing companies have used employee-training programs to achieve their goals and emphasized growth to a significantly greater extent than the slow-growing company. Huselid (1995) found that staff training and development has a significant effect on employee productivity as well as the long-term and short-term performance of the business. Furthermore, training programs show an enterprise's interest in employee development, thereby stimulating employee commitment, maintaining and enhancing employee productivity to contribute to the success of organization (Paul & Anantharaman, 2003). Meanwhile, Michie and Quinn (2001) found an inverse correlation between low employee training and firm performance. The economic benefit of opening more training programs is that they are more likely to be captured by the company if the employees are motivated by type and contribute to the company's success, which is motivated in part by training and development policies that the company brings (Becker & Huselid, 1999). The successful growth of employees is the result of the balance between individual orientation and career needs as well as corporate vision and mission (Shelton, 2001). Holton (1996) points out that employee development activities are especially important for the new employees joining the organization. Torraco and Swanson (1995) state that employee growth provides leaner opportunities to do their jobs better, which in turn enables the entire organization to improve efficiency.

2.1.3. Succession planning

Succession planning is a method used to identify potential successors for key positions in the business. That method is intended to help businesses ensure that their operations remain smooth even in the case of their important positions in transition, retirement or death. Succession planning requires testing the skills of each leader, finding potential people inside and outside the business for internal replacements, and training those employees so they can take over the position later, especially leadership positions. Succession planning is an absolutely important strategic issue for the continued success of the business. Grusky (1960) stated that in today's competitive economy, businesses should comply with the new changes to meet their business goals, together with succession planning and management will help businesses maintain a stable position. Research by Heinz Landau (2010) shows that about half of companies do not have a succession planning system. Likewise, the 2004 IPMA HR survey found that 63% of companies had no workforce plan. Recent research shows that people who execute succession plans well without any disturbances are willing to change depending on its ability to execute plans (Charan & Colvin, 1999). According to Rothwell (2002), succession planning is considered to be the most effective strategy used to address issues for many years. Over the past 30 years, succession planning has helped businesses successfully develop internal talent to fill potential leadership and administrative positions, who retire, transfer or promote.

An important aspect of succession planning is assessing the skills of people within the business to identify employees with potential opportunities to take over for the highest management positions. That will help motivate employees to grow, compete, and can encourage talented employees to stay in business instead of looking for opportunities at another company. At the same time, the business also shows that the business is very serious in the development of human resources, which can help employees have more trust and engagement with the business. As a result, businesses should have a written succession planning, which sets out the continuation of the business when the owner or key management member of the business leaves, retires, or over life. Furthermore, the document should detail changes as leadership moves from one person to another. Succession planning will give a number of advantages for the business. For instance, when an enterprise has succession planning, businesses can retain key employees, reduce tax burden and maintain stock prices during management transition. Succession planning is also of great value because it allows business owners to comfortably retire and continue to join family members. Succession planning needs a clear and specific strategic vision, which in turn helps the company have a suitable talent management strategy and be able to achieve its long-term goals (Cadmus, 2006). Without succession planning, a business cannot maintain stability for a long time.

2.1.4. Organizational performance

Lebans & Euske (2006) stated that performance is the index of financial factors that determines the degree of achievement of the goals. Financial success, shareholder return, organizational effectiveness, customer satisfaction, operational effectiveness, and other results that contribute to financial development are all examples of organizational performance (Richard et al., 2009). Organizational effectiveness and success are the goals of talent management and strategic human resource management (Cappelli and Keller, 2017; Mohammed, 2016; Ingram, 2016; Walisundera and Arachchige, 2016; Kaufman, 2015; Armstrong and Brown, 2019). When human resources are matched with the organization's operating structure, organizational efficiency can be achieved (Becker and Gerhart, 1996; Itami, 1987; Singh et al., 2016). Employee productivity, financial efficiency, and employee turnover are all indicators of strategic human resource management activities that lead to organizational performance (Lewis and Heckman, 2006; Delaney and Huselid, 1996). Organizational performance is the last dependent variable interested by researchers in the field of talent management.

Measuring organizational performance is essential for researchers and managers to evaluate specific company activities, compare business position with competitors, and track how companies grow and operate by the time. The capacity of an organization to achieve its specified objectives by efficiently using resources is referred to as organizational success (Daft, 2000). Richardo (2001), like Daft (2000), described organizational success as the organization's ability to achieve the proposed goals. The next issue that is always asked about the organization's performance is what determines the organization's performance. According

to Hansen and Wernerfelt (1989), there are two major research flows on the determinants of organizational success in the business policy literature. The first is focused on economic tradition, which stresses the role of external market influences in deciding the success of a company. Another line of study, based on the sociological and behavioral model, considers organizational variables and their "suitability" for the environment to be the most important determinant of performance.

2.2. Hypothesis development

2.2.1. Relationship between recruitment & selection and organizational performance

Behind the development of any company, the most important factor contributing to that growth is employees. Every employee works hard to fulfill the company's mission, which greatly contributes to the success of a business. According to Kibui (2015), companies only develop steadily when having the perfect combination of employees and the right selection of talented employees is of paramount importance. The recruitment and selection process will help the company choose the right people to maximize benefits for the company (Gelazanskas & Gamage, 2014). Fisher (2010) stated that not having the right and having enough resources to fill the position may lead to poor performance of the organization. To improve the organizational performance, recruitment and selection process is the first important factor that businesses need to pay attention to (Machogu, 2017).

Hypothesis 1: The recruitment and selection strategies have a positive impact on organizational performance.

2.2.2. Relationship between training courses & development talent and organizational performance

To improve organizational performance, companies need to pay special attention to conduct training and develop development policies for talented employees. Hammed & Waheed (2011) argues that for the long-term sustainable development of enterprises, firms invest heavily in the implementation of training courses as well as development policies to utilize the full potential of talented employees to achieve the overall goal of the business. In order for an organization to be successful, knowledge must be transferred from one person to another and this can be through a training strategy to advance the expertise of the talent towards the overall performance of the organization (Ibidunn, 2015). Shareholders and management strive to allocate resources to ensure they retain the top talent of the business. Furthermore, managers must use metrics to identify talented individuals who are willing to accept positions of greater authority and responsibility. Therefore, the training and development of talented employees is a priority because it related to the success of the organization in the long term (Almohtaseb, 2020).

Hypothesis 2: Training courses and development for talent affect positively on organizational performance

2.2.3. Relationship between succession planning and organizational performance

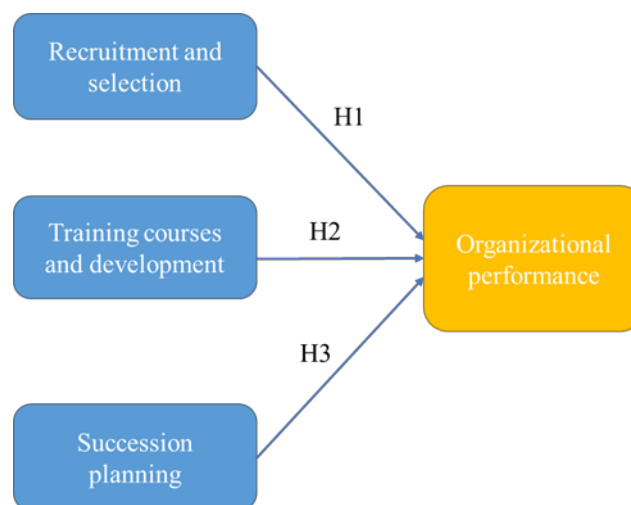
Pennell (2010) stated that succession planning's goal is to explore individual work efficiency in order to achieve organizational goals. Succession planning creates a team of people with the skills to fix the problem of inappropriate personal selection. Furthermore, succession planning has the potential to create a competitive advantage over competitors by providing uninterrupted customer service in the event of a sudden resignation of an employee (Johnson, 2018). Webb (2017) states that succession planning improves the expertise of talented employees, thereby enhancing their performance and their business. Patidar (2016) emphasizes that succession planning focuses on employees with high potential to achieve the best performance and prepares them for leadership roles in the organization in the future. Likewise, Grigsby & Brubaker (2016) emphasizes the importance of succession planning and points out that succession planning increases the organization's sustainable performance, optimize talent management and develop talented individuals for leadership roles.

Hypothesis 3: There is a positive relationship between succession planning and organizational performance.

2.2.4. Conceptual framework

Figure 1 explains the conceptual framework of this research

Figure 5: Conceptual framework



Source: Author (2021)

3. Methodology

3.1. Sampling procedure and data collection

The researcher wants to observe the impact of talent management strategies on organizational performance in Viettel with the use of online questionnaire because of the influence of Covid-19 pandemic, with 110 respondents at the headquarter of Viettel at 1 Giang Van Minh Street. It was distributed after the questionnaire was designed on 21th March 2021 through the representative of the headquarter of Viettel, Mr. Cao Anh Son by email, after that he sent out the online questionnaire to departments. The participants had to make

sure that they only do the survey once to ensure the validity of the data. The online questionnaire was designed in form of Google form and all the responses of participants were collected automotive through Google form. Because the questionnaire was designed in both English and Vietnamese versions, respondents can choose between two versions to answer. All the translation was made by the researcher and all the status of the questionnaire was updated every 2 days to ensure that the progress of data collection be on time.

3.2. Measures

This research includes 4 variables, in which one dependent variable (Y1: Organizational performance) and three independent variables (X1: Recruitment and selection, X2: Training courses and development, X3: Succession planning):

Variables	Types	Items	Measurement	Sources
Recruitment and selection	Independent	5	Rating (Likert Scale)	Abdollahbeigi (2017)
Training courses and development	Independent	6	Rating (Likert Scale)	Abdollahbeigi (2017)
Succession planning	Independent	5	Rating (Likert Scale)	Abdollahbeigi (2017)
Organizational performance	Dependent	5	Rating (Likert Scale)	Rajasshrie Pillai (2019)

This article uses subjective method (rating scales) to evaluate variables, especially organizational performance variable instead of objective methods. Due to the fact that financial statements of the business may be flawed, the lack of relevant data and the difficulty in reaching objective data to measure the performance of the business. Therefore, the researcher relies on data obtained from the respondents participating in survey to measure the performance of the business.

4. Analysis and results

This study completed the data analysis in two stages. the model measurement and model assessment. In this study, all constructs are performed on a reflective measurement model, rather than a formative measurement model because all construct’s items are compatible and associated (F. Hair Jr et al., 2014).

4.1. Sample characteristics

Table 1 represents the demographic information of the participants. The participant's gender, with 49 out of 110 male and 61 female participants, accounted for 45% and 55% of the total respondents respectively. The number of participants in Viettel aged 40-50 is the most common, corresponding to 43 people, followed by the age of 30-40 and above 50 with 26 and 22 participants respectively, ultimately aged 20-30 were the least with 19 out of 110

participants. Asked about their education level, 35 participants had a bachelor's degree, accounting for 31% of the total number of respondents, followed by 32 respondents who chose others option. Vocational education and high school graduation are the two lowest levels, with 10 people with vocational qualifications and 15 people with high school graduation, accounting for 9% and 13% respectively.

Table 4: Demographic information

Demographic Variable		Frequency	Percentage (%)
Gender	Female	61	55%
	Male	49	45%
Age	20-30 years' old	19	17,28%
	30-40 years' old	26	23,64 %
	40-50 years' old	43	39,08%
	Above 50 years' old	22	20%
Educational level	High school	15	13%
	Master's degree	18	17,91%
	Bachelor's degree	35	31%
	Vocational	10	9%
	Others	32	29,09%
Working department	HR department	7	6,37%
	IT department	12	10,9%
	R&D department	25	22,72%
	Marketing department	28	25,46%
	Quality control department	21	19,09%
	Administrative department	10	9,09%
	Other department	7	6,37%

Source: Author (2021)

4.2. Outer loadings

Outer loadings are indicators evaluating reliability through observing the correlation between items. The larger the outer loadings, the more reliable the relationship, and the greater the 0.7 to have a relationship between the items. In this model the outer loadings values are all greater than 0.7 except for items SP5 in Succession planning factor.

Notes: OP stands for Organizational Performance, RS stands for Recruitment and selection, SP stands for Succession planning, TC stands for Training courses and development.

Table 5: Outer loadings

	OP	RS	SP	TC
OP1	0.7666			
OP2	0.7669			
OP3	0.7787			
OP4	0.8075			
OP5	0.8417			
RS1		0.8229		
RS2		0.7790		
RS3		0.7641		
RS4		0.7977		
RS5		0.8218		
SP1			0.7016	
SP2			0.7301	
SP3			0.7443	
SP4			0.7353	
SP5			0.6284	
TC1				0.7628
TC2				0.8118
TC3				0.7789
TC4				0.7878
TC5				0.7303
TC6				0.7130

4.3. Construct Reliability and Validity

Table 3 shows the reliability of variables through Cronbach's alpha, composite reliability (CR) and average variance extracted (AVE).

Have the same function to measure reliability, however, while outer loadings measure each item, cronbach's alpha evaluates reliability through correlation among observed variables. This is recommended to be greater than 0.6 and for best results it should be higher than 0.7. In this model, cronbach's alpha are both greater than 0.6 (range from 0.75 to 0.85)

and are both at an acceptable level. It means that the questions in the questionnaire can accurately evaluate variables.

Composite reliability is also used to measure reliability similar to an Outer loadings index, however composite reliability adds the disadvantages and shortcomings of outer loadings. Composite reliability is often used concurrently with outer loadings to increase reliability between items, and it must be greater than 0.7 to make sense. In this model, all composite reliability values were higher than 0.7, ranging from 0.85 to 0.92, which shows the reliability of items were ensured.

AVE is defined as the sum of squares of the load factors divided by the number of variables, used to evaluate the unidirectional of questions in the same observed variable, which means considering questions that are correlated with one way or not. This value is determined to have significance when the index is greater than 0.5. The AVE values in this project range from 0.5 to 0.65, indicating that the construct accounts for more than half of the variance of items.

Table 6: Reliability of constructs

	Cronbach's Alpha	Composite Reliability	AVE
Organizational performance	0.852	0.894	0.628
Recruitment & selection	0.857	0.897	0.635
Succession planning	0.753	0.834	0.503
Training courses & development	0.857	0.894	0.585

Source: Author (2021)

4.4. Discriminant validity

Discriminant validity is the average of all correlations, as measured by the HTMT index used to check if there is a difference between the variables. Latent variables will lack uniqueness if the HTMT index is greater than 0.9. Therefore, for the results to be meaningful, the HTMT values must be less than 0.9. All HTMT values were lower than 0.9, it means that the independent variables in the study do not have mutual correlation.

Table 7: Discriminant validity

	OP	RS	SP	TC
OP				
RS	0,725			
SP	0,603	0,453		
TC	0,732	0,687	0,694	

4.5. Path coefficient

In table 5, Path coefficient shows the correlation between the variables and the values running from -1 to 1. However, in order for the coefficient to be statistically significant, it must depend on the P-value value (less than 0.05), which is obtained through the Bootstrapping method. The P-value in this model satisfies the condition and demonstrates that all three given hypotheses are acceptable and statistically significant.

Table 8: Path coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
RS -> OP	0.3766	0.3747	0.0824	4.5704	0.0000
SP -> OP	0.1779	0.1819	0.0771	2.3071	0.0215
TC -> OP	0.3089	0.3132	0.0898	3.4422	0.0006

Source: Author (2021)

4.6. R Square

The coefficient R Square is evaluated as a measure that predicts the interpretability of independent variables for dependent variables and is the squared correlation of the actual and predicted values. The coefficient R Square ranges from 0 to 1 and is as close to 1 as possible. In this model, R Square is 0.51, which means that the linear regression model being statistically will match the data at 51%, which shown in Table 6.

Table 9: R Square

	R Square
OP	0.5193

Source: Author (2021)

4.7. Collinearity

In table 7, collinearity is a phenomenon when the independent variables are strongly correlated with each other, leading to bias and changing the direction of its relationship with the dependent variable. If the VIF value is greater than 5, then there is multi-collinearity between the independent variables and should be considered for elimination or substitution. Therefore, the VIF value is suggested to be less than 5 to eliminate the collinearity. In this model, all the VIF values were lower than 5, meaning that the independent variables do not have a linear relationship with each other.

Table 10: Variance inflation factor

	VIF
OP1	1.8140
OP2	1.9229
OP3	1.8548
OP4	2.0212
OP5	2.3038
RS1	1.9811
RS2	1.6914
RS3	1.7961
RS4	2.0276
RS5	1.9759
SP1	1.5232
SP2	1.4314
SP3	1.3722
SP4	1.5206
SP5	1.2324
TC1	1.7738
TC2	2.1022
TC3	1.9276
TC4	1.9360
TC5	1.5825
TC6	1.4945

5. Discussion

This part concentrates on analyzing the collected result and discuss about the three hypotheses given above.

Table 11: Hypotheses results

Hypothesis	Relationship	β	P Values	Result
H1	Recruitment and selection strategy in talent management (RS) → Organizational performance (OP)	0,3766	0.0000	Accept
H2	Training courses and development in talent management (TC) → Organizational performance (OP)	0,1779	0.0335	Accept
H3	Succession planning in talent management (RS) → Organizational performance (OP)	0,3089	0.0018	Accept

Hypothesis 1 (H1): *The recruitment and selection strategies have a positive impact on organizational performance – Accepted*

The recruitment and selection strategies have positive impact on organizational performance and the results have shown the mutual impact relationship of two variables ($\beta = 0.3766$, P value = 0.0000 < 0.05). That means when the recruitment and selection strategies have increased by 1 unit, the organizational performance variable will increase by 0.3766 units. In other words, if Viettel wants to increase organizational performance, the company should improve more in recruitment and selection strategies. The positive effects of recruitment and selection strategies on organizational performance have also been demonstrated by many researchers. Abdollahbeigi (2017) indicated that choosing the right people with the right knowledge, skills, abilities and attitudes is at the heart of recruitment and selection strategies. Thereby, businesses can realize the need for talent ownership and devise strategies to use to attract talent to improve business performance. The effectiveness of an organization's recruitment and selection strategies system can influence bottom-line business outcomes, such as productivity and financial performance. Recruiting and selecting talented employees is increasingly fundamental to the running of an organization's success and there are compelling reasons to get it right. Inappropriate selection decisions undermine the organization's effectiveness, invalidate development and reward strategies, are often unfair to the individual hiring and can be offensive to managers, who must deal with the unsuitable employee. Richardson (2011) also argues that talent selection and recruitment strategies can reduce labor turnover, absenteeism as well as improve firm productivity. Employees are selected based on their qualifications, work experience and communication skills, and the organization's productivity will increase (Djabatey, 2012). He also pointed out that recruiting incompetent and unsuitable staff members reduces corporate performance. When the company has strategies for recruiting and selecting the talented people, they can bring the higher performance, productivity, flexibility than the others who not suitable with the culture and strategic of the company (Esra, 2010). A recent study by Ogbari (2018) advocates the continued recruitment of talent to achieve the required level of competency of the employees and improve the organization's performance. Similarly, Arif and Uddin (2016) researched and pointed out a positive relationship between talent selection and organizational performance.

Hypothesis 2 (H2): *Training courses and development strategies for talent affect positively on organizational performance – Accepted*

Hypothesis 2 have shown that training courses and development strategies for talent affect positively on organizational performance and the results obtained show the interaction relationship of the two variables ($\beta = 0.179$, P value = 0.0335 < 0, 05). This means that when the training courses and development strategies are increased by 1 unit, organizational performance will increase by 0.179 units. In other words, to increase organizational performance, encouragement is given that the company should increase the provision of talented employees with training and development courses. In terms of training courses and

development strategies in talent management, there are a number of researchers have researched and have the same opinion that the training courses and development strategies for talented people have brought about a positive effect on corporate performance. The business provides training and development courses not for career advancement but an opportunity to expand the knowledge base and working skills for existing talent to a better quality (Clifford & Thorpe, 2007). The immediate benefits of providing training and development for talented employees in the workplace are improved employee performance, increased employee satisfaction and morale, settlement and Overcoming the weaknesses of each person, reducing employee turnover thereby improving company performance and branding (Nafukho, 2004). By regularly providing and updating comprehensive training and development courses, the quality of employees will be significantly improved. As a result, this produces beneficial results for the business and can easily be inferred that training courses and development strategies play an important role in driving the organization's performance (Orpen, 1997). People in Aid (2013) also agrees when it emphasizes that the need for training and development is essential for employees as the organization operates in an ever-changing environment and that they need to adapt to stay ahead. The usefulness of learning and development has been recognized in these cases because being in the forefront means that the organization must always update new knowledge and skills, master new ways of operating to continues to offer high standards. In times of strong economic growth, it is easier to ignore mistakes in career management, but in the current economic downturn, top talent plays a more important role than ever (Davis, 2007). Training and development is an organization's approach to ensuring that people with the right qualifications and experience are available when needed (Zheng & Kleiner, 2001).

Hypothesis 3 (H3): *There is a positive relationship between succession planning and organizational performance – Accepted*

Hypothesis 3 stated that there is a positive relationship between succession planning and organizational performance and the results from this study show that by increasing succession planning by one unit, organizational performance will increase the coefficient 0.3089, succession planning is statistically significant to explain organizational performance as shown by a p-value of 0.0018, which is less than a statistical value of 0.05. Several studies have shown a positive impact of succession planning on organizational performance. The importance of succession planning lies in creating a ready pool of candidates who can fill vacancies at a higher level whenever the organization needs the right candidate. The relationship between succession planning and organizational performance has a positive relationship only when a succession plan is effectively designed by the company. Succession planning is a long-term process that aims to put the right people in the right position and at the same time support the development of individual talents (Rothwell, 2010). Candidates feel the impact these plans have on their careers and they will materialize themselves to feel satisfied and committed to the best in service to the organization. Succession planning should include

all employees, because a company needs all the manpower to work for its organization. It is better to promote from within for cost-benefit matters, as developing and promoting an internal candidate is much cheaper than hiring another candidate from the outside. Schall (1977) stated that succession planning includes preparing the agency for a change in leadership, but it also includes evaluating what is valuable and how it can be conserved and moved to next mode. He also said that through the succession planning process, senior employees are retained because they value the time, attention and development the company is investing in them. Schall (1977) research indicates that succession planning is concerned with leadership change preparation and that it ensures that high-performing employees are retained and rewarded. Personal career goals are critical to succession planning because it identifies key attributes required for leadership development in critical roles. It is approved by Kepha (2014) that in order to effectively implement succession planning within an organization, it is important to define and understand employee development needs by ensuring that all key employees understand their career paths and the role they are being developed to play.

All three hypotheses are accepted, meaning “recruitment and selection strategies”, “training courses and development strategies” and “succession planning” have positive impacts on organizational performance. However, among 3 independent variables, recruitment and selection strategies (RS) is the variable with the most impact on organizational performance (OP) with $\beta = 0.3766$, training courses and development (TC) strategies have the least impact on organizational performance (OP) with $\beta = 0.179$.

5.1. Recommendation to theory

The research specifically focuses on talent management in three aspects: recruitment & selection, training courses & development and succession planning processes, therefore, there are many other variables that can be studied to increase the linkage between talent management strategies and organizational performance, and further researchers can explore them. Also, the further research can use qualitative data to gain deeper insights into the talent philosophies of organization and the opportunities and challenges experienced by the business related to talent management. In addition, it is possible to compare talent philosophy and talent management in different organizations as talent management is increasingly important for organizations operating on a large scale. In addition, this study uses stratified sampling method. However, the research focuses on the talent management strategies in enterprises, clustered sampling method may be used to choose the sample frame because the research issue is closely related to the HR department. Therefore, further studies may use clustered sampling method to obtain the most useful information from the sample frame where most closely related to the problem.

5.2. Recommendation to methodology

This project only researches in the headquarter of Viettel at 1 Giang Van Minh Street, it is recommended that future research can consider survey in the remaining Viettel branches

nationwide to get the most accurate conclusion about talent management in Viettel company. Furthermore, because of the influence of Covid-19 pandemic, the number of study participants accessible to the study was still limited. Therefore, the following papers can be surveyed at the company with a larger number of samples to improve the reliability of the research. Due to the influence of Covid-19 pandemic, the research was conducted through questionnaire in the form of Google form. In the future, when the pandemic was improved, further researches can study by other way like combination of questionnaire and interview to get the in-depth results with greater accuracy. Finally, item SP5 "Succession planning exists and actively used in Viettel" can be considered for removal in other research articles on the same topic because it has no correlation to organizational performance variable.

5.3. Recommendation to company

For Viettel, every relationship between the independent variable and the dependent variable shows positive results. This proves that talent management strategies are being used appropriately at Viettel. However, through the R^2 is still low ($R^2 = 0.51$), it means that organizational performance of Viettel has not been appreciated and the talent management strategies at Viettel only explain about 51% of the results of organizational performance. Therefore, to improve organizational performance, companies need to update their talent management strategies and policies more often to match the size and performance of the company, especially in the training and development of talent strategies by training courses and development talent strategies at Viettel is the factor that has the least impact on organizational performance ($\beta = 0.179$) among the three above factors:

- The evaluation of training results at Viettel has not been applied flexibly and there is no table of criteria to evaluate the learning results of employees after training courses. It is recommended that the company should conduct evaluation, test and organize professional and professional seminars to draw the necessary experience for each employee participating in training.

- The company should diversify forms of training such as on-the-job training, continuous training and regular knowledge updates for staff on advanced professions as well as foreign languages (English, Japanese, Secondary, ...)

Moreover, according to the results obtained from Viettel employees, succession planning has been applied at Viettel, but it is not actively used. Therefore, it is recommended that Viettel should strengthen the inheritance planning process in the business. Furthermore, this process needs to be fine-tuned to ensure that the basic positions in the business are filled at all times and retain competent talent within the scope of the business. This will ensure that the business is proactive in its recruitment process, leading to ensuring that Viettel is always ready to deal with the ever-changing business environment.

6. Limitation and further research

The limitation of this research is that this research only researches the current situation of talent management and the impact of talent strategies on the performance of the

telecommunications industry in Viettel, thus giving an overview of the impact of the war. Talent management strategy to the telecom enterprise performance of the study is limited because each enterprise has different context. Therefore, future research can expand the research scope in the telecommunications industry to get more specific and accurate conclusions about the impact of talent management strategies on the performance of businesses. In addition, the study was conducted at Viettel Telecom, and it is not possible to compare the issue of the impact of talent management between the telecommunications industry with other industries in Vietnam. It is suggested in the future, other researchers may conduct this issue in other industries and other organizations in Vietnam, which have not been regarded before. Last but not least, due to the impact of Covid-19 pandemic, the access and the survey process were difficult, and the number of participants was limited. Therefore, future research papers may consider increasing the number of respondents and diversifying the survey methods to obtain the most reliable and accurate results for the research when the disease situation improves.

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APPENDIX

Strongly disagree	Disagree	Neither disagree nor degree	Agree	Strongly agree
1	2	3	4	5

Variables	Statement	Participants' opinion				
		1	2	3	4	5
Recruitment and selection strategies	Recruitment initiatives align employees with the mission and vision of each department	3,6%	4,5%	10%	46,36%	35,54%
	Viettel has a robust graduate & management trainee programs which forms part of its talent pool	0,9%	4,5%	8,2%	45,5%	40,9%
	Viettel reserves the budget to serve related expenses to recruit talented candidates from agencies	1,8%	6,4%	16,4%	42,7%	32,7%
	The HR department's plan determines the talents according to the requirements of each department	0%	6,4%	16,4%	44,54%	32,66%
	Recruitment is based on working skills and is more relevant to the corporate culture than qualifications	2,7%	3,6%	11,8%	50%	31,9%
Training courses and development strategies	"Viettel enlistment course" for new employees has been selected before entering the probation	0%	9,1%	20,9%	45,5%	24,5%
	Regularly open training courses to improve professional skills, equip talented employees with	2,7%	9,1%	16,4%	40,9%	30,9%

	new technology knowledge					
	Supporting the study funding for talented employees wishing to study at professional schools, train abroad, and participate in specialized seminars abroad	0%	9,1%	31,8%	39,1%	20%
	Regularly opening the training course "Developing Viettel leaders seed"	1,8%	8,2%	19,1%	44,54%	26,36%
	Organized many qualification competitions for excellent employees to evaluate and classify	0,9%	9,1%	16,4%	43,6%	30%
	Viettel through top leaders tutors employees with the best performance	0%	9,1%	15,5%	46,36%	29,04%
Succession planning	Succession planning in Viettel considers all key positions	0,9%	10,9%	24,6%	31,8%	31,9%
	Succession planning in Viettel helps improve talented employees' ability to meet the changing needs of the environment	0,9%	2,7%	27,3%	40,9%	28,2%
	Job rotation is done well in all parts of the organization	1,8%	12,7%	26,4%	37,3%	21,8%
	In Viettel, succession planning is created as an official document	4,5%	8,2%	30%	27,3%	30%
	Succession planning exists and is actively used in Viettel	0,9%	10,9%	28,2%	26,4%	33,6%
Organizational performance	Viettel outperforms its competitors	0,9%	9,1%	24,5%	40%	25,5%
	Viettel's profit has grown steadily over the years	0,9%	9,1%	15,5%	44,5%	30%

	Viettel's position has been expanded both at domestic and foreign market	0,9%	9,1%	18,2%	43,6%	28,2%
	The workload is completed faster than before	4,5%	10%	12,7%	40%	32,8%
	The productivity of Viettel increased higher	3,6%	7,3%	20,9%	40%	28,2%

UNDERSTANDING THE RELATIONSHIP BETWEEN SELF-EXPRESSION AND PURCHASE INTENTION IN FASHION OF GEN Z

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Abstract

Self-expression has been affirmed to be connected with buying intentions for fashion products, however, the underlying mechanisms that may mediate or moderate this connection remain unclear. Based on consumer behavior theory and symbolic interaction theory, the purpose of this study is to explore the effect of the mediating role of brand love and the moderating role of perceived value in the relationship between brand love and purchase intentions. The model of this research was based on the moderated mediation model of the prior research “Understanding the relationship between online self-image expression and purchase intention in SNS games: A moderated mediation investigation” (Hao Chen & Haitao Chen, 2020). Nevertheless, several variables of the model in this paper have been modified in order to be consistent with the recent study. To test this model, quantitative research and qualitative research were carried out. For qualitative research, seven Gen Z and two professors in marketing took in depth interviews. After obtaining findings from qualitative research along with secondary data, a quantitative questionnaire was constructed. The moderated mediation model was empirically tested with 300 Gen Z from 15 to 24-year-old in Ho Chi Minh City. The analysis suggests that self-expression has a significant effect on purchase intention in fashion both directly and indirectly. As regard to brand love, its mediation level in the moderated mediation model depends on the perceived value rate, otherwise, brand love would not moderate the relationship between self-expression and purchase intention without the existence of perceived value. The model can also be applied to predict potential customer intention and invent favorable shopping environments that are well-matched to specific features of Gen Z.

Keywords: Fashion, Gen Z, Consumer behavior theory, Self-expression of Gen Z, Social identity theory, Perceived value.

1. Introduction

One of the most important functions of fashion is the social function, in particular, people tend to put much more emphasis on clothes and their appearance. Regarding social classes, people are likely to distinguish themselves from others by wearing different types of clothes. Clothes determine one's image to some extent.

From the psychological point of view, items one wears indicate who he is as an individual, which means he tries to show off his self-expression. Over and above that, an

increasing number of people build up confidence to express themselves through their fashion styles although the norm makes it tough. In fact, people who wear fashionable clothes do not care about others' point of view, because they are self-sufficient and confident to display their authentic inner self (My Paper Hub, 2016),

There is much research related to fashion, fashion consciousness, satisfaction, loyalty, luxury fashion brand or product (Woodside, 2012). However, there is little research related to fashion purchase intentions (Lee & Johnson, 2010). Therefore, this study will show a new aspect which is the relationship between self-expression and fashion purchase intention. Moreover, gen Z is a generation with specific personalities and thereby a potential research object.

Gen Z can be defined as “post-millennials” are the people born between 1995 and 2010 (Seemiller & Grace, 2016) in spite of the varied beliefs regarding the exact generational cohort. (Nielsen, 2017); (Priporas et al., 2017). At the present, there are abundant factors controlling purchasing behavior of Gen Z for fashion items. Against Gen Z's growing need for self-expression in fashion purchase, the gap between the literature and the practical problems inspired our research.

Self-expression presents that people describe images to others in a way that satisfies their desires (Canary et al., 2008). Individuals purchase fashion items to strengthen their personal status. Self-image expression is considered as the reverberation of impression management behavior through fashion purchase intention. Understanding the self-expression of Gen Z is to propose strategies, especially marketing strategies to help increase brand awareness or brand love to gain better sales.

Besides, brand love is also an important mediation in the model used in this paper. (Carroll & Ahuvia, 2006). Brand love also has a positive influence on brand commitment. (Albert & Merunka, 2013). It is a motivation in fashion shopping, choosing clothes, accessories, etc. from the brand they love. Therefore, from our point of view, brand love has a positive impact on purchase intention. In this study, we want to know whether self-expression plays an influence on brand love, and brand love has an impact on purchase intention or not.

In short, the objectives of this research are: (1) examine the impact of self-expression of gen Z on brand love and purchase intention; (2) examine the moderating role of perceived value in the association between brand love and purchase intention; (3) suggest some recommendations that can help businesses to improve strategies and to boost revenue. This searching may also help improve the understanding of Gen Z and their self-expression. Our research focuses on exploring self-expression, brand love and purchase intention of gen Z.

Gen Z are shrewd customers. As consumers, Gen Z's behavior reflects their values and the influence of an increasingly digital world. In much the same way that Gen Z use fashion as a means to express personalities, they also look at their purchasing decisions as an expression of their values and identity. They value personalized products, and they are drawn

to brands who share their point of view on issues. In the near future, Gen Z will become one of the main customers of all brands. Therefore, brands need to really understand the impact of self-expression on purchase intention to come up with appropriate strategies. (The Annie E. Casey Foundation, 2021)

2. Literature review and research model

2.1. Literature review

2.1.1. Self-expression and purchase intention

Self-expression is associated with image-management, the way people control what others think of them (Leary & Kowalski, 1990). Self-expression is defined as the way people express their thoughts and feelings through words, choices, or action (Kim & Ko, 2007)

Gen Z do not mind purchasing high-class products that highlight their individuality (Yasmin, 2019). Choosing brands whose characteristics are perceived to be congruent with their personalities is the way individuals express themselves (Aaker, 1999); (Kassarjian, 1971) (Sirgy & Jeffrey, 1982). The important feature is that in many cases what people buy can be influenced by their self-image, so that through products they use define their self-concepts (Aaker, 1999) (Jae & George, 1995).

The consumer behavior theory (Phillip Kotler & Gary Amstrong, 2010) suggests that there are several factors that affect consumer behavior: psychological, cultural, social and personal factors. Depending on a person's self-expression and thereby the degree of the impact of the mentioned theory on their purchase intention will be different. Moreover, a personal factor includes lifestyle. Lifestyle captures individuals' personality, to be specific, they express themselves through lifestyle. It entails determining a consumer's interest, which leads to purchase behavior. (Phillip Kotler & Gary Amstrong, 2010)

Fashion clothing has been found to influence purchase intention (Teresa et al., 2006). Gen Z considers fashion (regardless consciously or not) as a part of their value (Criteo, 2018). The symbolic interaction theory (Nilgun et al., 2009) has been applied to understand well the relationship of self-expression and fashion products (Kim & Martha, 2014). A fashion product/meaning brand is determined by the symbols created by marketing, the consumer's social surroundings, and the implications assigned by personal value disposition. Consumers are more inclined to support and acquire fashion goods if these symbolic connotations resonate with their beliefs.

Hypothesis 1: The growth in self- expression will increase gen Z's intentions to purchase fashion products.

2.1.2. The effect of self-expression on brand love

Brand love is also a degree of passionate emotion that customers feel satisfied with a particular brand (Ahuvia et al., 2005); (Wallace et al., 2014). Companies recognize that the feeling of love plays an essential role in establishing a relationship with customers, it is a factor in gaining sustainable advantages (Noel & Merunka, 2013)

There is a relationship between self-expression and brand love. The previous studies considered self-expression as the basement of brand love (Marquette et al., 2017). (Sarkar et al., 2014) found that self-expression has a positive influence on brand love. According to (PSFK, 2019), an American communications company, 71% of Gen Z believe that brand is a means to help them reach their personal objectives and aspirations.

According to the consumer behavior theory (J. Paul Peter & Jerry C. Olson, 2010) the consumer decision-making process includes five stages: Problem recognition, search for alternative solutions, evaluation of alternatives, purchase decision and post-purchase. In the fourth stage, consumers make decisions of purchasing or not purchasing the product. This stage is affected by beliefs and attitudes. Beliefs can be founded on facts, opinions, or religion, and they can have an emotional impact. A person's constant assessments, sentiments, and inclinations toward an item or concept are referred to as attitude (Phillip Kotler & Gary Armstrong, 2010). Therefore, if consumers have good attitudes and feelings with a brand, it might lead to purchase intentions.

Consumers who have good experience and memories with brands may love that brand and pre purchase (Japutra et al., 2014) “and more likely to dream about that brand” (Albert et al., 2008). (O'Cass & Choy, 2008) research that fashion involvement has a positive influence on brand status, furthermore, positively affect consumers' willingness to purchase products from these brands. Consumers who have high fashion involvement have greater desire for uniqueness and seek social differentiation (Bhaduri & Stanforth, 2016)

Hypothesis 2: Increase in self-expression will increase brand love.

Hypothesis 3: The growth in brand love will increase the purchase intentions.

2.1.3. Perceived value and its moderating role

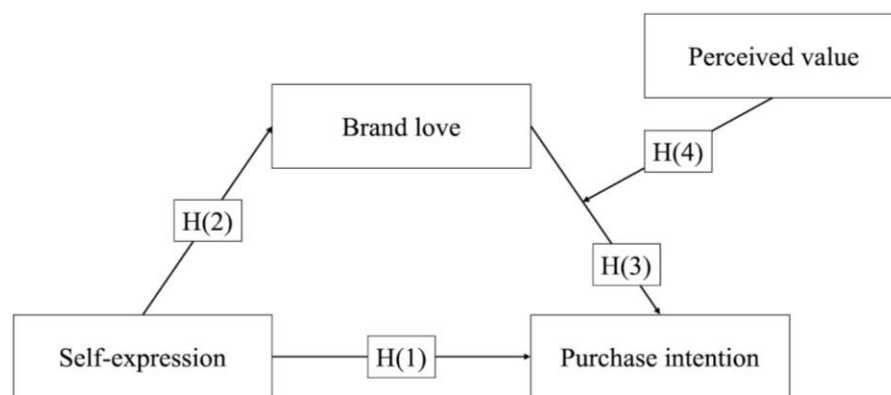
The consumer behavior theory proposes that the customer's activity (customer co-creation behavior) leads to value-in-use (consumer perceived value) (Flores and Vasquez-Parraga, 2015) According to (Lai, 1995) a customer's behavior influences an individual's perception of value at various stages, including pre-purchase expectations of product/service value.

Perceived value is the overall estimation of customers on products or services (Zeithaml, 1988). Its value comes down to the price that customers are willing to pay for products or services. People make decisions based on their own experience or feeling for that brand or products (Kahneman et al., 1997). Emotion is the moderating factor that encourages customers to purchase (Sweeney & Soutar, 2001). This assessment is conducted in two ways: (1) The instant utility measures the control of enjoyment and effective experience of using products; (2) The remembered utility derived from the information or buying experience, feelings (Kahneman & Thaler, 2006). These two kinds generate hedonic pleasures that are encouraged to create to increase the desire to own ideal products or brands. If the experience of purchasing fashion items is good enough, the perceived value might increase, and lead to purchase intention.

In the fashion terms, customers claim a product as a means to express their personality/life style/identity, and luxury brands as a symbol to convey messages about themselves (Vigneron & Johnson, 2004); (Dittmar, 1994). Perceived value is related to consumer purchase intention. (Keller, 1993) says that brand trust and perceived value has a positive effect on consumer's willingness to pay premium prices. However, the perceived value might be different in distinct circumstances and times (Kahneman & Tversky, 2000). If this value is low, the purchase experience is also negative, and customers might stop purchasing products, or even stop believing in the brands.

Hypothesis 4: Perceived value will moderate the relationship between brand love and the purchase intention.

2.2. Research model



Research model of the relationship of self-expression and purchase intention regarding fashion items illustrating moderated mediation influences.

Our study proposes a moderated model based on these hypotheses. This model tests if or not brandlove mediates the relationship between self-expression and purchase intention regarding fashion products of gen Z, also whether or not the effect of brand love on purchase intention is mediated by perceived value.

2.3. Research methodology

After referring to academic journals related to self-expression and purchase intention, considering and selecting appropriate factors, we proposed the research model. Then a pilot quantitative research was conducted by interviewing nine participants, including two Marketing specialists and seven members of Gen Z, to evaluate and adjust the model, scales or questionnaire. Next step, we conducted formal quantitative research with adjusted model, scale and questionnaire and the applied technique to collect data is to distribute survey forms with the expectation of collecting at least three hundred satisfactory samples.

Based on the data collected, we validate the measurement model and test the common-method bias by SPSS and for the structure model, PROCESS (a macro developed by Hayes for SPSS) was used to examine the mediation effect of brand and the moderating role of perceived value on the mediation path

2.3.1. Qualitative Research

Based on the proposed research model and the respective scales presented by (Hao Chen & Haitao Chen, 2020), a pilot qualitative study was conducted. Two separate proposed questionnaires were surveyed with two groups including Marketing experts (n=2) and Gen Z members (n = 7) to assess the questionnaire as well as the scale and deepen man's understanding of Gen Z's expression, brand love, perceived value, and their relationship to purchase intentions in fashion. The results will answer the question of whether the variables of each scale as well as the survey questionnaire are appropriate and essential for Gen Z in the fashion field in Vietnam, so that specific adjustments can be made to complete the scale, which will be used in the qualitative research.

Regardless of the specialist, we conducted in-depth interviews with two people and averaged thirty minutes. We based on the previous experience working with Gen Z or making decisions regarding this subject and members' relationships to ensure they are knowledgeable about this generation and able to reach them. The questions focused on two topics of their perceptions of Gen Z and their expression, how they interposed with Gen Z by influencing self-expression.

For Gen Z, we approached seven people directly and each interview lasted one hour on average. We select people with different contexts to ensure a diversity of opinions and perspectives. Interview questions are related to four factors including self - expression, brand love, perceived value, purchase intention. Career.

2.3.2. *Quantitative research*

2.3.2.1. Sample

To test the research model and hypotheses, an anonymous survey by Google Form was conducted to collect data. The targeted population for this study was Generation Z (people born between 1995 and 2010) (Seemiller & Grace, 2016). The oldest members of this generation cohort have now studied at high school, college or worked. Hence, the data were gathered from people who were fifteen to twenty-four year-old at Ho Chi Minh City, by using a self-administered questionnaire.

2.3.2.2. Sample size

Population from fifteen to twenty-four years old in HCM city is 1,494,058 which is greater than 10,000 (Completed result of the 2019 Vietnam population and housing census is conducted by The General Statistics Office). So that we use the following formula for the sample size n:

$$n = \frac{z_{\alpha} \times p \times (p-1)}{e^2}$$

Where:

n: Sample size

z: The standardized z-value associated with the level of confidence

p: Estimate of expected population proportion having a desired characteristic based on intuition or prior information.

p - 1: Estimate of expected population proportion not holding the characteristic of interest.

e: Acceptable tolerance level of error (stated in percentage points)

So with:

- A confidence level of 95% $\rightarrow \alpha = 0.05 \rightarrow \frac{z_{\alpha}}{2} = 1,96$
- $p = \frac{1,494,058}{9038600} = 0.17 \rightarrow 1 - p = 0.83$
- $e = 5\%$ survey

Interfere: $n = \frac{\frac{z_{\alpha} \times p \times (1-p)}{2}}{e^2} = \frac{1,96 \times 0.17 \times 0.83}{0.05^2} = 111$

However, to ensure the reliability of research, we decided to choose the sample size of three hundred respondents.

2.3.2.3. Sampling method

The stratified sampling method was used for this study because it allows us to choose samples that share the same structure with that of the total population sample, so it has high representation, and the sampling error is low. This method is much more logical and widespread than simple random sampling and systematic random sampling. It is commonly used when the subjects that need to be surveyed have a big total number of units that cannot be chosen mechanically. However, stratified sampling method requires there be available information about samples and stratified knowledge. Gen Z is a group of people who are aged from thirteen to twenty-four. They have distinct works, lifestyle, personalities, budget, etc. though there are also some common characters. This method is the most suitable as it would bring a sample that is most similar to the structure of the total population sample. Therefore, the selected sample population corresponded to our research goals.

Table of sampling calculating:

	Age group	Population	Ration	Sample size of each group
	15 - 19	656,093	0.44	132
	20 - 24	837,965	0.56	168
Sum		1,494,058		300

2.3.2.4. Contact method

Since the survey group consisted of Vietnamese, a two-way translation was used to ensure that respondents would not have problems when reading the items, thus preventing information loss in the translation process. We created questionnaires first and then translated these items into Vietnamese. Finally, a preliminary questionnaire was sent to a professor specializing in Marketing for review and revision of the document. In the process, the statements were carefully discussed and slightly modified.

We distributed Google Forms to targeted respondents' groups on social media - Facebook. This method is a suitable way to reach as many survey respondents as we target.

Furthermore, it is a useful tool to send surveys and collect information in a streamlined way. In addition, it is easy to use and one of the simplest ways to save data directly to a spreadsheet. In particular, we post our online survey questionnaire which is in the form of Google Form’s link on targeted respondents’ groups on social media - Facebook.

3. Research result

3.1. Qualitative research result

Gen Z asserts the term “Self-expression” in both two definitions, the first one is about how they assume their self-image on their own, and the second is about how they control other people’s thoughts of them.

The more resemblance in characteristics between oneself and brand lapse, the more one develops Brand love to enhance Self expression. Purchase intention, thereby, tends to grow as one engages with the brand they favor.

Along with Brand love to enrich Self-expression, one has other factors as Perceived value to consider and examine carefully before landing on Purchase intention. One assumes Perceived value as a factor contributing to their Purchase intention. In other words, one would not make their purchasing decision if they cannot attain their expected perceived value at that time, on the contrary, they would do.

On the other hand, one with no attachment between Brand love and Self-expression would not take Brand love into consideration. Hence, their purchase intentions would not be affected by Brand love.

3.2. Quantitative research result

3.2.1. Measures

All items were measured using a 7-point Likert scale, ranging from “1 = strongly disagree” to “7 = strongly agree”. The present sample including four items (Self-expression, Brand love, Perceivedvalue and Purchase intention) revealed an acceptable level of reliability and validity.

3.2.2. Testing the mediation effect

To examine the mediation effect of brand love, we tested the simple mediation model using PROCESS (Model 4). We considered Self-expression as the independent variable, Purchase intention as the dependent variable, and Brand love as the mediation variable in the mediation model.

```

*****
OUTCOME VARIABLE:
BL
Model Summary
R                R-sq      MSE      F      df1      df2      p
.5679          .3225    .7283   141.3574  1.0000  297.0000  .0000

Model
      coeff      se      t      p      LLCI      ULCI
constant  2.1376  .2550  8.3827  .0000  1.6357  2.6394
SE        .5364  .0451  11.8894  .0000  .4476  .6252

Standardized coefficients
      coeff
SE        .5679
    
```

Table 1

Table 1 illustrated that SE was significantly associated with PI (b=.5376, p<.0001)


```

*****
OUTCOME VARIABLE:
BL
Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .5679      .3225      .7283      141.3574      1.0000      297.0000      .0000

Model
      coeff      se      t      p      LLCI      ULCI
constant      2.1376      .2550      8.3827      .0000      1.6357      2.6394
SE              .5364      .0451      11.8894      .0000      .4476      .6252

Standardized coefficients
      coeff
SE      .5679

OUTCOME VARIABLE:
PI
Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .5442      .2961      1.0980      62.2649      2.0000      296.0000      .0000

Model
      coeff      se      t      p      LLCI      ULCI
constant      1.3282      .3482      3.8148      .0002      .6430      2.0134
SE              .3271      .0673      4.8599      .0000      .1946      .4595
BL              .3925      .0712      5.5089      .0000      .2523      .5327

Standardized coefficients
      coeff
SE      .2879
BL      .3264
    
```

Table 2

Table 2 demonstrated that SE was a significant variable associating with BL ($b=.5364$, $p<.001$)

Table 3

Table 3 indicated that both SE ($b=.3271$, $p<.001$) and BL ($b=.3925$, $p<.001$) were significantly associated with PI.

We found that the mediating role of brand love can promote purchase intention for fashion products.

3.2.3. Testing the moderated mediation effect

Following the recommendation of (Hayes, 2017) we assessed the parameters for the three models of regression outlined by a PROCESS macro (model 14) to examine the moderated mediation effect. Model 1, 2 and 3, respectively, examined the effects of moderation of perceived value on (1) the relationship between self-expression and purchase intention; (2) the relationship between self-expression and brand love; (3) the relationship between brand love and purchase intention.

```

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OUTCOME VARIABLE:
PI
Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .5676      .3222      1.0645      34.9422      4.0000      294.0000      .0000

Model
      coeff      se      t      p      LLCI      ULCI
constant      3.2228      1.5503      2.0788      .0385      .1717      6.2738
SE              .2770      .0696      3.9792      .0001      .1400      .4140
BL              -.2476      .3367      -.7353      .4627      -.9102      .4150
PV              -.1953      .2812      -.6945      .4879      -.7487      .3581
Int_1           .0941      .0563      1.6696      .0961      -.0168      .2049

Product terms key:
Int_1 :      BL      x      PV

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
M*W      .0064      2.7876      1.0000      294.0000      .0961
    
```

Table 4

Table 4 suggests that there was a positive effect of SE on PI ($b=.2770$, $p<.001$). Moreover, there is a negative predictive relationship between BL and PI in the model ($b=-.2476$, $s.e.=.3367$, $p<.001$).

However, the regression slope for BL is the predicted relationship between BL and PI for persons

scoring at the mean on PV, since this variable was centered at 0 (-.9102; .415). In other words, the relationship between BL and PI is not significant; irrespective of level of perceived value.

In addition, the interaction term (BL x PV) is not significant ($b=.0941$, $s.e.=.0563$, $p=.0961$) indicating no evidence that “path b” from BL to PI is moderated by PV.

```
*****
OUTCOME VARIABLE:
BL
Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .5679      .3225      .7283      141.3574      1.0000      297.0000      .0000
Model
      coeff      se      t      p      LLCI      ULCI
constant      2.1376      .2550      8.3827      .0000      1.6357      2.6394
SE      .5364      .0451      11.8894      .0000      .4476      .6252
Standardized coefficients
      coeff
SE      .5679
```

Table 5

The results of table 5 indicate that the effect of SE on BL was significant ($b=.5364$, $p<.001$). The multiple correlation ($R=.5679$), coefficient of determination (R -square $=.3225$) and the standard

F- test results for the model.

To further assess the moderated mediation effect, an indirect effect analysis was performed at different levels of moderation.

```
***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****
Direct effect of X on Y
      Effect      se      t      p      LLCI      ULCI
      .2770      .0696      3.9792      .0001      .1400      .4140
Conditional indirect effects of X on Y:
INDIRECT EFFECT:
SE      ->      BL      ->      PI
      PV      Effect      BootSE      BootLLCI      BootULCI
4.7161      .1051      .0734      -.0371      .2501
5.6154      .1505      .0598      .0396      .2732
6.5147      .1959      .0604      .0840      .3202
Index of moderated mediation:
      Index      BootSE      BootLLCI      BootULCI
PV      .0505      .0342      -.0168      .1177
```

Table 6

Table 6 illustrates that, when the moderated effect was small (i.e, M- SD), the indirect effect was not significant, while the trend was opposite when the effect became larger. The predictive power of BL regarding PI increased with the size of the

moderator, which explains why the indirect effect did not exist in the simple mediation model. That is, with the perceived value of fashion items increasing, the conditional mediation of brand love changed from non-significant to significant.

4. Conclusion and implications

4.1. Conclusion

As mentioned before, this study features a moderated mediation model to test the impacts of brand love and perceived value on the relationship between self-expression and purchase intention. The results show that self-expression has a direct effect on purchase intention for fashion products, it also has a remarkable association with brand love in the simple mediation model. When perceived value appears as a moderator in the moderated mediation model, an indirect effect analysis was performed at the different levels of moderation. In short, the mediating role of brand love would not exist if perceived value were not considered. In any model, the mediation role of self-expression is consistently significant.

It is clear that literature review plays a vital role in contributing to this paper, evident by its congruent attribution with the results. Firstly, in the previous research: "Understanding the relationship between online self-image expression and purchase intention in SNS games: A moderated mediation investigation" (Hao Chen & Haitao Chen, 2020) pointed out that the combination between online self-image expression and the propensity to acquire virtual

goods is explained by a mix of confidence in SNS games and perceived worth. However, our research results suggested that perceived value might have a conditional moderating effect. Secondly, in the research “What Motivates People to Purchase Digital Items on Virtual Community Websites? The Desire for Online Self-Presentation” (Kim et.al, 2012), the relationship between online self-expression and purchase intention is unclear. While there is an opposite trend in our research which shows that self-expression has a directly significant influence on purchase intention.

In conclusion, theoretical and practical implications have been covered in this research. We go to the conclusion that the greater Gen Z’ purchasing experience is, the greater their intention to purchase the fashion products.

4.2. Implications

Among brand love and self-expression, self-expression shows more impact on purchase intention. Moreover, self-expression also has a significant influence on brand love. Besides, as a high perceived value mediates the relationship between brand love and the intention to purchase fashion products. Therefore, we suggest some recommendations for fashion brands. Firstly, brands should create brand personality based on the personality of target customers. It is an effective way to attract gen Z as they can feel the brand and everything related to it. Secondly, fashion brands should create and follow trends. This can help to increase gen Z’s self-expression and brand love as they could have more choices and feel your brand is trendy. Besides, ensuring that your brand is unique. Gen Z tend to present themselves as unique and trendy people, so encouraging the demand of self-expression will also increase purchase intention. Moreover, brands should generate more various forms of social interaction to help customers take part in self-expression more easily and frequently. Finally, we propose that fashion stores and even packaging should be decorated well. What is more, services need to be cared for and increased. All those factors play an important role in increasing perceived value.

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DEVELOPING THE MARKET OF SAFE VEGETABLES ONLINE BUSINESS: APPROACHING BASED ON CUSTOMER BEHAVIOURAL THEORY

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Abstract

The research aims to provide market development solutions for safe vegetable online businesses by approaching customer behaviour. By quantitative studies with primary data sets collected from 363 customers, the results of SEM model analysis have shown the impact of perceived ease of use, subjective norm, perceived usefulness on attitude towards use. In addition, the results also show that purchase intention to use is positively influenced by attitude towards use and the effect of perceived usefulness on intention to use is not clear. Several implications are provided to support safe vegetable online businesses to develop the market from the research findings.

Keywords: Market Development; Safe Vegetable; Customer Behaviour; TAM model; TPB Model

1. Introduction

As reported by Statista, In 2020 global eCommerce market will cross the two trillion US\$ threshold. The internet economy in Southeast Asia was forecasted to triple its market value in the next few years, with e-commerce accounting for the largest part of its total value. Among one of the fastest-growing internet economies within the region, Vietnam's e-commerce market value reached around 12 billion U.S. dollars in 2020. Revenue is expected to show an annual growth rate (CAGR 2021-2025) of 5.67%, resulting in a projected market volume of US\$8,741million by 2025. The number of users is expected to amount to 70.9m users by 2025. User penetration will be 52.7% in 2021 and is expected to hit 70.1% by 2025.

According to General Statistics Office of Vietnam (GSO), as of mid-May, the country planted 451.8 thousand hectares of maize, equaling 99.3% of over the same period last year; 73.1 thousand hectares of sweet potatoes, equaling 95.4%; 121.1 thousand hectares of groundnut, equaling 96.3%; 16.3 thousand hectares of soybeans, equaling 87.2%; 649.9 thousand hectares of Vegetables and beans, equaling 101.3%.

Currently, the speed of fruit and vegetable production and business has increased, but safe vegetables cannot meet the requirements of Vietnamese consumers. In particular, the demand for consumption through e-commerce with safe vegetables is the development trend of Vietnam's agricultural economy, and consumers during the time of COVID-19 have more and more demand for online shopping lines is getting bigger. However, consumers demand a

lot from the safe vegetable quality and the combination of online shopping is a massive obstacle for businesses, cooperatives and farmers. Therefore, collecting online shopping behaviour of consumers with safe vegetables is even more necessary to keep up with e-commerce development and increase the potential of safe vegetables.

Studies on consumer behavior through internet platforms are relatively popular and receive the attention of researchers. Unlike conventional distribution channels, online sales channels have a broad market reach due to overcoming geographical barriers. Changes in the business environment under the strong impact of the industrial revolution 4.0 have posed many challenges for businesses in understanding customer behavior consumption and factors influencing buying behavior. This is an essential key for businesses to develop business markets. The safe vegetable is not a new food on the market. Although it has been shown to have advantages compared to traditional vegetables when ensuring better nutritional content and health for consumers, the popularization of this product to customers still faces many difficulties. Not only are technical or price barriers pointed out from the perspective of experts' analysis, but many barriers come from consumers' perceptions. From the above analysis, the author believes that it is necessary to the analysis of the consumption behavior of customers to clarify some factors affecting the consumption behavior of customers for this product.

2. Literature review and hypothesis development

2.1. Safe Vegetables

According to some authors (Zhang et al., 2018), safe vegetables include clean vegetables, green vegetables and organic vegetables in this study. There are variations in the standards used to identify non-hazardous clean, green and organic vegetables and these relate to the production area, production, processing, packaging and special regulations is the use of raw materials for production. That leads to differences in quality, safety, health and nutrition for different safe vegetables. Although safe vegetables are beneficial to human health and consumers positively perceive the health benefits associated with functional foods, many people still may not be willing to buy them. In particular, the high quality and safety of safe vegetables are due to high standards and strict control throughout the supply chain, leading to increased costs. This causes consumers to pay higher prices for safe vegetables compared to conventional vegetables

2.2. The TAM Model and TPB Model

2.2.1 The Technology Acceptance Model (TAM)

Davis (1989) proposed the technology acceptance model (TAM) to explain customer behaviour for products and services related to technology elements. In this model, the mentioned factors include perceived usefulness, perceived ease of use intention to use, attitude towards use, actual usage, and external variables. The TAM model is highly applicable in researches on consumer behavior through online platforms. Many studies apply

and develop this model to clearly analyze the consumer’s behavior. The specific relationships of the elements in the TAM model are illustrated in Figure 1.

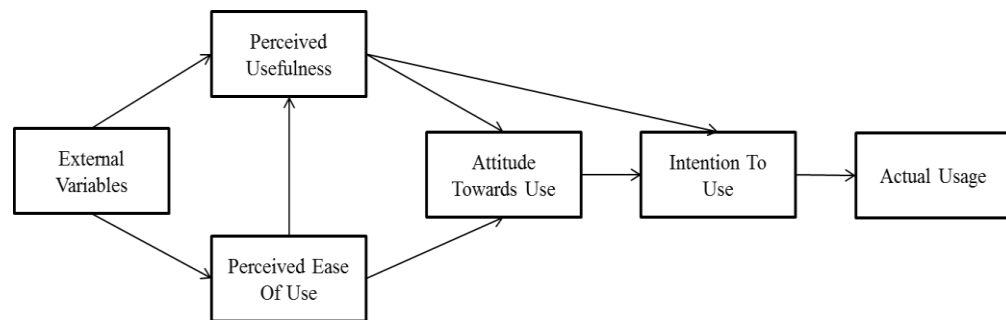


Figure 1. Technology Acceptance Model (TAM)

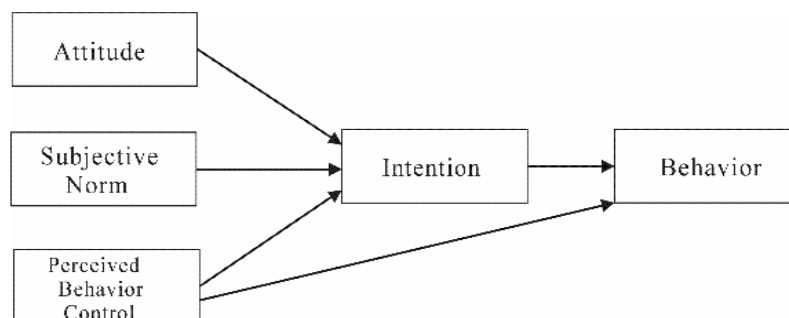
Source: Davis (1989)

The TAM model is widely applied in studies on customer buying behavior through electronic means, online channels (Cheema et al., 2013; Reyes-Mercado et al., 2017). Similarly, Li et al. (2020) applied this model to assess the buying behavior of customers for vegetable products in the Chinese market.

2.2.2 Theory of Planned Behavior (TPB)

Although TRA model (Theory Reasonable Action) was introduced in 1975 by Ajzen, the author of the model believed the TRA model has not fully explained customer psychology changes in making decisions buying product. Ajzen (1991) has shown that some customer behaviours do not seem to be derived from non-motivational factors such as resources, ability. Therefore, perceived behaviour control should be considered essential in consumer intentions and behaviour in this model. Details of the TPB model are shown in Figure 2.

Figure 2. TPB Model



Source: Ajzen (1991)

2.3. Intention

Intention subjective measurement capabilities of the client will perform a behaviour and can be viewed as a case of extraordinary beliefs (Fishbein & Ajzen, 1975). Most studies acknowledge the bridging role of intention to the relationship between attitude, subjective norms, perceived usefulness and consumer behaviour (Davis, 1989; Ajzen, 1991). Usually, the intention is measured based on the prepared intentions of customers in purchasing a particular product/service (Ajzen, 1991; Sukboonyasatit, 2009).

2.4. Attitude Towards Use

Attitude, beliefs and demographics are assessed as three fundamental factors to evaluate human behaviour (Assael, 1981). According to marketing theories, attitudes are judgments about the rationality of alternatives (Ajzen, 1975). In order to examine and measure customer attitudes, the questions focused on customers' evaluations of products/services relative to other similar products/services. Attitude is an important transition in the psychological development of customers when moving to the buying decision stage (Fishbein & Ajzen, 1975). The relationship between attitude and intention has been tested in numerous studies in different contexts (Cook & Moore, 2002). For food products, Tarkiainen & Sundqvist (2005) and Nystrand & Olsen (2020) examined this relationship in European markets. Cox & Mela (1998) showed a positive effect of attitude on customers' intention towards vegetable products. From the above analysis, the research hypothesis H_1 is proposed as follows:

H₁: Attitude has a positive effect on consumers' intention to consume safe vegetable

2.5. Perceived Usefulness and Perceived Ease of Use

In the TAM model, perceived usefulness and perceived ease of use are essential factors that affect both the customer's attitude and intention. According to Davis (1989), perceived usefulness is formed from customers' perceptions of the output quality of products/services. Many studies have evaluated the impact of perceived usefulness on customers' attitude and intention when consuming online (Guritno & Siringoringo, 2013). Leelayouthayotin (2004) pointed out the role of usefulness for food consumption behaviour in the Thai market. Meanwhile, Jaffery et al. (2020) showed the positive effects of perceived usefulness on customers' attitude and intention to use vegetable products. Meanwhile, According to Davis (1989), perceived ease of use is the perceived ease of use by customers when using operations in using products/services. When consuming and shopping on online platforms, the convenience of operation plays an essential role in assessing customers' attitudes towards products and services. From the theoretical basis of the TAM model and analysis, research hypothesis H_2 , H_3 , H_4 , H_5 are proposed:

H₂: Perceived usefulness has a positive effect on consumers' intention to consume safe vegetable.

H₃: Perceived usefulness has a positive effect on the attitude of consumers consuming the safe vegetable.

H₄: Perceived ease of use positive effect on the attitude of consumers consuming the safe vegetable.

H₅: Perceived ease of use positive effect on the perceived usefulness of consumers consuming the safe vegetable.

2.6. Subjective Norm

The Subjective norm in studies of planned behavioural theory (TPB) or rational action theory (TRA), the subjective norm is the main factor and influences intent (Intention). According to Fishbein and Ajzen (1975), the subjective norm is defined as an individual's perception, with their essential references to whether a behaviour should or should not be performed. Normative beliefs determine the performance of subjective standard measurement for the expectation of appropriately performing individual behaviour. From the above analysis and synthesis, the authors propose the research hypothesis.

H₆: Subjective norm has a positive effect on the attitude of consumers consuming the safe vegetable.

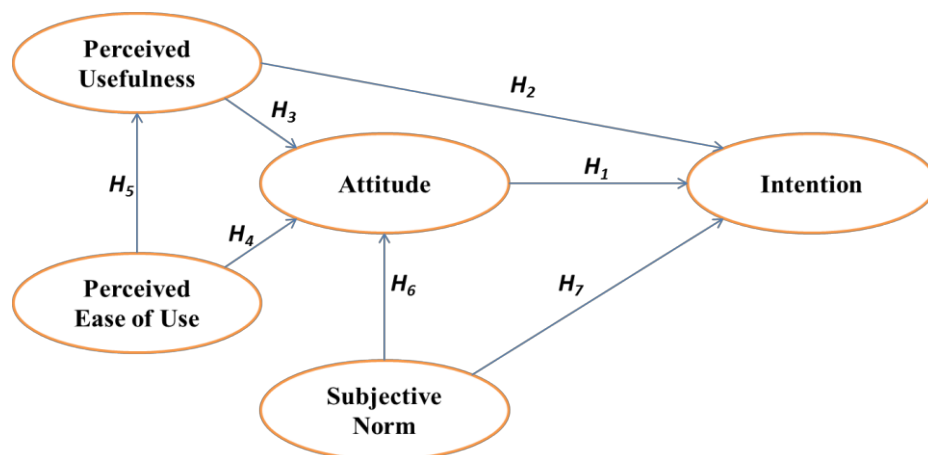
H₇: Subjective norm has a positive effect on the intention of consumers consuming the safe vegetable.

3. Methodology

3.1. Research Model and Measures

From the contents of the literature review and proposed hypothesis, the research model in this article is proposed based on the combination of TPB model and TAM model. The details of the research model are depicted in Figure 3.

Figure 3. Research Model



Source: Author

In order to measure the independent and dependent variables, the research applies the scales from Davis (1989) studies for the factors perceived usefulness, perceived ease of use, attitude towards use and intention to use. Meanwhile, the subjective norm factor is measured based on the scale of López-Mosquera et al. (2012). Although the research scale is selected from studies with high reliability, to ensure its suitability with the research context in Vietnam, the author has conducted several solutions, including:

- (1) Two language experts are invited to translate and cross-check statements from the referenced scales to ensure that the statements, when translated into Vietnamese, do not cause misunderstandings for respondents.

(2) In-depth interview method was applied to participants, including 2 PhDs with business administration expertise and five customers who regularly shop online for safe vegetable products.

From the comments of the interview, the official research scale is given and described in detail in Table 1.

Table 1. Items and Properties

No	Variable	Items	Source
<i>Subjective Norm</i>			
1	SN1	People important to me all think that I should purchase safe vegetables	López-Mosquera et al. (2012);
2	SN2	People important to me willingly support me in purchase safe vegetable	
3	SN3	My relatives expect me to purchase safe vegetables	
<i>Perceived Ease of Use</i>			
4	PEOU1	It's easy to buy safe vegetables online	Davis (1989)
5	PEOU2	The steps in the process of buying safe vegetables online are easy	
6	PEOU3	The process of purchasing safe vegetables online is easy to understand	
<i>Perceived Usefulness</i>			
7	PU1	Buying safe vegetables online is a time-saving solution	Davis (1989)
8	PU2	Buying safe vegetables online makes shopping easier	
9	PU3	Buying safe vegetables online is a solution to improve quality of life	
<i>Attitude Towards Use</i>			
10	ATT1	Buying safe vegetables online is a smart solution	Davis (1989)
11	ATT2	Buying safe vegetables online is a good idea	
12	ATT3	I really enjoy this purchasing solution	
<i>Intention to Use</i>			
13	INT1	I intend to purchase safe vegetable online regularly	Davis (1989)
14	INT2	I have plan to to purchase safe vegetable online	
15	INT3	I expect to purchase safe vegetable online in the future	

Sources: Author

3.2. Sample and Data Collection

The research sample was collected from 363 customers who regularly use the form of buying safe vegetables online. Due to the effects of the Covid 19 epidemic, the form of ballot collection used is online survey via Google Form software. The author contacted groups of customers to buy safe vegetables online on social networks to reach the respondents. Besides, the survey was also collected from the author's network of friends and relatives, who used to buy safe vegetables online. The time to collect research samples is from March 2021 to the end of May 2021. Information about the study sample is described in Table 2.

Table 2. Demographic profile of the respondents.

Demographic Characteristic	Frequency	%
<i>Gender</i>		
Male	156	42.98
Female	207	57.02
<i>Age</i>		
18-30	136	37.47
30-45	142	39.12
> 45	85	23.41
<i>Monthly income</i>		
Under 10.000.000 VNĐ	152	41.87
10.000.000-20.000.000 VNĐ	128	35.26
20.000.000-30.000.000 VNĐ	51	14.05
> 30.000.000 VNĐ	32	8.82

3.3. Analysis Data Method

To analyze the study's primary data, the author used a combination of two software IBM SPSS 20 and IBM AMOS 23. EFA analysis, descriptive statistics, Cronbach Alpha coefficient, were performed by IBM software. SPSS 20. Meanwhile, IBM AMOS 23 software will support CFA confirmatory factor analysis and research hypothesis testing with the SEM model. The thresholds for evaluating the reliability of the measurement model and the SEM model were based on the recommendations of Hair et al. (2010). Accordingly, the Chi-square/df (chi-square to degree of freedom ratio), AGFI (Adjusted Goodness fit index), GFI (Goodness of Fit Index), CFI (Comparative fit index), TLI (Tucker and Lewis index) and RMSEA (Root mean square) indexes error of approximation) is used to test the fit of the model. According to Hair et al (2010), testing criteria for the above indexes include: Chi-square/df < 3; Values of AGFI, GFI, CFI, TLI > 0.9 and RMSEA < 0.08.

4. Research results

4.1. Descriptive, Reliability, Convergent Validity and Discriminant Validity

The results of descriptive statistics and testing of the research scale are described in Table 3. In which, the reliability tests of the scale have factor loadings higher than 0.5. The values of AGFI, GFI, TLI, CFI, NFI are both greater than 0.9. Chi-square/df = 1.873 (less than 3); RMSEA = 0.049 (less than 0.08).

Table 3. Descriptive, Convergent Validity and Reliability Results

Items	Mean	SD	FLs	α	AVE	CR
<i>Perceived Ease of Use (PEOU)</i>						
PEOU1	3.0909	0.79362	0.863	0.746	0.507	0.753
PEOU2	3.1818	0.76165	0.843			
PEOU3	3.0826	0.79279	0.768			
<i>Perceived Usefulness (PU)</i>						
PU1	3.9917	0.68321	0.854	0.823	0.609	0.824
PU2	3.8044	0.73791	0.867			
PU3	3.7135	0.71720	0.858			
<i>Subjective Norm (SN)</i>						
SN1	3.4490	0.80022	0.845	0.806	0.589	0.811
SN2	3.5813	0.78725	0.779			
SN3	3.4601	0.81453	0.748			
<i>Attitude Towards Use (ATT)</i>						
ATT1	3.6832	0.69044	0.876	0.850	0.654	0.850
ATT2	3.5813	0.71363	0.887			
ATT3	3.7824	0.67678	0.869			

Items	Mean	SD	FLs	α	AVE	CR
<i>Intention to Use (INT)</i>						
INT1	3.5427	0.85735	0.837	0.767	0.524	0.768
INT2	3.7548	0.83959	0.831			
INT3	3.7603	0.79039	0.810			

Sources: Author

Besides, the values AVE > 0.5, CR greater than 0.7; Cronbach Alpha index greater than 0.7. Thus, according to the thresholds suggested by Hair et al. (2010), the measurement model and SEM model ensure reliability, convergence and fit with the collected data.

Table 4. Goodness fit index of Measurement Model and SEM Model

	Chi-square/df	P-value	AGFI	GFI	TLI	CFI	NFI	RMSEA
Threshold	< 5	< 0.05	> 0.9	> 0.9	> 0.9	> 0.9	> 0.9	< 0.08
Measurement Model	1.873	0.000	0.921	0.948	0.958	0.968	0.934	0.049
SEM Model	1.869	0.000	0.922	0.946	0.958	0.967	0.932	0.049

Source: Hair et al. (2010)

To evaluate the discriminant, the study compared MSV and AVE values, SQRAVE values and correlation coefficients. The results show that the AVE > MSV, SQR AVE values are more significant than the correlation coefficient. Since the correlation values are also less than 0.6, according to Grewal et al. (2014), multicollinearity did not occur in the study.

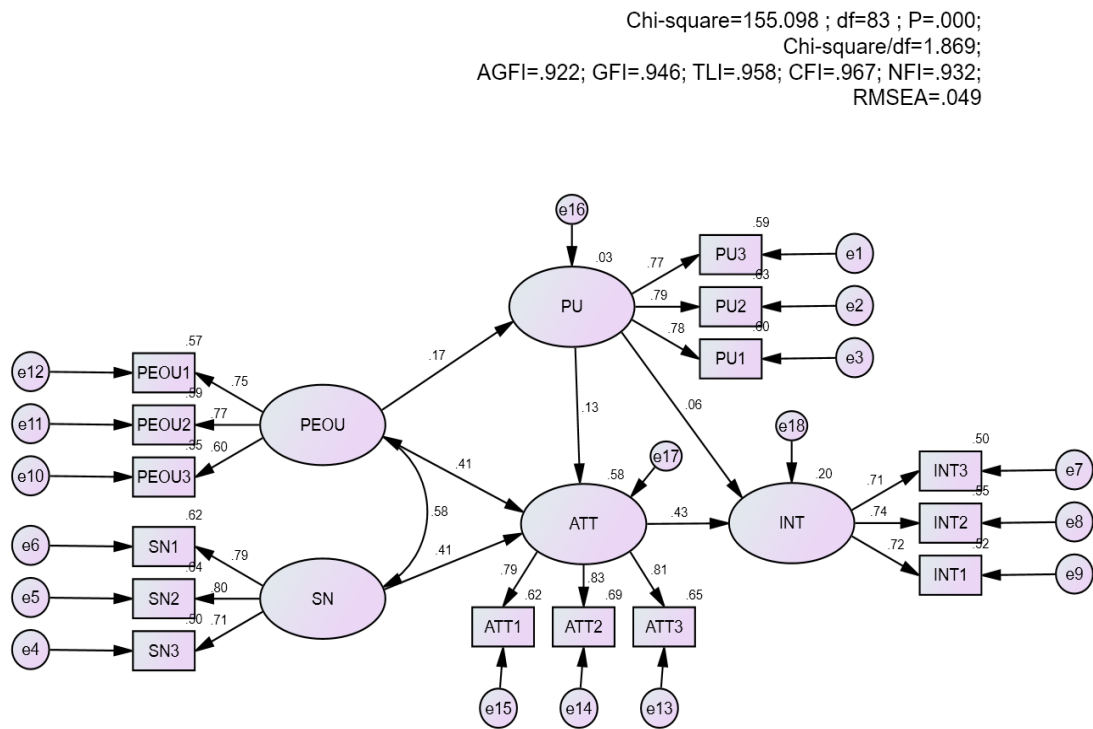
Table 5. Discriminant Validity and Correlation

	MSV	MaxR(H)	PEOU	PU	SN	ATT	INT
PEOU – Perceived Ease of Use	0.457	0.770	0.712				
PU – Perceived Usefulness	0.071	0.824	0.156	0.780			
SN - Subjective Norm	0.445	0.817	0.577	0.169	0.768		
ATT – Attitude Towards Use	0.457	0.851	0.576	0.266	0.567	0.809	
INT – Intention to Use	0.204	0.769	0.218	0.177	0.327	0.452	0.724

4.2. Hypothesis Testing

The research hypotheses were tested through SEM analysis. Besides the proven goodness fit index, the research model explains that 20% of the dependent variable is intention to use; 58% attitude towards use and only 3% perceived usefulness.

Figure 4. SEM Analysis Results



Sources: Author

Among the six research hypotheses, only the hypothesis about the relationship between perceived usefulness and intention to use was rejected because the p-value was more significant than 0.05. Perceived ease of use affects perceived usefulness with a beta factor of 0.169 (p-value = 0.011; t-value = 2.550); perceived ease of use affects attitude with a beta coefficient of 0.415 (p-value < 0.001; t-value = 5.421); subjective norm has an impact on attitude with a beta coefficient of 0.408 (p-value < 0.001; t-value = 5.773); Perceived usefulness affects attitude through a beta coefficient of 0.134 (p-value = 0.007; t-value = 2.712). Finally, attitude shows the ability to promote intention with a beta of 0.429 (p-value < 0.001; t-value = 6.204). Through regression weight, it can be seen that the perceived ease of use and subjective norm plays an essential role in customer's attitude when evaluating the solution to buy safe vegetable online. Meanwhile, the attitude of meaning predicts intention to use of the client with regression weight is 0.429.

Table 6. Regression Weights and Hypotheses Testing

Hypothesis	Estimate	S.E.	t-value	p-value	Conclusion
PU ← PEOU	0.169	0.095	2.550	0.011	Accepted
ATT ← PEOU	0.415	0.098	5.421	***	Accepted
ATT ← SN	0.408	0.066	5.773	***	Accepted

Hypothesis			Estimate	S.E.	t-value	p-value	Conclusion
ATT	←	PU	0.134	0.044	2.712	0.007	Accepted
INT	←	ATT	0.429	0.071	6.204	***	Accepted
INT	←	PU	0.061	0.059	0.952	0.341	Rejected

Source: Author

5. Discussion

The study has succeeded in building a model to explain safe vegetable consumption behaviour through an online platform in the Vietnam market through the combination of TPB and TAM models. The research results reinforce the theories mentioned in the studies of Davis (1989) and Ajzen (1991) about the role of attitude, perceived ease of use and subjective norm on customers' intention to use. However, the results showing that perceived usefulness does not affect the intention to use customers are different from the studies of Davis (1989). This situation may stem from the fact that customers do not trust safe vegetables when using online shopping. Online food shopping is considered to be highly convenient but often encounters problems with product preservation solutions. Therefore, the evaluation related to the solution's value is not enough to convince the customer to make the intended use.

Meanwhile, the perceived ease of use and subjective norm showed an essential role in evaluating the customer's use attitude. The main advantage of buying safe vegetables online is the ease of use and positive communication from customers. This result is consistent with the characteristics of this form of purchasing, especially in the context of Covid 19. The research results also contribute to supporting safe vegetable online business units in making market development and expansion.

6. Conclusions, implications and limitations

6.1. Conclusions and implications

From the findings, several implications were proposed to support enterprises in promoting consumer behavior, thereby aiming for effective market development activities.

Firstly, businesses need to pay more attention to ensuring the quality of vegetables during transportation. The results have shown the evaluation of the opinion that buying online safe vegetables is a good solution for a valuable life lowest average in the group of factors perceived usefulness (Mean = 3,713). For food products, customers' quality issues are always concerned, so safe vegetable quality improvement solutions when transporting to customers will play an important role in customers' perceived value, thereby helping to build customer loyalty.

Secondly, research results have shown that perceived ease of use has significant effects on customer attitudes. Therefore, the interface and support operations when shopping online will contribute to helping customers save time shopping online. Finally, ensuring that online shopping activities on safe vegetable products are also related to the supply ability of

businesses, it is necessary to avoid the situation of not being able to meet the needs of customers promptly.

Thirdly, businesses need to focus on communication solutions to develop the market. Research results show that the subjective norm plays a significant role in predicting customer behaviour, so it is necessary to build communication activities about the benefits of buying safe vegetables, such as saving time, preventing dangers from the Covid 19 pandemic.

6.2 Limitations

Although the author has tried to fulfil the research objectives, however, due to objective factors and limited resources, the study has some limitations, including:

- (1) The research sample is still narrow and cannot guarantee the research significance.
- (2) The factors included in the research model are still limited when it is not possible to clearly explain the variation of dependent variables such as perceived usefulness or intention to use customers.
- (3) The study has not been able to test the multi-group differences to understand different customer groups' perceptions better, thereby supporting more market development activities of enterprises.

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IMPACT OF DIGITALIZATION ON BUSINESS MODEL INNOVATION: EVIDENCE FROM SMES IN VIETNAM

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Abstract

This paper is conducted to investigate the relationship between digitalization and business model innovation within small and medium enterprises. Small and medium enterprises (SMEs) are an important component of Vietnam's economy and society but lag in digitalization compared to larger enterprises. Business model innovation (BMI) is a necessary solution to have impacts on firm performance. While the world is heavily affected by digital transformation, innovation plays an important role in business development. By using Partial least square - structural equation modeling with a sample size of 140 small and medium enterprises in Vietnam, research shows a significant impact of digitalization on business model innovation. The paper contributes to our understanding of the theory of business models and how digital technologies facilitate BMI. In particular, digital strategy, information technology, and employees' digital skills have a positive impact. Research results bring practical value to help business managers and policymakers in applying digitalization to business model innovation.

Keywords: *Business model innovation; digitalization;*

1. Introduction

Nowadays, companies not only have confronted technological change but also face volatility, uncertainty, complexity, and ambiguity. Several new technology opportunities are being seized, but people are not sure how to use and implement them simultaneously about product and service offerings (Lerch and Gotsch, 2015). The situation within the field of digitalization and business model innovation (BMI) is attention-grabbing as a result of the influence of digitalization on the business model (BM) is new, and exploitation of technological opportunities – also from a strategic viewpoint – is difficult (Mezger, 2014; Loebbecke and Picot, 2015; Paulus-Rohmer et al., 2016; Bouwman et al., 2017).

Digitalization refers to enabling or improving processes by leveraging digital technologies and digitized data. Digitalization improves an existing business process or processes but does not change or transform them. Digitalization is closely related to the

relationship between the three main resources of SMEs, which are digital strategy (DS), Information technology (IT), employee skills (SKI). From a strategy's perspective, recent discoveries suggest that companies that innovate their business processes and structures have a clear and coherent digital strategy (Kane et al., 2015). The measurement of digitalization is based on a refined version of the scale of information technology used for customer relationship management. In-depth research shows that employee knowledge and skills, including critical thinking, problem-solving, and network collaboration are the focus of digitization (Sousa and Rocha, 2019).

Business model innovation (BMI) is defined as an activity or a process in which the core elements of a business and its business logic are purposefully transformed to achieve advancements in the industry operations and strategy. Nguyen Thi Kim Anh et al. (2020) comment that BMI's three basic components have impacted with the same direction on the performance of start-up firms in their beginning period of doing business. BMI is an ongoing response to environmental changes (Demil and Lecocq, 2010), an evolutionary process, a continuous learning process (Sosna et al., 2010) with the need to consider dual repetition learning, and is a process-based exploratory, trial, and error-based rather than analytical approach (Sosna et al., 2010).

Marcin et al. (2018) presented the impact of digitalization on a company's business model. It provides a realistic look at the recent context and the factors driving BMI. According to Harry et al. (2018), many small and medium enterprises in Europe use social networks and big data to innovate their business models, helps top-level managers and executives better understand how to test digitalization on BMI, and then, find out the impact of digitalization on BMI.

However, most of the research has mainly focused on a small part of the research area, only tested on a small scale in a foreign region, so there are many limitations that Viet Nam cannot apply due to differences in language, culture as well as economic. The research of Vietnamese authors is only relative, not affirmative, or is deemed to be a basis for further studies. Our study addresses the above-presented research gaps and analyzes the impacts of digitalization on BMI then suggests avenues for managers. Research results will enable managers and policymakers to apply digitalization and set up proper policies to stimulate BMI activities.

The remainder of this paper is structured as follows. In Section 2, based on previous research, the authors formulate the research hypotheses development. In Section 3 related to the methodology, the authors present, among others, the data collections methods and measures. Section 4 reports the data analysis and main research results. The authors discuss the theoretical and pragmatic implications of the study's findings and suggest avenues for managers in Section 5. Finally, Section 6 presents conclusions and some limitations along with directions for further research.

2. Literature review and hypothesis development

2.1. Business model innovation

The theory of dynamic competition of Teece et al. (1997) is extended from the theory of Resource-Based View of the Firm (RBV), to identify the special competence of the enterprise as an advantage when combining capacity and resources for development. Based on this, the research team reviews the literature to better understand and develop the authors' hypotheses related to the relationship between digitization and key resources of SMEs, thereby building a research model. According to Entrepreneurship Theory, entrepreneurs find business opportunities and promote business ventures by uncovering unmet customer needs and the unused potential of resources to exploit profit. Based on this, the team reviews the literature to better understand and develop hypotheses that these digitalization opportunities provide businesses with a constantly innovating environment to have a positive influence on BMI.

BMI is defined as an activity or a process in which a business's core elements are transformed purposefully to make progress in operations and strategies. BMI has been described as a process (Matzler et al., 2013) to develop a BM that may be new to the company or the whole industry (Schallmo and Brecht, 2010). BMI, on the other hand, is described as the result of an innovation that modifies the organization's current BM (Mitchell and Coles, 2003) or completely changes BM (Lindgardt et al., 2009). Such changes may include the value chain or value proposition to the Company's customers or other partners (Matzler et al., 2013).

The process of BMI is an ongoing response to environmental changes (Demil and Lecocq, 2010), an evolutionary process, a continuous learning process (Sosna et al., 2010), and a process that is based on discovery, trial, and errors rather than analytical approaches (Sosna et al., 2010).

2.2. Digitalization

In general, digitalization refers to “the use of digital technologies” (Srai & Lorentz, 2019). Digitalization is often used to replace the word “digital transformation” when illustrating how the adoption of digital technology changes society and organizations. In the route of digitalization, digital technology helps organizations to transform their existing business processes (Verhoef et al., 2019), including communication (Ramaswamy & Ozcan, 2016; Van Doorn et al., 2010) and distribution (Leviäkangas, 2016). Digitalization has three components. The first component is a tangible thing that we are working or interacting with. The second component is a network that connects a lot of devices. This is because digitalization is not possible without an established ecological system. The third component that makes digitalization possible is cloud computing technology. It is used to store and manage the data generated by various digital devices. Several terms are commonly used to describe the process of collecting, storing, and managing data, such as cloud, big data, stakeholders of digitalization, data center...

In sum, digitalization marks radical thinking about how an organization uses technology, people, and processes to change business performance (Westerman et al., 2014).

2.3. Digitalization and business model innovation

BMs were affected during the crisis but are expected to grow faster in the future. This is not only because most of them already have to rely on technology to hold customers, but also because of the adaptability to innovate. While digitalization is often considered important, the value proposition, as well as its place in the value network, will determine the available options for BMI by digitalization (Michael et al., 2018). Companies apply digital technology to optimize business processes by enabling coordination between processes, thereby increasing efficiency and reducing costs. From the strategy perspective, organizations that digitally transform their business processes and organizational structures have a clear and coherent digital strategy (Robert Eller et al., 2020). Digitalization opens a new systematic route for discovering and exploiting business opportunities, mostly based on technology (Wirtz et al., 2016). In sum, digitalization gives businesses an environment to innovate and create breakthroughs in BMs, thereby positively influencing BMI.

2.4. Hypothesis development

Digitization and productivity enable companies to apply digital technology to optimize existing business processes by enabling more efficient coordination between processes thereby increasing efficiency and reducing costs through digitalization. Digital strategy relates to transforming products and services, combining with digital technology from a business-centric perspective. A digital strategy is not only aware of the prevalence of digital resources in functional areas such as operations, purchasing, and marketing, but also raises questions about business model reconfiguration (Clauss et al., 2020) and levels of innovation. These arguments lead to the following hypothesis:

H1: DS has a positive effect on BMI.

According to Robert Eller et al. (2020), SMEs' ability to quickly apply new technologies, learn, innovate and optimize is limited by their small size. However, the development of software is a service that gives SMEs access to cost-effective technology as well as the flexibility to switch between technologies as required. This gives SMEs an unprecedented opportunity to develop and adapt that can enable digitalization. IT enables communication, collaboration, and computing capabilities to facilitate the development of digital platforms (Nambisan, 2017) and stimulate BMI. Technology innovation has been identified as an important determinant of effective business, even a driver for BMI. The following hypothesis attempts to synthesize the previous arguments:

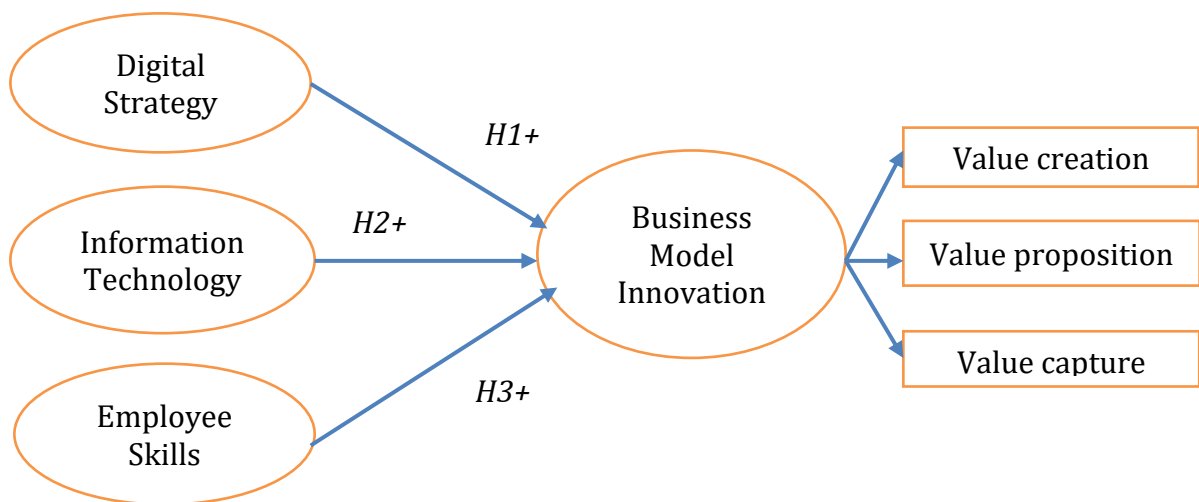
H2: IT has a positive effect on BMI.

Besides using technologies and applications, employee skills also include continuous learning, combining conformity skills required by digital projects. SMEs need a combination of skills, such as the ability to use technology and analyze a big amount of data, as well as soft skills, such as problem-solving skills, accepting change skills... SKI is an important factor to change the company's landscape. New capabilities are needed to innovate the business model. Businesses need to take full advantage of SKI and develop new capabilities arising from the external environment (Teece et al., 1997; Achtenhagen et al., 2013). Nguyen et al. (2013) identify SKI factors as one of the four factors that determine the success of BMI. Therefore, we hypothesize that:

H3: SKI has a positive effect on BMI.

And BMI is the second-order factor. It is a variable that commonly represents value creation, value proposition, and value capture. Figure 1 summarizes the proposed model and hypotheses to be tested.

Figure 1. Theoretical model and hypotheses



Source: Synthesis of the research group

3. Research methodology

3.1. Measurement and questionnaire design

The research team built a measurement based on the theoretical foundation of previous studies abroad, synthesizing and supplementing by the practice of SMEs in Vietnam. We developed 3 to 5 items for each dimension, as listed in Table1.

Digital Strategy: Recent research confirms that companies require a digital strategy to coordinate all resources and enhance competitiveness (Grover & Kohli, 2013; Yeow et al., 2018). Through these measures, DS is assessed using four items from DS1 to DS4.

Information Technology: IT was measured using an existing scale developed by Robert Eller et al. (2020) according to four dimensions: Social Media (IT1), Mobile

Technologies (IT2), Data and Analytics (IT3), and Cloud Computing Services (IT4). IT enables the ability to communicate, collaborate, and develop digital infrastructure and platforms (Nambisan, 2017).

Employee Skills: SKI was evaluated using the items from Robert Eller et al. (2020) with additional items based on Verhoef et al. (2019) covers from SKI1 to SKI5. Nguyen et al. (2013) identify SKI as one of the three components of enterprises' digitalization capabilities.

Business Model Innovation: Regarding BMI, this study used three dimensions by Thomas Clauss (2016). BMI is a representation of value creation (VCI), value proposition (VPI), and value capture (VC), which is considered the second-order factor.

All items were measured using a five-point Likert scale. Respondents were asked to indicate their agreement or disagreement with each item of the measurement scale (1 = completely disagree and 5 = fully agree).

3.2. Sampling and data collection

This study was conducted in small and medium enterprises that have been and are implementing digitization in Vietnam. The study sample collects opinions and evaluations of employees and managers from those enterprises. The respondents were selected based on random sampling technique due to costs in time and money as well as the complicated context of the Covid-19 epidemic. Official data was collected through online survey questionnaires using Google forms shared via social networks (Facebook, Zalo ...) and personal relationships to send links to potential survey subjects.

All questionnaires used in the survey were initially compiled and translated from English to Vietnamese and then carefully back-translated to ensure the accuracy and meaning of the original questionnaire. The survey results collected 145 online questionnaires, of which 5 were invalid due to outliers and incomplete filling. Therefore, the official sample for analysis was 140 valid questionnaires. Of the 140 respondents, 68.6 percent were managers and 31.4 percent were employees. 50 percent of small and medium enterprises are in the service industry, 5.7 percent in agriculture, 5 percent in education, 3.6 percent in biology and healthcare, 5 percent in e-commerce, and the remaining 30.7 percent of other business lines. Finally, regarding the location of the business headquarters, 12.1 percent are in the South region, 4.3 percent are in the Central Region, and the Northern region accounts for a majority of 83.6 percent.

3.3. Research method

PLS-SEM is the method that enables researchers to estimate complex models with many constructs, indicator variables, and structural paths without imposing distributional assumptions on the data. The second-order factor is representative of the first-order factors

that are substantially correlated with each other to reduce the hypothesis in the model and account for the variation among the first-order factors.

This study applies PLS-SEM due to assess the causal predictive power in estimating statistical models, algorithm is based on ordinary least squares regression to allow unrestricted use of single-item, reflective, or formative measures which are collected in corporate databases. PLS-SEM is effective with small sample sizes: 140 questionnaires and models comprise many constructs and a large number of items. User-friendly software is available that generally requires little technical knowledge about the method, such as SmartPLS (Ringle et al., 2015), while more complex packages for statistical computing software environments. Especially, it draws conclusions that affect business practices and have managerial implications.

Firstly, the authors examine the indicator loadings, following the second step is assessing internal consistency reliability, most often using composite reliability. Next, the third step to assess the convergent validity is the average variance extracted (AVE) for all items on each construct. After that, the study evaluates the discriminant validity using the square root index of AVE. The 5th step is to evaluate the structural model on SmartPLS 3.

4. Results

4.1. Reliability and convergent validity

The study uses the PLS Algorithm estimation method. Standardized root means square residual (SRMR) to measure the fit of the model with the study area. Henseler et al. (2014) introduced the SRMR as a goodness-of-fit measure for PLS-SEM and recommend using this measure to avoid model misspecification. Values lower than 0.1 and in a more conservative consideration 0.08; are considered a good fit. The result $SRMR = 0.068 < 0.08$ is good.

Table 1 presents Cronbach's Alpha (α), Composite Reliability, Average Variance Extracted, and Outer Loading of observed variables of the scales in the model.

Table 1. Statistical indicators of the scales

Digital strategy (DS): $\alpha = 0.863$; CR = 0.907; AVE = 0.709		Outer Loading
DS1	Fundamentally transform business processes and/or business model (e.g., grow new lines of business)	0.849
DS2	Improve customer experience and engagement	0.880
DS3	Develop a plan to promote innovation with digital tools	0.821
DS4	Increase efficiency	0.817

Information Technology (IT): $\alpha = 0.835$; CR = 0.890; AVE = 0.668		
IT1	Social Media and Collaborative Technologies	0.790
IT2	Mobile Technologies in management and operations	0.817
IT3	Digital Data and Analytics	0.846
IT4	Cloud Computing Services (Dropbox, Google Drive, ...)	0.816
Employee Skills (SKI): $\alpha = 0.839$; CR = 0.886; AVE = 0.608		
SKI1	The company has a common requirement for digital skills for all employees.	0.782
SKI2	The company can assemble teams of IT capable of dealing with technical intensive project	0.791
SKI3	The balance between overall digital skills & specialized digital roles is adequate.	0.787
SKI4	The company encourages employees to learn more about digital technology	0.787
SKI5	The employees are provided with the resources or opportunities to obtain the right skills to take advantage of digital trends.	0.750
Business Model Innovation (BMI): $\alpha = 0.842$; CR = 0.905; AVE = 0.760		
VCI	Value creation	0.868
VPI	Value proposition	0.898
VC	Value capture	0.849

Source: Synthesized results from SmartPLS 3

The results show that the Outer Loading of all observed variables is greater than 0.7, they indicate that the construct explains more than 50 percent of the indicator's variance, thus providing acceptable item reliability. So the scales used in the research model have convergent validity (Hair et al., 2017). In addition, the results show that the scales that meet the requirements for Composite Reliability are all greater than the standard level of 0.7. Moreover, the Average Variance Extracted values of the scales in the model is all > 0.5 . Therefore, these scales satisfied the requirements for internal consistency and homogeneity.

4.2. Discriminant validity

To evaluate the discriminant value of latent variables in the model, the study uses Fornell - Lacker criterion according to Hair et al (2017).

Table 2. The results of discriminant validity analysis

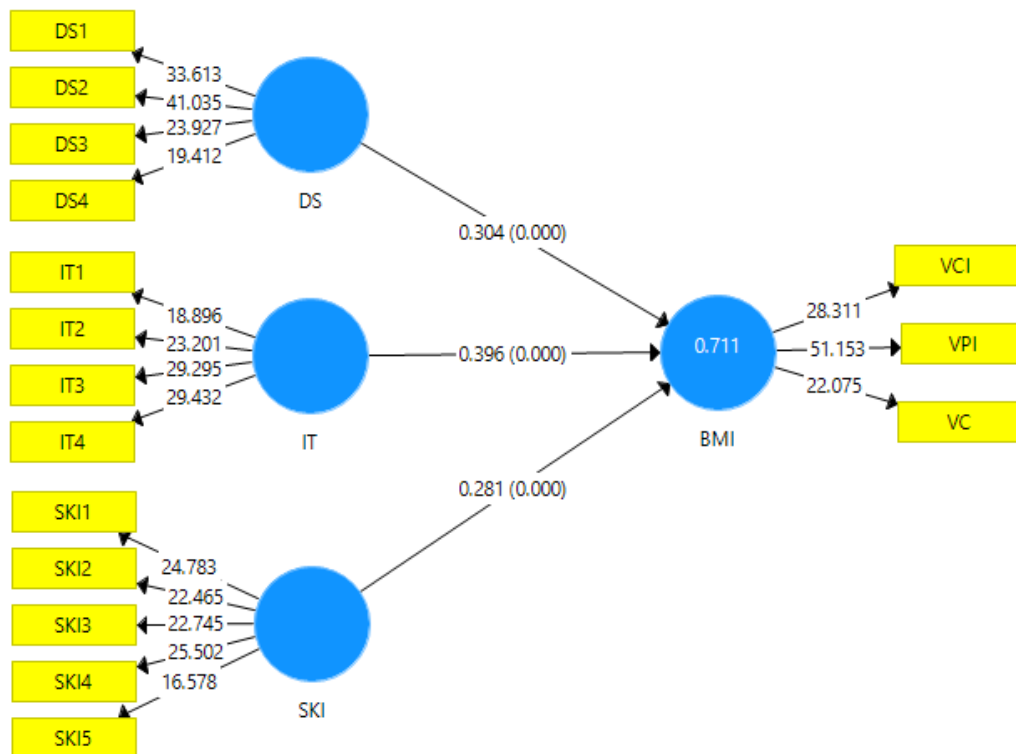
	BMI	DS	IT	SKI
BMI	0.872			
DS	0.716	0.842		
IT	0.756	0.633	0.818	
SKI	0.691	0.572	0.596	0.780

Source: Synthesized results from SmartPLS 3

The table shows that all the square root values of the AVE of each research variable are greater than the latent variable correlations between that variable and other variables in the same row and column. Therefore, the scales of the research variables all have discriminant values.

4.3. PLS-SEM results

Figure 2. Estimation results PLS-SEM



Source: Synthesized results from SmartPLS 3

To evaluate the hierarchical scale model (results - causes), the study uses a two-stage approach. In the first stage, the Repeated Indicators Approach is used to save the value for further analysis in the 2nd stage. In the 2nd stage, the latent variable at level 1 acts as the observed variable. Through this stage, the path coefficient is determined in the structural model analysis. The results of model estimation by Bootstrapping method with a sample size of 1000, the resulting amount of Complete Bootstrapping are shown in Figure 2.

Table 3 shows that R^2 value > 0.7 , so the 3-component explanation level of digitalization is strong. In addition, the influence magnitude of the 3 components has a moderate influence ($f^2 < 0.35$). The results of the evaluation through R^2 and the magnitude of f^2 show that the quality of the research model is good.

Table 3. The results of Boot-strapping analysis

	Original Sample (β)	Sample Mean (M)	Standard Deviation	T Statistics	P Values
DS \rightarrow BMI	0.304	0.299	0.061	4.984	0.000
IT \rightarrow BMI	0.396	0.394	0.063	6.294	0.000
SKI \rightarrow BMI	0.281	0.285	0.058	4.848	0.000
$R^2 = 0,711$					
$f^2_{DS \rightarrow BMI} = 0.173, f^2_{IT \rightarrow BMI} = 0.280, f^2_{SKI \rightarrow BMI} = 0.158$					

Source: Synthesized results from SmartPLS 3

The results show that the relationships are statistically significant ($p < 0.001$), the expected hypotheses in the theoretical research model are accepted. Information technology has a strong positive relationship with Business model innovation, followed by Digital strategy and finally Employee skills.

Table 4. Hypotheses and results

	Hypotheses	Results
H1	Digital strategy <i>has a positive effect on</i> business model innovation	Supported
H2	Information technology <i>has a positive effect on</i> business model innovation	Supported
H3	Employee skills <i>have a positive effect on</i> business model innovation	Supported

Source: Synthesized results from SmartPLS 3

Similarly, there is a significant and positive association between IT and BMI ($\beta = 0.396$; $p = 0.000 < 0.001$). Therefore, H2 is supported. H1 assumes that DS has a direct positive relationship with BMI. The results of the study indicate a highly significant relationship ($\beta = 0.304$; $p = 0.000 < 0.001$). Therefore, H1 is supported. Finally, the impact of SKI on BMI is also a positive relationship ($\beta = 0.281$; $p = 0.000 < 0.001$). Therefore, H3 is supported.

5. Discussion and recommendations

From the system of basic models and theories, we formed a model of the impact of digitalization on business model innovation. Digital strategy has a positive effect on BMI (*H1*). Digital strategy involves transforming products and services associated with digital technology from a business-centric perspective (Robert Eller et al., 2020). Besides, the digital strategy determines the activities in the business to create the chain value brought by digitization. Digitalization challenges the current business model and value proposition and acts as a driver of further growth (Bouncken et al., 2019; Clauss et al., 2020; Fisher et al., 2016). For managers, the strategy helps transform products and services that are more relevant and competitive, enhancing customer experience, leading to business improvement and positive business model transformation of the business model (Kraus et al., 2019). This result has many similarities with the business model innovation of Thomas Clauss (2016) and the RBV of Williamson (1975).

IT has a positive effect on BMI (*H2*). IT capability has a positive effect on firm performance (Chen et al., 2014). Similarly, digital analytical capabilities positively relate to firm performance and digital analytical tools allow SMEs to measure insights and optimize existing business processes (Soroka et al., 2017; Wamba et al. 2017). IT also enables communication, collaboration, and computing capabilities to facilitate the development of digital platforms (Nambisan, 2017). Lu & Ramamurthy (2011) identified a significant positive relationship between IT capability and two types of organizational agility: market capitalization agility and operational adjustment agility. Extending this finding, Robert Eller et al. (2020) argue that the development of software is a service that gives SMEs access to cost-effective technology as well as the flexibility to switch between technologies as required. This development gives SMEs an unprecedented opportunity to scale up and adapt to digitalization.

Employee skills have a positive effect on BMI (*H3*) which is in line with prior research by Nguyen et al. (2013). It identifies employee skills as one of the four factors that determine the success of BMI. Employee skills are an important factor to change the company's landscape (Kane et al., 2015, 2016; Sousa & Rocha, 2019). Digitalization depends on human capital as well as technological resources (Jandric & Randelovic, 2018; Sousa & Rocha, 2019; Sousa & Wilks, 2018). Essentially, employees are central to rebuilding the organization's values, norms, and behaviors during the transition (Fisher et al., 2016; Gioia et al., 2013). Adoption of new digital technologies often requires well-educated employees and existing literature shows that skilled employees are necessary for disruptive digitization (Sousa & Rocha, 2019).

This study contributes to both theory and practice, assists managers in small and medium enterprises in Vietnam to have a measured insight into the relationship between digitalization and business model innovation. And this base helps to promote business performance and business development. From a practical viewpoint, our study also has the following implications for business managers and policymakers.

For business managers, the first recommendation is that they should invest and focus on product and service research to promptly respond to customer needs and digital transformation. Then focus on the right digital technologies to help businesses achieve their goals more efficiently, reducing time and costs. As a result, businesses can lead the market and build a positive image with customers. Second, building a common digital standard for employees in the enterprise. Based on that, form recruitment standards and plans to develop employees' hard skills in digital technology to effectively apply IT to business processes and operations. Third, provide the environment and conditions for improving employee skills. Establishing a culture of innovation for teams to have a voice and experiment with digital initiatives that enable businesses to develop digital services and business models. Digital is just a tool and employees are the ones who directly implement the production and business processes and promote digital transformation. Therefore, it is necessary to attach and coordinate between digital resources and human resources to achieve business goals and build a sustainable foundation. Fourth, regularly assess and check the digital status of operations and production processes, quickly remove outdated features and content, and add new features to optimize cost and business efficiency. This option helps businesses develop their competitiveness with competitors in the industry. Finally, have an effective digital strategy. Starting from a clear perception, clearly understanding the strengths and weaknesses of the business as well as the business environment and industry competitors, aware of the market's innovation and digital transformation, the business manager designs optimal promotion plans to maximize competitive advantage, growth, profitability, and value chain creation.

For policymakers, first, propose investment incentive policies specifically for potential innovative start-ups. Because of the mindset and understanding of the market needs of new business model companies, digital transformation will take place more aggressively and faster. Second, building, perfecting, and enforcing a fair legal system for economic issues and licenses in the digital environment; protecting the intellectual property of digital platforms, protecting user data ... to create conditions for a healthy and sustainable economic development based on digital technology. Third, build an attractive mechanism to stimulate scientists and experts who are willing to participate and dedicate themselves to creating, developing, and applying digital science and technology in daily life activities. Finally, creating research and testing environments for start-ups; establish organizations to connect investors with young businesses to promote digital transformation and innovation on a large scale.

6. Conclusion

This study contributes to a better understanding of the relationship between digitalization and business model innovation in SMEs, empirically examining the impact of digital strategy, information technology, and employee skills on BMI. Based on a comprehensive literature and the empirical survey, a theoretical model and hypotheses were developed, extended, and validated through a systematic analysis process to define their positive relations. Impacts of digitalization were identified in the value creation, value proposition, and value capture of BMI in our case study. Companies acknowledge the opportunities and challenges of getting their BMIs, for example, by using digital technology, developing employees' digital capabilities. Furthermore, this study sheds light on all investigated business professions that have undergone the digital transformation step by step, with similarities and differences in their behavior towards BMI. Therefore, quickly implementing digital transformation is essential to help innovate business models and catch up with current development trends.

As with any research, this study still has some limitations in terms of sample size, sampling method, and sample distribution at localities, which limit the generalizability of the research results. In this respect, more insights can be obtained in the future by conducting a study with more respondents or diversifying the sample business line. Therefore, further studies can overcome these limitations, broaden the scope of research, and help perfect and develop this research topic more deeply.

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TALENT MANAGEMENT STRATEGY AND ITS IMPACT ON THE COMPETITIVENESS OF VINGROUP

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Abstract

Talent Management has become one of the most current topics because of its importance in the organization. Nowadays, firms around the world are faced with big decisions and challenges in talent management in today's fast moving, complex, unpredictable, and highly competitive global markets. Consequently, Talent Management of knowledge staff and high potentials is becoming increasingly strategic for companies around the world. Therefore, this research aims to identify the impact of Talent Management strategy on Vingroup competitiveness. By conducting survey to collect data from 100 respondents and using simple random sampling method, descriptive analysis and Smart PLS program to analyse data, the result pointed out that all 3 variables: Talent Attraction, Talent Development, Talent Retention have positive impact on Organizational Competitiveness while Career Development have no relationship with this variable. Then, by proving these close relationships through the hypotheses, this research will help Vingroup develop the proper strategy for Talent Management to develop sustainably. In addition, the results of this research will help Vingroup become more aware of the importance of Talent Management strategy in the company as well as its positive impacts to Vingroup competitiveness.

Keywords: *Talent Management, Talent Management strategy, Organizational Competitiveness, Vingroup.*

1. Introduction:

According to Hitu and Satyawan (2018), in the field of human resource management, Talent Management is a relatively new and important concept. Employees' personal skills and abilities are recognized by Talent Management, and a suitable job is offered to them. This is also the primary responsibility of Human Resource Management which helps to improve the organization's productivity (Rana, 2016).

From the past to the present, Talent Management always plays an important role in each organization which determines how competitive each company is (Maaytah, 2018). Specifically, if an organization is unable to position the best talent in the industry where he or she should be, the talent acquisition process is incomplete (Kousar and Ali, 2016). To succeed and stay ahead of the competition, every business needs the best employees. Since talent is the most critical element that pushes a company forward and propels it to greater heights, it

must never be jeopardized. It is not an exaggeration to suggest that Talent Management is a never-ending talent battle (Ahad, 2019).

In fact, both Vietnamese and foreign companies pay special attention to Talent Management to come up with smart and effective strategies to increase Organizational Competitiveness. As one of the leading technologies, industries, and real estate services in Vietnam – Vingroup, the human factor is one of the most important factors in the success and decisive competitiveness of Vingroup with other companies in the same field (Nguyen, 2017). This is also the reason that Vingroup pays great attention to Talent Management, especially in building strategic human resources to manage talented employees.

Therefore, this research was done to learn about the strategic human resources to manage the talents of Vingroup and their impact on the competitiveness of the company. Not only evaluating the importance of having good strategic human resources, but this study also gives meaningful recommendations which could help managers and leaders of Vingroup improve their strategic human resources to manage talents in order to achieve their goals, vision, and mission.

Besides, by conducting this research on the impact of Talent Management strategy on the competitiveness of Vingroup, two objectives are expected to be achieved. The first one is to determine the Talent Management strategy of Vingroup. Another is to investigate the relationship between Talent Management strategy and Vingroup's competitiveness. Currently, the topic of Talent Management is receiving a lot of attention in Vietnam, especially businesses because of the benefits that Talent Management brings. However, research papers on this topic in Vietnam are very rare, making the understanding of Talent Management's concept misleading. Therefore, this research was conducted to provide and clarify the concept of Talent Management as well as the importance of Talent Management strategy and its impact on Organizational Competitiveness. Besides, this is the first study on Talent Management of Vingroup. Hence, with those findings, Vingroup can have deeper knowledge about the importance of having good strategic human resources, thus, having meaningful recommendations and solutions to improve their strategic human resource to manage the talents of the company.

In terms of the research scope, the research will only focus on the Talent Management strategy and its impact on Vingroup's Competitiveness. Specifically, the research will revolve around small components of Talent Management strategy which are Talent Retention, Talent Attraction, Talent Development, Career Development, and define their impact on the competitiveness of the company. To collect the data from 100 respondents, an online survey is used with informed consent and confidentiality of participants. The structure of this research basically has 8 parts, in order are Abstract, Introduction, Literature Review, Methodology, Results, Discussion, Conclusion, and Recommendation. These sections will be harmoniously combined to create a complete and logically research.

2. Hypotheses development

Talent Management has become one of the most current topics because of its importance in the organization. Specifically, Talent Management entails not only finding the right applicant but also recognizing the employees' untapped and unusual abilities in order to cultivate and maintain them to achieve the desired results (Pasha and Ahmed, 2017). In this day and age, firms around the world are faced with big decisions and challenges in Talent Management which make managing knowledgeable staff and high potentials are becoming strategic for companies around the world (Tymon et al., 2014). Hence, this research is going to identify the impact of Talent Management Strategy on Organizational Competitiveness through 4 components of Talent Management Strategy: Talent Attraction, Talent Development, Talent Retention, and Career Development and its relations with Organizational Competitiveness.

2.1. *Talent Management and Talent Management strategy*

The definition of Talent Management is described differently: Whelan and Carcary (2013) define Talent Management as a policy for selecting the right people for the right jobs. Others, such as Snell (2010), define it as a wide range of complex human resource operations that support companies while Uren and Samuel (2010) saw it as a series of well-thought-out steps that include identifying, attracting, developing, and retaining talent.

Although it's a process of implementing fully integrated strategies as well as processes to enhance and adapt the operations of recruitment, growth, and retention of highly qualified and trained workers to meet an organization's current and future requirements, according to Liu et al. (2011), Mellahi and Kamel (2012) defined Talent Management as a set of interconnected and overlapping activities that allow organizations to attract, retain, and develop talent employees who are currently presenting the organization as well as those who will be presenting the organization in the future to gain a competitive advantage.

Talent Management strategy is described as systematic and coordinated strategies for improving organizational performance and processes used to recognize such talents, assess their competencies, hire highly skilled employees, cultivate and retain current talented workers in order to meet current and future needs and objectives and gain a competitive advantage (Jain et al., 2014). A company's Talent Management strategy can include vital talent development, controlled talent relationships, and an inclusive talent structure in addition to the basics including talent creation and success management (Karthikeyan, 2017). A well-designed Talent Management strategy within an organization allows the HR function and management to prepare for hiring and retaining top performers, as well as employing them faster than the competition to meet specific business goals. The most powerful Talent Management strategy blends the organization's expectations and objectives with current and future employees' personal development goals (Rani and Joshi, 2020).

2.2. Organizational Competitiveness

Organizations in the labour market were once considered impossible to succeed at the same degree of productivity for a prolonged period of time; but, with the introduction of Competitive Advantage, this might no longer be the case. According to Shaaban (2020), continuing to improve human resources and using them as a strategic advantage ensures companies' distinction from rivals and preserves labour market excellence. At both the academic and practical levels, the idea of maximizing Competitive Advantage is a true breakthrough in business administration (Alparslan and Saner, 2020). Management has been developed into a dynamic system aimed at addressing and resolving a wide range of internal and external challenges in order to achieve excellence and long-term viability (Praise and Kah, 2019).

According to Al-Mutairi (2017), every organization strives for success, while excellence is a characteristic that ensures a company's long-term success and longevity in the market. According to Kehinde (2015), Competitive Advantage is the collection of characteristics or attributes that define an entity and differentiate it from its competitors. As a result, the researcher will describe the Competitive Advantage as an organization's ability to outperform its rivals in terms of excellence, ingenuity, and innovation. These factors will allow a company to achieve its goals, such as increasing the number of customers, increasing revenue, increasing market share, growing, and surviving. To put it in another way, Competitive Advantage refers to an organization's ability to offer a unique and high-quality service (Agrawal, 2013). This is reflected in the high level of expertise of its staff, as well as the organization's Competitive Advantages in a variety of similar work environments and society's confidence in it.

2.3. Talent Attraction and Organizational Competitiveness

The goal of human resource management is to retain workers by providing a good working atmosphere, opportunities, and competitive benefits. According to Jane Kennelly (2018), attracting talent today is about creating employer identities to cater to talented individuals, not just hiring advertising. The creation of processes and policies on wages, development training, creating an attractive working climate, and organizational culture to meet the needs of employees are referred to as the Talent Attraction policy.

In short, an Attraction Strategy is used not only to attracting talent to a company, but also for promotion and marketing by providing services and rewards to customers. This type of approach helps the employer maintain a positive image. To inspire discerning and skilled individuals to apply, a variety of companies use an attraction technique. To attract talent, businesses must first identify potential sources of talent and then select the best candidates, especially for key positions.

The first impact of Talent Attraction on Organizational Competitiveness is that if the organization has an appropriate strategy, it could help to reduce the cost of recruiting. Attracting talent entails promoting the company's brand, enforcing strategies, remuneration,

community, working climate, and transforming companies into ideal workplaces, as workplaces deserve to be the dream of their employees (Tram, 2014). Once a successful system for meeting the needs of employees has been established, it will invariably help the organization. To begin with, it will provide companies with a Competitive Advantage in the fight for talents (Lawler and Ulrich, 2013). Furthermore, talented individuals are a force that attracts talented individuals. The organization's talents would have appealing qualities.

The process of developing attractive factors to attract financial talent entails gaining employees' loyalty and commitment to the business (Elarabi and Johari, 2016). Specifically, for the company to grow and maintain its competitiveness, it is critical to hire and retain qualified people who are suitable for the job (Cennamo and Gardner, 2018). Customers would be more satisfied with the quality of goods and services if the company has a team of healthy, competent employees. As a result, not only will company profits rise but so will market rivalry.

H1: There is a significant impact of Talent Attraction on Organizational Competitiveness

2.4. Talent Development and Organizational Competitiveness

The field of Talent Development is vast and complex. The term refers to Talent Development activities that promote learning, employee engagement, talent management, and employee development to drive organizational success and efficiency (ATD Press, 2020).

One of the most important strategies for giving organizations strength, performance, and trust is Talent Development. According to Areiqat (2014), this approach is based primarily on constant monitoring and review of what the company offers and comparing it to the supply and demand of human capital. It is deniable that having talent capital is advantageous to businesses (Ekhsan and Sudiro, 2019). Therefore, organizations must have strategies and budgets in place for talent investment in terms of encouragement, preparation, and growth. Organizations benefit from talent investment because it is seen as a strategic advantage.

Organizations are expected to provide innovative procedures to accomplish their tasks, have new tools, and provide up-to-date expertise and information, so talent acquisition practices must be implemented on a continuous basis. These can be used to evaluate an organization's ability to adapt to an evolving world, maintain a Competitive Advantage, and compete effectively against competitors (Cappelli, 2015). Organizations should identify talents based on their ability level and assess the degree and length of time needed to complete the learning and development process (Dychtwald et al., 2017). "It is better for a company over the long haul to have talent trained and have managers and advisors committed to talking to talents about the way to improve their skill", Wagner and Harter (2016) concluded in their report.

Taleghani et al. (2015) conducted research that suggested that talent creation has a positive impact on maintaining Organizational Competitive advantage and that having a successful Talent Development plan determines the organization's performance in comparison to others. It also improves the efficiency of the company.

H2: There is a significant impact of Talent Development on Organizational Competitiveness

2.5. Talent Retention and Organizational Competitiveness

Talent Retention refers to any of an organization's activities and processes aimed at stopping employees from leaving. The cost of losing talent includes both direct and indirect costs, such as the loss of technological skills, organizational knowledge, and employees' networks as they depart (Ott and Michailova, 2018). As a result, companies find it difficult to achieve and sustain a competitive advantage without retaining talent. Employees are now more open and have access to external opportunities than they were before, and they are more receptive to those opportunities even though they are not actively pursuing them (Ferry, 2017).

Managers around the world are worried about maintaining technical talent in the face of an ever-increasing high rate of employee turnover. Skilled workers are the most critical differentiator for most companies in today's highly competitive market (Mohammad et al., 2015). To compete favorably and achieve a Competitive Advantage in the international market, almost all companies rely on the skills of their employees. As the business climate continues to evolve, one of the most pressing issues confronting companies in the competitive marketplace is maintaining valuable workers (Anzi et al., 2020). According to recent reports, managers are finding it difficult to retain highly qualified workers because they are being recruited by several organizations at the same time with different types of benefits. In light of this, companies will continue to lose valuable workers to competitors unless and until managers are able to recognize and implement effective retention strategies that will help reduce regular main talents turnover (Hamidi et al., 2019).

Mumero (2017) also argued that in today's ever-changing business climate, employers are beginning to recognize the importance of the individuals who make up the company, making Talent Retention a real challenge. A lack of talent has resulted in fierce competition, and the employment relationship is facing fundamental challenges that have consequences for attracting, inspiring, and retaining skilled employees (Flipppo, 2012). According to Fitzenz (2015), an organization's long-term performance is primarily dependent on its ability to efficiently manage and leverage its human capital, which are the most important. Ineffective Talent Management results in a high rate of talent turnover, which has a major economic impact on companies, especially because of the expertise lost when workers leave. The loss of many key members of staff in the same unit or team may cause the entire organization to become unstable (Shaaban, 2012 and Kehinde, 2013).

H3: There is a significant impact of Talent Retention on Organizational Competitiveness

2.6. Career Development and Organizational Competitiveness

Career Development is a systematic preparation mechanism that links an employee's career goals and objectives to the goals of the organization (Kakui and Gachunga, 2016). It can be described as activities undertaken by employees and the company in order to meet job requirements and career goals. According to Robbins (2015), Career Development is a critical

strategic concern for all companies, regardless of industry, sector, scale, or profile. Employees with the right competencies are needed to help companies in today's intensely competitive markets in order to gain a competitive advantage over competitors. According to Mwanje (2012), Career Development has a significant effect on the organization's importance, performance, morale, and profitability. Organizations benefit from career growth because it helps them bridge the difference between anticipated future success and actual performance.

A career, according to Ylmaz (2015), is a phase that is openly linked to organizational and personal interests and results in an accumulation of experiences arising from assignments, employment, roles, or transformations such as promotions or transfers. In the ever-changing expertise and capability profiles of employees, as well as an organization's competitiveness and effectiveness, development and training are critical (Schuler, Tarique, and Jackson, 2013). Organizational and individual employee career growth include staff development to promote Talent Development and Career Management (Garofano and Salas, 2015). Continuous growth, attraction, and retention of bright, high-quality workers are major determinants of organizational performance, according to organizations (Phillips, 2014). As a result, Talent Management and Career Management are primarily considered from the perspectives of both the company and the individual employees. Organizations of many rivals need to focus on Career Management and Talent Management. Simultaneously, this approach offers an added opportunity for talented individuals to learn and do more (Siam, 2018).

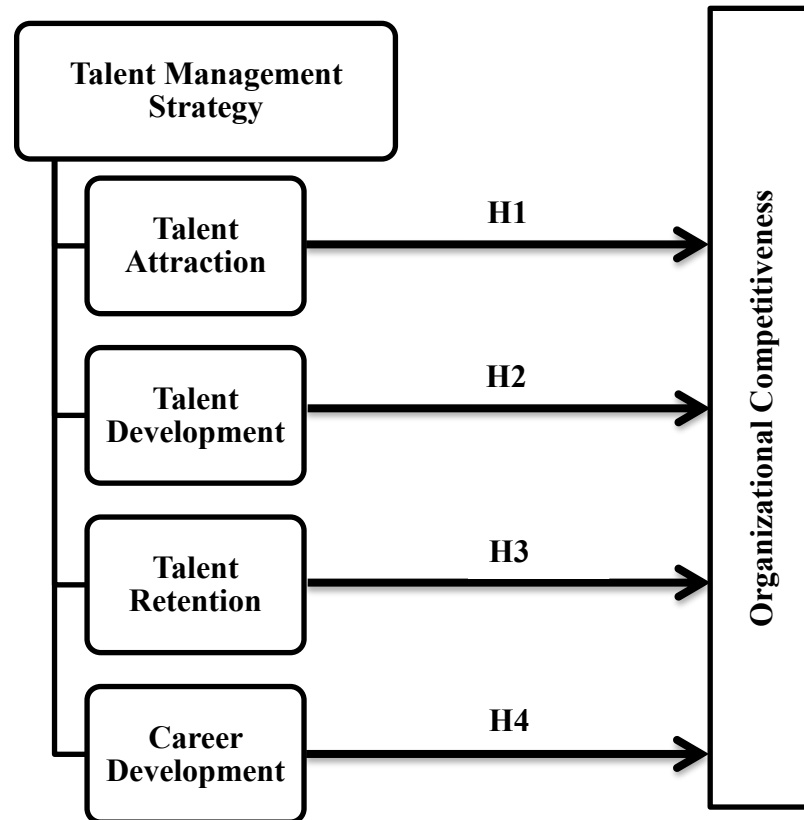
In this era of increased competition, Career Growth research has become more critical. Since the nature and structure of talent professions can change rapidly, it is difficult to reliably predict talent career growth, even with the help of newly available big data in the field of human resources (Xiong, 2017). Owing to the intense competition for talent around the world, many companies strive not only to attract the best talents but also to provide sound Career Development guidance in order to retain their talented and experienced employees. As a result, Career Development research is becoming increasingly important in strategic human resource management (Hengshu, 2017).

Various research platforms in designing and creating Career Growth opportunities for workers to remain in the company helped Career Development gain prominence. It can change depending on the needs of an organization's mission and vision (Gunathilake, 2015). Clear Career Growth plans, including a straightforward and promising Succession Plan, will often help to alleviate talent shortages (Church, 2014). Employers who prioritize Career Growth for their employees build long-term relationships that support the Organizational Competitiveness (Tsui, et al., 1998), particularly as the job market has become more difficult, dynamic, and accessible over time (Hoekstra, 2012).

H4: There is a significant impact of Career Development on Organizational Competitiveness

Based on the hypotheses above, there is a conceptual framework:

Figure 1: Conceptual framework



3. Methodology

Since hypotheses are suggested based on previous theories in order to generalize from the general to the particular, the researcher used deductive method to evaluate the hypotheses above for hypothesis falsification or verification. The survey will be used to collect data from participants. After contacting to the representative, the link Google Form to do online questionnaire will be sent to participants via their email. The questionnaire was designed in both English and Vietnamese to ensure that the respondents could understand the questions clearly. Moreover, this study applied simple random sampling method where every member of the population has an exact equal chance of being chosen. The benefits of using a simple random sampling include ease of use and representation accuracy.

Specifically, the main subjects in this study were employees who is working at the headquarter of Vingroup. The sample size was 100 participants in total. There would be one dependent variable (Organizational Competitiveness) and four independent variables (Talent Attraction, Talent Development, Talent Retention and Career Development).

Table 1: Description of variables

Variables	Types	Items	Measurement	Sources
Talent Attraction (TA)	Independent	3	Rating (Likert Scale)	Almannai, 2017
Talent Development (TD)	Independent	3	Rating (Likert Scale)	Almannai, 2017

Variables	Types	Items	Measurement	Sources
Talent Retention (TR)	Independent	3	Rating (Likert Scale)	Almannai, 2017
Career Development (CD)	Independent	3	Rating (Likert Scale)	Almannai, 2017
Organizational Competitiveness (OC)	Dependent	3	Rating (Likert Scale)	Almannai, 2017

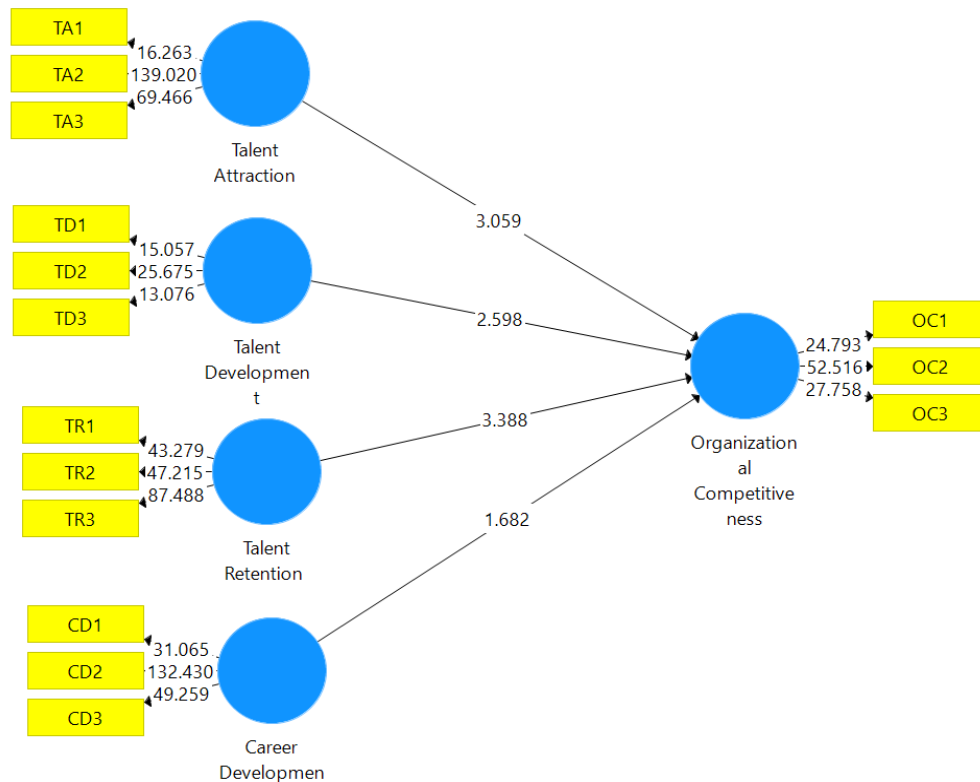
Among 100 respondents, 56% of them was female employees and 44% was male. Most of the survey respondents were between the age of 35 and 44 years old, accounting for 35% of the total respondents. When being asked about level of education, most of the answers was “Bachelor’s degree” (46%), followed by “Master’s degree” (38%). In terms of time working at Vingroup, one third of them said they have been working here for 4 to 6 years, followed by those who worked here for 7 to 9 years (28%). The departments that employees are currently working in are also examined, where 35% of respondents came from Human Resources department, slightly higher than the figure of next group – Marketing department with 25% of the respondents.

CB-SEM (Covariance-based SEM) and PLS-SEM (Partial least squares SEM) are two common methods for estimating linear structural models. In terms of hypothesis checking, theory validation, and contrast of alternative hypotheses, CB – SEM was more prevalent than PLS-SEM. PLS-SEM, on the other hand, is a better option for non-theoretical analyses, analyses that investigate relationships between variables, and analyses that concentrate on predicting variables such as key target variables or key driver variables. Therefore, PLS-SEM will be used in this research.

4. Results

The data of 100 respondents which was collected through the questionnaire will be demonstrated thanks to the descriptive analysis. Along with short explanation which appropriate with the result, all the calculations will be given by using not only Microsoft Excel but also Smart PLS software.

Figure 2: Model showing the relationship between Talent Management Strategy and Organizational Competitiveness



4.1 Measurement Model

The reliability is measured using three indicators: Outer Loadings, Cronbach's Alpha and Composite Reliability.

First, Table 3 illustrated those 15 items of 5 variables have their reliability values (outer loading) that are nearly or above the recommended value of 0.70 (Hair Jr et al., 2016) which mean that all the items had close relationship. Hence, the result of the questionnaire was meaningful and had validity.

Table 2: Outer loadings

	Original Sample	Sample Mean	STDEV	T Statistics	P Values
CD1 <- CD	0.831	0.832	0.028	30.178	0.000
CD2 <- CD	0.950	0.950	0.007	140.501	0.000
CD3 <- CD	0.884	0.883	0.019	46.123	0.000
OC1 <- OC	0.809	0.808	0.034	23.798	0.000
OC2 <- OC	0.888	0.887	0.018	49.847	0.000
OC3 <- OC	0.882	0.879	0.034	25.799	0.000
TA1 <- TA	0.820	0.813	0.053	15.431	0.000
TA2 <- TA	0.942	0.943	0.007	137.647	0.000
TA3 <- TA	0.931	0.931	0.015	63.979	0.000

	Original Sample	Sample Mean	STDEV	T Statistics	P Values
TD1 <- TD	0.789	0.786	0.054	14.492	0.000
TD2 <- TD	0.846	0.849	0.031	27.451	0.000
TD3 <- TD	0.777	0.772	0.066	11.805	0.000
TR1 <- TR	0.878	0.878	0.021	42.656	0.000
TR2 <- TR	0.903	0.902	0.020	45.472	0.000
TR3 <- TR	0.946	0.945	0.011	88.353	0.000

Cronbach's alpha is an internal accuracy and reliability measure. The reliability of multiple-question Likert scale surveys is determined using Cronbach's alpha tests (Nguyen, 2017). If the Cronbach alpha < 0.5, it is unacceptable while higher than 0.9 is excellent. The Cronbach alpha here were good and excellent because all of them were from 0.8 to 0.9 and higher than 0.9.

At the construct level, the average variance extracted (AVE) is a standard criterion for evaluating convergent validity. Because of Cronbach's alpha's shortcomings, a different measure of internal consistency reliability, known as composite reliability, is theoretically more appropriate. The composite reliability scale ranges from 0 to 1, with higher values suggesting greater degrees of trustworthiness. In exploratory study, composite reliability values of 0.60 to 0.70 are sufficient. As can be seen, all the AVE here were higher than 0.5 and composite reliability were higher than 0.7 which could be accepted.

Table 3: Internal Consistency Reliability and Average Variance Extracted

	Cronbach's Alpha	Composite reliability	AVE
CD	0.867	0.919	0.792
OC	0.823	0.895	0.740
TA	0.882	0.927	0.809
TD	0.734	0.846	0.647
TR	0.895	0.935	0.827

Discriminant validity refers to how distinct a construct is from other constructs. The ratio of between-trait to within-trait correlations is known as HTMT. Henseler et al. (2016) propose a threshold value of 0.90 if the path model contains structures that are conceptually quite similar. In other words, an HTMT value greater than 0.90 indicates that discriminant validity is lacking. A lower and thus more stringent threshold value of 0.85 tends to be justified when the path model's constructs are conceptually more distinct (Henseler et al., 2016). It can be clearly seen from the result that all the HTMT were lower than 0.9, hence, they could be accepted.

Collinearity, or strong associations between two formative indicators, may be problematic from a methodological and interpretive standpoint. A related measure of collinearity is the variance inflation factor (VIF), which is defined as the reciprocal of the tolerance. The term VIF refers to the amount of standard error that has been increased due to

collinearity. A VIF value of 5 or higher in the sense of PLS-SEM indicates a potential collinearity issue (Hair et al., 2012). A VIF level of 5 indicates that the remaining formative variables associated with the same construct account for 80% of the indicator's variance. As can be seen from the result, all the VIF value were lower than 5 which could be accepted.

Table 4: Discriminant Validity

	CD	OC	TA	TD	TR
CD					
OC	0.845				
TA	0.725	0.849			
TD	0.750	0.862	0.753		
TR	0.838	0.878	0.729	0.842	

Table 5: Collinearity

CD1	CD2	CD3	OC 1	OC 2	OC3	TA1	TA2
2.008	4.262	2.999	1.496	2.443	2.394	1.890	3.654
TA3	TD1	TD2	TD3	TR1	TR2	TR3	
3.397	1.424	1.418	1.538	2.231	3.522	4.758	

4.2 Structural Model

The path coefficient (P-value) is a metric for determining the strength of the relationship between independent variables and dependent variables (Hair et al, 2015). For the significant efficiency of the data, the standardized suitable P-value should be less than 0.05, and the P-value in the patch coefficient should be equal to 0. As can be seen from the result, the variables Talent Retention, Talent Attraction, Talent Development all have P value lower than 0.05 which mean that all have relationships with Organizational Competitiveness, except Career Development at 0.08.

Table 6: Path Coefficient

	Original Sample	Sample Mean	STDEV	T Statistics	P Values
CD -> OC	0.188	0.196	0.107	1.757	0.080
TA -> OC	0.316	0.310	0.101	3.125	0.002
TD -> OC	0.196	0.203	0.076	2.577	0.010
TR -> OC	0.274	0.264	0.088	3.104	0.002

In a regression model with a dependent variable, R-squared (R²) is a statistical measure that describes the proportion of variance explained by an independent variable or variables. If the R² of a model is 0.50, the model's inputs will explain roughly half of the observed variance. R-squared values range from 0 to 1, with 0.5 to 0.75 being the best result. R Square was equivalent to 0,711 in this case, which was a good result. In other words, the variance of the independent variable explains 70% of the variance of the dependent variable under scrutiny when the R-Squared value is 0.7.

5. Discussion

Table 7: Results for Hypotheses

Hypothesis	Relationships	β	P Values	Results
H1	CD -> OC	0.188	0.080	Not Supported
H2	TA -> OC	0.316	0.002	Supported
H3	TD -> OC	0.196	0.010	Supported
H4	TR -> OC	0.274	0.002	Supported

H1: Not Supported

H1 predicted that there would be a significant impact of Career Development on Organizational Competitiveness, however, the result proved that there is no relationship between them ($\beta = 0,188$, P Values = $0,08 > 0,05$). This hypothesis was also being supported by many another research in the past, one of them was conducted by Darwish (2018). Although in his research, he divided Organizational Competitiveness into five components: Quality, Efficiency, Creativity, Responsiveness, and Excellence, the result was still similar to this research. He found, in particular, the dimensions of Competitive Advantage have little relationship with Career Progression. Furthermore, responsiveness has a medium positive relationship correlation with the Preservation Strategy, while creativity, quality, efficiency, and excellence have no correlational relationship with the Career Advancement strategy, meaning that the four dimensions of Competitive Advantage would not be influenced by the Career Advancement strategy. As a result, he came to the conclusion that achieving staff Career Development, promotion, and escalation through administrative empowerment, competency retention, functional privileges, or cultivating a culture of shared trust among employees enhances talent management. Also, Anzi et al. (2019) and AlMannai (2015) supported these findings.

On the other hand, Career Development has no importance in helping Vingroup achieve its Organizational Competitive advantage. In fact, the working positions of talents in the company do not affect too much on the operation and organization of Vingroup because no matter where they are, they only need to have talent and willingness to contribute to the company which also helped the company to grow. Besides, detecting talented people and facilitating their talent development as well as having policies to retain them for a long time, working for the company is an issue that leaders, as well as managers of Vingroup, must have the ability to solve. Based on these statements, it could prove that Career Development has no impact on Organizational Competitiveness.

H2: Supported

H2 predicted that there would be a significant impact of Talent Attraction on Organizational Competitiveness, consequently, the result proved that there is a positive relationship between them ($\beta = 0,316$, P Values = $0,002 < 0,05$). This hypothesis was also being supported by many another research in the past, one of them was conducted by Al-Mutairi (2017). According to his study, an Attraction Strategy can be used for more than just

attracting talent to a company; it can also be used for promotion and marketing by offering services and benefits to customers. This type of approach helps the employer maintain a positive image.

Al-Mutairi (2017)'s result of conducting research was similar to this research. As evaluated by the overall degree of the correlation coefficient between the dimensions of Competitive Advantage and the Attraction Strategy, the dimensions of Competitive Advantage (quality, efficiency, inventiveness, responsiveness, and excellence) have a significant positive association with the Attraction Strategy in which responsiveness has the strongest positive relationship with Attraction Strategy, meaning that responsiveness is the most significant dimension of Competitive Advantage driven by Attraction Strategy, accompanied by excellence, creativity, efficiency, and consistency. Ziad (2016), Abdul Nasir, et al. (2016) and Alkraawi (2015) also have the same view with this research.

In fact, in order to compete with rival companies in the same industry, it is vital to attract talent to apply to the company first. That is why Talent Attraction plays a very important role in helping a company to achieve Organizational Competitiveness. Attracting more talent to work for the company will help the company grow more, have innovative in terms of services as well as help develop the company's activities such as business expansion and having the right development strategies, helping Vingroup growth sustainably.

H3: Supported

H3 predicted that there would be a significant impact of Talent Development on Organizational Competitiveness, consequently, the result proved that there is a positive relationship between them ($\beta = 0,196$, P Values = $0,01 < 0,05$). This hypothesis was also being supported by many another research in the past, one of them was conducted by Arbab (2018). According to his results, the dimensions of Competitive Advantage (quality, efficiency, inventiveness, responsiveness, and excellence) have a significant positive association correlation with the Development Plan, both collectively and individually. Furthermore, innovation has the strongest positive relationship, meaning that creativity is the most significant dimension of Competitive Advantage influenced by strategy growth, accompanied by excellence, efficiency, responsiveness, and consistency.

This strategy is regarded as one of the most critical in providing organizations with strength, performance, and trust. According to Areiqat (2016), this approach is based primarily on constant monitoring and review of what the company offers and comparing it to the supply and demand of human capital. Consequently, departments should collaborate with Talent Management to assign complete tasks to talent, allowing the talent to be fully utilized.

Having talent capital is advantageous to businesses. Organizations must have strategies and budgets in place for talent investment in terms of encouragement, preparation, and growth. Organizations benefit from talent investment because it is seen as a strategic advantage. According to Arbab (2018), the involvement of talent in an organization should

not be limited to one field, and Talent Management should aim to distribute talent in a balanced and organized manner in all areas of the organization. Iqbal, et al. (2019), Ramadan (2017), Shimla and Ghidwani (2015) also have the same view.

In addition, it is the responsibility of the leaders and managers of Vingroup to recognize the right of each talent as well as have a suitable development investment strategy for each talent. Enabling Talent Development not only helps them to improve in terms of knowledge, expertise and skills, but also encourages them to use those things to contribute to the development of the company, thereby helping to improve the company's long-term development and achieve Organizational Competitiveness.

H4: Supported

H4 predicted that there would be a significant impact of Talent Retention on Organizational Competitiveness, consequently, the result proved that there is a positive relationship between them ($\beta = 0,196$, P Values = $0,01 < 0,05$). This hypothesis was also being supported by many another research in the past, one of them was conducted by Kehinde (2014). In her research, she discovered that the Competitive Advantage dimensions (quality, efficiency, creativity, responsiveness, and excellence) have a moderately positive relationship with the Preservation Strategy. Specifically, responsiveness and consistency have a moderately positive relationship with Preservation Strategy, whereas efficiency, excellence, and creativity have no correlational relationship with Preservation Strategy, meaning that the three dimensions of Competitive Advantage are unaffected by Preservation Strategy.

Organizational Competitiveness is heavily influenced by the human element, particularly if it is successful and distinctive. Perhaps one of the most significant impediments to the human element's stability is their insistence on growth and transition, which causes them to be perpetually on the lookout for better job opportunities. According to Pruis (2017), for these elements, organizations must provide moral and material benefits, create trust, promote an energetic and competitive atmosphere. This means that during the hiring process, those with the requisite experience and fundamental skills for the job are given opportunities for jobs. Additionally, the Human Resource department, in collaboration with other departments, should create an integrated control structure aimed at controlling and recognizing the talented staff's accomplishments and contributions to award rewards. Maaytah et al. (2016), Ramadan (2015), Shimla and Ghidwani (2015) also have this point of view. That is the reason why it is stated that Talent Retention has a positive impact on Organizational Competitiveness.

6. Conclusion

As a result, Talent Management cannot be denied as a corporate practice, and Vingroup must completely incorporate it into all of the organization's employee-related processes in order to achieve organizational productivity. In a Talent Management system, every member of the company, particularly managers with talents, is responsible for

attracting, creating, and retaining talented employees. Successful Succession Planning ensures that the best talent is well educated and prepared to take on the next step in their career path. Succession Planning benefits the talents and also benefits the organization (Susan, 2021).

The research aims to clarify the impact of Talent Management strategy on Vingroup competitiveness. Specifically, Talent Management strategy was divided into 4 aspects in this research: Talent Attraction, Talent Retention, Talent Development and Career Development which were assumed to have relationships with Organizational Competitiveness. However, the result proved that Talent Attraction, Talent Retention, Talent Development all have positive impact on with Organizational Competitiveness, while Career Development which have no relationship with this variable. It is quite easy to understand because Career Development has no importance in helping Vingroup achieve its Organizational Competitive advantage. In fact, the working positions of talents in the company do not affect too much on the operation and Organizational Competitiveness of Vingroup because no matter where they are, they only need to have talent and willingness to contribute to the company which also helped the company to grow.

Despite the fact that it is possible to answer all the research questions as well as achieve the aim of the research, there was still existed some limitations. First of all, due to the cost and time constrain as well as COVID 19 pandemic, the sample size was limited which might cause the bias in the result so that other research on the future is recommended to expand the sample size to not losing the potential respondents and have higher reliability and validity results. Secondly, this research was investigated the Talent Management strategy of Vingroup which is a multidisciplinary corporation organization so that their Talent Management strategy need to be detailed and has a more complex structure to cover a large number of talents in the company. Hence, all the recommendations which being provided from the result of surveying in Vingroup may not be true for single industry firms. Therefore, other research with the same topic with this study in the future can consider defining the impact of Talent Management strategy on organization with other industry such as technology, real estate or service... to have meaningful and validity recommendations which suitable with their company.

7. Recommendation

Firstly, although Career Development has no impact on Organizational Competitiveness, Vingroup still needs to focus on arranging talent in the right position, suitable with their capabilities, expertise, efforts, at the same time concentrate on salary as well as benefits to talents as a way to retain them. Secondly, it is important to focus on creating conditions for talents to have the opportunity to learn, cultivate professional knowledge and skills such as organizing seminars with experts to exchange experiences or have training sessions with professionals. Specifically, Vingroup can create opportunities for talents to go abroad to learn new technology knowledge so that they can contribute to the company's operations and work more effectively to help the company compete better with

others company in the same field. Last but not least, a company that wants to develop sustainably needs to attract talented human resources. To attract them, Vingroup needs to actively open recruitment sessions on universities to select talent for the company. In addition, it is necessary to regularly organize outside activities, team building or Sport days to enhance the bond of talents with other people as well as with the company.

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PROPOSING THE APPLICATION OF INEVITABLE DISCLOSURE DOCTRINE TO RECOGNIZE NON-COMPETE AGREEMENTS IN VIETNAM

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Abstract

Non-compete agreements are established by employers and employees to protect the employer's trade secrets. These agreements are governed by the laws of many countries around the world. However, in Vietnam, the current law does not have clear provisions to regulate this issue. In this article, the author introduces the doctrine of inevitable disclosure that can be used as a theoretical basis for legislators to officially recognize the validity of the non-compete agreements in the near future.

Keywords: *Inevitable disclosure doctrine; Non-compete agreements; Trade secret.*

1. Introduction

Since the policy of “*Doi Moi*” was introduced by the Sixth National Congress of the Communist Party, Vietnam's socio-economic situation has achieved remarkable achievements. Along with the change in economic management thinking, the issue of international integration was also mentioned by the Communist Party in documents of many congresses. Most recently, at the Thirteenth Congress, the Communist Party set out directions, tasks and solutions to implement the socio-economic development strategy for the period of 2021 - 2030. Accordingly, the Communist Party of Vietnam (2021, 243) continued to affirm: “*Strengthening international integration capacity; supporting businesses on legal issues in commercial dispute settlement, minimizing risks in international integration*”. One of the positive effects of international integration is to enhance the attraction of foreign investment. More specifically, increasing foreign investment helps to supplement capital for the economy, solve the lump of labor, improve skills, professional qualifications and management capacity for workers and promote technology transfer process (Dao Thi Bich Thuy, 2012).

In order for the economy to adapt to the trend of international integration and globalization, the State needs to study and perfect the legal system to be in line with international practices and improve the competitiveness of the investment environment (Communist Party of Vietnam, 2021, 238). In particular, the issue of ensuring a healthy and fair competitive environment among business entities is one of the urgent issues that need to be resolved. Especially, when Vietnam joins new-generation free trade agreements, such as CPTPP or EVFTA, ensuring a healthy and fair business environment must be quickly implemented to match engagements of Vietnam to partner countries.

For businesses to be able to compete fairly, the protection of trade secrets is one of the important issues that determine the survival of the business. Especially, in the context of the Fourth Industrial Revolution, trade secrets are seen as non-traditional and extremely valuable assets for businesses. However, it is more difficult for enterprises to control and secure trade secrets in the course of conducting business activities than traditional assets. Competitors tend to try to gain access to this non-traditional asset class by enticing, recruiting, or rehiring employees who hold close to the business's trade secrets. In order to protect trade secrets, enterprises can take many measures, including the measure of entering into non-compete agreements with employees, especially those who have been involved in creating or have access to useful information and trade secrets of enterprises. Non-compete agreements prohibit employees from working for a competitor of their former employer or from self-employment in a field related to the business of their former employer.

In Vietnam, because the term “*non-compete agreement*” has not been officially recognized in statute law, it creates some difficulties in solving practical problems. Although in case law, commercial arbitration and courts have recognized the legality of non-compete agreements (People’s Court of Ho Chi Minh city, 2018). However, these decisions of arbitrators and courts are still being challenged. Some commenters doubted the validity of non-compete agreements because they believed that these agreements infringed on employee rights.

In this article, the author introduces the inevitably disclosure doctrine that has become popular in the United States. Although the doctrine has not been mentioned in Vietnam, it is used by courts in the United States to protect trade secrets of businesses by banning employees from working for competitors of their former employer or from self-employment in a field related to the business of their former employer. The author also tries to propose the application of this theory to a certain extent in order to lead to the official recognition of non-compete agreements in Vietnam.

2. Literature review, theoretical framework and research methods

2.1. Literature review

Inevitable disclosure doctrine rooted in the fundamental principles of US trade secret law. During the time since the theory was born, there have been many studies by scholars on this theory. The author presents some typical studies as follows:

- Brandy L. Treadway (2002) stated the history of birth and development of inevitable disclosure doctrine in the United States and practical application of this doctrine in US states. Treadway has clarified the difference in legislative thinking between the US states on resolving the conflict between protecting workers’ free movement rights and protecting the legitimate interests of employers.

- Earlier, Jonathan O. Harris (2000) also made some suggestions to balance the interests of employees and employers when applying the doctrine of inevitable disclosure. Harris’s analysis was based on the equity which is one of the important

sources of US law. Accordingly, Harris argued that courts should scrutinize the inevitable disclosure to ensure fairness.

- Analyzing the application of the doctrine of inevitable disclosure from the perspective of federal law, Eleanore R. Godfrey (2004) argued that Section 2 of the Uniform Trade Secret Act (UTSA) provided legal support for this doctrine. Godfrey has also argued that if the possibility of disclosure of trade secrets is inevitable, it is necessary to enact a ban on competition against employees.

The studies mentioned above were conducted within the United States. However, the results of these studies can be seen as suggestions for the application of the inevitable disclosure doctrine to recognize non-compete agreements in Vietnam.

2.2. Theoretical framework

The inevitable disclosure doctrine has its roots in the common law system of the United States. Some researchers suggest that this theory stems from the *Eastman Kodak Co. v. Power Film Products, Inc.* in 1919 (Eleanore R. Godfrey, 2004). In this case, Warren, an employee of the Eastman Kodak Company, signed a confidentiality and non-compete agreement. Specifically, Warren promised not to disclose Kodak's trade secrets, which are the production process of raw film products, and not enter the photography business for a period of two years after the termination of employment across the United States (except Alaska). However, Warren worked for Power Film Products, Inc., which was a competitor of Kodak. So Kodak sought to enforce the non-compete agreement to ban Warren from working for Power Film Products. The trial court did not recognize the validity of the non-compete agreement because of changes in public policy. In contrast, the appellate court overturned the trial court's decision and upheld the validity of the non-compete agreement.

Although believed to have been around since 1919, the term “*inevitable disclosure*” was first used by the court in the *E. I. duPont de Nemours & Co. v. American Potash & Chemical Corp.* in 1964. In this case, Donald E. Hirsch was employed by the plaintiff, EI duPont de Nemours and Company, to participate in the research and development of the manufacture of titanium dioxide pigments by a chloride process. When hired by the plaintiff, Hirsch entered into an agreement not to use or disclose the plaintiff's trade secrets. However, there was no non-compete agreement between Hirsch and the plaintiff. After six years of employment, at the end of 1961, Hirsch quit and moved to American Potash and Chemical Corporation, which competed with the plaintiff. The plaintiff asked the court to issue a preliminary injunction in the same terms as the restraining order against Hirsch. In other words, the plaintiff asked the court to ban Hirsch from working for American Potash and Chemical Corporation. The Court of Chancery of the State of Delaware (1964) concluded that “*inevitable disclosure*” should be considered.

In 1979, at the federal level, the inevitable disclosure doctrine was transmuted into the Uniform Trade Secrets Act published by the National Conference of Commissioners on

Uniform State Laws in 1979 and amended in 1985. Section 2(a) of the Uniform Trade Secrets Act stipulates: “*Actual or threatened misappropriation may be enjoined*”. Thus, from this regulation, it can be seen that the will of legislators of the United States have identified acts of threatening to disclose trade secrets may also be prohibited.

Appeared since 1919 in the common law system and prescribed in the statute law since 1979, however, until 1995, the inevitable disclosure doctrine became popular and attracted the attention of researchers from the *PepsiCo Inc. v. Redmond*. In this case, William Redmond Jr. was a General Manager of the Northern California Business Unit of PepsiCo. His job position gave him access to inside and confidential PepsiCo information such as the North American Competitiveness Plan, Financial Objectives and Strategy production, marketing and distribution for the next three years. On November 8, 1994, Quaker, a PepsiCo competitor, reached an agreement with Redmond to have him assume the position of Vice President of Quaker’s Gatorade. Then, on November 10, 1994, Redmond resigned and left PepsiCo. PepsiCo then sued to ask the Court to order an injunction banning Redmond from working at Quaker. The court granted PepsiCo’s request because it found that Redmond's new work posed a clear threat of misappropriation of trade secrets and information secrets of PepsiCo.

Thus, through the content of some typical case law and provisions of the Uniform Trade Secrets Act of the United States, it is possible to understand the content of the inevitable disclosure doctrine. The doctrine is applied to protect the legitimate interests of the employer, in particular, to protect the trade secrets of the enterprise. The doctrine allows employers and employees to enter into non-compete agreements to prevent workers from working for an employer’s competitor. In some cases, courts have even applied this doctrine to prohibit workers from working for a competitor of their former employer despite the lack of a non-compete agreement. Eleanore R. Godfrey (2004) argued that it is important for the courts to apply the inevitable disclosure doctrine to enact an outright ban on competition where the bans on the use and disclosure of trade secrets are not sufficient to prevent disclosure of trade secrets.

2.3. Research methods

In this article, the author used the following research methods:

- **Theoretical research method:** This method is used to clarify the inevitably disclosure doctrine as the basis to explain problems arising in practice and to propose solutions.

- **Statute law analysis method:** This method is used to analyse the current situation of the provisions of the statute law of Vietnam. On the basis of identifying the current legal situation, the research results of the article will also propose solutions to recognize non-compete agreements in Vietnam.

- **Historical research method:** This method is used to assess changes in legal provisions related to non-compete agreements over time. Thereby, the author assesses the

trend of changing views of Vietnamese legislators. From there, the proposals will be in line with the current legislative trend.

- **Comparative law method:** This method is used to clarify the similarities and differences between Vietnamese and foreign laws regarding the provisions relating to the recognition of non-compete agreements. The result of the comparative study is to assess the shortcomings of the current Vietnamese law and to derive more effective solutions to the relevant legal problem. In the article, the author chooses to compare with the law of the United States because this is the country where the inevitably disclosure doctrine was derived.

- **Sociological investigation method:** This method is used to survey the views of the judges of the People's Court of Da Nang city and the district people's courts in Da Nang (42 judges were surveyed). The author provided information on a number of cases involving noncompete agreements to the judges surveyed. The author then asked the judges surveyed to state their views on the recognition of the validity of the non-compete agreement. The survey results are used to assess the court's view of the validity of the non-compete agreement in practice. From there, the author makes suggestions to improve the legal system of Vietnam.

3. Status of Vietnamese law on recognition of non-compete agreements

Looking back at Vietnam's history from the French colonial period to the present, it can be seen that the non-compete agreement had been recognized by law. In Article 30 of the Labor Code 1952 (Ordonnance No. 15 of July 8, 1952) of the State of Vietnam, the employer and the worker were allowed to agree in the labor contract to prevent the worker from performing competitive occupational activities against the former employer for a period not exceeding 1 year and a range not exceeding 50 km. Article 46 of this code also imposed the responsibility of a new employer when workers entered into a non-compete agreement to work for them where there was evidence that they instigated workers to quit, or hired workers even though this new employer knew the worker was bound to a non-compete agreement, or continued to employ a worker after learning that the worker was still bound to the non-compete agreement.

Although the law of the Democratic Republic of Vietnam did not mention the non-compete agreement, Article 26 of Act No. 29/SL of March 12, 1947 of the President of the Government imposed the responsibility of the new employer when this entity was involved in the severance of a worker or hired a worker even though this entity knew the worker was bound to a labor contract with another employer. This regulation has somewhat limited the unfair competition behavior of employers who entice employees of their competitors to work for them. However, this provision is not enough to protect the legitimate interests of the owner.

Since the country was reunified, during the period from 1975 to 1986, Vietnam had developed a centrally planned economy. Production and business activities had mainly taken place within economic organizations belonging to the state-owned and collective economic sectors, which were managed by administrative orders of the State. Because of the

characteristics of the centrally planned economy, the competition issues among economic organizations have not been paid much attention.

After “*Doi Moi*”, the first Labor Code of the Socialist Republic of Vietnam was passed by the National Assembly in 1994. The Labor Code 1994 had not yet recognized non-compete agreements in labor relations. Even this type of agreement was prohibited because the provisions of the employee’s rights are lower than those specified in the labor law. In other words, in the context that had just come out of the system of budget subsidies, the thinking of legislators at this stage was still class-based, so it was not appropriate to agree the limitation of workers’ rights. Articles 85 and 129 of the Labor Code 1994 allowed an employer to fire an employee if he/she disclosed trade secrets and to claim damages.

The Labor Code 2012 is considered a legal document that “*gives the green light*” to the existence of the non-compete agreement (Doan Thi Phuong Diep, 2015). Article 23(2) of the Labor Code 2012 provides that: “*In case the employee doing works directly related to the trade secret, technical know-how as prescribed by law, the employer is entitled to reach a written agreement with the employee on the contents and term of business secret, technical know-how protection, the interests and compensation for the employee’s violations*”. This provision is almost unchanged in the Labor Code 2019 which is the current Labor Code of Vietnam. Although legislators have been more open-minded in protecting the legitimate interests of employers, which is shown by allowing employers and employees to agree on issues related to protection of trade secrets, the term “*non-compete agreement*” has not been mentioned in these legal documents. In addition, the content of Article 23(2) of the 2012 Labor Code and Article 21(2) of the 2019 Labor Code, still do not clearly stipulate the permission for the employer to negotiate to ban the employee from working for a competitor. The fact that non-compete agreements will limit employees’ freedom to work specified in Article 5(1) of the 2012 Labor Code and Article 5(1) of the 2019 Labor Code. Meanwhile, Article 50 of the Labor Code 2012 and Article 49 of the Labor Code 2019 stipulate that a labor contract is invalid when the provisions of the employer's interests are lower than those in the labor law.

The lack of formal recognition of the non-compete agreement by the applicable law leads to different views on the validity of this agreement. The author conducted a survey of the opinions of judges at the People's Court of Da Nang city and the district courts in Da Nang city. The survey results show that 27,3% of people surveyed do not acknowledge the legitimacy of the non-compete agreement. This group argues that the non-competition agreement has infringed on the civil rights specified in Article 35 of the 2013 Constitution and the rights of employees specified in Article 5 of the 2019 Labor Code. To add more arguments to defend their point of view, this group bases on Article 49 of the Labor Code 2019 to argue that the non-compete agreement is invalid due to a violation of the law. In contrast, there are 72,7% of respondents who agree to acknowledge the legitimacy of the non-compete agreement. This group believes that if the non-compete agreement is established

voluntarily, does not violate the prohibition of the law and social ethics, it will be effective for the parties. In addition, although the law has not officially recognized a non-compete agreement, there is no provision prohibiting the establishment of a non-compete agreement. Therefore, this group believes that the validity of the non-compete agreement should be acknowledged in this case.

The reality of court trials in Vietnam also shows that courts tend to recognize the validity of non-compete agreements. For example, on June 12, 2018, the People's Court of Ho Chi Minh City issued Decision No. 755/2018/QD-PQTT on the request to annul the arbitral award. In this case, the petitioner, Mrs. Do Thi Mai T, requested the People's Court of Ho Chi Minh City to consider and annul the entire content of the Arbitration Award No. 75/17HCM dated February 19, 2018 of Vietnam International Arbitration Centre (VIAC). One of reasons of Mrs. T was that the arbitral award violated the prohibition of the law and was contrary to the basic principles of Vietnamese law. Finally, the People's Court of Ho Chi Minh City rejected the request of Mrs. T and acknowledged the validity of the non-compete agreement in this case.

Although in the opinion of many judges and in many practical cases, non-compete agreements are admittedly binding. However, the lack of clear provisions on non-compete agreements in Vietnamese law leads to the ambiguity of the law. This leads to the existence of many conflicting views on the validity of the non-compete agreement.

4. Proposal to apply the inevitable disclosure doctrine in Vietnam to recognize non-compete agreements

It is clear that acknowledging the inevitable disclosure doctrine would limit civil rights and workers' rights, in particular the right to work and to free choice of employment. However, in principle, citizenship can still be restricted under certain circumstances. This principle has been recognized in important international treaties and Vietnamese laws. From the perspective of international human rights law, Article 29 of the United Nations Universal Declaration of Human Rights of 1948 affirms that: *"In the exercise of his rights and freedoms, everyone shall be subject only to such limitations as are determined by law solely for the purpose of securing due recognition and respect for the rights and freedoms of others and of meeting the just requirements of morality, public order and the general welfare in a democratic society"*. Thus, the Universal Declaration of Human Rights 1948 affirms the principle of limiting human freedom to ensure the freedom of others, social morality, public order and the general safety of democracy society. From the perspective of domestic law, Article 14(2) of the Constitution 2013 of Vietnam also recognizes the principle of limiting human rights and citizens' rights for reasons of national defense, national security, social order, social ethics and public health.

In a democratic and progressive society, it is a violation of social ethics if an employee discloses trade secrets that he or she acquires in the course of employment to a new employer or uses these secrets for self-employment to compete with his former

employer. This ethical standard has been recognized by law as one of the basic principles of civil law. Specifically, Article 3(3) of the Civil Code 2015 stipulates: “*Each person must establish, exercise/fulfill, or terminate his/her civil rights and/or obligations in the principle of goodwill and honesty*”. In addition, according to Article 125 of the Labor Code 2019, the disclosure of business secrets is also considered as one of the serious violations of the employees, which leads to the employees being fired. Thus, the recognition of the inevitable disclosure doctrine to protect the legitimate interests of the employer can be seen as a legal limitation of the rights of employees to ensure social ethics.

However, the application of the inevitable disclosure doctrine in Vietnam should only lead to formal recognition of the validity of the non-compete agreement. Excessive application of this doctrine to prohibit employees from working for a competitor or doing business on their own in the relevant field without a non-compete agreement is not in accordance with Vietnamese law. Article 16(1) of the Labor Code 2019 stipulates that employers must provide information to employees about regulations on protection of trade secrets. Thus, if employees and employers do not enter into a non-compete agreement which is considered as a provision for the protection of trade secrets, employers may not require employees to restrict the competition.

Moreover, although the inevitable disclosure doctrine should be accepted as a viable legal doctrine, it is still necessary to balance the interests of employers and employees (Jonathan O. Harris, 2000). Limited application of this doctrine is necessary to avoid abuse of the non-compete agreements by employers to unjustly bind employees. Thus, it is necessary to determine the limits of the non-compete agreement to balance the interests of the parties in the labor relationship. The contents of the non-compete agreement that should be limited including the subject of the agreement being employees, the time limit for competition restriction, and the scope of the space in which the agreement is applied. In addition, employees also need to receive certain benefits from the employer to compensate for the sacrifice of their rights. These benefits can be a sum of money, a promotion or an extension of employment duration.

5. Conclusion

The inevitable disclosure doctrine is a theory that commonly used in the United States to protect the legitimate interests of employers in their relations with employees. This doctrine is the rationale for the recognition of non-compete agreements in many states in the United States. In Vietnam, the non-compete agreement has not been officially recognized by law. The lack of specific provisions makes it difficult to resolve disputes related to non-compete agreements in practice. Thus, the inevitable disclosure doctrine should be studied by Vietnamese legislators. As a result of this study, the legislators need to officially recognize the non-compete agreement in Vietnamese law.

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A STUDY OF FACTORS THAT INFLUENCE GREEN PURCHASE INTENTION OF CONSUMERS IN HUE CITY

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Abstract

People are becoming more concerned about green consumption because of a grown consciousness for environmental protection. Green purchasing is essentially the act of buying environmentally friendly products. This study is conducted to find the antecedents affecting consumers' purchase intention towards green products in Hue City, Vietnam. Data were collected from a convenience sample of 232 customers through face-to-face interviews. Regression Analysis is used to test the hypothesized relationships. The findings indicate that six factors influence on intentions of customers: Attitude, Subjective Norm, Environmental Awareness, Price Perception, Products Availability, and Belief. However, Product Availability has not affected customers' purchase intention towards green products in Hue City, Vietnam. The study has implications for enterprises to formulate effective marketing strategies to attract more customers to purchase green products.

Keywords: *Green products, Green purchase intention, Green consumption*

1. Introduction

Over the last decade, concern for environment-related issues has gained more importance due to increasing awareness of environmental deterioration (Kalafatis, Pollard, East, & Tsogas, 1999). Increasing pollution, depletion of natural resources, global warming, depletion of the ozone layer, sky-high price of petroleum products, and rising side-effects of all this on the social, economic, and physical condition of human life have generated drastic changes in consumer behavior towards environmentally friendly products or green products (Sinnappan & Rahman, 2011; Sarigollu, 2009). In addition, many consumers now emphasize environmental protection as the main factor of their buying decisions (Fraj & Martinez, 2007). Under such an environment, the enterprise must adhere to these changing trends in consumer behavior to make themselves more competitive (Crassous & Gassmann, 2012; Arseculeratne & Yazdanifard, 2014).

With the increasing consumer awareness about the environment, enterprises are not only complying with environmental regulations, but on a practical ground, they are also introducing environmentally friendly products (D'Souza, Taghian, & Khosla, 2007). Such environmental responsiveness behavior helps firms achieve a competitive advantage, increase market share, and improve employee motivation, and commitment, in addition to customer loyalty (Forte & Lamont, 1998; Chan, 2001; Porter & Van der Linde, 1995).

Although there are no separate regulations on green consumption in Vietnam, many contents related to green consumption and sustainable consumption were soon included in policy content. Vietnam Government had integrated and regulated in many documents of the Party and State versions. Notably, in the latest survey, about 80% of Vietnamese consumers are said that they are willing to pay more for products with “green” and “clean” commitments or produced from environmentally friendly materials (Nielson, 2017). It appears that there has been an enormous change in the perception of Vietnamese consumers. Therefore, many Vietnamese enterprises begin to invest in products that ensure “green” and “clean” and build a “green brand” associated with sustainable development. The enterprises consider commitments to sustainable growth, green products as motive power for planning long-term investment and business strategies, aiming to protect the brand’s health and enhance customers’ loyalty.

In this context, the issue of sustainably environmental-friendly production and the understanding of the changes in cognitive, psychological, and customer behavior towards nature has become increasingly urgent and needs to be solved. Therefore, a study was conducted to determine the factors affecting consumers’ green purchase intention in Hue City, Vietnam, and then propose solutions for enterprises to speed up green consumption to achieve sustainable development.

2. Theoretical background and hypothesis development

Green products

According to Philip Kotler (2013), a green product is created by green technology and does not cause harm to the environment. Chan (2001) defined green product that does not cause harmful effects on the environment and the development of the ecosystem, and the production process itself must be environmentally friendly and not cause evil influence” (Chan, 2001); has ecologically friendly materials or packaging (Elkington & Makower, 1988); “brings benefits to the environment” (Terra Choice, 2010); “the product does not pollute the earth environment or harm to natural resources and can be recycled and conserved (Shamdasamin et al., 1993); “the products use recycled materials, minimize waste and the amount of water, save energy, minimize packaging and emit less harmful substances into the environment” (Nimse et al., 2007); Chen (2010).

Green consumer

The green consumer is defined as a consumer who is “friendly to the environment and through consumption trends, and its positive influence on changing environmental awareness” (Shamdasamin et al., 1993); or “implements environmentally friendly behaviors or buys products that are less harmful to the environment but still meets the demand” (Ottman, 1993); “is ready to absorb new things, what makes it easier for them to accept green products” (Shamdasani et al., 1993).

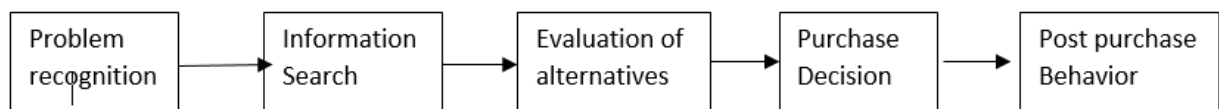
Green purchase intention

Green purchase intention refers to purchasing environmentally friendly products and avoiding products that harm the environment (Chan, 2001). While Rashid (2009) defines that “*Green purchase intention (GPI) is conceptualized as the probability and willingness of a person to give preference to products having eco-friendly features over other traditional products in their purchase considerations.*” A nearer point of view is that green purchase intention refers to consumers willing to purchase green products. Intentions capture the motivational factors that influence consumers’ green purchase behavior (Laroche, M., Bergeron, J., Barbaro-Forleo (2001). Each author has their definition of green purchase intention, but they all indicate that consumers’ willingness to purchase a green product over other non-green products in their purchase consideration is referred to as green purchase intention

Theoretical models of consumer purchase intention

The theory of consumer behavior indicates that consumers go through the stage of purchase intent before coming to a purchase decision or in other words, there is a cause and effect relationship between purchase intention and behavior, in which the consumption intention is the premise leading to the consumption behavior (Philip Kotler, 2010). Marketing activities (4Ps) and environmental factors will influence the buyer’s black box, i.e., affecting the characteristics (culture, society, personality, and psychology) as well as the decision process of the buyer. Once, the consumer induces the necessary responses on the part of the buyer and leads to a certain purchase decision (type of product, brand, quantity, time, and place of purchase).

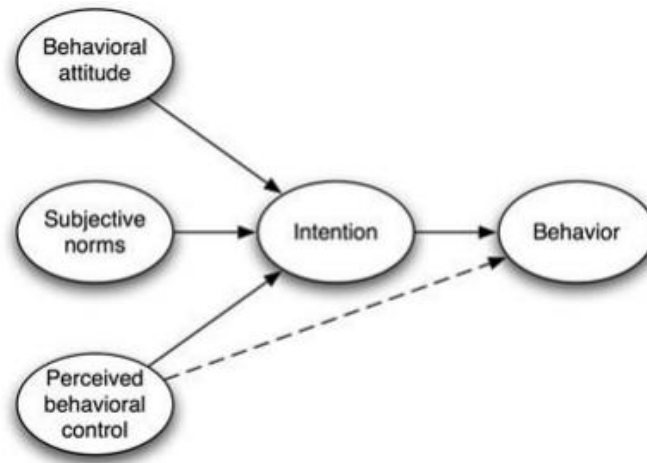
Figure 1. Consumer decision-making process (Philip Kotler, 2010)



The theory of planned behavior (TPB; Ajzen, 1991) is one of the most influential behavioral decision theories. The theory of planned behavior enables us with a complete framework for exploring the factors which influence the decision to engage in behavior related to environmental issues such as recycling (Boldero, 1995; Chan, 1998), and the same can be applied in systematically understanding different factors affecting the purchase behavior for environmentally sustainable products. TPB originated from the theory of reasoned action (TRA; Fishbein et al., 1977), which explains the influence of individual determinants, social surroundings, and non-volitional determinants on intention (Han and Kim, 2010). According to the theory of planned behavior, the intent is affected by three variables: personal factor (attitude), social influence factor (subjective norm), and control factor (perceived behavioral control all together lead to the formation of a ‘behavioral intention’ which in turn influence the behavior (Ajzen, 2005). Therefore, many purchase

intention studies mainly use this model as the base framework when studying consumers' green purchase intention, adding new variables based on the original variables.

Figure 2. Theory of Planned Behaviour (adopted from Ajzen, 1985)



Overall, TPB is a conceptual framework looking at the factors affecting the behavior towards a particular issue. It has been extensively applied in many studies on matters related to the environmental aspect of behavior such as recycling (Chan, 1998; George N. Lodorfos & June Dennis (2008) Ramayah et al., 2012), water-saving technology (Lynne, Casey, Hodges, & Rahmani, 1995), and environmental attitude (Kaiser, Wölfing & Fuhrer, 1999). TPB has also been extensively used in understanding ethical behavior. For example, purchasing environmentally sustainable or green products is also moral (Hopfenbeck, 1993). It is interesting to observe that the majority of the studies have been undertaken in developed countries. Hence, it is not easy to ascertain the validity of the studies in other cultural settings (Lee & Green, 1991), especially in developing countries like Vietnam.

Related research and proposed conceptual model on the factors that influence green purchase intention

There have been several studies in Vietnam on the factors affecting green purchase intention; however, they may not be abundant. In the study of the author Vu Anh Dung et al., a model is built, referring to several factors such as price, quality, brand, eco-label, design, and availability that influence the transition from green consumption intention to behavior. Research by Pham Thi Lan Huong on “Predictable green purchase intention of young consumers (2013) has studied cultural and psychological factors affecting young people’s green consumption intention. Research results show that collectivity indirectly influences green purchase intention through the intermediate variables of environmental concern and attitude towards green consumption. Among the factors that directly affect the green purchase intention, the adequate perception of ecological protection action has the highest predictability, followed by the attitude towards green purchase behavior, and the last is a social impact. Research on *Lifestyle and Green Consumption from the perspective of the*

planned behavior theory by Nguyen Vu Hung et al. (2015) shows that lifestyle influences the green product purchase intention. However, different lifestyles have different effects. While people with a fashion sense are less likely to buy green products, people with a self-made, crafted, and adventurous style have a highly green product purchase intention. It indicates that the value of living in each person expressed through their lifestyle can form different attitudes towards the environment and thus influence the green product purchase intention and behavior (Nguyen Vu Hung, 2015).

Based on The Planned Behavior theory of Ajzen (1991) and the results of previous research works. Experimental researches have now demonstrated the relationship among attitudes, subjective norms, and green product purchase intention: Vu Anh Dung et al. (2012); Research by Vermei & Verbeke (2006), Rylander and Allen (2001). Furthermore, the variables such as “Product Availability, Environment Awareness, Price Perception” was also found to have a significant influence on the green product purchase intention (Taylor & Todd, 1995). Additionally, demographic characteristics – such as age, gender, education, and income – may have an impact on consumer purchasing intentions, as well.

In Hue, there are more and more shops selling green and clean products. Consumers prefer to purchase green and clean foods, but “*How is green and clean? Where did it come from?*” consumers are entirely unaware. Therefore, the first thing to do is build the belief with consumers to impulse the green product purchase intention. According to Arvola et al. (2008), incontestably, customer belief impacts customers’ purchase intention. Furthermore, the demographic factor has been examined in several research results as one of the predictors of green consumption intention. Mainly, marital status and sex were found to be principal factors affecting green consumption intention. Moreover, the initial research also indicated the importance of age, education level to green consumption intention.

In sum, many factors have been found to affect consumer purchasing intentions of green products. Therefore, based on the theory of consumer behavior, combined with the expansion of the TPB model and related studies, this study puts forward a theoretical framework to influence consumers’ green purchase intention: Attitude, Subjective Norm, Environmental Awareness, Price Perception, Product Availability, and Belief.

Hypothesis: On the basis above literature review, this study tests the following hypotheses:

H1: Attitude towards green products has a significant positive influence on the green purchase intention

H2: Subjective norm has a significant positive influence on the green purchase intention

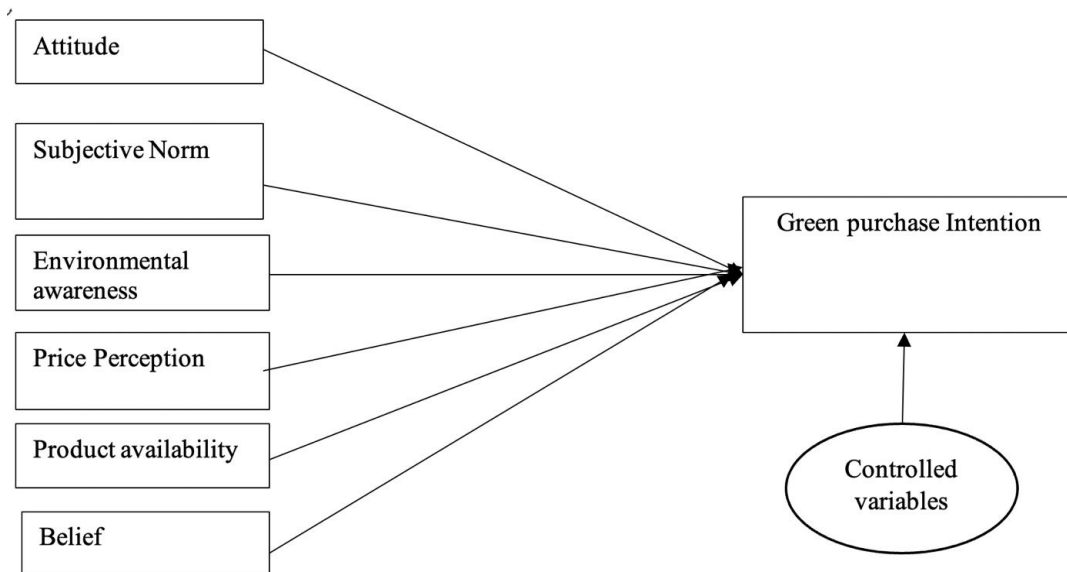
H3: Environmental awareness has a significant positive influence on the green purchase intention

H4: Price perception towards green products has a significant positive influence on the green purchase intention

H5: The product available towards green products has a significant positive influence on the green purchase intention

H6: Belief in green products safety has a significant positive influence on the green purchase intention.

Figure 3. Proposed conceptual model



3. Research methodology

Data Collection

In this study, the author used both qualitative and quantitative data. First, the qualitative research step is implemented to discuss the adjusted measurement scales, proposed hypotheses, and integrated model. In this step, in-depth interview and group discussion methods were used to explore the view of ten experts (including four senior researchers who are knowledgeable about the research topic and six experienced managers working in different departments of supermarkets in Hue City (i.e., Coopmart, Big C, and Vinmart). The average time for an interview was about 60 minutes. This step helped to eliminate the unsuitable variables in the proposed framework (such as confidential information about customer's perceptions and behaviors) and built the quantitative questionnaire.

For the quantitative research step, all the variables in the structured questionnaires were measured through the five-point Likert scale. The ratings start from 1 (strongly disagree) to 5 (strongly agree). Samples include customers who have been purchased green products. The samples were selected by using the convenience sampling method. Convenience sampling is a sampling technique that obtains and collects the relevant information from the sample or the study unit that is conveniently available (Zikmund, 1997). Convenience sampling is usually used for collecting a large number of completed surveys speedily and with economy (Lym et al., 2010). The interviewer questioned the customers who have experienced purchasing green products while

shopping at supermarkets in Hue City. The sample size was judged regarding the population means. In total, 300 respondents were interviewed, of which 68 questionnaires were unusable because of inappropriate responses and missing data. Finally, 232 questionnaires were suitable for analysis.

Sample description

Table 1: Descriptive statistics of the studied samples:

Classification	Frequency	Ratio	Classification	Frequency	Ratio
Sex			Age		
Male	88	37.9	< 22 years of age	21	9.1
Female	144	62.1	23 - 34 years of age	90	38.8
Occupation			35 - 60 years of age	99	42.7
Students	21	9.1	> 60 years of age	22	9.5
Officers	105	45.3	Average monthly income		
Housewives	41	17.7	< 5 million VND	84	36.2
Freelancers	43	18.5	5 -10 million VND	107	46.1
Pensioners	22	9.5	10-15 million VND	21	9.1
Education level			> 15 million VND	20	8.6
Secondary/ High school	72	31	Marital status		
Intermediate//College	66	28.4	Single	63	27.1
Graduate/Postgraduate	94	40.6	Married	169	72.8

Source: Data processing results

The overall sample in this research consists of 232 customers who have purchased green products at supermarkets in Hue city. In which, most of the customers are female (62.1%), married, 72.8%, aged from 23 to 60 years old (81.5%), and have the most common income of 5-10 million (46.1%) Public officials (45.3.3 %) and freelancers (18.5%) accounted for a high percentage of green purchase intention.

4. Results

4.1 Factor analysis

Exploratory factor analysis

The exploratory factor analysis (EFA) was conducted to determine the number of extracted factors on each scale. In this study, the principal components factor analysis and the Promax rotation method were applied. The results show that the measurement scale is satisfied all requirements: Kaiser–Meyer–Olkin coefficient > 0.5; the significance level of Bartlett’s Test of Sphericity < 0.05; Eigenvalue of each extracted factor > 1; total variance extracted > 50%, and factor loading of each item > 0.5 (Table 2). In addition, six representative factors are extracted from 24 observed variables in the proposed scale, including Attitude (A), Subjective norms (SN), Environmental awareness (EA), Price Perception (PP), Product Availability (PA), Beliefs, and Intention (IN).

Table 2 EFA and CFA of the measurement models

Exploratory Factor Analysis				Confirmatory Factor Analysis			
KMO	Sig.Barlett's Test	Total variance extracted	CMIN/DF	GFI	TLI	CFI	RMSEA
0.819	0.000	70,226	1.612	0.900	0.916	0.926	0.056

Source: Data processing results

Confirmatory factor analysis

Confirmatory factor analysis (CFA) was conducted to test the constructs' scale reliability, convergent, and discriminant validity. The confirmatory factor analysis allows for a more objective interpretation of validity and establishes items reliability, and constructs accuracy

Model fit

The key indicators in the measurement model provide good fit to the data: $\chi^2/df < 3$, Comparative Fit Index (CFI) > 0.9 , Goodness-of-fit index (GFI) > 0.9 , Tucker & Lewis index (TLI) > 0.9 , and Root Mean Square Error Approximation < 0.08 , (Table 2). These hypothesized models then were compared with possible alternative models. The results indicate that the hypothesized measurement models outperformed the alternative ones.

Reliability analysis

The indexes in Table 3 indicate that the reliability values of the measurement scale are higher than the recommended values: the Cronbach's alpha coefficients > 0.7 , Composite Reliability (CR) > 0.7 , and average variance extracted (AVE) > 0.5 [9]. These results mean that the research scale is reliable.

Table 3: Results of EFA analysis and Cronbach's Alpha coefficient of groups of variables affecting purchase intention

Variable group	Number of variables	Initial Eigen value	% of Variance	Cronbach's Alpha
Attitude towards green products (A)	4	6.559	27.329	0.865
Subjective norms (SN)	3	3.065	12.771	0.867
Environmental awareness (EA)	4	2.248	9.366	0.820
Price Perception (PP)	6	1.930	8.043	0.865
Product Availability (PA)	3	1.802	7.509	0.838
Belief (B)	4	1.250	5.208	0.845
The average Variance extracted of 70.226%				

Source: Data processing results

The reliability of the scale is then tested using the Cronbach’s Alpha coefficient. This index measures the consistency of variables within the same scale. In this research, the obtained values of all six tested scales are more significant than the recommended value of 0.7. The scales, therefore, meet the requirements and can be used for further analyses.

4.2 Correlation and regression analysis

The tests on the confidence level of the correlation model (with the adjusted R2 value equal to 0.556 > 0.5 and Sig. of the F test equal to 0.000 < 0.05), and the tests on the defects of the model (with Durbin-Watson values equal to 1,612 in the range (1.6; 2.6) and VIF values are all less than 10) proves that the theoretical model also meets the requirements to ensure meaningfulness.

Table 4 Model showing multiple regression

Model	R	R ²	Adjusted R ²	Std. error of the estimate	Durbin - Watson
1	.528a	.579	.556	.65339	1.612

Note: independent variables (A), (SN), (EA), (PP), (PA), (B) Source: Data processing results
 Dependent variable GPI

Regarding testing the relationship between statistical hypotheses, the variable H5 (PA) alone is not accepted, the remaining five hypotheses of H1, H2, H3, H4, H6 corresponding to 6 relationship tests are accepted with the regression coefficient of 0.387, 0.123; 0.214; 0.175; 0.193 respectively, clearly shown in the following figure:

The general regression equation of the model is rewritten as follows:

$$GPI = 0.387A + 0.123SN + 0.214EA + 0.175PA + 0.193B$$

4.3 Difference analysis

Table 5: Table of one-way Anova Test results

Evaluation criteria group	Demographic characteristics					
	Sex	Age	Occupation	Income	Education	Marital status
Green purchase intention	0.00*	0.489**	0.719**	0.9266**	0.387**	0.00*
Green purchase intention	0.00***	0.461***	0.894***	0.927***	0.497***	0.00***

* Independent-sample T-Test Source: Data processing results
 ** One-way Anova test
 *** Levene test

One-way ANOVA test and Independent -Test were used to test the difference between consumer groups based on six groups of demographic characteristics (sex, age, occupation, income, education, and marital status) when assessing the groups of variables that affect their green product purchase intention with the used confidence level of 95%. The hypothesis H0

of the Levene test is that all groups of samples have the same Significant (p-value is greater than 0.05), showing that all groups of test variables satisfy this condition.

The results of the differential analysis shown in Table 5 above indicate that, among six groups of variables affecting consumers' green purchase intention, two groups appear entirely different in the consumers' assessment, including gender and marital status with a significance level of 0.00 (<0.05), meaning that there is a difference in purchase intention. However, the other factors have no difference between groups when affecting consumers' green product purchase intention.

5. Conclusion

This study is beneficial for both practitioners and theoreticians who want to understand consumers or environmentally conscious customers. Green marketing will become successful when consumers are influenced by their attitude towards the adoption of green products. Green marketers must identify all the factors that encourage cooperation. Thus the current study will also benefit the green marketers as it aids in developing a marketing strategy that persuades consumers to seek the value of collective gain over self-interest. It is vital to create and implement such policies about green products to help and give information about green products to retailers and customers towards a green change. This paper also highlighted various aspects of consumer behavior that could be influenced by green marketing.

Understanding the development of green product consumption currently happening, local enterprises have brought these products to the market with many quality and safe products. As a result, consumers are increasingly willing to purchase and intensely consume green products, especially in economic innovation, which has become a wise choice of customers.

From the study results, some solutions are proposed for enterprises to enhance the green consumption intention of consumers in Hue city as follow:

5.1 Solutions for improving the attitude to the environment and green product consumption

Attitudes to the environment and green product consumption have a relative impact on green purchase intention, which is necessary to start consumption intention. Managers can take advantage of it to further enhance the effect on green consumption intention. Currently, Vietnamese consumers in general and Hue consumers, in particular, are progressively interested in environmental issues and want to consume green, clean, and environmentally friendly products. However, they still have difficulty in choosing products due to a lack of information. Therefore, enterprise messages should emphasize the effectiveness of green purchase behavior through the practical benefits that the product can bring to consumers and the living environment. In addition, it is necessary to provide the basic information of the product printed on the package that helps enterprises achieve the product's advantages in their marketing activities and communication programs.

5.2 Solutions for increasing Environmental awareness

Consumers' awareness of the environment has the most decisive impact on green consumption intention. Therefore, enterprise managers should take active and specific marketing activities about the environment and the essential for green consumption to further raise consumers' perception of environmental issues through communication channels. Besides, enterprises should invest, build their corporate image with social responsibility, do business towards the sustainable development of the community and society. For example, at supermarkets, enterprises should provide programs to encourage customers to become wise consumers and purchase green products through discounts and gift-giving, which indirectly improves consumers' perception of the environment.

5.3 Solutions for raising Subjective norms

Subjective norms is an influencing factor in the group of factors affecting green purchasing intention. Managers can take advantage of it to increase the effectiveness of consumption development encouragement actions. Building environmentally friendly movements, trends, and lifestyles that spread in society makes consumers feel that the intention of green and environmentally friendly is right and modern. When purchasing this type of product, it is possible to provide promotions, such as discounts, gifting with other environmental protection items, etc. Communication activities about environmental protection and green consumption strategies are developed to create dissemination effects, changing consumers, leading to sustainable consumption.

5.4 Solutions for creating Consumers' Belief

The first thing considered very importantly to influence the consumers' purchase intent is the need to make the beliefs in consumers. The study indicates that most surveyed people do not believe that the green products sold are 'real' green products or are only labeled - green products. Therefore, enterprises need to show customers that those green products offered for purchase are certified to meet standards and have clear origins to build consumers' beliefs. Thus, consumers will trust and feel more secure with green products and have a higher intention to consume green products.

6. Limitations

Despite the best efforts, the research is still aware of some limitations as follows:

At first, a large percentage of variation in green product consumption intention has not been explained by variations in components; many other observed variables need to be added to the research model. The proposed solutions are only typical at the level appropriate to the actual situation to promote the factors affecting the green product purchase intention in the next period.

Conclusively, the survey results show that the factors affecting green consumption intention are constantly changing according to the diverse needs and desires of customers in current market conditions. Furthermore, there may be many other factors that have not been

mentioned in this topic. The studied factors are the basic that affect the consumers' green consumption intention, and future research can examine more other theoretical contents to build a more accurate and complete model of the consumers' green product consumption intention.

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PATENT PROTECTION UNDER THE VIETNAM LAW AND THE ROLE OF PATENT FOR STARTUPS

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Abstract

In this article, the authors mention an effective tool that is considered indispensable to successful startups: invention. By analyzing and evaluating some startup models, the article highlights the relationship between businesses in the digital economy and startups, particularly with protecting intellectual property rights: intelligence, especially invention. In addition, the article also analyzes and clarifies the patent protection process in Vietnam based on examining and evaluating the legal provisions on intellectual property as well as some related regulations according to international practices. The article will help start-ups understand protecting their patents in Vietnam and offer effective protection solutions for successful startups.

Keywords: *Startup, Startup business, Patents, Intellectual Property, Intellectual Property Assets.*

1. Introduction

As US President Abraham Lincoln once said, “The US patent system adds the fuel of interest to the fire of genius in the discovery and production of new and useful things.” In recent years, technology businesses based on start-ups enter the market and play a massive role in economic development, including developed and developing countries. The start-up is a term that refers to technology companies in the general startup stage, serving as a critical driver of growth, offering employment opportunities, and catalyzing the innovation economy¹. In Vietnam, small and medium enterprises (SMEs) account for more than 97% of the economic structure², operating in almost all sectors of the economy to meet the diverse and abundant needs of local and abroad consumers. Thereby, it also shows the fierce competition among SMEs. Therefore, to attract consumers and investors, SMEs need to have unique products or ways to make their products different to attract potential customers to develop. Accordingly, intellectual property assets are among the essential assets that the businesses own not only for SMEs but also for large corporations to attract customers,

¹ Wikipedia (2021), ‘Startup company’. URL from: https://vi.wikipedia.org/wiki/Khởi_nghiệp. Accessed August 8, 2021.

² Ministry of Planning and Investment (2020), ‘Sách trắng Doanh nghiệp Việt Nam năm 2020’, Thông Ke Publishing House.

investors and determine the success of your business. Patents certificates can help enterprises exploit a specific technology exclusively, thereby creating a difference in their products and services, making it easier for businesses to attract potential investors and investors and prevent competitors from using their technology is one of the ways to secure their position in the market. Startups like Apple, Alibaba, Grab have been successful and growing thanks to the fact that they have effectively protected and managed their intellectual properties. Accordingly, Apple has a clear strategy to protect its intellectual property when protecting certain features of its iPhones and other products with patents, copyrights to protect the companies' software programs of the iOS operating system, and the Apple device trademark. Through that, we can see that this is a wise and effective policy in protecting and exploiting the intellectual property of enterprises.

Although the importance of intellectual property protection in general and patents in particular for successful startups is undeniable. However, not all startups are serious about protecting their intellectual property. But are often ignorant and not focus on developing and protecting their intellectual property, especially patents, which cause loss of assets and delays in protecting their intellectual property rights, along with getting entangled in lawsuits due to infringing the intellectual property rights of others. In addition, startups often have difficulty identifying and classifying intellectual property types and determining which intellectual property should be disclosed and registered and which should be kept confidential. Even SMEs that see what needs to be done is often unwilling to access intellectual property information and guidance from a business perspective³. In most countries, especially developing countries and countries in transition to an economic market, the vast majority of SMEs consultants are in the private sector or support SMEs that are not fully equipped to assist SMEs with their intellectual property needs and concerns.

Accordingly, through this article, based on analysis and evaluation, the article will provide an overview of patent protection in Vietnam through establishing rights, interests, and essential roles of intellectual property in general and inventions in particular in the development of enterprises, especially start-ups.

2. Research overview, theoretical basis, and research methods

2.1. Research overview

The terms related to industrial property rights, patents, and patent protection were first uniformly defined in the Paris Convention 1888 but limited the number of countries applied. Until 1994, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) became a multilateral agreement constituting the minimum condition for acceding to the World Trade Organization. The terms were newly developed and popularized. After the TRIPs agreement, patent protection at the national and international level has become the subject of

³ Kamil Idris (2004), Những điều cần biết về sở hữu trí tuệ - Tài liệu hướng dẫn dành cho các doanh nghiệp xuất khẩu vừa và nhỏ, WIPO, Geneva, v-vi.

many diplomatic and professional negotiations. Many articles on the provisions related to the security of patents at various levels and the compatibility of national laws with international treaties or commitments in free trade agreements are focused on development. Among them are some notable researches such as The protection of Geographical In the TRIPs Agreement by Albrecht, Intellectual property policy and procedures of AFBI Innovations, Intellectual property and the US economy by Michell K. Lee, WIPO intellectual property handbook of the World Intellectual Property Organization (WIPO), Managing intellectual property in the book publishing industry of WIPO, Geographical indications and trademarks - the road from Doha by Burkhart, etc. However, these works mainly guide the terminology generally, basic intellectual property terms in the TRIPs agreement and the WIPO mechanisms, or the compatibility of the laws of some countries with those provisions, or only mentioning the commercial element and the importance of the protection of industrial property rights objects in general and patents in particular, not to mention the importance of patent protection for the success of start-ups.

2.2. Theoretical basis and analytical framework

The topic applies the guiding viewpoints of the Party and State regarding the protection of intellectual property rights in general and the protection of inventions in particular in the period of international economic integration and development of the knowledge economy, encourage innovation as well as the national program of entrepreneurship⁴ (1) as the central theoretical basis for the research process.

The project is expected to analyze two main contents in the order of first and last, including the role of inventions in start-ups; Patent protection under Vietnamese law.

2.3. Research methods

In this study, the author uses the following research methods:

Doctrine Research: This method clarifies some legal and theoretical issues about patents and patent protection.

Comparative research: this method clarifies the similarities and differences between Vietnamese law and international law and the laws of some countries on patents and patent protection.

3. The role of patents in start-ups and patent protection under Vietnamese law

3.1. The role of patents for startups

Patents are intellectual property that plays an essential role in developing enterprises in particular and the country's economic development in general. However, as mentioned above, the difficulty in establishing the rights to IP assets of start-ups mainly comes from the awareness and the approach methods to the types of intellectual property. Accordingly, there are many cases where start-up founders register when they do not establish themselves as the business's property, but in the form of an individual as the owner or only one person's name

⁴ Documents of the 10th National Party Congress.

on the application and registration certificate. When there is a dispute or a separation of businesses, it is challenging for start-ups to keep their inventions. Or in cases, the start-up business accidentally revealed the novelty of the invention and missed the grace period of the invention because of missing information on the provisions of the law, and did not receive timely legal advice. Aware of that, legislators and specialized agencies, localities, and the National Office of Intellectual Property regularly open seminars on intellectual property to raise awareness of intellectual property protection as well as advice on what kind of intellectual property should be protected by businesses, especially start-ups. In addition, to create favorable conditions for businesses to register to establish rights to intellectual property, especially inventions, the Intellectual Property Office of Vietnam also supports applicants on how to file applications, classify patents, classify the list of products and services, etc.

Accordingly, the part of patents in the economy and the advancement of science and technology is vast, which can promote economic growth, national competitiveness, create a lot of value for society, reduce operating costs, exclusivity factor and bring the following benefits:

First, it meets the material and spiritual needs of society. Innovating, improving products, services, and processes helps businesses develop and meet society's increasing demands, helping to solve problems of shortage of qualified personnel subjects and high administrative costs.

Second, encourage enterprises to innovate to improve the value of their products/services. Speaking at the Techfest 2018 National Innovation and Entrepreneurship Day in Da Nang, Prime Minister Nguyen Xuan Phuc emphasized that there is no such thing as an endless and eternal resource like creativity. And if you start a business in the spirit of the invention, success will come⁵. To support start-ups, the government, in collaboration with ministries and local authorities, is committed to protecting intellectual property rights, initiatives, and start-up ideas at the highest level, as these are precious assets of entrepreneurs. Innovation will help businesses reduce operating costs, improve product/service quality, and improve their competitiveness compared to other competitors.

Third, it is a legal tool to protect and manage the assets of the enterprise effectively. There have been many cases where enterprises did not register to establish rights to protected objects as industrial property in general and patents in particular. This has made it difficult for startups to prove that they are the legal owner of patents or any other industrial property when having a dispute over intellectual property rights or have intellectual property rights infringement of that enterprise. Therefore, intellectual property registration is the most effective and least expensive legal tool to protect enterprises, especially SMEs. In addition, setting rights to intellectual property assets will help enterprises to improve.

⁵ VOV (2018), 'Thủ tướng Nguyễn Xuân Phúc dự Techfest 2018'. URL from: <https://vov.vn/chinh-tri/thu-tuong-nguyen-xuan-phuc-du-techfest-2018-845257.vov>. Accessed on August 3rd, 2021.

Fourth, this is a tool to promote, build and develop the business's brand to increase the value. Patents can be considered the most valuable assets of start-ups, helping them create a compelling competitive advantage over other companies. In addition, along with patents, trademarks, and different types of industrial property objects, all are high-value intangible assets that can be used to contribute capital for investment, business cooperation: mortgage, and transfer rights to another party. Therefore, if used, exploited, and managed effectively, these intangible assets are the primary tools to help businesses promote, build, and make their brands and businesses more popular with consumers, expanding their market share.

3.2 Patent protection under Vietnamese Law

Patents are technical solutions in a product or process intended to solve a problem by applying natural laws⁶. In other words, patents are artificial technical solutions that are novel to solve a technical problem and susceptible to industrial application. Regarding the grounds for arising and establishing rights, Article 6, Intellectual Property law stipulates that the grounds for emerging and establishing intellectual property rights in general and patents particularly represent the inheritance of the provisions of the Civil Code 2005. Accordingly, a patent must go through the registration procedure to establish rights at the National Office of Intellectual Property to be protected. Patents protected only by the State, which will be granted a patent certificate from which the right holder can exploit the patent and, on their behalf, resolve disputes and infringements related to intellectual property rights.

Similar to other countries in the world, Vietnam only protects intellectual property rights established under Vietnamese law or international treaties that Vietnam commits. Specifically, for patents, currently, Vietnam does not participate in any automatic collective protection treaties. Any individual or organization that wants to be protected for invention in Vietnam must go through the registration procedure pursuant to Vietnamese law provisions. Conversely, if start-ups wish to protect their patents in any other country, they must follow the country's process of establishing rights.

According to the provisions of Vietnamese law and international treaties as well as other national laws, an invention to be protected in the form of a patent must satisfy three conditions: (i) Must be novel to the world. The novelty of the patent is the novelty of the world⁷. Novelty is determined at the time of filing without any document or source that was publicly disclosing the patent, whether in writing, orally, or by other direct use in the country or abroad prior to the filing date of the patent application or before the priority date in the case of claiming priority right⁸. Accordingly, many start-ups have been missed the right time for registering for the protection of technical products/solutions as patents for they have revealed and lost this novelty.

⁶ Point 12, Article 4, Intellectual Property Law 2005 amend and supplement in 2009, 2019.

⁷ Intellectual Property Office of Viet Nam (2012), 'Tài liệu tập huấn về sở hữu trí tuệ dành cho cán bộ quản lý sở hữu trí tuệ trong doanh nghiệp', Science and Technics Publishing House, 56.

⁸ Article 60, Intellectual Property Law 2005 amend and supplement in 2009, 2019.

However, there are some exceptional cases that disclosure is not considered a loss of novelty of a patent if a patent is obtained directly or indirectly from the right holder or the person receives information publicly disclose within twelve months from the date of disclosure⁹; (ii) Must have inventive nature (non-obviousness). Accordingly, the inventiveness of the patent is considered if, based on the technical solutions that have been publicly disclosed before the filing date, the patent is an innovative step that cannot be created easily for people with average knowledge of the respective technical field¹⁰; and (iii) susceptible of industrial application, i.e., which is the ability to manufacture, mass-production products, or repeated application of the process which is the subject matter of the invention, and to achieve stable results¹¹. In addition, if the patent lacks inventiveness, the right holder can still apply for protection as a utility model but must satisfy two conditions: novelty and industrial applicability.

However, start-up businesses should note to protect the interests of the state, the public interest, the rights and interests of other organizations and individuals, or patents related to national defense and security, contrary to social interests, against humanity and social order. If applied, it will risk destroying people, seriously affecting public health, the environment, and national security. In addition, for various reasons such as humanity factors, the apparent nature of creation, etc. The laws of Vietnam and other countries refuse to protect them as patents¹², other subjects such as scientific discoveries or theories, mathematical methods; schemes, plans, rules and methods for performing mental acts, training domestic animals, playing games and doing business; computer programs; presentations of information; solutions of aesthetic characteristics only; plant varieties, animal breeds; processes of plant or animal production which are principally of a biological nature, other than microbiological processes; human and animal disease prevention methods, diagnostic and treatment methods. Although not protected as patents, the right holder may consider protecting under other forms of rights.

To be protected as a patent, the right holder must file a registration application with the Intellectual Property Office of Vietnam (IPVN) and undergo an examination process, including the filing stage and formality examination, publication, and substantive examination.

Filing stage:

The author who creates a patent with their funds or organizations, individuals who invest funds as a job assignment or hiring have the right to file an application for patent protection¹³. Accordingly, the applicant needs to prepare all required documents, including at least three types of documents: (i) Registration declaration (according to the prescribed form); (ii) Documents, samples, and information showing the industrial property object registered for protection; (iii) Documents that prove fee payment. In addition, depending on the type of

⁹ Article 60, Intellectual Property Law 2005 amend and supplement in 2009, 2019.

¹⁰ Para 3, Article 59, Intellectual Property Law 2005 amend and supplement in 2009, 2019.

¹¹ Article 61, Intellectual Property Law 2005 amend and supplement in 2009, 2019.

¹² Article 59, Intellectual Property Law 2005 amend and supplement in 2009, 2019.

¹³ Article 86 Intellectual Property Law 2005 amend and supplement in 2009, 2019.

application and the method of filing, a registration application may need some other types of documents as follows: power of attorney (if the application is filed through an industrial property agent service); documents proving the right to registration (if the applicant enjoys the right to register from another person); documents confirming the right of priority (if the application claims for the priority right), etc. An applicant has the right to claim the priority right based on the first application for protection of the same object if it satisfies the following conditions¹⁴: (i) The first application has been filed in Vietnam, or a member country of an international treaty has provisions on priority rights which Vietnam is also a contracting party or with a mutual agreement to apply this principle; (ii) The applicant is a citizen of Vietnam or a citizen of other countries that is a member of the treaty, resides or does business in Vietnam, or other contracting parties; (iii) The application contains a claim for priority rights, and a copy of the first application is submitted; (iv) The application is filed within the time limit specified in an international treaty to which Vietnam is a contracting party. The time limit for enjoying the priority right for patent registration is 12 months from the filing date.

Formality examination:

After receiving the application, the examiner will check the formality compliance pursuant to the regulations, thereby concluding whether the application is considered valid or not¹⁵. During this stage, the examiner will conduct the formality check of the documents contained in the application and a preliminary check of the content contained in the application, and then conclude the validity of the application¹⁶. Accordingly, examine the formality of the application is checking the following contents (i) whether the documents contained in the application meet the provisions of intellectual property law; (ii) whether the documents included in the application were submitted within the specified time limit; (iii) whether the applicant has paid in full and correctly the prescribed fees and charges. Preliminary examination of the contents of the application, the examiner will examine the name of the patent, the field of use of the patent, the technical status of the patent, the technical patent nature, a brief description of the drawings enclosed with and a detailed description of the implementation options of the patent¹⁷. The time limit for the formality examination is one month from the filing date¹⁸. After the examination time limit, if the application is valid, the IPVN will issue a decision on acceptance of the application and the application will be published in the Industrial Property Official Gazette within two months

¹⁴ Article 91 Intellectual Property Law 2005 amend and supplement in 2009, 2019.

¹⁵ Point 13, Circular No 01/2007/TT-BKHCN amend and supplement by para 12, Article 1, Circular 16/2016/TT-BKHCN.

¹⁶ Article 3, Regulations on examination of patent registration applications promulgated with Decision No. 487/QD-SHTT March 31, 2010 of the Director of the Intellectual Property Office of Vietnam.

¹⁷ Article 5 Regulations on examination of patent registration applications promulgated with Decision No. 487/QD-SHTT March 31, 2010 of the Director of the Intellectual Property Office of Vietnam.

¹⁸ Article 119 Intellectual Property Law 2005 amend and supplement in 2009, 2019.

from the issuance of the decision date¹⁹. If the application does not fully meet the prescribed conditions for the validity of the application, the IPVN will issue a notice of the formal examination results and provisional refusal notification. The applicant will have two months to amend the application pursuant to the law or respond to the notification from the date of the notice. If the applicant has no response by the end of this time limit or does not correct the omission, the amendment is unsatisfactory. The IPVN will issue a refusal decision²⁰.

Publication and substantive examination:

Unlike other industrial property subjects, a patent registration application has two-time limits for publication: within 19 months from the priority date or filing date; or within two months from the date of issuance of a decision on acceptance on application, whichever is later²¹. The applicant may also file a request for early publication with the IPVN. Unlike other industrial property subjects, after being published in the Gazette, the IPVN will not automatically examine the substantive that the applicant or a third party must submit a request for substantive examination within the time limit, 42 months for patents and 36 months for utility models from the filing date²². However, the IPVN allows the applicant has time-intensive to request a substantive examination. This extension, according to the author, the length of this period is unnecessary. And it needs to be changed because there is a possibility that the applicant is trying to delay the introduction of the patent into the market, or the patent is not essential enough to the applicant, thereby slowing down the general development of science and technology.

Different from European patent law, since the publication date, European patent applications are allowed for provisional protection²³. While in Vietnam, patent applications do not enjoy these rights. Still, the applicant only has provisional rights to the patent, namely the right to notify in writing the person who is using his patent for commercial purposes that he has filed an application for that person to terminate or continue using. If continued to use, as soon as the patent is granted a registration certificate, the owner shall have the right to request the user to pay compensation equivalent to the price for licensing of such patent within the corresponding scope and duration of use²⁴. However, the patent owner usually has difficulty in exercising their right, and in practice, it is difficult for the applicant to enforce this right.

¹⁹ Point 13.8 Circular No 01/2007/TT-BKHHCN amend and supplement by Para 3, Article 1, Circular 05/2013/TT-BKHHCN.

²⁰ Point 13.6 Circular No 01/2007/TT-BKHHCN amend and supplement by para 12, Article 1, Circular 16/2016/TT-BKHHCN.

²¹ Point 14.2 Circular No 01/2007/TT-BKHHCN amend and supplement by para 13, Article 1, Circular 16/2016/TT-BKHHCN.

²² Point 25 Circular No 01/2007/TT-BKHHCN amend and supplement by para 23, Article 1, Circular 16/2016/TT-BKHHCN.

²³ Article 67, European Patent Convention.

²⁴ Article 131 Intellectual Property Law 2005 amend and supplement in 2009, 2019.

Patent substantive examination is about to examine the patentability of the subject stated in the application under the protection conditions, that is, to test its novelty to the world, inventiveness, industrial applicability, and determine the corresponding scope of protection²⁵. Accordingly, the examiner will examine in turn for each independent point of the protection claim in the following order²⁶: (1) examine the suitability of the object stated in the application with the type of protection title requested granted. Accordingly, the content of the assessment will determine whether the subject indicated in the application is a technical solution, in the form of a product or a process, and whether it belongs to the exceptional cases that are not protected as patent or violate the prohibitions of the law; (2) evaluate the object according to each protection condition. In order to examine the subject of protection according to each protection condition, the examiner should carry out the following steps: analyze technical solutions, require the applicant to clarify the nature, or submit supporting documents to prove the solution stated in the application, etc. (if necessary), whether the patent has been appropriately classified as a technical solution according to the international classification, look up the technical status, appraise the priority right, calculate the consistency of the application and assessment of the ability to meet the protection conditions; (3) check the first filing rule.

After completing the substantive patent examination content, if the subject meets the conditions to be protected as a patent, the IPVN will issue a notice of granting protection and require the applicant to pay the corresponding granting fee. The patent registration certificate is valid for 20 years from the filing date, and the patent's validity is not renewable. The time limit for patent examination from the filing date to the grant of a patent registration certificate is 42 months. However, the time limit for patent examination is often longer than the law specified time limit. It causes many disadvantages in exploiting and using the patent of the applicant, which is the issue between practice and the law that makes patent protection still difficult.

Along with establishing rights to intellectual property, start-ups also need to pay attention to protecting their intellectual property rights against the infringement of other subjects. Consequently, the patent's holder has the right to enforce by himself or request the competent authorities to apply measures to protect the rights protected by law and prevent them from infringing and handle other illegal use and exploitation of such intellectual property objects. The protection of intellectual property rights is the use of necessary institutions to ensure that the holders can enforce their rights in practice to ensure that the intellectual property rights are the real power²⁷.

²⁵ Point 15.1 Circular No 01/2007/TT-BKHHCN amend and supplement by para 14, Article 1, Circular 16/2016/TT-BKHHCN.

²⁶ Article 18 Regulations on examination of patent registration applications promulgated with Decision No. 487/QĐ-SHTT March 31, 2010 of the Director of the Intellectual Property Office of Vietnam.

²⁷ Intellectual Property Office of Viet Nam (2012), 'Tài liệu tập huấn về sở hữu trí tuệ dành cho cán bộ quản lý sở hữu trí tuệ trong doanh nghiệp', Science and Technics Publishing House, 76-94.

However, practice shows that the awareness of intellectual property of SMEs and individuals is still deficient, especially in countries with developing economies, including Vietnam, with a high rate of intellectual property infringement and it is happening more complicated, sophisticated methods of operation. Infringers are taking advantage of the development of the internet, mechanisms, policies, scientific and technical achievements to commit violations. Therefore, to protect their rights, the right holder can himself exercise the defense right or request the enforcement authorities to handle the infringement by civil measures, administrative or criminal, or request the application of measures to control import and export goods to detect, prevent and handle acts of importing and exporting goods infringing upon rights²⁸. However, in practice, the primary method used to solve intellectual property rights infringement cases is through administrative measures through authorities such as customs, specialized inspectors, market surveillance, and economic police. Still, it is unclear which agency is the focal point, and there is no close and effective coordination between the agencies²⁹, making it difficult for the right holder to identify the agency that has the authority to deal with specific cases of infringement of intellectual property rights.

4. Conclusion

The article shows that patents are an essential and valuable asset of small and medium-sized start-ups and large enterprises, corporations in the market. Early identification, classification, and understanding of the conditions and procedures for establishing patent rights, thereby building a strategy for establishing rights, effectively exploiting, and protecting their intellectual property, will help start-ups succeed and sustain. Specifically, patents help start-up businesses (1) meet the material and spiritual needs of society, thereby creating a foundation for product needs and customer choice orientation; (2) encouraging enterprises to innovate to increase the value of their products/services; (3) is a legal tool to protect and manage the assets of the enterprise effectively; (4) this is a tool to promote, build and develop the business's brand to increase the value of the business. Patents can be considered the most valuable assets of start-ups, helping them create a practical competitive advantage over other businesses. In addition, along with patents, trademarks, and different types of industrial property subjects, all are high-value intangible assets that can be used to contribute capital for investment, business cooperation, mortgage, and transfer rights to another party. Therefore, if used, exploited, and managed effectively, these intangible assets are the primary tools to help businesses promote, build, and make their brands and businesses more popular with consumers, thereby expanding the business's market share.

²⁸ Ministry of Planning and Investment Inspectorate, 'Các biện pháp thực thi quyền sở hữu trí tuệ'. URL from: <https://www.most.gov.vn/thanhtra/tin-tuc/7/83/So-do-cac-bien-phap-thuc-thi.aspx>. Accessed on August 3rd, 2021.

²⁹ Ministry of Planning and Investment Inspectorate, 'Các biện pháp thực thi quyền sở hữu trí tuệ'. URL from: <https://www.most.gov.vn/thanhtra/tin-tuc/7/83/So-do-cac-bien-phap-thuc-thi.aspx>. Accessed on August 3rd, 2021.

Notes:

(1) The document of the 10th National Party Congress requires that “The knowledge economy must be considered an important element of the economy and industrialization, modernization; strongly develop economic sectors, and economic products with the high added value depend on knowledge” ... “the state encourages activities of creation, improvement, and application of new technologies, through policies to support the development, recognition, and protection of intellectual property rights.”

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Circular no. 16/2016/TT-BKHCN on amendments to some articles of the circular no. 01/2007/ TT-BKHCN dated february 14, 2007 providing guidelines for the government’s Decree no. 103/2006/ND-CP dated september 22, 2006 elaborating and providing guidelines for some articles of the law on intellectual property regarding industrial property amended in the circular no. 13/2010/ TT-BKHCN dated July 30, 2010, Circular no. 18/2011/ TT-BKHCN dated July 22, 2011 and Circular no. 05/2013 TT-BKHCN dated february 20, 2013.

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Intellectual Property Law 2005 amend and supplement in 2009, 2019.

Ministry of Planning and Investment (2020), ‘Sách trắng Doanh nghiệp Việt Nam năm 2020’, Thong Ke Publishing House.

Regulations on examination of patent registration applications promulgated with Decision No. 487/QĐ-SHTT March 31, 2010 of the Director of the Intellectual Property Office of Vietnam.

DETERMINANTS OF INPATIENTS' SATISFACTION ON HEALTH CARE SERVICE AT HUE UNIVERSITY OF MEDICINE AND PHARMACY HOSPITAL

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Abstract

Patient satisfaction has been considered an indispensable measure in the process of evaluating hospital performance. A patient satisfaction survey can help explore possible gaps in hospital service to improve its quality. This aim of study is to investigate the impact of service quality dimensions on inpatients' satisfaction in Hue University of Medicine and Pharmacy Hospital (HUMP hospital). This study was conducted using the data from 134 inpatients who received services from HUMP hospital. By utilizing PLS-SEM approach, the results of this study revealed that five out of six dimensions of service quality have significant impacts on inpatients' satisfaction including hospital facilities; Responsiveness; Empathy; Reliability and Treatment outcomes. The result implicates that to improve the satisfaction of inpatient, HUMP hospital's managers should invest more money on hospital facilities and pay more attention on the interaction between inpatients and hospital staff as well as the treatment results.

Keywords: Inpatients, HUMP hospital, service quality, PLS-SEM

1. Introduction

Hospitals have been considered as the most important component of any health care system. The main mission of hospitals is to provide good quality of health care service for the patients and meet their expectation. Several past studies showed that hospital service quality have affected on patients' loyalty. If the hospital service quality is excellent, it will persuade the existing patients to continue using the medical services (Asnawi et al. 2019).

In recent year, there is an increasing interest on hospital services in many countries because the standards of living have improved and a demand for better medical has increased rapidly (Meesala & Paul 2018). Lim et al. (2018) highlighted that the improvement of the existing hospital service from understanding patient evaluation will subsequently increase the number of patients who continue to visit their hospitals. Hospitals that fail to understand the importance of delivering quality service and patient satisfaction may be inviting a possible decline in patients (P. Pai & T. Chary 2013).

Vietnam has population of nearly 100 million people and the demand for good health care services has increased rapidly. Although hospital services have significantly improved during the last decades, it still does not meet the patients' satisfaction. Evaluating the

satisfaction of hospital services would significantly contribute to identifying possible gaps in health care at both public and private hospitals. This in turn helps improve the quality of hospital care, enhancing the effectiveness of the health system of the country.

Hue University of Medicine and Pharmacy Hospital (HUMP hospital) is located in Hue city. In 2019, the hospital had 700 beds and receives 69,000 patient visits with more than 36,000 inpatients. The average treatment time of inpatient is around 7 days and bed occupancy rates of the hospital is increasing in the past five years.

This study aims to explore the level of inpatient satisfaction with services obtained from the HUMP hospital where they do the treatment. This research utilizes quantitative research methods with Partial Least Square - Structure Equation Modelling approach (PLS-SEM).

2. Literature review

A hospital is defined as “*an organization devoted to delivery of patient care, and it serves as the central hub for the entire health care industries*” (Langabeer, 2008, p. 32). Hospitals are a vital part of society’s infrastructure – as important as schools, the police department, or a dependable fire-fighting service. Healthcare service is an intangible product and cannot physically be touched, felt, viewed, counted or measured like manufactured goods. Healthcare services are simultaneously produced and consumed and cannot be stored for later consumption. This makes quality control difficult because the customer cannot judge “quality” prior to purchase and consumption. (Mosadeghrad 2013)

Service quality is defined as “*a global judgment or attitude relating to the overall excellence or superiority of the service*” (Parasuraman, A, Zeithaml & Berry 2002). According to Grönroos, service quality has two basic dimensions: *technical or outcome dimension* and *functional or process-related dimension*. The technical dimension refers to those aspects that can be measured relatively objective because of its characteristic as a technical solution. In terms of health care services, the hospital will provide patients with medical equipment along with physicians for diagnosis, nursing staff for caring, and amenities for staying in. Those are technical dimension in hospital care. However, how do nurses and doctors interact with patients and how do hospital staff use medical equipment to serve patients is another dimension of service quality. This service dimension refers as the functional or process-related dimension of hospital service because that show how the hospital service is transferred to patients. Patient perceptions of the transfer process reflect service quality of the hospital. Therefore, in health care organizations, the functional dimension can be seen as the interaction between health care staff and patients in the process of providing care.

Patients’ satisfaction with hospital services has been defined in literature in several ways. Ramli (2019) define a patient satisfaction as consumer’s attitude reflecting how much patients are satisfied with the medical service after experiencing it. Patient’s satisfaction results when service meets their expectation. According to P. Pai and T. Chary (2013) patient

satisfaction is an attitude of all the emotional aspects, cognitive, previous experiences and expectations. Patient satisfaction is used as measurement criteria of health care performance of hospitals and it is the main influencer of quality of health care (Ngatunga 2020).

In the literature, Parasuraman, Anantharathan, Zeithaml and Berry (1985) developed SERVQUAL scale to measure service quality through five dimensions including reliability, assurance, tangibles, empathy and responsiveness. In healthcare service, many researchers applied these five dimensions to measure service quality of health care organizations and hospitals (Anderson 1996; Clapton 2013; Irfan, Ijaz & Farooq 2012; Taner & Antony 2006; Wong 2002). Although SERVQUAL scale has been widely used to measure hospital service quality, it remains silent about other dimensions such as clinical procedures and their outcome, process of admission, information dissemination, patient safety, food and social responsibility.

Owing to these limitations, some researchers have modified the SERVQUAL scale by adding some dimensions. Arasli, Ekiz and Katircioglu (2008) developed a modified SERVQUAL scale to evaluate service quality in both public and private hospitals. This study identified six dimensions of hospital service quality such as empathy, relationship, giving priority to inpatients' needs, professionalism of staff, food and physical environment. Rashid and Jusoff (2009) proposed a conceptual model of hospital service quality in which they added five more dimensions to the SERVQUAL scale to make a total of ten dimensions that contribute to service quality. These ten dimensions of hospital service quality are reliability, tangibles, responsiveness, assurance, empathy, access, choice, information, redress and representation. Murti, Deshpande and Srivastava (2013) conducted an empirical study in India to measure hospital service quality and its influence on patient satisfaction. This study identified eight dimensions of hospital service quality, namely, tangibles, reliability, responsiveness, assurance, empathy, discharge, safety measures and medicine quality management.

Many researchers found SERVQUAL and its modifications to be insufficient to measure quality of service as perceived by patients in a hospital setting. So they developed or tested other instruments for measurement of hospital service quality. Sower et al. (2001) developed KQCAH scale to assess hospital service quality in the USA, which identified eight dimensions of hospital service quality such as respect and caring, effectiveness and continuity, appropriateness, information, efficiency, effectiveness and meals, first impression and staff diversity. Rose et al. (2004) conducted an empirical study in Malaysia for predicting hospital service quality. This study identified eight quality dimensions such as technical, interpersonal, amenities or environment, access or waiting time, cost, outcomes, social support and patient education.

Mejabi and Olujide (2008) developed a scale for measuring hospital service quality in Nigeria. This scale included eight dimensions of hospital service quality such as resource availability, quality of care, condition of clinic or ward, condition of facility, quality of food, attitude of doctors or nurses, attitude of non-medical staff and waiting time for service. Padma, Rajendran and Lokachari (2010) developed a conceptual framework to measure

hospital service quality from the perspective of patients as well as their attendants. This framework proposed eight dimensions of service quality such as infrastructure, personnel quality, process of clinical care, administrative procedures, safety indicators, corporate image, social responsibility and trustworthiness of the hospital.

Voon et al. (2014) conducted an empirical study and developed HospiSE scale to measure service quality of both public and private hospitals in Malaysia. This measurement scale included three broad dimensions, namely, employee orientation, patient orientation and competitor orientation that represent service excellence environment in hospitals. Employee orientation includes parameters like internal coordination and communication, employee motivation and competency along with innovative approach in delivering service. Patient orientation includes parameters like hospital's commitment to provide service, understanding patients' needs and resolving their problems along with provision for measurement of patient satisfaction at regular intervals. Itumalla, Acharyulu and Shekhar (2014) developed HospitalQual scale to measure service quality for in-patient services in hospitals. This scale consists of seven dimensions such as medical service, nursing services, supportive services, administrative services, patient safety, patient communication and hospital infrastructure. This study also established these seven dimensions as significant determinants of inpatient service quality.

Based on the review of existing literature on hospital service quality, patient satisfaction, this study has identified five major areas through which inpatients and their attendants perceive the quality of service in a hospital. These six areas are hospital facilities; hospital responsiveness; hospital empathy; hospital reliability; hospital assurance and treatment results. The list of items in each hospital service dimension in Table 1.

Table 1: Hospital quality service items

Codes	Items	Sources
Facilities (FAC)		
Fac1	There are enough beds for patients	(Giao et al. 2020); (Padma, Rajendran & Lokachari 2010);(Le & Fitzgerald 2015)
Fac2	Hospitals are always clean	(Giao et al. 2020); (Irfan, Ijaz & Farooq 2012); (Mejabi & Olujide 2008)
Fac3	Patients easily find the office room (doctor room, x-ray room, etc)	(Giao et al. 2020)
Fac4	The hospital seems to have modern medical equipment	(Giao et al. 2020); (Ladhari & Rigaux-Bricmont 2013)
Responsiveness (RES)		

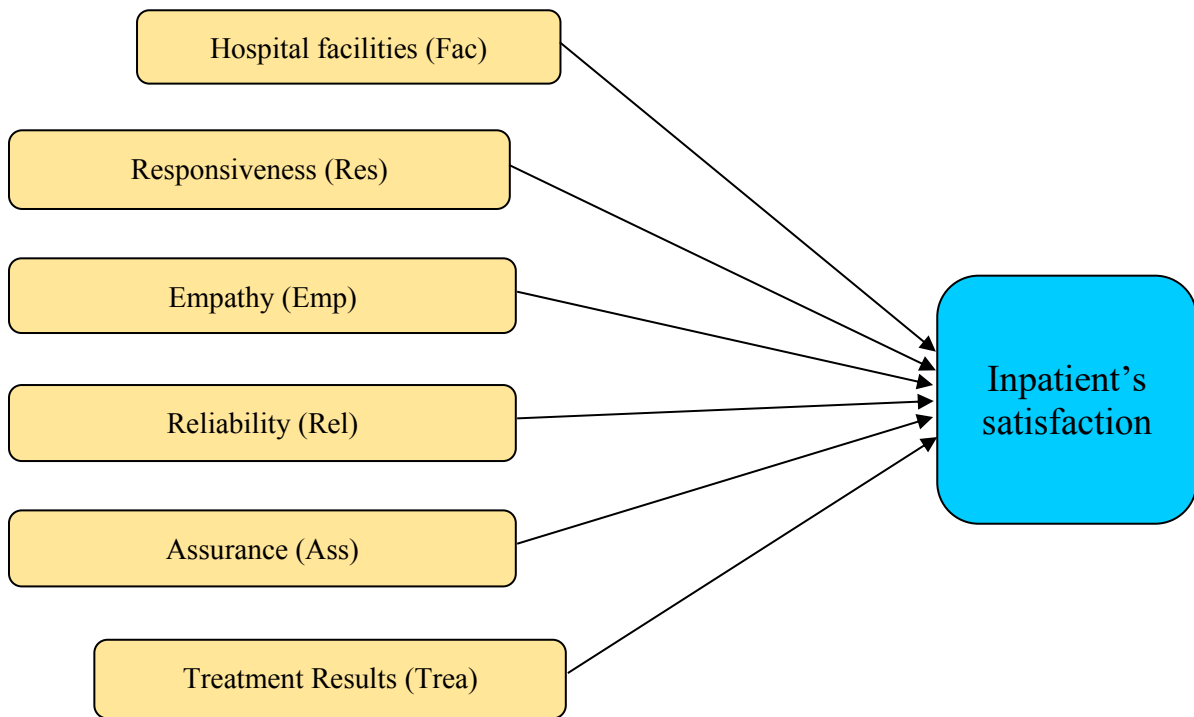
Codes	Items	Sources
Res1	The administration procedures of the hospital take too much time	(Le & Fitzgerald 2015); (Itumalla, Acharyulu & Shekhar 2014)
Res2	It takes too much time for the discharging procedure	(Le & Fitzgerald 2015)
Res3	The waiting time for lab examination and/or imaging diagnostic procedures is too long	(Giao et al. 2020); (Sower et al. 2001)
Res4	The hospital is too much crowded	(Le & Fitzgerald 2015)
Res5	Nurses/midwives are too busy to response to your request promptly	(Mejabi & Olujide 2008)
Empathy (EMP)		
Emp1	The doctors understands patient's needs	(Giao et al. 2020); (Sower et al. 2001)
Emp2	The doctor clearly answers the patient's questions	(Irfan, Ijaz & Farooq 2012)
Emp3	The doctor clearly explains the result of the examination, treatment and return.	(Giao et al. 2020); (Mejabi & Olujide 2008)
Emp4	The doctor gave me good advice about my health	(Verbeek et al. 2005)
Emp5	Nursing counseling for patients with peace of mind before taking blood test, x-ray, ultrasound, minor surgery.	(Giao et al. 2020)
Emp6	When the patient needs, the hospital staff are available to help	(Ladhari & Rigaux-Bricmont 2013); (Irfan, Ijaz & Farooq 2012)
Reliability (REL)		
Rel1	Patient privacy and confidentiality are maintained by the hospital;	(Giao et al. 2020)
Rel2	Hospital provided services as promised;	(Irfan, Ijaz & Farooq 2012)
Rel3	Equal treatment to all;	(Sower et al. 2001)
Assurance (ASS)		
Ass1	The doctor examines the patient very carefully	(Mejabi & Olujide 2008)
Ass2	Nurses perform well medical procedures.	(Sower et al. 2001)
Ass3	Hospital staff treats patients very well.	(Giao et al. 2020)
Ass4	Hospital staff are polite	(Ladhari & Rigaux-Bricmont 2013); (Mejabi & Olujide 2008)
Treatment Results (TREA)		

Codes	Items	Sources
Trea1	The patient's health has improved over the course of the treatment.	(Giao et al. 2020)
Trea2	Patients trust the hospital's medical machinery for accurate results	(Giao et al. 2020); (Mejabi & Olujide 2008)
Trea3	Patients believe the hospital has brought the best treatment outcome	(Giao et al. 2020)
Patients' satisfaction (SAS)		
Sas1	Overall, I was delighted with the medical treatment I received at the HUMP hospital	(McKinley et al. 1997); (Al-Damen 2017)
Sas2	Overall, I was happy with the nursing care I received at the HUMP hospital	(Al-Damen 2017)
Sas3	If possible I would prefer to use the HUMP hospital service next time	(McKinley et al. 1997)

Six dimensions of perceived service quality comprising 25 items were developed based on the literature review. The dimensions were as follows:

- H1: Hospital Facilities has a significant effect on inpatients' satisfaction
- H2: Hospital Responsiveness has a significant effect on inpatients' satisfaction
- H3: Hospital Empathy has a significant effect on inpatients' satisfaction
- H4: Hospital Assurance has a significant effect on inpatients' satisfaction
- H5: Hospital Reliability has a significant effect on inpatients' satisfaction
- H6: Treatment Results has a significant effect on inpatients' satisfaction

Figure 1: Research conceptual model



3. Research methods

The mixed research approach was adopted in this study. First, previous studies were reviewed to identify dimensions of hospital service quality. Next, the survey instruments consisted of closed-ended questions with eliciting the respondents’ perceived agreement on the level of hospital service quality. The study population was inpatients and/or their relatives who had taken care of the patients in the HUMP hospital. These potential respondents are people who experienced as inpatients/ their relatives at least one week in the hospital because it ensures that they have understandings of hospital services at the HUMP hospital.

Determining a sufficient sample size is very crucial for ensuring quality of any study. Because this study utilized PLS-SEM analysis, the use of 10 times rule for determining minimum sample size is appropriate for this approach (Hair Jr et al. 2017 p.20). This rule states that minimum sample should be “10 times the largest number of structural paths directed at a particular construct in structural model”. Structural model of this study involves six constructs (six independent and one dependent variable), thus the minimum sample size should be 60 respondents. In this study, 134 returned respondents obtained via the survey (72%) met the minimum requirement of sample size.

The collected data is analyzed in terms of outliers, missing data, reliability and validity of the expressions used for each variable in the measurement model. SmartPLS 3.2.6 is utilised to investigate statistical significance and degree of the relationship between dimensions of hospital service quality and inpatients’ satisfaction in the structural model.

4. Results

4.1. Demographic Profile of Respondents

Demographic characteristics such as age, gender, and educational level are vital in assessing perception of inpatients on perceived hospital service quality. Of 134 inpatients, the majority (nearly 73%) came from Thua Thien Hue province where the HUMP hospital is located. Females consisted of 56.1 percent the sample. Among 134 respondents who reported their ages, more than half were 45 years old or older (54.7%) with mean ages of 46.5. The distribution of patients' occupation was diverse including farmers; teachers; businessman and governmental officers. Nearly 85% of patients were covered by health insurance.

4.2. Results

PLS-SEM is mostly used for theory development in exploratory research. The approach permits several relationships to be tested at once in a single model with various relationships instead of examining each relationship individually. PLS-SEM contains a two-step procedure which involves the evaluation of the outer measurement model and evaluation of the inner structural model (Hair Jr et al. 2017).

4.2.1. Evaluation of measurement model

Table 2: Results of Measurement Model

Factors	Cronbach's Alpha	CR	AVE
FAC	0.913	0.938	0.792
RES	0.846	0.904	0.758
EMP	0.876	0.906	0.617
REL	0.866	0.918	0.788
ASS	0.917	0.941	0.800
TREA	0.855	0.911	0.774
SAS	0.789	0.877	0.703

The outer measurement model is aimed to evaluate convergent validity, internal consistency reliability and discriminant validity of the observed variables together with unobserved variables (Henseler, Hubona & Ray 2016). The results show that three items "Res2 - It takes too much time for the discharging procedure" and "Res5 - Nurses/midwives are too busy to response to your request promptly" were removed from further analysis due to their low loadings (< 0.7). Table 2 shows the results of convergent validity and internal consistency reliability of all constructs upon the exclusion. All the constructs meet the acceptable Cronbach's alpha (α) and composite reliability (CR) thresholds of 0.7. All the average variance extracted (AVE) values are greater than 0.5. These results suggest that

convergent validity and internal consistency reliability of all the reflective constructs are ensured.

4.2.2. Structural model analysis

The structural model analysis was performed from the repeated indicator approach, the PLS algorithm, and bootstrapping of 5,000 subsamples with a two-tailed 0.05 significance level (Hair Jr et al. 2017). The structural model was utilised to evaluate the model’s predictive relevancy and the relationships between the constructs. The coefficient of determination (R^2) measures the variance explained in the endogenous construct for the structural model and is thus a measure of the model’s predictive accuracy. In this study, the R^2 was 0.522 for the SAS latent construct. This result explains that all independent’s variables affects inpatients’ satisfaction up to 52.2%, whereas about 47.8% of inpatients’ satisfaction was influenced by other variables outside this study.

Figure 2: The validated structural mode

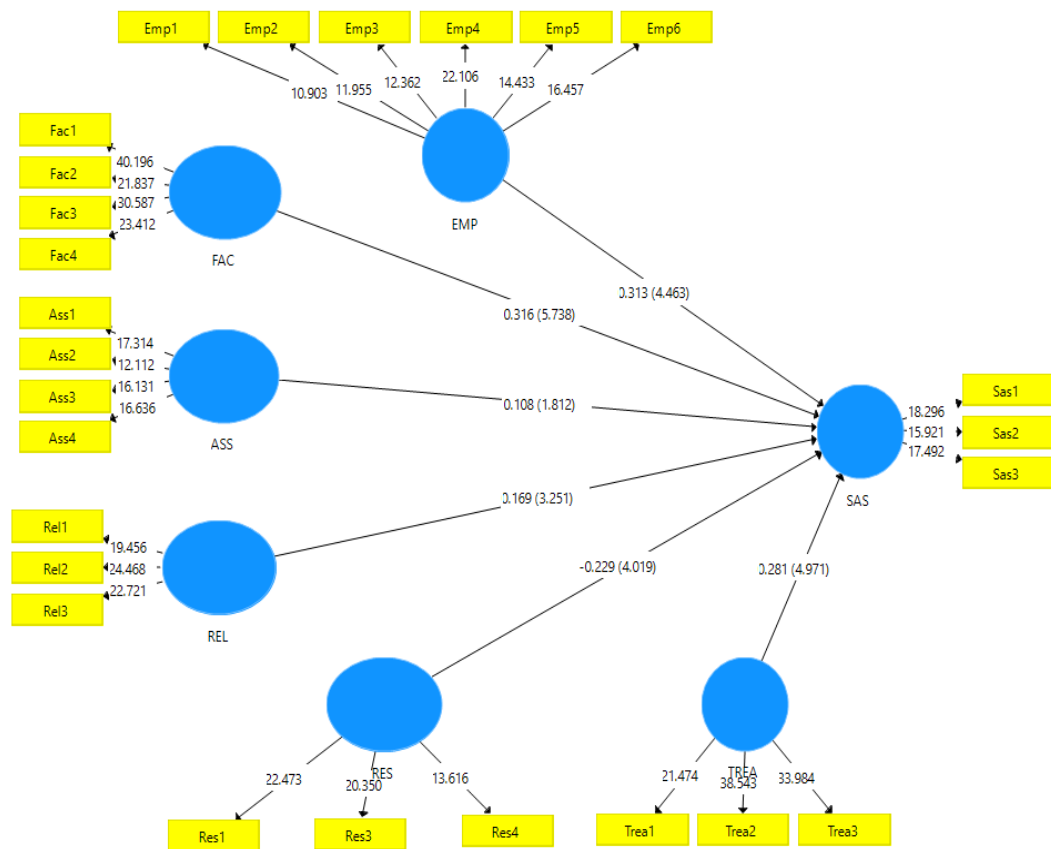


Table 3 presents coefficient and p values for evaluating the statistical significance of each path of the proposed model. A statistically significant and positive relationships which were found between all four service dimensions (EPM; FAC; REL; TREA) and inpatient satisfaction (SAS) indicate that these factors influenced positively the satisfaction of HUPA inpatients. Thus, hypothesis H1; H3; H5 and H6 were supported. The sign of RES coefficient that is significantly negative at $p < 0.01$ indicates that the delay of administration; waiting time

and crowded people at the HUMP hospital reduce the satisfaction of inpatients. However, there is no relationship between the ASS and SAS, thus, hypothesis H4 was not supported.

Table 3: Path coefficients and hypothesis testing

Hypothesis	Coefficient	SD	P	Results
H1: FAC -> SAS	0.316	0.055	0.000	Support
H2: RES -> SAS	-0.229	0.057	0.000	Support
H3: EPM -> SAS	0.313	0.070	0.000	Support
H4: ASS -> SAS	0.108	0.060	0.070	Not Support
H5: REL -> SAS	0.169	0.052	0.001	Support
H6: TREA -> SAS	0.281	0.057	0.000	Support

5. Discussion

In this study, the highest influence of hospital service dimension on inpatients' satisfaction at the HUMP hospital was the hospital facility. This results are in line with many previous studies which indicated that modernization of hospital equipment, making the service areas and the healthcare devices more visually attractive, and cleanliness increases patient perceptions of healthcare quality and their satisfaction (Ladhari & Rigaux-Bricmont 2013; Purcărea, Gheorghe & Petrescu 2013). However, the result is inconsistent with the findings of Irfan (2012) when he proved that the hospital facility has less impact on patient satisfaction (Irfan, Ijaz & Farooq 2012).

Empathy in this context of this study relates to the helpfulness in the interaction process between patients and nursing aides who deal with providing facility services to patients. This result of the study indicates that the good interaction between inpatient and hospital staff will increase the satisfaction of inpatients. This result implies that to increase the level of patient satisfaction in the HUMP hospital, the manager should set priority on improving professional knowledge and skills of doctors and nurses/midwives as well as better practicing interpersonal interaction between patients and hospital staff. The findings of this study is similar with the work of Padma, Rajendran & Lokachari (2010) and Le & Fitzgerald (2015) where they found that the empathy played important role in enhancing the satisfaction of patients in the hospitals.

Treatment outcome is has found as a strong predictor of inpatient satisfaction. This dimension refers to the improvement of inpatients' health condition after the certain time of treatment and the accuracy of medical test. The outcomes are stable with the earlier studies that treatment result is absolutely related with patient's satisfaction (Al-Damen 2017; Irfan, Ijaz & Farooq 2012).

The study proved that there is an impact of the "Responsiveness" factor on patient satisfaction in the HUMP. The negative coefficient (-0.229) indicated that if the responses of

the HUMP hospital are too long (too much time for administration procedures; too much time for the discharging procedure; the long waiting time for lab examination and busy nurses/midwives), it will impact negatively on patient satisfaction. This finding is consistent with the study carried out by Al-Damen (2017) at the public hospital in Jordan and Purcărea, Gheorghe & Petrescu (2013).

6. Conclusion

The understanding of hospital service quality and patients' satisfaction is very important because it is a concept integral to the provision of a better, more focused quality service for patients. This study has developed a range of factors affecting inpatient satisfaction in HUMP hospital. In the general model, five factors influence the satisfaction of inpatients in HUMP hospital: the hospital facilities; responsiveness; empathy; reliability and treatment outcomes. To improve the level of patient satisfaction with HUMP hospital, more focus should be placed on training to improve professional skills for doctors and nurses/midwives to improve communication between hospital staff and inpatients; nursing-aides in interpersonal interaction because it is important factors in achieving a high level of patient satisfaction. However, the study also has some limitations. First, the study is based on only the inpatient's perception of quality of care. Second, the study was conducted at one public hospital in Hue city, so it is difficult to generalize the findings to the whole community of public hospitals. Thus, the findings need to be further examined in other public hospitals to confirm their constancy.

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FRONTLINE EMPLOYEES' EMOTIONAL EXHAUSTION AND ITS INFLUENCES ON HOSPITALITY SECTOR DURING COVID-19 CRISIS

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Abstract

During COVID-19 crisis, many frontline employees have to put their lives at risk to keep services running effectively, therefore, it leads to the phenomenon that they may face with work stressors, threats of job insecurity, and feelings of isolation, which together cause the emotional exhaustion (Hwang et al, 2020). Moreover, the features of hospitality jobs are always the emotional, mental, physical demands. As the results, emotional exhaustion is a sufficient indicator of the burnout in the service sectors, which can take place when job requirements exceed employee's capacity and resources. This research provide a deeper understanding of the emotional exhaustion and its influences on frontline employees especially in hospitality. In addition, conversation of resources theory (COR theory) is considered to be a "principal explanatory mechanism" to perceive the process of burnout (Hobfoll, 2001). It claims that the obtainment, retaining, and protection of fundamental resources including objects, personal manners, conditions, or energies that employers look for. Therefore, this work points out the consequence of emotional exhaustion through the lens of COR theory during COVID-19 pandemic. Moreover, the research provides scientific evidence and important managerial implications to authorities and tourism and hospitality firms to decrease the emotional exhaustion because of their negative effects on organization, especially on hospitality sector.

Keywords: *emotional exhaustion, frontline employees, influences of emotional exhaustion, COR theory, hospitality sector, COVID-19.*

1. Introduction

In service fields, particularly hospitality and tourism sector (HTS), frontline employees have taken the vital role of the contact as well as connection between customers and the organization, and often suggested being the differentiation in the service process or competitive advantage for commerce in the market (Tsauro and Tang, 2013). Frontline employees have to meet the needs of performance via both intellectual and physical labor, and emotional labor (EL). With the situation of EL, Grandey (2000) implies EL as "the method of regulating both feelings and expressions for organizational objectives". The employees are responsible for making sincere efforts to show and prove sufficient and professional feelings

(i.e., deep acting) (Hwa, 2012) and abiding by the emotional display rules of the organization (Zapf and Holz, 2006). Politeness, warmth and friendliness are the top quality of frontline employees to internal and external stakeholders, with no anger and depression (Smollan, 2006). Hence, the origin of job stress springs from EL (Hochschild, 1983). Emotional exhaustion (EE) is considered to be a manner of physical or mental weakness, which has been often associated with a high turnover ratio, weak performance of employees and low organizational results. Frontline employees are required to express “professional” emotions and dominate “inappropriate” ones for obtaining specific targets that the organization has set (Brotheridge and Lee, 2002).

Indeed, it is necessary for HTS to possess certain emotional display disciplines to guarantee the excellence service quality for customers, there is the importance of recognizing how frontline employees can control emotional exhaustion during their serving process (Liu et al., 2008). Former empirical research has released situational factors (Goldberg and Grandey, 2007; Grandey et al., 2004), as well as individual difference factors (Pugh, 2002; Liu et al., 2008) as predictive reaction of frontline employees towards emotional demands on their job.

Thus, the features of hospitality jobs are always the emotional, mental, and physical demands, EE is a sufficient indicator devoted to burnout in service sectors, which can take place when requirements from working overwhelm capacity of employees and strength (Cho et al., 2014), which results in a lot of passive attitudinal and behavioral consequences. Many of the experienced witnesses in HTS that EE passively affects both job satisfaction and organizational commitment (Karatepe & Uludag, 2007), orientation to guests (Choi et al., 2014; Lee et al., 2012), the state of service restore (Choi et al., 2014), and that it significantly affects to the turnover purpose of employees (Karatepe & Aleshinloye, 2009; Karatepe & Uludag, 2007; Yavas et al., 2008).

Therefore, the meaningful comprehension for EE of frontline employees and influences brought have always been largely noticed to not only hospitality researchers but managers as well. This study concentrates on the influence of EE on the critical employees, simultaneously job-related outcomes and its consequences are also analyzed.

In addition, although more studies on individuals’ mental health exposed to COVID-19 have been called for by scholars (Ho, Chee, & Ho, 2020; Rajkumar, 2020), the major concentration to the stressors during quarantine springing from general pandemics (Brooks et al., 2020) and the mental health of medical staff who have been treating COVID-19 patients (Xiao, Zhang, Kong, Li, & Yang, 2020) devoted to the current research. To our perception, Tan et al.’s (2020) study on employees’ psychological symptoms when they return to work after the time of lockdown and quarantine is the unique research that investigated the influences of the COVID-19 pandemic amongst non-health care workers. Nevertheless, the changes in the mental health of employees before and after the COVID-19 along with the consequences of emotional exhaustion during these pandemic has been remained unknown.

Health and safety, moreover, are always the existing related knowledge of COVID-19 (Kaushal and Srivastava, 2021). The emergence of the COVID-19 crisis in the hospitality and tourism industry is sure to be concerned (Higgins-Desbiolles, 2020; Hoque et al., 2020; Zheng et al., 2020). The predictor variables of work-related stressors in Pakistan's academic arena have been also exposed in the formerly research projects (Zhang et al., 2020). The withdrawal behavior during COVID-19 of employees has appeared less in the studies (Filimonau et al., 2020; Jung et al., 2021).

Within the context of tourism and hospitality, the impacts of tourist-flow, financial-performance, and economic-revenue from epidemics have been investigated by a large amount of of relevant studies (e.g. Zhai et al., 2019). Besides, researchers are also supplementing to this literature, inquiring the effects of COVID-19 pandemic on global tourism (Hall et al., 2020; Yu et al., 2020), analysing of the relationships between optimism, job stress and EE (Özdemir,S., & Kerse, G., 2020), real-time perceptions and emotions of employees in an online community during the COVID-19 pandemic (Park, E., Kim w. J., & Kim. S. B., 2020). However, little research has elucidated frontline employees' emotional exhaustion and its influences on hospitality sector during this pandemic. Emotional exhaustion of employees and its impacts play the vital role in the labour-intensive hospitality industry, especially it is able to decide the great ability in coping with the crisis of pandemic.

In this regard, there has been an urgent necessity to research the relationship between workplace stressors, aggression, withdrawal behavior and the role of COVID-19 concern. The current research objective is to examine the impact of COVID-19 on the relationship between emotional exhaustion and withdrawal behavior among employees in hospitality industry. Thus, it is essential to explore the consequences of emotional exhaustion during COVID-19 crisis, whereby tourism facilities can apply appropriate activities to support their employees.

2. Literature review

2.1. Frontline employees

Frontline employees are those who directly contact with customers. They play the vital role of representatives for the business, creating the first strong impression about a company and the value of brand image in the ways of serving and settling customers. Karlsson (2018) argued that "frontline employees might be a wire connection between the organization and guests. The combination of knowledge, experience from operational work as well as the value creation processes of capacity of customers is considered to be a successful element in innovation job. In the way of relation to the employees, the danger of creating a service that does not meet to customers' needs and expectations, or services which cannot carry out in daily operations is in the reduction". The hospitality industry has been being now a strategic and challenging field in the service industry throughout the world. Consequently, when maintaining customers in order to increase profitability, restaurant managers have to concentrate on creating customer satisfaction and holding a pool of profitable loyal customers (Karatepe and Aleshinloye, 2009), and accordingly must guarantee that the attitudes and

behaviors of frontline employees are appropriate for the expectations of management and customers (Hartline and Ferrell, 1996). Therefore, frontline employees form is the most essential connection in the process of service (Karatepe and Aleshinloye, 2009). Nevertheless, high levels of EE from frontline employees are the inevitable features as their tasks are to satisfy and appeal customers (Li et al., 2017).

2.2. Emotional exhaustion (EE) of frontline employees

EE implies to the state of depleted energy (Chen & Chen, 2012) and is considered to be the shortage of energy and that emotional resources in individuals are used up due to the exhausted psychological demands (Kim et al., 2009). EE is majorly related to the careers which has the high strength towards the interpersonal interactions (Ducharme et al., 2007), including hotel, restaurant field, where always exists a high level of interaction between hotel employees and guests (Karatepe & Kilic, 2007), and these encounters are usually relied on customers' satisfaction (Faulkner & Patiar, 1997). Freudenberger (1974) refers to the requirements beyond the individuals' uncontrollable energy, strength or resource, which leads them to fail, wear out or become exhausted as burnout. Maslach and Jackson (1984) stated that burnout is the feeling of physical and psychological exhaustion. Moreover, Maslach also reaffirmed that burnout is divided into three dimensions. The first one is "emotional exhaustion", which implies the overloaded emotional demands from the organization on each individual during interpersonal interaction, which the individual have impossibility in controlling, causing the exhaustion of emotional resources. The second dimension is "depersonalization", happening when individuals lose feelings towards guests. The employees have no attention to the customers, or even serving them strangely with the emotional distance. The last aims to the "reduced personal accomplishment" dimension, when the individuals' motivation in their jobs has been lost, accordingly the feelings of qualification or a sense of professional completion have also been diminished (Schaufeli and Buunk, 2003; Wu and Cheng, 2003).

A variety of issues can be reflected from EE. The fact that EE is the key characteristic of burnout (Schaufeli and Taris, 2005), which is also a manner of of physical and psychological exhaustion (Li et al., 2017). In addition, EE can be suggested being one of the most dysfunctional behaviors in the current work environment containing the high stress (Schaufeli and Salanova, 2007). It may cause the seriously unexpected consequences for not only individual but organizational levels as well. There are many of the research on HTS have mentioned to the problems from EE (Kim, 2008; Lee and Ok, 2012), consisting their high ability of absence (Deery et al., 2002) and weak job performance (Cropanzano et al., 2003).

Table 1: Summaries of reviews relating to EE towards frontline employee

Study/Sample	Research target	Demands (conflict antecedents)	Resources	Design analysis	Findings
Grobelna (2020) - data is collected from 162 hotel employees in Poland	To examine the impact of workload and supervisor support on EE and analyze its consequences for critical employee and job-related outcomes	Workload Supervisor support	Organizational commitment, Intention to leave, and the quality of service performance	SEM analysis	Workload, supervisor support are significant antecedents of EE, which exerts an impact on quality of service performance and hotel employees' leaving intention. Moreover, trainings, emotional management courses may protect hotel employees from EE that maintain committed workforce.
Edmondson ^{1,2,3,4} (2019)	this study seeks to clarify what is known in a sales setting about burnout's central component, EE.	Work-family conflict, Role conflict, Organization support, Work overload, Supervisor support	job satisfaction, organizational commitment, job performance, and turnover intentions	meta-analytic reviews	Specifically, all of the antecedents of EE exhibited strong positive relationships with EE, except supervisory support, role ambiguity and perceived organizational support. As a result, except for turnover intentions, job satisfaction and organizational commitment had the dramatically passive relationships with EE
Johnson et al (2019)	to explore mindfulness training as a viable intervention for frontline employees in tourism and hospitality as a way to aid in the regulation of emotions and reduce or prevent employee burnout while increasing levels of work engagement.	mindfulness training	work engagement	Qualitative	mindfulness training can potentially help to regulate emotional labor of tourism and hospitality frontline employees, and mindfulness training can potentially reduce burnout and enhance levels of work engagement of tourism and hospitality frontline employees.
Chen et al. (2018) - 260 samples in the	To explore the relationship between	harmonious passion,		SEM analysis	Harmoniously Excited frontline employees always have the tendency of adopting a strategy of planned

restaurant industry as frontline employees	balanced indulgence, haunting excitement, deep performance, appearance acting and EE	obsessive passion, deep acting, surface acting			acting and protect them from EE, whereas frontline employees with obsessive passion employ a surface acting strategy. Emotional labor strategies play the vital role in the relationship between dualistic passion for work and EE.
Kenworthy (2014)- 57 independent samples that included self-report measures of emotional dissonance and EE from 16,165 employees	To examine the relationship between emotional dissonance and EE	emotional dissonance		meta-analysis	Employees who experienced their emotions at work also suffer from EE. Moderation analyses indicate strongest in police work, compared with other service job types
Lee, J. (Jay), & Ok, C. (2012). - Data were collected from 309 customer-contact hotel employees and managers in the United States.	Investigated direct and indirect effects of employees' EI on two different forms of emotional labor : burnout and job satisfaction	Emotional Dissonance	Job Satisfaction Depersonalization	SEM analysis	EI was also found to indirectly affect job satisfaction and emotional exhaustion through the mediating roles of personal accomplishment and ED, respectively. Additionally, ED was found to directly affect depersonalization and indirectly affect job satisfaction through emotional exhaustion while EE directly affects personal accomplishment and indirectly affects job satisfaction.
Lee et al (2011) - Psychotherapists (17 samples)		Job stress, Self-control, Overinvolvement, Job support, Professional identity	Job satisfaction, Turnover intention	Qualitative	All of the other antecedents had significant relationships with EE except for job support. Both job satisfaction and turnover intention were also strongly influenced by EE.
Swider and Zimmerman (2010) Included 115 samples from the PsychINFO	To examine the relationship between EE and five-factor of personality as well as	Neuroticism, Extraversion, Agreeableness, Conscientiousness	Turnover purpose, Job performance Absenteeism	SEM analysis	All of the big Five models had been withdrawn from antecedents. From these, there was the illustration of meaningful relationships with EE except for openness. Neuroticism was pointed out in the closest

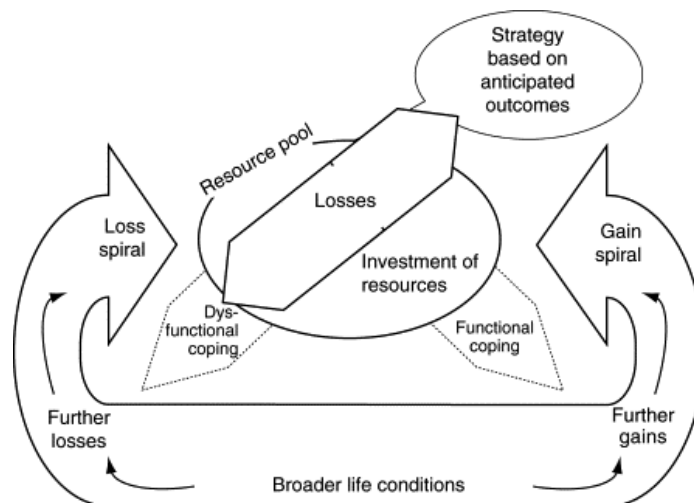
database as the main sources in the supporting the taken careers.	EE's consequences.	ss, Openness			relationship with EE. EE showed a deep relationship with all three of the outcome dimensions, especially absenteeism.
Karatepe and Uludag (2007) - 677 samples of frontline employees working in 3-, 4-, and 5-star hotels in Northern Cyprus in Turkey	This study tests the effects of work-family disagreement, EE, and internal motivation on influenced job outcomes	Work-family	Job dissatisfaction Organizational commitment Intention to leave	LISREL analysis	Work-family affects positively to EE and EE leads to job dissatisfaction, reducing the influenced organizational commitment, and increasing ratios of intention to leave.

2.3. Conversation of resources theory (COR theory)

The COR theory is considered to be a “principal explanatory mechanism” to perceive the journey of burnout (Hobfoll, 2001). It claims that the obtainment, retaining, and protection of fundamental factors containing conditions, personal manners, objects or energies that employers look for (Hobfoll, 2001). Pressure is a result from the incidence when there is the threat towards losing the resources, or resources vanishes, or even the individuals meet failure in attaining the adequate necessary contribution following meaningful investment about lost opportunities, time, energy, etc. (Hobfoll, 2001). Especially, in the stress process, losing the resource is a critical ingredient (Hobfoll, 2001) leading to determined behavioral and attitudinal consequences, consisting turnover purposes, erosion of commitment from organization, involvement about career path and satisfaction (Lee & Ashforth, 1996). A wide range of former research in hospitality sectors setting use the COR context to illustrate the ways that stable resources and requirements are accompanied by burnout process from employee (emotional exhaustion) and/or the way it affects chosen result (e.g., Karatepe & Aleshinloye, 2009; Karatepe & Uludag, 2007; Yavas et al., 2008).

COR is known to be a motivational theory, which assumed that individuals' limited resources has been strategically given out in order to accomplish job demands (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). Resources which employees think they will support them to successfully, meet their job demands, including social helps (e.g., from administrators, colleagues), material resources (e.g., instructional materials), and internal resources (e.g., knowledge, skill; Halbesleben et al., 2014). Once there is the balance between demands and resources, employees realize that they can manage their responsibilities, have more motivation and are more likely to stay with their job. On the contrary, the reduction of motivation may occur when employees have high demands and low resources and thereby increase intent to leave their job. Meta-analyses help the utility of COR theory in the prediction commitment and retention of employees (Alarcon, 2011; Halbesleben et al., 2014).

Figure 1: Processes of resource conservation



Source: Hobfoll, 2001

The core tenet of theory about COR are developed from motivational theory. The first is "Primacy of resource loss". Especially, individuals has motivations to contain, maintain, foster and protect those things they value. As the result, food, shelter, a positive sense of an effective self, and primary social ties are the value to social, biological animals. The second principle is resource investment. Furthermore, secondary resources which preserved these primary resources are work, time, family, credit, insurance and other physical. Resources will be invested by individuals get back up from losses, to protect, and to gain resources (Hobfoll, 2001a). Actually, one definition of culture is the network of institutions and practices constituted to conserve resources and ensure survival. From this basic principle emerge several principles. Again, we must refer the reader to numerous articles and empirical tests of the theory that today make it one of the two most studied theories of stress.

In that way, despite of support from social, self-efficacy, sense of control, and social status in their own right as the important individual resources, there are some kinds which influenced their performance due to function health & mental. Rather, they prefer run in herds than singly, form building blocks, and actually may vanish in total.

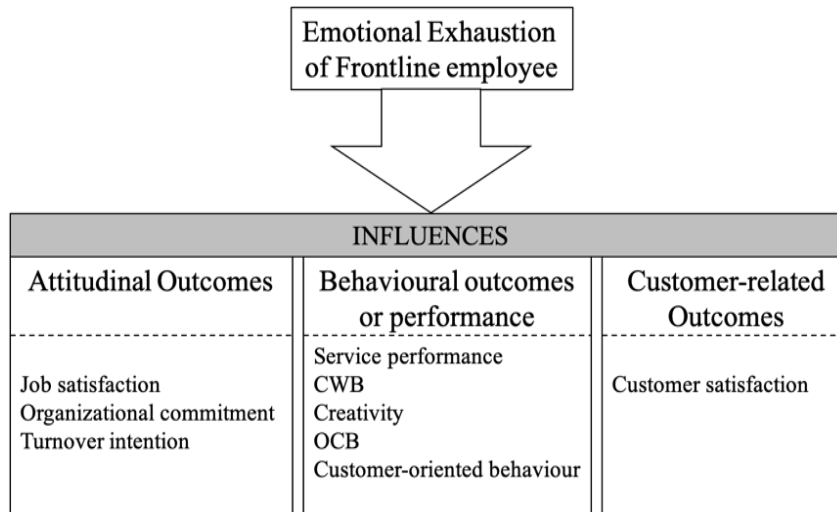
3. Influences of emotional exhaustion based on COR theory during COVID-19 crisis

The COVID-19 has hit all corners of the world and led to lots of unprecedented challenges that significantly influenced every angle of human life. Several kinds of COVID-19 abatement strategies are social distancing and lockdown, which eventually led to the shutdown of the businesses (Karim & Haque, 2020; Fernandes, 2020). The closure of companies prompts many adverse job conditions including reduced working hours, temporary suspension, voluntary retirements, paid and unpaid leave (Gossling, Scott, & Hall, 2020). Tourism, transport, and hospitality-related businesses is the most impacted (Ali & Çobanoğlu, 2020). Therefore, countless employees of the tourism and hospitality industry are on either paid or unpaid leave or lose their jobs (Foo, Chin, Tan, & Phuah, 2020). Most airlines, such as Jetstar, Cathay Pacific, Malaysian airline and Singapore Airlines, send their employees on unpaid leave. Based on ILO (2020), more than 75% employees in Cathay pacific alone (by 25000 people) is advised to take unpaid leave. Moreover, apart from the airline, the tour operators, hotels, restaurant sectors are also defaced by the COVID-19 pandemic. There are about 23,000 employees had to take transitory leave by the lack of customers in Vietnam. 340 restaurant employees in New Zealand have to be laid off (ILO, 2020). Hwang et al (2020) argue that even when controlling for baseline affective dispositions, those exposed to COVID-19 display a significantly higher level of EE than those who were not. Moreover, Hwang et al (2020) also explore a significant interaction impacts of COVID-19 with gender, age, and job tenure on emotional exhaustion. Generally, whilst female workers who were younger and having shorter labour time felt more emotionally exhausted, their EE becomes more strained in the COVID-19 context, which is appropriate for the prior study asserting that younger employees, and women expose more serious psychological symptoms under COVID-19 (Fu et al., 2020; Park et al., 2020). The reason for this issue is that younger

employees have immature and ineffective stress-confronting capacity than older one (Whitty, 2003). Female employees often have the emotionally exhausted feeling after the COVID-19 pandemic because their caring responsibilities increased. Moreover, the problem is that social relationships are considered to be more vital by women than by men, social distancing resulting from COVID-19 may cause more obstacles in working to women, thus causing female employees to suffer higher EE than their male counterparts. Specially, based on COR theory, in hospitality sector, EE affects not only attitudinal, behavioral outcomes but also performance and customer - related outcomes.

The COR theory is applied to EE studies to explain how EE depletes the resources of employees, leading to consequences such as increased stress, burnout, turnover intentions and disclared organizational commitment or job satisfaction (Lee et al, 2012). Because the drain on resources is both emotionally exhausting and stressful, leading to burnout or stress. Thus, according to the COR theory, the outcomes of EE are stress and burnout (Kim, 2008; Lee and Ok, 2012; Li et al., 2017; Newnham, 2017). Moreover, Lee et al (2012) argue that EE also concerns about the customer service behaviors (customer orientation) as well as the organizational attitudes (e.g. organizational commitment, job satisfaction). Therefore, the COR theory (Muraven and Baumeister, 2000) offers the theoretical framework to explain the various outcomes of EE.

Figure 2: The conceptual framework



❖ Attitudinal outcomes

Attitudinal outcomes are related to the feeling of employees toward their organization including job satisfaction, organizational commitment, and turnover intentions.

• Job satisfaction

Job satisfaction is one of construct which has received as much attention in sales research (Rutherford et al. 2009). When individuals increase EE, their job satisfaction will diminish (Shepherd, Tashchian, and Ridnour, 2011) agreed that, whereas Boles, Johnston, and Hair (1997) did not. Concurrently, at the end-stage consequences of burnout, job satisfaction is proposed, but in another study, it is a mediator between burnout and organizational

commitment (Lee et al. 2012). Lee et al (2012) agree that EE has negative relationship with job satisfaction. Specifically, employees experiencing EE do not satisfy with their job, therefore, decrease their actual job performance (Lee et al, 2012).

The COR theory recognizes job dissatisfaction as one of important consequences of EE. When employees' expectations is not meeting the current job, they may dissatisfy. Singh et al. (1994) argue that after evaluating job demands, individuals usually compare them to personal resources. If an imbalance relationship (like high demand and low levels of resources) is happening, it may lead to the dissatisfaction. Herzberg's (1959) theory provides another reasonable explanation for the effect between EE and job satisfaction. According to two-factor theory, motivators (achievement, recognition) and responsibility lead to job satisfaction. Based on two-factor theory, motivators (achievement, recognition), responsibility lead to job satisfaction. During FE examination, employees detach themselves from customers, therefore, avoid emotional involvement, which, in turn, may lose their sense of job responsibility. So that, customers, coworkers may not recognize them. Therefore, when individuals in EE status, they may manifest job dissatisfaction. Moreover, hierarchical downsizing and restructuring strategies has been implemented by tourism industries because of severe competition and opened economies resulting from the happening globalization with the increasing factors including job insecurity, increased turnover rate and job dissatisfaction in workers (Khawaja, et, al., 2020). However, during COVID-19, Wong (2021) supported the notion that stressors can be positive factors for determining an enhancement of job performance and motivation to work hard (McGowan et al., 2006).

- Organizational commitment

Organizational commitment is related to the individual's psychological connection of organization's employees (Meyer, 2006). Buchanan (1974) defines that organizational commitment of employee is their emotional attachment towards the organization (Meyer; N.J. Allen, 1997). Additionally, organizational commitment is attitude of employees (Porter, 1974), one of the organizational goals (Cullen et al., 2003). It is behavioral (Becker, 1960), attitudinal commitment (Mowday,1982). Pool and Pool (2007) argue that "organizational commitment is the relative strength of an individual's identification with and involvement in a particular organization". Therefore, the organizational commitment has three different characteristics: "a desire to remain with the organization, a belief and acceptance of values of the organization and strong willingness to put in effort for the organization" (Nijhof, 1988). Consequently, employee's commitment defines by both their attitude and behavior to organization. Furthermore, individuals develop their expectations, reputation, recognition, future development and progression to improve their relationships to company (Khan, 2014). Affective commitment is "positive feelings of identification with, attachment to, and involvement in the work organization" (Meyer and Allen, 1984). It is associated the individual involvement, attachment, and loyalty of an employee. Manifest of employee's commitment is good communication, characteristics, loyalty, dependability, skill variety,

supervisory feedback, task significance, task identity, organizational dependability, perceived participatory management (Dunham, 1994). Continuance commitment is defined as the association between leaving organization and perceived cost (Allen and Meyer, 1990). Perceived cost is multidimensional including the lack of opportunity or the sacrifice of employee with their organization (Newman, 2011). Thus, employees except having self-interest will stay with the organization having strong continuance commitment (Newman, 2011). Sometimes, an affective commitment increases employee's chance to stay. The left one is normative commitment which is the feelings of obligation's employee to remain in organization (Wasti, 2003). Furthermore, normative commitment deals with the employee's feeling to stay within the organization (Curtis et al, 2001). Based on COR theory, EE affect organizational commitment affectively (Karatepe & Uludag, 2007; Lee & Ashforth, 1996). The findings have assumed that there have been the downsizing organizations bringing a lot of stress and worry for managers during the COVID-19 pandemic (Graf-Vlachy et al., 2020). Especially, when resources are threatened as well as employees lose resources, the employees in EE may affects their affective commitment (Karatepe and Uludag, 2007).

- Turnover intention

Employee's turnover intention is defined as the change during a given period in the workforce. Specifically, turnover intention is a measure to what extent do the employees leave and new employees enter the organization in a definite time period. There are two dimensions of turnover including voluntary and involuntary ones. Voluntary turnover happens when people decide to leave their organization themselves, whereas, involuntary turnover is phenomenon happened when an organization removes them (Price & Mueller, 1981). Most researchers demonstrate that voluntary turnover is detrimental but involuntary turnover's quite good for organization (Mc Shane & Williams, 1993). Turnover intentions affect the level of employees' commitment to organization (Azlin Natasha Armizi, 2008).

There are numerous empirical studies in the hospitality supporting the relationship between stress and the increasing leaving intention (Gök et al, 2017 ; Fong et al,; Huang et al, 2018). Based on COR theory, people experienced EE are preparing for leaving the current organization to preserve their scarce resources (Karatepe & Uludag, 2007); however, turnover is the final solution lessening the threats to loss (Walsh, 2011) and it may helps employees to reach a greater balance (Wen et al, 2020). Comprehensibly, the employees with high level of EE are willing to take a new job (Prajogo, 2019). Previous studies also show that emotional exhaustion significantly affects business intentions in Northern Cyprus (Karatepe & Uludag, 2007), Turkey (Yavas et al, 2008) and Nigeria (Karatepe & Aleshinloye, 2009). There is a significant positive relationship between EE and turnover intentions (Lee and Ashforth; 1996). Moreover, individuals experiencing EE tend to achieve the high levels of intentions to leave (Boles et al., 1997). Cropanzano et al. (2003) argue that EE predicted turnover intentions significantly. In Egypt, Elshaer& Saad (2017) show that most of the employees of tourism industry had high turnover intentions to leave the organization during the political

crisis in 2011. Because of the unstable conditions, they lose their commitment in their organization (Elshaer & Saad, 2017). Empirically, Alola et al. (2019); Karatepe & Kilic (2015) demonstrate that EE influences turnover intentions, especially during the COVID-19 pandemic (Said et al, 2021).

❖ Behavioral outcomes or performance

EE affect employees' behavioral outcomes, which includes service performance, creativity, customer-oriented behavior, organizational citizenship behavior (OCB), and counterproductive workplace behavior (CWB). According to scholars, hospitality sector has possessed higher fixed costs. This industry is very easy to cope with the instabilities in the market, including food service and lodging service fields (Dimitropoulos, 2018), when many other sectors have the tendency of downsizing of employees to cut the cost maximally (Kaushal and Srivastava, 2021). This leads to the work stressors and heavy workloads that the employees have to face. The negative emotions amongst workers may associate the concern about job insecurity and the change in the organizational policies (Kiefer, 2005). Researchers have also suggested that lockdown situations caused the increasing feeling of boredom and anger quarantined (Brooks et al., 2020; Xiang et al., 2020). Besides, job stress in employees was also considered to be the increasing consequence of a stressful workplace environment (Vigoda, 2000). The employees have to cope with the stressors at the workplace and worry caused by the complex COVID-19 situation results in the aggression – one of the workplace-deviant attitudes. The unpaid leave caused some frustration which exacerbated the psychological contract breach among the employees. Abdalla et al (2021) suggests that EE is one of the main determinants of employee behavioral performance and performance.

• Service performance

Consistent with the COR theory, when the level of employees's burnout is high, their job performance eroded (Karatepe & Uludag, 2008). In addition, EE not only damages the performance but also obstructs effective customer service of employees (Yavas et al., 2008). Because the lack of certain resources, they can not work well (Prajogo, 2019) (Karatepe & Uludag, 2008). Therefore, it deteriorates their customer-oriented attitudes, behaviors as well as interest in customers' needs (Lee et al., 2012). According to the COR model, when individuals experiencing EE, they don't have enough energy, so, they become choosy, sensitive. Because of the exhaustion they experienced, they are not willing to expend their rare resources in the service of organization. Consequently, they may not keep their efforts to get a higher performance. And of course, such employees are not suitable to serve customers, because the high-quality of service is one of the decisive factors in the service creation process (Castro-Casal et al., 2019). Researches on frontline employees in the hospitality industry show that mental exhaustion affects service performance, customer orientation negatively (Castro-Casal et al., 2019). In the same way, Essawy (2016) shows a negative impact of EE and the employee's service recovery performance in Egypt, whereas Wang (2020) revealed a negative relationship of EE on service quality in Taiwan's international

hotels. Specially, during COVID-19 pandemic, frontline worker experiencing EE due to the lack of energy, their service performance is decline (Wong, 2021 ; Gupta, 2021 ; Elkholy, 2021). In conclusion, EE decrease the service performance of employees in organization (Gupta, 2021; Elkholy, 2021).

- Counterproductive Workplace behavior (CWB)

CWB is “a set of volitional acts [as opposed to accidental or mandated] that harm or intend to harm organizations and their stakeholders (e.g., clients, co-workers, customers, and supervisors)” (Spector & Fox, 2005). Therefore, CWB includes a large number of behaviors when individuals take extended breaks to steal or have physical violence. Lee and Ok (2014) explore that EE influences positively to CWB (e.g., service sabotage) in hospitality. According to COR theory, EE is found as an antecedent of CWB because in service sector, employees, in some cases, have to suppress expressions which depletes resources to regulate their emotions to provide service, particularly during difficult interactions. The exhaustion of resource may increase the likelihood of later immoral or counterproductive behaviors (Lee & Ok, 2014). On the other hand, EE is affected negatively to CWB, especially in hospitality, EE is related negatively to employees’ ego exhaustion, for its part, indirectly reduces CWB (Lam, and Zhao, 2017). The combination of new rule in avoiding social interactions during the COVID-19 pandemic with upholding the balance between professional and personal demands and stressful psychological effects caused counterproductive work attitudes (Malik et al., 2020).

- Creativity

Creativity is foundational to human experience. People argued that creativity involves the skill (rather than the gift) which bring some new and valuable things, and it related to good mental health. Creativity is defined as originality; a change; rejuvenated, renovated, or regenerated past ideas; or a unique specific expression. Furthermore, EE influences the creativity of employees. To creativity, individual has motivation to chasing of new suggestions to persistently proceed and solve problems (Zhou & George, 2003). It means that employees in service have to invest and gain enough resources to encourage ideas creatively. Nevertheless, employees experiencing EE may decrease their motivation, thus, they cannot adopt the job challenging, which lastly goes down their creativity's levels (Shin, Hur, & Oh, 2015). According to Rangachari et al (2020), COVID-19 requires the frontline employees preserving stable psychology, patient but safety, thus, in somehow their creativity is declined.

- Organizational citizenship behavior (OCB)

In organizations working under changing conjunctures as an intrinsic feature, their successful factors of changing mainly rely on the willingness of employees (Lee et al, 1996). Behaviors which are so important even may become crucial for the survival of organization but exceeding expectations are defined as ‘organizational citizenship behaviors’ (OCBs) (Katz & Kahn, 1966). Similarly, EE not only affects employees’ performance, but

also their OCBs, or enterprising/extra-role performance (Prentice, Chen, & King, 2013), especially during COVID-19 crisis (Jalili et al, 2021).

- Customer oriented behavior

In the same way, according to COR theory, Lee et al. (2018) argue that EE has impact on customer-oriented behaviors of employees in airline industry. In addition, some researches demonstrate that EE tends to influence customer-oriented behaviors negatively (Xu, 2020), however other explore that EE affects customer-oriented behaviors positively. The reason is although the true feeling of employees remain unchanged, but their faking emotions of action which based on the display regulations is also related to customer-oriented and may satisfy the expectation of customers to some extent (Mesmer-Magnus, DeChurch, & Wax, 2012). In the India context amidst COVID-19, Gupta et al (2020) argue that the frontline employees expericing emotional labour decrease their customer oriented behavior. As a result, customer oriented behavior is one of the EE's consequences (Elkholy et al, 2021, Lee et al, 2018).

- ❖ Customer related outcomes

- Customer satisfaction

The perceived service quality of customer especially in hospitality industry outstandingly relies on the employee's performance (Zhao, Mattila, & Ngan, 2014). Or it can be seen that the performance of employees is one of the most important aspects impacting the customer's perceived service quality. EE involves spurious emotional displays, and it may be detected by the customers when they interacts with employees in the service process, therefore, EE may reduces the job performance of employees and hinders employee-customer relationship which lead to customer satisfaction (Hülshager & Schewe, 2011). In addition, COVID-19 changes the service user-frontline employee relationship due to impaired communication and increased customer anxiety and frustrations (Northington et al, 2021), thus their satisfaction decrease.

4. Implications and conclusion

In service fields in general and hospitality sector in particular, frontline employees are those who directly contact with customers. They play the vital role of representatives for the business, creating the first significant impression about a company and the value of brand image in the ways of serving and settling customers. Therefore, the occupational stress so_called EE from employees is always “one of the gravest issues” which employees working in hotel industry experienced (Hwang et al., 2014). Hence, this study may bring a broader understanding in the profession-strain process which is able to restrict some gaps about it. Our research, moreover, is a deep paper on frontline employees in hospitality sector and its consequence during COVID-19 pandemic. According to Cao et al.; Xiao et al. ; Lauri Korajlija & Jokic-Begic (2020), like medical staff, students and the general public, frontline employees' mental health was also weakened by COVID-19 (Tan et al., 2020). The organizational management during the COVID19 pandemic has been implicated in the current findings. Thus, leaders in

organizations are recommended noticing to EE of their employees. It is also proved that employees experienced the increasing level in EE after the COVID-19 pandemic, the peer support should be encouraged in organizations in order to help workers better cope with EE in the COVID-19 context (Tan et al., 2020). As peer support is particularly important in alleviating emotional exhaustion in service occupations (Ducharme, Knudsen, & Roman, 2007), service organizations may need to consider using intranet applications or instant messengers to foster peer support among service employees. Additionally, online mental health services (e.g. online counselling hotlines or self-help services) can be used for the alleviation of stress and anxiety and sharing of information to cope with the pandemic while minimizing face-to-face interactions (Liu et al., 2020; Rajkumar, 2020).

First of all, although some of the studies indicate chief points in the grasp of the impacts of job requirements and their resources related to EE and its taken consequences (e.g., Karatepe & Uludag, 2007; Kim et al., 2007; Yavas et al., 2008), there is no still presentation the linking impacts between the workload and supporting from supervisors on EE of service employees and profession-related results, consisting influenced disposition, leaving job, particularly, the service quality of working performance, features of attitudinal and behavioral outcomes from working process of critical employees' are matched via emotional exhaustion. Throughout the estimation the above mentioned relations, this study somehow supplements the void in management literature in HTS context.

Furthermore, since "a guest experience is a service (...)" (Ford et al., 2012) and frontline hotel employees have to always prove professional job performance (Karatepe & Douri, 2012), that is the indisputable measurement devoted to frontline service occupations in the hospitality industry. As a result, this paper may play a role of a reference frame for future study in various socio-cultural context in service sectors.

Besides, there is rare empirical proof about influences of EE on employees' job in the literature of current HTS (Karatepe & Uludag, 2008), and individual studies does not bring the concrete results (see e.g., C.H. Choi et al., 2014; Karatepe & Uludag, 2008; Yavas et al., 2008). Hence, via exploiting the relationship between EE and the service quality in performance, this study may contribute the certain findings to hospitality research about EE.

Next, via this paper, it can be seen that when hospitality managers are desired to uphold dedicated labourforce for high service quality, their task is to find out and apply the suitable methods in order to mollify employees' EE. In addition, workload is considered to be the major influential job stressor for of sector employees, the task of releasing the excessive workload belongs to the leaders' managerial attention. Hospitality careers are described as the unsocial jobs with working hours arranged in unfixed shifts, regardless of nights, weekends and holidays (Chan et al., 2019), more flexibility need to be given to employees in arranging their own working schedule, and of course it is incorporated with other employees in the business schedule (Schiffinger & Braun, 2020); Avoiding excessive workload and time pressure for employees in the ways of giving the seasonality in hospitality jobs that managers

should be optimally staffed (Schiffinger & Braun, 2020).

Furthermore, because the peer support plays a particularly important role in reducing EE in service careers (Ducharme, Knudsen, & Roman, 2007), it is necessary for hospitality organizations to consider applying the intranet process or instant messengers to enhance peer support among employees who work in service fields. Also, mental health services including instruction hotlines or self-help services which are online may bring for the reduce of stress and worry and sharing of information to confront the pandemic whilst minimizing face-to-face contacts (Liu et al., 2020; Rajkumar, 2020).

Results of this paper also affirm that it is necessary for service managers to conceive their role in supporting in order to limit employees' EE during COVID-19 crisis. It is necessary for managers to possess the sensitivity towards emotional needs of their employees (Haldorai et al., 2019), and pay the compassion to them and play a role of their advisors in alleviating the work pressure which help them efficiently work (Schiffinger & Braun, 2020). Also, if hotel organization want to retain and appeal the efficient hotel employees, it is needed to encourage them to plan effectively in the long-term job. Therefore, the necessity for making each and every employee comprehend their work is aligned with objectives of organization and their wholehearted contribution will be greatly helpful to organizational growth and success (Haldorai et al., 2019).

Via the certain findings of this research, managers in HTS should also regularly investigate the level of stress in working process from their frontline employees' to hinder EE and its negative consequences from appearing in employees' working performance. Thus, managers should take the appropriate actions in creating chances for employees to get time off to recharge the energy after their hard-working (Choi et al., 2019; Wen et al., 2020). Especially, there is the urgency to train employees to manage their emotions, and emotional management courses should be provided to regulate and deal with EE for employees (see Cheng et al., 2018; Essawy, 2016; Wen et al., 2020).

Finally, employees is not able to effectively cope with job obstacles as well as deliver the poor working performance due to the incongruent job demands with employees' individual abilities (Karatepe et al., 2014). Therefore, the appropriate individuals for frontline service positions should be recruited carefully by managers because of the long-term success of hotel organizations. Some psychometric tests should be involved in the recruitment process in order to get the guarantee of appropriate personality profiles form candidates, applying holistic data related to their employment background to give the decision whether their skills and personality would be right and fit into the organization (Haldorai et al., 2019).

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THE EFFECTS OF CORPORATE SOCIAL RESPONSIBILITY ON CUSTOMERS' PURCHASING INTENTION

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Abstract

This study investigates customers' perception of four types of responsibilities in Carroll's CSR pyramid (1991), including economic, legal, ethical and philanthropic responsibilities; and the effects of their perception of CSR on purchasing intention. The findings show some interesting points. Firstly, the importance level of four responsibilities from customers' perspective is different from that of Carroll model (1991). Secondly, purchasing power does not affect the relationship between customers' perception of price fairness on purchasing intention. Lastly, customers' perception of CSR has positive effect on purchasing intention. These research findings are a valuable reference for enterprises in implementing CSR to retain customers' loyalty.

Keywords: *Corporate Social Responsibility, Customers' Purchasing Intention, Customers' Perception of CSR.*

1. Introduction

World-wide globalization has brought many benefits to enterprises in Vietnam. Besides, this trend also raises many acute issues such as increased competitive pressures, negative impacts on the environment, social moral and some ethical or legal issues. Therefore, enterprises need to have appropriate business strategies to adapt to the context, ensuring the sustainable development. For these reasons, Corporate Social Responsibility (CSR) is becoming an international concern of every business, every nation, in other words, it is the concern of the times.

According to some scholars, a crisis is needed to attract businesses' attention to CSR. However, as a result of globalization and the linkage of global information, the corporations can no longer insist on traditional view that it is acceptable to maximize short-term profits without regarding to environmental and social consequences. Businesses must now take social responsibility with their stakeholders. Companies focus on creating wealth, while simultaneously consumed resources and pollution can make them lose their customers and competitiveness in the market. Consumers as well as companies have paid their attention to CSR. Recently, there are some theories suggesting that many consumers now accept Social Responsibility Consumer Behavior (SRCB), whereby consumers are interested in ethical products and business processes. These consumers also use their purchasing power to exert pressure on CSR commitment by buying socially responsible products. Sometimes, they are willing to pay more to do so, and boycott socially and environmentally irresponsible products.

In Vietnam, CSR has been increasingly playing a paramount important role in promoting a clear, transparent and friendly business environment, contributing to the improvement of people's life quality, ensuring social welfare for sustainable development in the long-term. Vietnamese government has also been developing and completing the legal frameworks in order to create conditions for enterprises to fulfill their CSR as well as to provide a firm basis for strict and comprehensive state management. Especially a series of alarming recent incidents relating to CSR have eroded the belief of local residents, for example, Vedan's destruction of Thi Vai River through releasing unprocessed wastages, chemicals and contaminated water; the marine environment and ecology destruction of Formosa Ha Tinh company; the potato bitterness of PepsiCo Vietnam, Frieslandcampina's allergy-prone milk recall... These cases represent not only the enterprises' lack of awareness and understanding of CSR but also the weaknesses in defining the challenges and issues that protect the interests of the businesses itself in the long-term.

However, there are many MNCs which focus on CSR as key element in their overall business strategy in order to creatively solve problems and actively face up with challenges in the business development process. Successful implementation of CSR will not only helps businesses to ensure high growth rate, generate higher revenues and profits, enhance brand images, maintain well-known reputation, but also helps the companies address strategic issues related to environmental, legal and social issues for sustainable development. More importantly, the implementation of CSR has huge impacts on customers' behaviors, their satisfaction and loyalty to the brand name.

This topic is a hotly-debated issue and attracts a lot of concern of many researchers, policy makers, entrepreneurs and consumers. Doing research on CSR can generate both theoretical and practical values for enterprises to have a thorough understanding of the significance of CSR in business strategy, the influences of the customers' perception of CSR on their purchasing intention, in the long-term, their satisfaction and loyalty.

In Vietnam, CSR is still a new problem and has many difficulties to be implemented, therefore, some enterprises suppose that they are forced to conduct CSR, but not fully understand the nature as well as its significance. Therefore, this research aims to raise the awareness of CSR in Vietnam corporations, turn CSR into the corporations' culture and identity as well as suggest some solution recommendations and policy implications for pushing customers' purchasing intention through CSR.

2. Literature review

2.1 Concepts of CSR

The concept of CSR has attracted the attention of many researchers all over the world for a long time. Before the 1950s, there was no official definition of CSR. Key points mentioned in this stage is a matter of charity and profit seeking. After the 1950s, the documents of CSR were supplemented by many researches in both theory and practice (Carroll 1999). CSR was first defined in 1953 by Bowen when he published the book

“Social Responsibilities of the Businessman”. With the first definition, Bowen is considered "the father of CSR "(Carroll 1999; Windsor 2001).

All other definitions in the early 50s took the need for managers to assume responsibility for public good into consideration. Drucker (1954) supposed that “it has to consider whether the action is likely to promote the public good, to advance the basic beliefs of our society, to contribute to its stability, strength, and harmony”. Furthermore, the two definitions are united on the need to align CSR with what managers consider as current and prevailing features of the socio-political environment they operate within. Carroll (2008) stated that the entire idea of CSR during this early period is corporate philanthropy but there are only few actions which might be considered as beyond philanthropy in this period. Frederick (2006) summarizes what CSR stands for in the 50s under three basic issues: Corporate managers are appointed as public trustees; There is need to balance competing stakeholders claims with corporate resources; The acceptance of philanthropy as a humane philosophy and discretionary principle of the organisation.

During the early 1970s, the definitions of CSR achieved great achievements. Main stream in the CSR definitions of this decade included long-term benefits, legal adherence, voluntary, and things beyond social expectations. Dr. Davis, a professor at Arizona State University and a CSR scholar, stressed the importance of CSR. He mentioned, “CSR refers to the firm’s consideration of and response to issues beyond the narrow economic, technical, and legal requirements of the firm” (Sharma & Mehta, 2012, pp.). He supposed that businesses should take the impact their activities and policies bring to society into careful consideration. It is also essential to make contributions to society rather than purely focus on profit-making.

In the period of 1970 - 1980, Archie Carroll, a CSR scholar defined CSR in a more comprehensive way by developing a CSR model. He identified four stages: economic, legal, ethical, and discretionary, which compose the main corporate responsibilities (“CSR - The Shape of A History”, 2014, pp.). His framework regarded economic responsibility as the key function of a company. Discretionary or philanthropy is at the highest level, which refers to some voluntary responsibilities that a company is not mandated to commit to. These stages are not mutually exclusive; they do not require companies to achieve one by one. Companies can achieve these stages simultaneously and continuously as a long-term goal. Thus, corporate social responsibility is defined as “a voluntary way for a company to enhance its public image and reputation by incorporating responsible activities that satisfies a need of society beyond its legal requirements” (Abels & Martelli, 2012, p. 86).

During the period 1980 - 1990, there were more researches in defining CSR than in previous decades (Carroll, 1999). In this phase, new concepts had been proposed, for example, corporate responses to the society, social achievements of the enterprises, community policy, and business ethics. In particular, the proposed theme for CSR was extended from just satisfying shareholders to satisfying other social organizations, called stakeholders.

The period from 1990 to 2000 did not have significant advancement in the definition of CSR (Carroll, 1999). At this stage, CSR was understood as the social achievements of a business that went along with its social responsibility.

From 2000 up to now, many definitions of CSR have been proposed. Most of the definitions and related issues were similar to those discussed in the previous decade. However, emerging concern in this decade was the environment. In general, the concerns of this period are still voluntary work, society, environment, stakeholders and profits.

Nowadays, stakeholders are not only concerned about profits; they concentrate on many CSR aspects of a company such as environment, governance, ethic and law. These factors also affect the reputation of the company in the long term. The fact proves that there is a competitive advantage for corporations that have a higher reputation and are more socially responsible; they also have a higher return on investment. (Eccles, Ioannou & Serafeim, 2012, p.28).

The World Business Council for Sustainable Development (2006) defined CSR as the continuing commitment by business to behave ethically and to contribute to economic development while improving the quality of life of the workforce and their families, as well as that of the local public and society at large; management studies have defined CSR as a company's obligation to operate in an economically and environmentally sustainable way at the same time recognizing the interest of all stakeholders and maximizing social, economic and environmental values (Waddock and Post, 1990; Wood, 1991; Matten et al., 2003; Waddock, 2004).

Confederation of British Industry (2004) states that CSR encompasses the extent to which companies should promote human rights, democracy, community improvement and sustainable development objectives throughout the world.

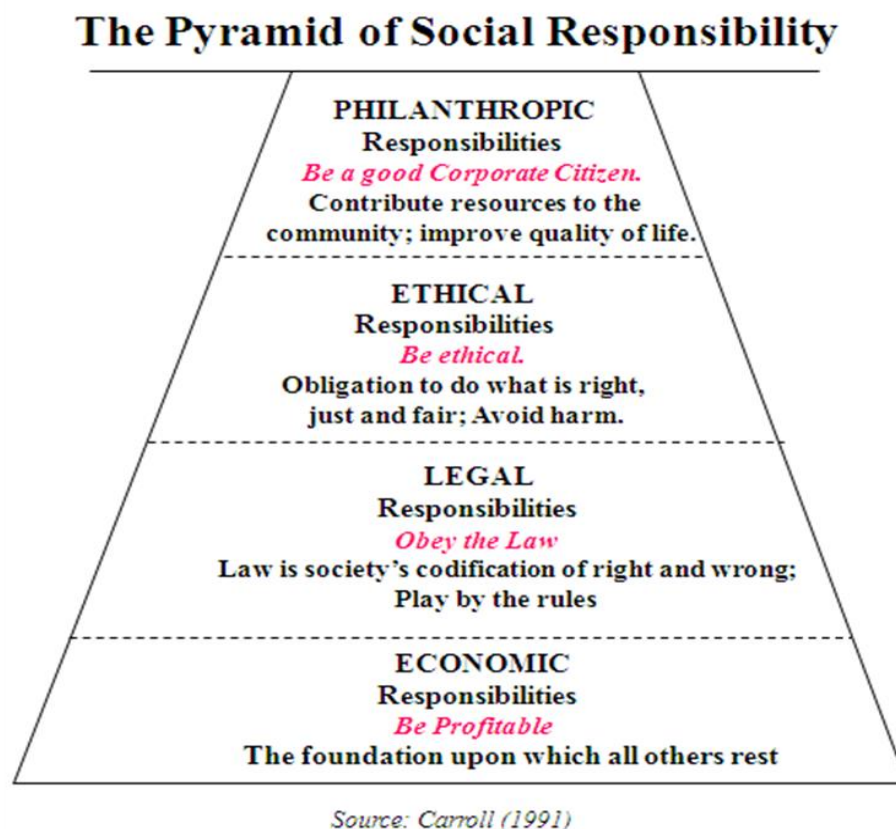
As per World Bank (2001), CSR is the commitment of businesses to contribute to sustainable economic development working with employees, their families, the local community and society at large to enhance their quality of life in ways that are both for business and good for international development. World banks definition is almost same as world business council's definition with a broader point about developing at international levels.

2.2. CSR models

2.2.1. Carroll's Pyramid Model (1991)

According to Carroll (1991), four types of responsibility composing CSR includes: economic responsibilities, legal responsibilities, ethical responsibilities and philanthropic responsibilities.

Figure 1: The Pyramid of Social Responsibility



Source: Carroll (1991)

Economic responsibility

Throughout history, the businesses were set up to become an economic entity with an aim to providing goods and services for the society. The profit goal is built as the most basic motivation of the business. Before achieving any other goals, the enterprises are the basic economic components of society. Therefore, the basic target of the businesses is producing the goods and services that the consumers need and want, and create the acceptable profits through business process. All these other kinds of corporate responsibilities are built based on economic responsibility.

Legal responsibility

The society not only expects the enterprises to operate under profit target but it also expects them to abide the law, operate under the rules and regulations set by the government and the authorities. Companies are expected to pursue its economic mission within the legal frameworks. This responsibility applies not only to the whole enterprises but also each individual of these enterprises.

Ethical responsibility

Ethical responsibility includes activities that are expected or banned by members of society, although these activities are not mentioned in law. Ethical responsibility includes standards, or expectations that reflect the company's concern about what consumers, employees, shareholders, and the whole society regard as fairness or rightness. The company

shows respect for the moral norms that the entities mentioned above respect and protect. Moral responsibility can affect legal responsibility. It promotes greater accountability and sets higher expectations for entrepreneurs to do more than the law.

Philanthropic responsibility

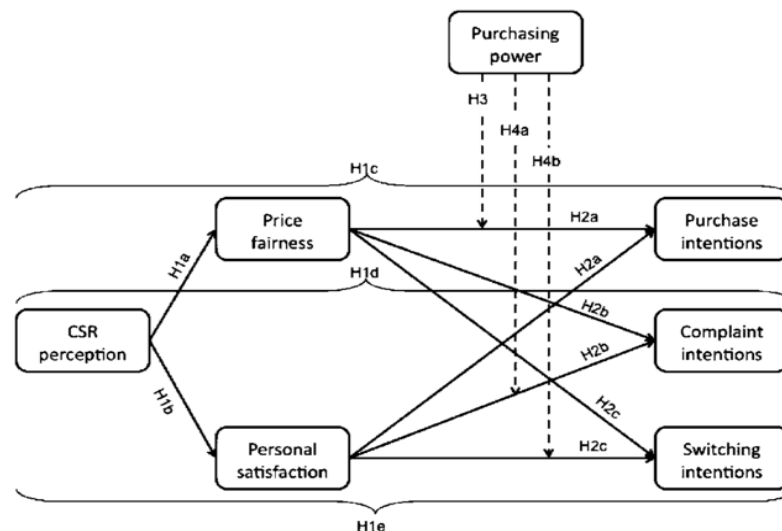
Philanthropic responsibility includes the activities of the businesses that respond to the expectations of the society, showing that the businesses are well-performing the obligations of good corporate citizens. It includes a direct commitment of the business in action or the design of programs to promote the prosperity of the whole society, for example, contributing financial, human or other resources to culture, arts, education or community activities.

In short, according to Carroll, CSR consists of four components, namely economic responsibility, legal responsibility, moral responsibility, and philanthropic responsibility. In other words, a CSR company should try to make profit, abide the law, behave in accordance with ethical standards of society and become a good citizen in the community.

2.2.2 Carvalho Model (2010)

In order to study the impacts of customers' perception of CSR on their purchasing intention, the model proposed by Carvalho et al. (2010) will be applied in this study. The original model includes the key elements: customers' perception of CSR, price fairness, personal satisfaction, purchasing power, purchasing intention, complaining intention, and switching intention.

Figure 2: The effects of CSR perception model



Source: Carvalho et al., 2010

Customers' perception of CSR: This factor shows the level of customers' appreciation for CSR activities which demonstrate whether they perceive the enterprises' concern in the environment, community, law, morality and whether these activities are worth doing or not.

Price fairness: This factor determines whether consumers are willing to pay a higher price for a company's product than their competitors'.

Personal satisfaction: This factor helps assess whether when consumers use products from a company well-performing CSR, they themselves feel pleased and comfortable or not.

Purchasing power: This factor is measured through income, the higher the income, the greater the purchasing power.

Purchasing intention: The likelihood that consumers will choose to purchase a company's products.

Complaining intention: This factor measures the extent to which consumers are inclined to complain and spread negative rumors of a company.

Switching intention: This factor determines the likelihood that the consumers will no longer use a company's products, and switch to another provider.

According to this model, Carvalho et al. proposed the following hypotheses:

H1: Consumers' perception of CSR has positive effects on their perception of price fairness, personal satisfaction, purchasing intention and negative impacts on complaining intention and switching intention.

H2: Consumers' perception of price fairness and personal satisfaction mediate the relationship between consumers' perception of CSR and purchasing intention, as well as complaining intention and switching intention.

H3: The mediating effect of perception of price fairness in the relationship between perception of CSR and the purchasing intention is increased for consumers with lower purchasing power compared with consumers with higher purchasing power.

H4: The mediating effect of personal satisfaction in the relationship between CSR perception and complaining intention, between CSR perception and switching intention is increased for consumers with higher purchasing power compared with consumers with lower purchasing power.

The study was conducted with a sample of 400 consumers in Brazil. According to the findings, the extent to which Brazilian consumers perceive whether a company is socially responsible or not can be predicted as a result of the transaction with that company, as well as switching intention and complaining intention about rising prices caused by CSR. Moreover, these relationships are mediated by the extent to which consumers perceive whether price increases caused by CSR are fair or not and personal satisfaction because of supporting a socially responsible company. Finally, the results showed that these intermediate effects depend on purchasing power. More specifically, the mediating effect of price fairness in the relationship between CSR perception and purchasing intention is stronger with lower income consumers than with higher income ones. Meanwhile, the mediating effect of personal satisfaction in the relationship between CSR perception and switching intention and complaining intention is stronger with higher income consumers than with lower income ones.

However, the study by Carvalho et al. did not investigate in depth consumers' perception of CSR. Specifically, in their study, there were only questions about philanthropy responsibility without questions to understand consumers' perception of the remaining three types of responsibilities (economic, moral and ethical responsibility). The results did not

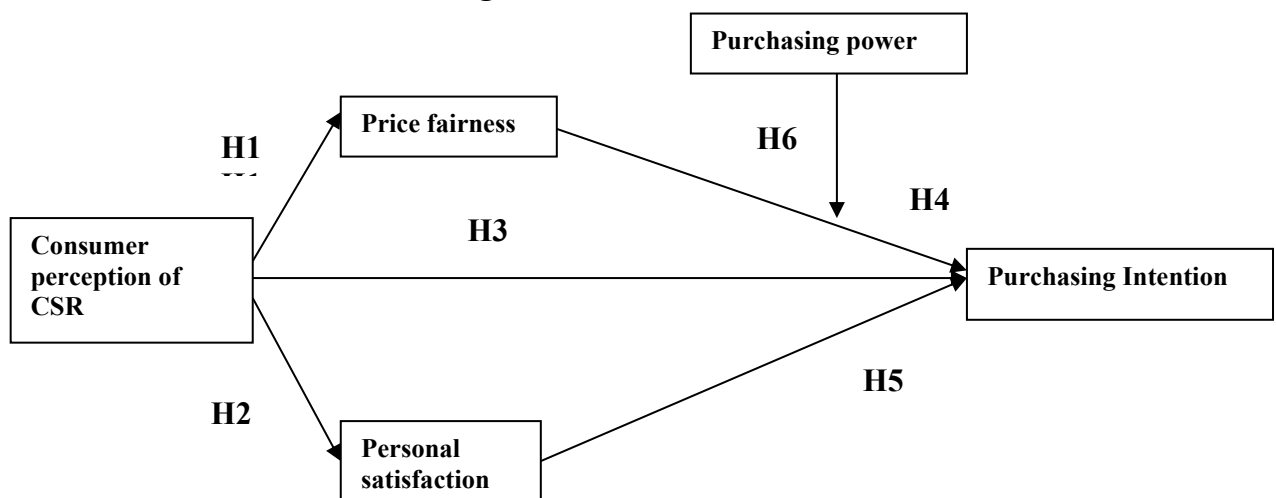
indicate whether there is a correlation between the age, income, gender, occupation, education level of the respondents and their perception of CSR or not. Their study did not arrange the importance level of four types of CSR from the perspectives of the consumers. Therefore, in order to find out more about the issues that Carvalho and his colleagues have not clarified yet, this study will revise the original model, adding research questions to understand consumers' perception of CSR. The objective of this study is to focus only on the relationship between consumer perception of CSR and their purchasing intention.

3. Research methodology

3.1. Research framework

Starting from research goals, this study is based on model of Carvalho et al. (2010). However, unlike Carvalho et al, this study investigates in depth about the customers' perception of four types of responsibilities in CSR of the Carroll model (1991), while investigating the level of effect of customers' perception of CSR on their purchasing intention. In this model, the factors that influence the consumer's purchasing intention include: consumers' perception of CSR, perception of price fairness, personal satisfaction, and purchasing power (measured through income). One particular feature is that purchasing power does not directly affect purchasing intention; it will affect the impact of the perception of price fairness on purchasing intention.

Figure 3: Research framework



3.2. Data collection

3.2.1. The sample subjects

The sample subjects of this research includes people from different age groups (18 – 24; 25 – 35, 35 - 45, over 45); different genders (male, female); different occupations (office workers, students, others); different income (below 5 million, 5 – 10 million, 10 – 15 million, 15 – 20 million, over 20 million); different education level (college/university bachelor, master/doctor, high school student).

3.2.2. The structure of questionnaire

The questionnaire consists of two main sections, which were formulated with questions combined and edited from the questionnaire of two studies by Aril et al. (2009) and Carvalho et al. (2010).

The first part consists of questions to measure the consumers' perception of CSR which rooted from the study by Arli et al. (2009):

Economic responsibility:

- I believe that businesses should maximize profits, keeping the growth rate as high as possible.

- When buying goods, I will prioritize products of enterprises having high profit, high growth rate and famous brand in the market.

Legal responsibility:

- I believe that businesses should ensure that they operate all business activities within the legal framework.

- When buying goods, I would prioritize products of enterprises not violating the law or not being condemned by the mass media.

Moral responsibility:

- I believe that businesses should help solve social problems and improve the quality of life of the community.

- When buying goods, I will prioritize products of enterprises regularly helping solve social problems.

Philanthropic responsibility:

- I believe that businesses should ensure that they often do charity and always try to meet the expectations of society and the community, for instance, implementing literacy programs, improving health for rural people.

- When buying goods, I will prioritize products of enterprises that often do charity and meet the expectations of the community.

The second section includes questions that measure the impact of CSR perception, price fairness, personal satisfaction and purchasing power which rooted from the study by Carvalho et al. (2010):

If the enterprise has activities that contribute to improving the life quality for employees and the whole society, using environmental-friendly materials, contributing financial resources to charity programs and making transparent information policies for shareholders, suppliers and customers, I suppose:

- That business has concern of the environment
- That business orients towards the community
- That business has invested in a worth work

If the enterprise makes a significant contribution to the community, and therefore its products' price is higher than that of its competitor, I believe that price is:

- Fair

- Acceptable
- Satisfactory

If I buy product from the enterprise that makes a significant contribution to the community, I would feel:

- Better about myself, because I have made profit for a socially responsible company
- I do the right thing
- I have created benefits for myself by supporting the products of that company,

thereby indirectly contributing to society.

- Self-satisfied

For the products of the enterprise that makes a significant contribution to the community, even though its price is higher than that of other companies, I would:

- Only buy its products when financial capacity allows.
- Buy its products if I receive a reasonable explanation from sellers or acquaintances

that have ever purchased about the reasons of high- cost products.

- Will definitely buy its products.

Then, the trial survey will be conducted. The purpose of this trial survey is to determine whether the questionnaire is easy to understand or not, as well as whether the language used in the questionnaire should be changed or not. This survey will be conducted by delivering questionnaires to ten subjects of different ages, occupations and educational backgrounds, without further explanation of the questionnaire for them to assess and evaluate. After that, the questionnaire will be revised again. Then a second trial survey will be conducted before entering the official one.

3.3. Research methodology

In this research question, the methodology the researcher chooses to use is causal research. This is the most appropriate method because the aim of this research question is to analyze and evaluate the effects of CSR on customers' purchasing intention, i.e. the cause - effect relationship. It helps the researcher identify the reasons why the customers make decision to purchase products/services of a CSR company, what factors affect the purchasing intentions of customers and the relationship between these variables: consumers' perception of CSR, perception of price fairness, personal satisfaction, purchasing power, purchasing intention.

189 valid questionnaires were collected from total 200 questionnaires issued in Hanoi. In order to achieve the research objectives, data analysis methods used in this study include: data descriptive statistics, scale reliability analysis, analysis of variances (ANOVA), linear correlation analysis and linear regression analysis.

Scale reliability analysis will be assessed through the Cronbach Alpha coefficient to eliminate unsuitable variables and limit the extraneous variables in the research model. Accordingly, unsuitable variables will be eliminated if the Corrected Item - Total Correction < 0.3 and the scale will be accepted when the Cronbach Alpha coefficient > 0.6 .

ANOVA method is used to analyze the relationship between qualitative cause variables and quantitative effect variables, based on the calculation of intra-group variation and the variation between group averages, from which concludes whether there is a difference in the evaluation of the significance of a factor between different groups of people or not.

Linear correlation analysis was used to measure the relationship between two quantitative variables, based on the Pearson correlation coefficient (denoted by r). Absolute value of r demonstrates the degree of linearity. The absolute value of r approaches 1 when two variables have a close linear relationship. When all dispersed points are arranged in a straight line, the absolute value of $r = 1$ (Hoang Trong and Chu Nguyen Mong Ngoc, 2008).

After determining two variables having close linear correlation through the correlation coefficient r , the study quantifies their causal relationship by a linear regression model in which a variable is called is the dependent variable (or variable that is explained -Y) and a variable called the independent variable (or variable explaining -X). In this study, the regression model used would be a multiple linear regression model.

From the research model, the following hypotheses are given:

H1: Consumers' perception of CSR has a linear correlation with their perception of price fairness

H2: Consumers' perception of CSR has a linear correlation with personal satisfaction

H3: Consumers' perception of CSR has a positive effect on their purchasing intention

H4: Consumers' perception of price fairness has a positive impact on their purchasing intention

H5: The consumer's personal satisfaction has a positive impact on their purchasing intention

H6: Consumers' purchasing power has a positive effect on the relationship between consumers' perception of price fairness and purchasing intention.

The linear correlation and linear regression analysis were performed to test the hypotheses.

Linear correlation analysis

Linear correlations were used to test hypotheses H1 and H2, and also to examine the variability between independent variables before conducting regression analysis.

Linear regression analysis

The aim of linear regression analysis is to model the causal relationship between a dependent variable and one or more independent variables. In this study, multi-variable regression analysis will be conducted to determine the importance level of each component: Perception of CSR (CSRb), Perception of Price Fairness (PF), Personal Satisfaction (PS), Purchasing Intention (PI). In addition, the impact of purchasing power (INCOME) on the relationship between perception of price fairness and purchasing intention will also be examined through the PFxINCOME variable in the regression model.

Independent variables: CSRb, PF, PS, PFxINCOME

Dependent variable: PI

The regression model in this study will be in the form:

$$Y = \beta_0 + \beta_1 * X_1 + \beta_2 * X_2 + \beta_3 * X_3 + \beta_4 * X_4$$

In which:

Y: Consumers' Purchasing Intention

X1: Consumers' Perception of CSR

X2: Consumers' Perception of Price Fairness

X3: Personal Satisfaction

X4: Purchasing Power x Perception of Price Fairness

4. Data analysis and discussion

4.1. Descriptive statistics

The age proportion in the sample is quite equal. The age group accounting for the highest proportion is 25 - 35 (37.70%), followed by 18 - 24 (31.38%), 35 - 45 (29.26%) and over 45 (2.66%).

Regarding to the gender, there is a considerable difference between the proportion of male and female, with female accounting for 75% and male accounting for 24.47%

In terms of occupation, the highest percentage is office workers (53.19%), the second is students (34.57%), the third is teachers (12.23%) and other occupations account for a small minority.

In terms of income, the highest proportion is the income level of 5 - 10 million (38.83%), followed by below 5 million groups (34.57%). Income level of 10 - 15 million accounts for 15.96%. Income level of 15 - 20 million and over 20 million accounts for quite small proportion (3.72% and 6.91% respectively).

In terms of education level, the highest percentage is college/university bachelor (72.87%), followed that is master/doctor (23.40%), which is suitable with the population features in such a large city as Hanoi where concentrates many universities and colleges. The lowest percentage is high school students (3.72%).

4.2. Testing the scale

Scale reliability analysis

The variables in the study measure the following factors:

- Consumers' perception of CSR includes 11 variables, in which:
 - 8 variables measure consumers' perception of CSR derived from the study by Arli et al. (2009): numbered from CSR1 to CSR8. These variables are mainly used to compare the CSR perception of different consumer groups. These variables will not be included in the regression model.
 - 3 variables measure consumers' perception of CSR derived from the study by Carvalho et al. (2009): numbered from CSR9 to CSR11. These variables will be included in the regression model.
- Consumers' perceptions of price fairness: 3 variables numbered from PF1 to PF3

- Personal satisfaction: 4 variables numbered from PS1 to PS4
- Purchasing intention: 1 variables PI

After testing, all scales have Cronbach Alpha coefficient > 0.6 (see in Table 1). There is one variable in the consumers' perception of CSR scale that have correlation coefficient < 0.3 that is CSR1, but this variable will not be included in the factor analysis for running regression model since this variable is not included in the Carvalho et al. model. They are primarily used to measure consumers' perception of CSR; therefore, this variable is retained.

Table 1: Result of scale reliability analysis

Test scale	Cronbach Alpha coefficient
Perception of CSR	0.8200
Personal satisfaction	0.9118
Purchasing intention	0.8737

Analysis of variances (ANOVA)

The research compares the perception of four responsibilities in CSR among consumers of different age, gender, occupation, income, educational level through analysis of variance (ANOVA). After the analysis, based on the mean value identified, some results are given in Table 2. ANOVA testing has p-value = 0.0002 < significance level = 1%. Therefore, it can be concluded that there is statistically significant difference in the CSR perception among consumers of different educational level groups: the higher the educational level is, the higher the CSR perception is. Bartlett’s test for equal variances has p-value = 0.525 > significance level = 1%. From that, it can be concluded that there is no variance difference in the CSR perception among consumers of different educational level groups.

Table 2: Result of analysis of variances

Criteria	Results	Perception of CSR	Perception of Price Fairness	Personal satisfaction	Purchasing Intention
Education level	Mean	12.675532	11.670213	15.170213	8.6223404
	p-value (ANOVA test)	0.0002	0.0000	0.0001	0.0000
	p-value (Bartlett’s test)	0.525	0.611	0.432	0.684
Gender	Mean	12.675532	11.670213	15.170213	8.6223404
	p-value (ANOVA test)	0.7654	0.5315	0.5054	0.6425
	p-value (Bartlett’s test)	0.629	0.525	0.108	0.941
Age	Mean	12.675532	11.670213	15.170213	8.6223404

	p-value (ANOVA test)	0.4746	0.0519	0.1296	0.6558
	p-value (Bartlett's test)	0.689	0.600	0.686	0.575
Occupation	Mean	12.675532	11.670213	15.170213	8.6223404
	p-value (ANOVA test)	0.0327	0.0000	0.7433	0.0141
	p-value (Bartlett's test)	0.374	0.611	0.780	0.290
Income level	Mean	12.675532	11.670213	15.170213	8.6223404
	p-value (ANOVA test)	0.2498	0.0016	0.0302	0.0311
	p-value (Bartlett's test)	0.743	0.015	0.381	0.058

Similarly, from the result tables, it can be concluded that there is no statistically significant difference and no variance difference in the CSR perception among consumers of different age groups, gender groups and income groups. However, there is statistically significant difference but no variance difference in CSR perception among consumers of difference occupation group.

In a similar way, the result tables show that there is no statistically significant difference and no variance difference in price fairness perception and personal satisfaction among consumers of different age groups, gender groups, occupation groups, income groups. However, there is statistically significant difference but no variance difference in price fairness perception and personal satisfaction among consumers of different educational level groups. In terms of purchasing intention, the result tables show that there is no statistically significant difference and no variance difference among consumers of different age groups and gender groups but there is statistically significant difference but no variance difference among consumers of different income groups, educational level groups and occupation groups.

Based on the mean value of the four CSR variables, consumers ranked the importance level of four types of responsibilities in descending order: legal, moral, philanthropic and economic. Thus, in the context of this study, the subjects surveyed assessed legal responsibility as the most important factor and economic responsibility as the least important factor. In other words, for consumers, they think that the business needs to do beyond just looking for profits.

4.3 Testing the model

Linear correlation analysis

The analysis result using Pearson coefficients (in Table 3) shows that the variables CSR, PF, PS, IPF have a correlation with PI (sig = 0.0000 <0.05).

Table 3: The result of linear correlation analysis

	CSR	PS1	PS	PI	IPF
CSR	1				
PS1	0.4342 0.0000	1			
PS	0.4749 0.0000	0.8777 0.0000	1		
PI	0.5420 0.0000	0.5339 0.0000	0.5993 0.0000	1	
IPF	0.2031 0.0052	0.0712 0.3315	0.1754 0.0160	0.2007 0.0058	1

In addition, it can be concluded that there are correlations between the independent variables, therefore, after the regression analysis; it is needed to use the VIF coefficient to test the multicollinearity.

Linear regression analysis

The results of regression analysis are shown in the Table 4.

Table 4: The results of regression analysis

Source	SS	df	MS	Number of obs = 188 F(4, 183) = 44.16 Prob > F = 0.0000 R-square = 0.4912 Adjust R-square = 0.4801 Root MSE = 1.523
Model	409.731683	4	102.432921	
Residual	424.454487	183	2.31942343	
Total	834.18617	187	4.46088861	

PI	Coef.	Std.Err.	t	P> t	[99% Conf. Interval]	
CSR	.2358374	.0642874	3.67	0.000	.0684998	.4031749
PF	.2950308	.0748341	3.94	0.000	.1002405	.4898211
PS	.1540796	.051885	2.97	0.003	.0190248	.2891344
IPF	-2.18e-10	1.20e-09	-0.18	0.856	-3.35e-09	2.92e-09
_cons	-.1265352	.7204201	-0.18	0.861	-2.001761	1.748691

Using VIF coefficient to test the multicollinearity:

Table 5: VIF coefficient

Variable	VIF	1/VIF
PF	2.78	0.360290
PS	2.24	0.446749
CSR	1.49	0.670341
IPF	1.16	0.860801
Mean VIF	1.92	

VIF coefficient < 10, therefore, it can be concluded that there is no multicollinearity phenomena (Table 5).

According to the results from the regression analysis, Prob > F = 0 shows the model has statistical significance (the estimated coefficients are not equal to 0). Estimated coefficients β_1 , β_2 , β_3 are statistically significant (p-value = 0, 0, 0.003 respectively < 0.01 significance level). The estimated coefficient β_4 is not statistically significant (p-value = 0.856 > 0.01 significance level). Therefore, it is possible to conclude that consumers' perception of CSR, consumers' perception of price fairness and personal satisfaction all have influences on consumers' purchasing intention. Meanwhile, the purchasing power of consumers (expressed by income) does not affect the consumers' purchasing intention. R-squared = 0.4912, which means that 49.12% of the difference in consumers' purchasing intention can be explained by the dependent variables in the model.

Regression equation:

$$Y = -0.1265352 + 0.2358374 * X1 + 0.2950308 * X2 + 0.1540796 * X3$$

From the correlation and regression analysis, conclusions about the hypotheses of the study could be drawn: Hypotheses H1, H2, H3, H4, H5 are accepted and hypothesis H6 is rejected.

Table 6: The results and findings from testing hypothesizes

Hypothesizes	Results	Findings
There are differences in the CSR perception among consumers of different gender groups	Rejected	
There are differences in the CSR perception among consumers of different age groups	Rejected	
There are differences in the CSR perception among consumers of different occupation groups	Accepted	Teacher groups has the highest CSR perception, followed by student and office worker groups
There are differences in the CSR perception among consumers of different educational level group	Accepted	The higher the educational level, the higher the CSR perception

Hypothesizes	Results	Findings
There are differences in the CSR perception among consumers of different income level group	Rejected	
The consumers evaluate the importance level of four components of CSR in accordance with Carroll model	Rejected	The consumers evaluate the importance level of four components of CSR in descending order: legal, ethical, philanthropic and economic
H1: Consumers' perception of CSR have a linear correlation with their perception of price fairness	Accepted	There is a correlation between consumers' perception of CSR and their perception of price fairness
H2: Consumers' perception of CSR has a linear correlation with personal satisfaction	Accepted	There is a correlation between consumers' perception of CSR and their personal satisfaction
H3: Consumers' perception of CSR has a positive effect on their purchasing intention	Accepted	The higher the consumers' perception of CSR, the higher their purchasing intention
H4: Consumers' perception of price fairness has a positive impact on their purchasing intention	Accepted	The higher the consumers' perception of price fairness, the higher their purchasing intention
H5: The consumer's personal satisfaction has a positive impact on their purchasing intention	Accepted	The higher the consumers' personal satisfaction, the higher their purchasing intention
H6: Consumers' purchasing power has a positive effect on the relationship between consumers' perception of price fairness and purchasing intention.	Rejected	The increase in income level does not increase the effect of consumers' perception of price fairness on purchasing intention

Table 7: The differences between previous findings and the findings of this research

Researches	Previous findings	Findings of this research
Carvalho et al. (2010)	CSR perception of consumers is correlated with the perception of price fairness and personal satisfaction. The purchasing power affects the relationship between the perception of price fairness and the purchasing intention.	There is no correlation between consumers' perceptions of CSR and their perception of price fairness, while there is a correlation between consumers' perception of CSR and personal satisfaction. The purchasing power has no effect

Researches	Previous findings	Findings of this research
		on the relationship between the perception of price fairness and the purchasing intention.
Carroll (1991). Arli et al. (2009)	The most important is economic responsibility.	The most important is legal responsibility, followed by philanthropic, ethical and economic responsibility.

Based on these findings, it can be concluded that consumers' perception of CSR, perception of price fairness and personal satisfaction have a positive effect on their purchasing intention. In detail, with the H3 hypothesis, that means that when the consumers perceive that a company well-performs CSR, its purchasing intention of this company's product is higher the competitors' one although the price of this product is higher than that of the competitors. This is similar to the H4 hypothesis, when the perception of price fairness increases, i.e. the consumers perceive that the increase in product's price which is caused by the contribution to the CSR policy of the firm is right, and their purchasing intention of the company's products will also increase. Finally, with the H5 hypothesis, when consumers feel self-satisfied because they perceive that purchasing a product of a company which well-perform CSR is a good thing to do for themselves. By making a contribution to society, they feel better and more self-satisfied, they will also accept to buy the products at a higher price than usual.

Besides the accepted hypotheses in the regression model, there is one rejected hypothesis, i.e. H6. It means that the purchasing power of consumers has no effect on the relationship between the customers' perception of price fairness and their purchasing intention. In the study scale in Hanoi, the income factor does not affect the relationship between customers' perception of price fairness and purchasing intention, in other words, higher income does not increase the effect of the perception of price fairness on the purchasing intention. This is consistent with the ANOVA analysis conducted for the above CSR variables. Income factor does not have the relationship with the consumers' perception of CSR.

5. Conclusion

First of all, from the perspective of the consumers, the importance level of four components of CSR in descending order is: legal, ethical, philanthropic, economic. This order differs from Carroll's (1991) when he arranged in descending order of economic, legal, ethical and philanthropic responsibility. The explanation for this may have been due to a series of scandals relating to the business operation of some enterprises, for example, the Vedan incident that dumped toxic wastewater out of the environment in 2008, Coca Cola's "transfer pricing" case in 2013. Formosa Ha Tinh's marine contamination in 2016, consumers suppose

that it is important for businesses to operate within the legal framework. One remarkable thing is that economic responsibility is regarded as the least important. Consumers believe that businesses need to do things beyond the mere profits, and this finding is particularly important for entrepreneurs to control their business activities.

Secondly, the results show that there is no correlation between consumers' perception of CSR and their perception of price fairness; meanwhile, there is correlation between consumers' perception of CSR and their personal satisfaction. Besides, there is no difference in the CSR perception, price fairness perception, personal satisfaction and purchasing intention among consumers of different age groups, gender groups. There are many reasons from the facts in Vietnam to explain this conclusion. In term of gender groups, in "Human Development Report 2016" published by the United Nations Development Program, the United Nations regards Vietnam as a bright spot in the implementation of the Millennium Development Goals, one of the countries having high gender equality achievements. Vietnam is ranked at the top list of gender equality in Southeast Asia. This demonstrates Vietnam's remarkable progress in the implementation of gender equality, in which the chances to access education and information are one of the most important factors. Therefore, in Vietnam, the fact that both genders have quite similar perception of CSR is clearly apparent. In term of age groups, originating from the Vietnamese culture that the elderly often teach or pass down their knowledge and understanding from generations to generations, hence, Vietnamese people at any age groups, more or less, have basic understandings of the importance of CSR in this modern life. Moreover, in spite of age groups, almost Vietnamese people can easily get access to the information of CSR through internet, television or other mass media channels.

However, there is difference in the CSR perception, price fairness perception, personal satisfaction and purchasing intention among consumers of different educational level groups. The reasons to explain for this conclusion could be attributed to the positive CSR education in Vietnam. Nowadays, almost Vietnamese universities, institutions, organizations as well as corporations integrate CSR in many teaching and training programs. CSR becomes an integral part in business administration education. However, for people who have lower education level, the opportunities to access to CSR knowledge is quite limited due to the fact that Vietnamese curriculum from primary to high level tends to concentrate on academic knowledge but practical one. Meanwhile, CSR directly originates from and relates to practical situations.

Finally, the regression analysis revealed that consumers' perception of CSR, consumers' perception of price fairness and personal satisfaction had a positive effect on their purchasing intention. This means that the higher the customers' perception of CSR, the fairer they feel about the price, the more satisfied they feel themselves, the more likely they are to buy the company's products despite the higher price than those of the same category. The study, however, also shows that the purchasing power of consumers (here measured by

income) does not have an effect on the relationship between the perception of price fairness and their purchasing intention.

6. Implications

From the research results, it can be seen that the perception of CSR has a positive impact on consumers' purchasing intention. Therefore, enterprises should have policies to better fulfill their CSR as this will not only benefit the community, but will also motivate the consumers to purchase the products of that business although the price may be higher than that of the competitors. CSR policies should be widely popularized to all employees in the enterprise, so that any individual of that enterprise behaves responsibly towards society in any way. CSR policies also need to be publicized on the website and the mass media in order to improve consumers' insight and awareness of CSR.

This research also allows the author to conclude that the implementation of CSR policies into companies geared towards meeting the needs of consumers generates competitive advantages. That is to say that investing in CSR not only allows the companies to reduce the impact of business on society, but also leads to the generation of added value for the consumers. This study shows that the consumers are aware and appreciate that firms undertake CSR actions oriented to their needs. This in turn translates into an increase in the trust and commitment of the consumer to the companies that additionally intensifies consumer satisfaction and loyalty.

In addition, the Vietnamese National Assembly and the Government should complete legal systems relating to CSR, regulatory bodies should be firm in enforcing laws in corporations and CSR should be viewed as part of the code of ethics of any corporations. Also there should be a national policy from government to set parameters for CSR in Vietnam including employment policies, working conditions and welfare benefits, product quality, and on protecting the natural environment. The Government should also encourage the dissemination and sharing of examples of responsible businesses should be willing to be studied and the results disseminated widely. If a company operates ethically, the outcome of the study should be favourable, raising its reputation and position in the business community.

Moreover, the researcher also recommends that companies should deepen the performance of their CSR activities to cover more of environmental protection activities, performing in line with the legal requirements, meeting economic objectives and be ethical in their operations. Additionally, the quality of products/services provided by companies must also be critically paid attention to as they are paying critical attention to their CSR activities as well. It would be better to work all things in the right direction. This will make people see the firms as the best not only in the field of CSR performances but also the provision of better products. At the long run the profitability of the company would increase if they pay critical attention to these factors.

7. Limitations and further studies

Like all other studies, this study also has some limitations. Firstly, due to time and budget constraints, sampling method is convenient method; therefore, the sample may not be representative for the whole customers. For the same reasons mentioned above, the study has not been possible to conduct a full-scale test of the Carvalho et al model (2010). Instead, the model has been revised and removed two elements from the original model. Besides, the study was only conducted at several certain places around Hanoi; hence, it has not yet covered the perception of the customers in the whole city area.

In the future, if there is a study conducted based on this research, the researcher could conduct a linear regression test between the perception of CSR and two other factors (perception of price fairness and personal satisfaction). Moreover, the researcher can expand the research model based on the original model of Carvalho et al. (2010) in order to test the correlation between the independent variables of the original model and the complaining or switching intention. Finally, another study could be conducted in a wider scale than Hanoi, as well as with a wider variety of products.

Moreover, future studies related consumer purchase intention should also use perceived innovation, social media, and brand trust as a moderating variable. In current study our focus is on consumer purchase intention and nowadays trend change and people are more digitized and moving online shopping. So, future studies should be on online shopping behavior. Future research should conduct on risks with online shopping behavior like financial risk, product risk, non-delivery risk, time risk and privacy risk in Vietnam and other developing countries.

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DIGITAL TRANSFORMATION IN QUALITY MANAGEMENT OF VIETNAMESE ENTERPRISES – ADVANTAGES AND DIFFICULTIES

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Abstract

Today, the world is constantly fluctuating and changing. In the context of digital transformation, many changes have taken place in all areas on a global scale. Digital transformation has brought both opportunities and challenges to all businesses in the world and Vietnamese businesses. This requires businesses to modernize their quality management systems. The author's article presented the theoretical basis system related to quality 4.0. At the same time, based on VCCI's business survey data report, the author presented my opinions and personal assessment about opportunities and challenges of Vietnamese enterprises. Then, the author uses the change management mindset required by ISO 9001:2015 and the PDCA cycle in quality management to propose a roadmap for implementing digital transformation in quality management. Thus, the main contribution of the article is the author's views and comments on advantages and disadvantages, proposing a roadmap for digital transformation in quality management for Vietnamese enterprises.

Keywords: *advantages, difficulties, digital transformation, implementation roadmap, quality management.*

1. Introduction

The sudden outbreak of the Covid-19 pandemic brought many changes in awareness, commercial transactions, and business. Digital technology has a tremendous impact on almost all areas of activities. All enterprises must adapt to these changes. These enterprises must both maintain the quality management system and innovate their businesses in the direction of digital transformation. In many cases, maintaining both goals at the same time is one of the barriers for businesses to survive and develop. Therefore, launching the digital transformation journey has become one of the most important strategies of enterprises, to pursue, and stay competitive in the business environment. Digital transformation involves making full use of modern digital technologies to improve products, services, processes and enhance productivity (Frédéric Ponsignon et al., 2019). In recent times, the topic of digital transformation in quality management or the term "Quality 4.0" has received the attention of many researchers in the field of quality management. There are two main approaches to this area: first, quality professionals focus on how to improve and modernize quality management and the opportunities that organizations offer from digital transforming the quality management system. Besides, the second approach comes from technicians, maintaining the

management system by modern information technology. These different approaches have a major impact on the overall perception of quality management in the context of digital transformation (Carvalho et al., 2020). Therefore, the digital transformation of the quality management system is one of the urgent requirements of Vietnamese enterprises and businesses in the world. However, to the best of my knowledge, there are very few research articles on the advantages and disadvantages of Vietnamese enterprises as well as proposing a roadmap for businesses in implementing digital transformation in quality management.

The author's article will focus on the theoretical basis of quality management in the context of digital transformation, based on the results of the literature review and the collected secondary data, the author presents the advantages and disadvantages of Vietnamese enterprises in the digital transformation of quality management. In the last part of the article, based on the application of the PDCA cycle and change management requirements according to ISO 9001:2015, the author will propose a roadmap for digital transformation in quality management.

2. Theoretical framework and literature review

2.1. Quality management

According to ISO 9000:2015, quality management is the management related to quality. Quality management may include establishing the quality policy, quality objectives, and processes for achieving these quality objectives through quality planning, quality assurance, quality control, and quality improvement.

Also, according to ISO 9000:2015, quality management is built on seven principles: (1) Customer focus; (2) Leadership; (3) Engagement of people; (4) Process approach; (5) Improvement; (6) Evidence-based decision making and (7) Relationship management.

2.2. The Deming Cycle (Plan – Do – Check – Act Cycle/PDCA cycle)

The PDCA cycle is the Plan (P) - Do (D) - Check (C) - Act (A) cycle, which is considered an improvement tool applied in quality management, in all areas such as production, service provision, project implementation,... This is the principle introduced by Dr. Edwards Deming, an American quality management expert in 1950. This method is very effective in implementing continuous improvement, with the principle of doing better work in the future (Sarah Isniah, 2020).

This method is used to control and improve the supply chain management process or traditional ways of working of a company that involves a four-step iterative cycle. In other words, there are four main stages in the implementation including:

- Step 1: Planning (Plan - P) includes setting goals and processes to achieve the intended results.

- Step 2: Implementation (Do - D) includes the implementation of the work according to the established plan.

- Step 3: Check (Check - C) includes checking and monitoring the performance results, on the basis of comparison with the set goals.

- Step 4: Actions (Act – A) are actions that can be taken to improve performance (ISO 9001:2015).

2.3. Industry 4.0

Industry 4.0 is the integration and interaction of technology related to the physical and digital domains, which makes it stand out from other industrial revolutions. Production has moved from mass production to customization. It is no longer based on the effects of scale and volume, but towards flexible manufacturing, and high localization rates, close to the customer. It produces "on-demand" and no longer has to maintain inventory levels, adjusting production to demand. It is more predictive and autocorrect, and less prone to trial and error. The adoption of automated production processes or advanced decision support for operators reduces production downtime and waste while maintaining high-quality production. Therefore, Industry 4.0 can provide many opportunities for quality management (Demartini et al., 2017).

Hermann et al. (2015) defined "Industry 4.0" as "Industry 4.0 is a general term for technologies and concepts of value chain organization. Within industry 4.0's modular, Smart Factories, CPS oversees physical processes, creates a virtual copy of the physical world, and makes decentralized decisions. Through IoT, CPS communicates and cooperates in real time. Through IoS, both internal and inter-organizational services are provided and used by value chain participants."

The authors also affirm that "Industry 4.0" consists of four main components:

- Cyber-Physical Systems (CPS): Physical processes that affect computation and vice versa
- Internet of Things (IoT): Things and objects interact with each other
- Internet of Services (IoS): Provide support services and features through the Internet
- Smart Factory: A factory that assists humans and machines in performing their tasks.

Leineweber et al (2018) argue that, in order to facilitate the transition to industry 4.0, companies must first determine the current and future status by addressing three factors: technology, organization, and personnel, as well as the interrelationships between them. The goal of Industry 4.0 is to promote a flexible production model of products and services that are produced digitally and combined with real-time communication between all stakeholders and facilities in the industry during production process.

2.4. Digital transformation

Digital transformation is defined as the application of modern digital technologies to change the way organizations operate, do business and manage employees (Frédéric Ponsignon et al., 2019).

Digital transformation refers to the use of digital technology, not only to make things more efficient, but to transform and implement new ways of doing things, by leveraging entirely new capabilities and adjust them with digital tools (Berbegal-Mirabent et al., 2018).

A digital transformation strategy can take many forms, such as improving customer experience and engagement (e.g. customizing products and services, personalizing customer relationships); improve efficiency (e.g. automate and digitize tasks and activities to increase productivity); improve decision making (e.g. increase speed and efficiency of decisions at the strategic and operational level); improve innovation (e.g. introduce new products and services, design new customer experiences, etc.) and transform business models (e.g. implement strategies bringing about changes in operating systems and business mechanisms (Frédéric Ponsignon et al., 2019).

Digital transformation promises to enhance the effectiveness of quality management through the improvement of products, processes and service quality. Product quality is a decisive factor for the success of manufacturing companies. Effective quality management leads to sustainable cost reductions and facilitates the development of high quality products and enhancing customer satisfaction (Demartini et al., 2017).

2.5. Literature review on Digital transformation in quality management

Since quality management is an activity or a set of activities introduced into an organization, one can divide the methods for digital transformation into two main methods: quality management in organizations where digital transformation is being made their way, or in fact, these organizations have completed the digital transformation of quality management and the second group are those that have not develop a roadmap and plan for digital transformation (Berbegal-Mirabent et al., 2018).

“Quality 4.0” is a concept related to “Industry 4.0”. The term refers to quality digitization and how digital tools can impact technology, processes, and people. The changes that come with digitization must be considered as organizational issues; where the quality of work will be related to the search for new data; sources can be analyzed to provide insights to people, suppliers and customers,... to make their work better. The term “quality 4.0” closely links quality management with Industry 4.0 to enhance the performance, innovation and business model of enterprises (Raoul Sisodia, 2020).

Radziwill et al (2018) asserted that the three prerequisites to move towards “Quality 4.0” are the fit between strategy and goals, data governance and cybersecurity. To achieve this, the management system must first enhance data management and scalability as the foundation of the system itself, and then integrate processes and systems to improve coherence.

Digital quality management is a digital capacity that is used to sustain quality throughout the lifecycle of a product or service, and it is made up of activities that are aimed to improve how businesses give it to customers. Digital Quality Management is concerned

with not only the final output of digital capability, but also with all of the aspects and actions required to achieve it. It involves efforts aimed at preventing and correcting flaws in the product. Digital QM offers the capacity to measure the quality of digital customer encounters in addition to traditional quality management (Cristina Ralea et.al, 2019).

There is a link between the implementation of exploitation-oriented quality management practices and business performance in a variety of industrial and service industries, according to existing research (Frédéric Ponsignon et al, 2019). According to some studies, quality 4.0 is a superior option, since it allows businesses to determine the quality of a product in a lot more efficient manner, thanks to modern technology. Prescriptive data can now be added to the framework thanks to Industry 4.0 technology. Together with the solution, prescriptive analytics can forecast failure. Quality 4.0, in comparison to traditional quality management systems, can set greater criteria in terms of connection, growing business information technology, and operational technology. Enterprise quality management systems and enterprise resource planning can be integrated to manufacturing and laboratory technology in this way (Cristina Ralea et.al, 2019).

Also, the following issues can be effectively solved by establishing a digital system of information support for quality management processes (Logunova I.V, 2020): collection and analysis of evidence about products, processes, and enterprise management systems; process monitoring and diagnostics; decision-making based on employee relationship management, taking into account the standard requirements of the quality management system when making process changes; identification and analysis of risks associated with late identification of the causes of process deviations, application of risk-based prognostics.

3. Research design

3.1. Research objectives

The author's article was made with the following research objectives:

- Presenting the theoretical basis and theoretical framework for digital transformation and quality management in the context of digital transformation.
- Present some observations and assessments of the author about the difficulties and advantages of Vietnamese enterprises in the process of digital transformation of quality management based on secondary data collected through survey reports.
- Proposing a roadmap for Vietnamese businesses in implementing the digital transformation of quality management.

3.2. Research method

The article uses qualitative and literature review research methods, research data used in the article is secondary data which is synthesized by the author through business survey reports of VCCI.

The author designed a search technique for the literature review. One of the goals of this research is to review the available literature on a specific topic. In order to attain this goal, a literature review was conducted and finished in May of 2021. During the literature search, it was crucial to find relevant papers that supported the study's chosen topic. The authors did a literature review using Web of Science and Scopus, two scientific publication databases. The AIS Electronic Library has also been incorporated into the search process, resulting in more precise research findings, as well as a deeper coverage of the body of literature and a greater understanding of the subject.

Because conference papers are significant sources for the literature review process, this literature review research includes proceedings papers, journal articles, and book chapters.

The first stage in our literature study was to define search terms. In terms of keyword selection, the emphasis has been on terms related to the concepts of Quality management and Digital transformation. Given that the primary goal of this literature review is to find connections between the two concepts discussed, the following keyword combinations were chosen and used in the literature search.

In the second step of the literature review, the search results were limited. Papers that were found in more than one searchable database, as well as those with access limitations, were removed from further study. Due to the language barrier, papers that were not written in English were also removed from further research. As a consequence, papers were advanced to the next stage of the review process.

In the third part of the literature review, all of the papers were examined and analyzed according to their topic. Each publication looked into the accuracy of the search terms as well as the topic matching of each article with the study topic.

In the last stage, this study uses secondary research involves using already existing data. Existing data is summarized and collated to increase the overall effectiveness of research. Secondary research includes research material published in research reports and similar documents. These documents can be made available by public libraries, websites, data obtained from already filled in surveys. These data will be used for presenting the author's opinion about advantages and disadvantages of digital transformation in quality management. Data collected by VCCI will be translated and analyzed by the author to demonstrate author's assessment.

4. Discussion and results

From an overview of articles related to the topic, and based on business survey data of VCCI, the author presents the contributions and new findings of the article. Firstly, through the author's observations on the quality and productivity's policies, and through the survey report data (secondary data) of the VCCI's report, the author will demonstrate opportunities and challengings of digital transformation in quality management. These are the author's

personal assessments. After that, the author apply change management mindset of ISO 9001:2015 and PDCA approach to propose a roadmap for Vietnamese enterprises.

Therefore, the “Discussion and results” of the article focus on two main parts, corresponding to the two objectives set for the article. In the first part, the author presents personal assessments on the advantages and disadvantages of digital transformation in quality management based on the report data of VCCI. In the second part this section, the author proposes a roadmap for implementing digital transformation in quality management for Vietnamese enterprises based on the approach of quality management system according to ISO 9001:2015. These are completely new contributions of the author.

4.1. Advantages and disadvantages of digital transformation in quality management of Vietnamese enterprises

4.1.1. Advantages in digital transformation in quality management of Vietnamese enterprises:

Firstly, enterprises are facilitated by the State in terms of creating the necessary conditions to support and develop the digital transformation in quality management

One of the biggest opportunities that businesses in Vietnam receive is the support of state agencies. This is shown through the State's documents, policies and regulations on digital transformation and digital transformation in productivity and quality such as:

- Decision No. 1322/QD-TTg of the Prime Minister: Approving the national program to support enterprises to improve productivity and quality of products and goods in the period of 2021 - 2030.

- Directed by the Prime Minister in Decision No. 749/QD-TTg approving the "National Digital Transformation Program to 2025, with orientation to 2030", the Ministry of Planning and Investment coordinated with USAID to approve the project "Promoting reform and improving connectivity of small and medium-sized enterprises (LinkSME)" implements the Digital Transformation Business Support Program for the 2021-2025 period. Through the Program, businesses will receive technical support focusing on the following four main contents: Raising awareness, business vision and strategy on digital transformation; digitizing business activities such as marketing, sales...; digitize management processes, production processes, technological processes, financial management, accounting, human resources, reporting, monitoring and evaluation...; comprehensive digital transformation to create new products, services and models for businesses. In the first phase, the program will focus on supporting businesses in a number of industries and fields such as: mechanical engineering, electronics, manufacturing, agriculture, food processing...

- Decision No. 12/QD-BKHDT dated January 7, 2021 of the Minister of Planning and Investment approving the program to support businesses in digital transformation in the 2021-2025 period with the common goal of supporting and promoting digital transformation in enterprises through integration and application of digital technology to improve the efficiency

of production and business activities, enhance capacity and competitive advantage, and create new values for enterprises.

Secondly, there are a number of tools available to help businesses assess their approach to smart manufacturing and digital transformation.

Currently, in the world and in Vietnam, there are a number of tools to assess the accessibility of smart production and digital transformation capacity in the field of productivity and quality such as:

Smart Industry Readiness Index (SIRI)

- As a diagnostic tool that businesses can use to better understand key aspects of Industry 4.0/ Industrial Internet of Things (IIOT) concepts, as well as to assess the current condition of production facilities.

- SIRI provides factual analysis on the three fundamental foundations of Industry 4.0 - Process, Technology and Organization.

- Originally developed in partnership between TÜV SÜD and the Economic Development Board of Singapore, the Smart Industrial Readiness Index (SIRI) is based on the Reference Architecture Model Industry 4.0 framework (RAMI 4.0) and has been thoroughly endorsed by an advisory board of industry and academic experts. To ensure that it is an easy-to-use tool, the index has been applied to businesses and their employees, in a variety of manufacturing sectors such as: chemicals, medical, electronics, aeronautics universe and across all business sizes, including small and medium enterprises (SMEs).

Digital Transformation and Smart Manufacturing Readiness Assessment Toolkit (ViPA)

- This is a toolkit to assess business readiness, geared towards digital transformation and smart manufacturing.

- This toolkit is built on the four main pillars of business management, productivity management, physical infrastructure for digital transformation and smart manufacturing.

- Each of these pillars is divided into four detailed contents, which are in turn evaluated by 16 relevant indicators. These 16 metrics form the basis for measuring business readiness for digital transformation and smart manufacturing. The data used in this toolkit is collected through an online survey of businesses.

- Each criterion is assessed on 5 levels (1 to 5) including minimum requirements that must be met to complete the level. Level 1 describes businesses that do nothing or have little/or no foundation to prepare for digital transformation. Level 5 describes best practice businesses - those that have successfully implemented all digital transformation business activities. Level 5 of the model also describes the state of fully realizing the goal vision - when the entire value chain is integrated in real time and interoperable.

These are tools to help businesses assess their digital transformation status and capabilities, and from there, help them build an appropriate implementation plan.

Thirdly, Vietnamese businesses have realized the role of the application of digital technologies, especially in the context of Covid-19 in improving the quality of products and services.

According to survey results of VCCI, 2020, in Vietnam, 50.9% of businesses have applied digital technologies before the Covid-19 pandemic broke out. The effects that digital transformation brings are not only improving productivity, optimizing resources, increasing customer experiences, but also helping businesses build competitiveness and keep pace with time and lead the trend. In addition, 25.7% of enterprises started applying digital technologies since Covid-19 and intend to continue using these technologies.

4.1.2. Difficulties in the digital transformation of quality management in Vietnamese enterprises:

Firstly, digital transformation in quality management may require huge expenditure and large capital

Industry 4.0 requires huge capital investment. In the end, automation will save management money in the long run but businesses will need some money to invest and launch. Businesses must think of ways to start a new approach by saving money (AMMC et al., 2016).

According to the survey results, 55.6% of businesses said that the barrier they face when applying digital technology is because of the high cost of digital technology applications.

Secondly, lack of digital infrastructure

To apply digital tools, specialized management software sometimes requires businesses to spend a relatively large amount of cost, especially investment in the procurement of new equipment or machinery, modern automation lines as well as re-synchronizing the information technology infrastructure in the enterprise. Lack of digital technology infrastructure also becomes the next major barrier that makes it difficult for businesses, accounting for 38.9% of enterprises participating in the survey (Business Survey, VCCI, 2020).

Outdated and inconsistent information technology infrastructure will hinder the application and connection of information technology software and solution systems for activities related to employees, partners and employees. Outdated machinery and equipment is also the reason why it is difficult for many businesses to integrate internal information technology tools in a comprehensive way (18.3%).

Thirdly, the shortage of human resources

Digital transformation in quality management requires staff to be trained. Enterprises face difficulties in maintaining a workforce that meets the capacity requirements for digital transformation in quality management. However, businesses have difficulty recruiting and finding qualified and experienced professionals to deploy these systems. Digital transformation can increase job opportunities for workers, but at the same time, digital transformation of quality management also causes gaps in the qualifications of the workforce. Workers need to adapt to changes in the digital transformation in quality management. They are the ones who face the biggest challenges, especially with older workers.

In digital transformation of quality management, the shortage of internal human resources to apply digital technology is the next barrier, accounting for 32.3% (Enterprise Survey, VCCI, 2020). In order to apply digital tools in production and business processes, it not only requires employees in the enterprise to know how to use modern machinery, equipment and software, but also to ensure the ability to repair when errors arise and carry out regular maintenance activities. Organizations that act as brokers and services in the technology market to connect technology supply and demand are still limited, leading to businesses' lack of updating and understanding of new technology trends (Enterprise Survey, VCCI, 2020).

Fourthly, despite being aware of the importance of digital transformation, many businesses are not yet ready to do digital transformation

In addition to resource limitations, cognitive and psychological limitations are the barriers that make many businesses choose to stay out of the current digital transformation trend. Digital transformation requires businesses to be ready to change, ready to give up traditional business models to establish new business models, re-establish working processes, eliminate middlemen and redundant stages. The mentality of being afraid to change, afraid to give up traditional business practices that have been maintained for many years makes it difficult for 21.9% of businesses to conduct digital transformation (Business Survey, VCCI, 2020).

4.2. Proposed implementation roadmap for Vietnamese enterprise to implement digital transformation in quality management

4.2.1. Change management mindset as required by ISO 9001:2015

Clause 6.3 of the planning of changes required by ISO 9001:2015 specifies: when the organization determines the need for changes to the quality management system, these changes shall be made by the requirements of ISO 9001:2015 according to a planned way.

The organization must consider:

- a) the purpose of the changes and their potential consequences
- b) integrity of the quality management system
- c) availability of resources
- d) the assignment and reassignment of responsibilities and authorities.

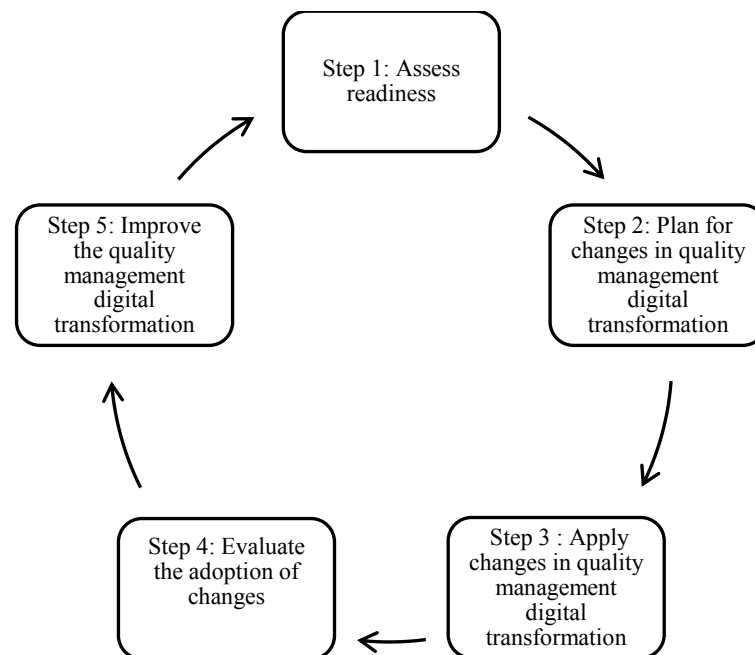
Clause 8.1 (ISO 9001:2015) on the performance planning and control also requires the organization to control planned changes and consider the consequences of unintended changes, implement take action to mitigate any adverse effects as needed.

Clause 7.1.6 (ISO 9001:2015) on organizational knowledge also requires the organization to determine the knowledge necessary for the performance of its processes and to achieve product and service conformity. When addressing changing needs and trends, the organization must review its current knowledge and determine how to obtain or access the necessary additional knowledge and updates.

4.2.2. Proposed implementation roadmap based on the combination of change management mindset according to ISO 9001:2015 and PDCA cycle

Based on a literature review, a theoretical basis, and a theoretical framework based on the Plan - Do - Check - Act cycle approach, the change management approach is reflected in the ISO 9001:2015 standard, and based on the assessment of advantages and disadvantages in the digital transformation of quality management in section 4.1, the author proposes a roadmap for implementing digital transformation in quality management for businesses as follows:

Figure 1. Digital transformation in quality management roadmap for Vietnamese enterprises



Source: author's research

Step 1: Assessing the readiness

- The first step for the organization is assessing its readiness to implement a digital transformation in quality management. An organization needs to assess its readiness before implementing digital transformation in quality management to understand its strengths, weaknesses, and identify opportunities for improvement.

- Evaluate process stability and workflow.
- Monitor new regulations and standards related to data, automation, and digitization.
- To assess their readiness in the digital transformation of quality management, organizations can apply the supporting toolkits mentioned and introduced by the author, the most popular of which are: Digital Transformation and Smart Manufacturing Readiness Assessment Toolkit (ViPA) and Smart Industry Readiness Index (SIRI).

Step 2: Plan for changes in quality management digital transformation

After assessing the readiness for the implementation of the digital transformation in quality management, organizations need to develop a plan for the implementation of digital transformation based on the results of the analysis of the readiness assessment.

According to clause 7.1. Resources in the ISO 9001:2015 standard, organizations need to prepare and plan to ensure that the necessary resources are identified and provided for the quality management system. Therefore, to plan for the digital transformation of quality management, organizations need to plan and ensure sufficient resources, in terms of people, infrastructure, and finance,...

- In terms of personnel, the organization needs to plan for changes related to the assignment of responsibilities and authorities of departments in the organization.

- Clause 7.2. Competence of the ISO 9001:2015 standard confirms:

The organization shall:

- a) Determine the necessary competence of person(s) performing work under the organization's control that affects the performance and effectiveness of the quality management system

- b) Ensure that these persons are competent based on appropriate education, training, or experience

- c) Where possible, take actions to achieve the required competence and evaluate the effectiveness of actions taken

- d) Retain appropriate documented information as evidence of competence.

Appropriate action may include, for example, providing training, mentoring, or reassignment of personnel being employed; or hire or contract qualified personnel.

Therefore, organizations need to develop an appropriate training plan to ensure that employees in the organization can meet the capacity requirements in digital transformation.

- In addition, the organization also needs to prepare capital and financial resources to prepare for the implementation of digital transformation activities.

- Moreover, organizations need to have a plan to invest in equipment, infrastructure, and technology for digital transformation in quality management.

Step 3 – Applying the changes and performing the digital transformation in quality management

- At this stage, the organization needs to make and apply changes to the quality management system according to the plan developed in step 2.

- Organizations can make adjustments to processes. In addition, the organization needs to perform tasks such as: allocating and assigning personnel, operating and maintaining infrastructure, information and data systems,...

- During this stage, the organization can pilot it in a number of parts and departments within the organization, before sustaining large-scale change.

Step 4 – Evaluating the application of changes

- Evaluate the results of implementing the changes
- Evaluate the results of digital transformation in quality management

First, the role of organizational leadership is to control and measure performance. Specifically, organizational leadership can design and implement performance metrics to assess the impact of digital transformation based on predefined criteria (e.g. efficiency and speed; disability and problems; employee skills, satisfaction and interaction with digital solutions; customer satisfaction, etc.

Organizational leadership also conducts assessments to ensure implemented digital solutions align with strategy and address identified needs appropriately. Performance information will then be shared and communicated to stakeholders.

Step 5 – Improving the digital transformation in quality management

- Identify ways to improve the quality of processes
- The final phase consists of two main activities: leveraging newly acquired knowledge and promoting continuous improvement.

Furthermore, top management needs to share and spread a culture of continuous improvement throughout the organization. Specifically, the role of the leader is to organize, facilitate, and coordinate an innovative collaborative process through digitally powered teams. In addition, organizational leadership plays an important role in diagnosing and solving, or assisting in the resolution of problems arising from the use of digital tools and solutions.

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THE INFLUENCE OF EMPLOYEE RELATIONSHIP PRONENESS IN CREATING EMPLOYEE LOYALTY WITHIN A VIETNAMESE BANK CONTEXT

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Abstract

The aim of this study is to investigate the impact of employee relationship proneness in creating employee loyalty including attitudinal and behavioural loyalty within a Vietnamese bank context. In order to address these aims, structural equation modeling with two-steps approach was recruited with 315 valid samples. The evidence illustrated the increase in employee relationship proneness resulted in the rise of employee loyalty in both attitudinal and behavioural loyalty. Comparing to the literature review and prior study, several inconsistent findings were figured out. Reasons explaining for these different results were analysed. Basing on these findings, significant implications were suggested for managers and human resources practitioners.

Keywords: *Employee relationship proneness, attitudinal and behavioural loyalty, calculative commitment, normative commitment, affective commitment*

1. Introduction

Employees are considered as one of the most vital resources who assist organizations to achieve their goals (Zhou, 2021). This leads to the fact that organization always wants to remain long-term relationship with these employees by putting great emphasis on employee loyalty.

Employee loyalty has been defined as a willing sacrifice of employees to reinforce the relationship between them and their employers (Yao, Qiu and Wei, 2019). In other words, loyalty will make employees create favourable behaviours for their organizations such as remaining with their organizations (Ton & Huckman, 2008), creating marvellous performance that goes beyond normal duty (Atmojo, 2015). Moreover, in the service industry, employee loyalty is vital factor driving customer loyalty (Heskett et al, 1994) as it enables the employee to attempt to provide the service with consistent and good quality to customers (Dhar, 2015). This indicates that achieving employee loyalty not only helps organization to retain employee but also motivate them to perform high productivity which leads to the organization's success (Suliman and Al-Junaibi, 2010).

As illustrated above, employee loyalty brings many advantages for organization, therefore, considerable researchers have devoted to study about employee loyalty and its surrounding issues such as loyalty and its restrictions, appropriateness and targets (Provis,

2005), the role of loyalty in downsizing (Niehoff et al, 2001) or approaches to promote employee loyalty (Roehling, et al, 2001). However, most of the researches about loyalty were taken in the Western countries (Suliman and Iles, 2000). This led to the fact that the extent of these studies can be applied to other cultures remains debatable (Yousef, 2003).

Moreover, In the Vietnamese banking filed in which this study was taken, it is reported that recruiting an employee who want to remain long-term relationship with employers is becoming difficult as the tendency of changing jobs is increasing (Khuong and Tien, 2013). Consequently, Vietnamese banks have to waste large amount of money to recruit and train new employees (Khuong and Tien, 2013).

Hence, in order to fill the gap in the literature about employee loyalty in Asian context and present significant implications for manager and human resources practitioners in choosing employee who has high probability to become loyal employee, the research of investigating the influence of employee relationship proneness in creating employee loyalty within a Vietnamese bank context, which was taken in Belgium, a Western setting by Bloemer and Odekerken-Schroder (2006), is worth conducting.

The aim of this study is to ascertain the influence of employee relationship proneness as a personality trait on employee loyalty within a bank context in Vietnam, an Asian country.

2. Literature review

2.1. Employee relationship proneness

Although the relationship proneness has been used from 1980s in customer context (Bouguerra and Mzoughi, 2011), there is an ongoing discussion about its concept (De Wulf et al, 2001). This leads to different perspectives about what characterizes the concept of relationship proneness. However, there is a common denominator about some features of this concept (Boouguerra and Mzoughi, 2011) that is relationship proneness is an individual inclination to involve in relationships (Dick and Basu, 1994). There are three main approaches representing for three main perspectives about relationship proneness (Boouguerra and Mzoughi, 2011). In order to understand thoroughly the meaning of this terminology, it is worth mentioning three theoretical approaches to its concept.

The first is the contextual approach. It is said that the relationship proneness is influenced by the contextual nature such as, in the customer context, relationship proneness is impacted by product type (Odekerken-Schroder et al, 2003), the nature of service (Berry, 1995). This means that the relationship proneness is the individual tendency to engage in the relationship in a given context. This tendency will vary depending upon the nature of the environment which the relationship is working within (Bendapudi and Berry, 1997). Financial services which is considered the favourable environment for the development of relationship proneness (Boouguerra and Mzoughi, 2011) is the typical example for this situation.

In the psychological method, relationship proneness is seen as a personality trait (Wei et al., 2013). Personality is constituted by the combination of inner psychological

characteristics (Cattell, 1965), referring to traits (Linehan, 2008). A trait is any unique, relatively stable features that enable to differentiate one individual from others (Guilford, 1959). This indicates that, a personality trait is one of the inner psychological features of individual personality, which is distinctive, relatively stable. Thus, as a personality trait, employee relationship proneness is defined as an approximately stable, conscious, voluntary tendency of individual to intrinsically commit in the emotional relationship with organization. Moreover, this tendency is different in different individuals. Furthermore, as this tendency is a personality trait, it reflects the true intrinsic desire or emotional attachment rather than the consideration of appropriateness in committing relationship with organization (Dick and Basu, 1994). Thus, employee relationship proneness in this perspective has dedicated base.

The third approach believed that the nature of relationship proneness is the combination of two above perspectives about relationship proneness (Bouguerra and Mzoughi, 2011) referring to contextual and psychological approach. In fact, relationship is not only driven by the setting in which it takes place but also the individuals' personality (Lindgreen and Pels, 2002). Therefore, from this viewpoint, relationship proneness is defined as an approximately stable, conscious, voluntary tendency of individual to intrinsically commit in the emotional relationship with organization (Fernandes and Proenca, 2008) in a given context. This means that, this tendency is different in different individuals and is distinguishable in distinguishable contexts. In this research, the perspective of psycho-contextual vision is adopted as it reflects thoroughly the psychological and contextual aspects in explaining the relationship proneness (Bouguerra and Mzoughi, 2011).

To sum up, in line with Bloemer and Odekerken-Schröder (2006) in this research, employee relationship proneness is seen as a personality trait, which describes an approximately stable, mindful, voluntary inclination of individual to intrinsically engage in the emotional relationship with organization in a bank context.

The mindful tendency emphasizes that the employees are aware of their behaviours and the situation but still be willing to take action to commit. This is different from loyalty tendency which is based on the convenience or inertia (Dick and Basu, 1994). Thus, relationship proneness is built on the positive and dedicated motivation to commit to relationships (Bendapudi and Berry, 1997).

Additionally, this concept focuses on the tendency to engage in the relationship which is opposite to the tendency to retain or enhance the relationship in the bank (Bloemer and Odekerken-Schröder, 2006). In order words, employee relationship proneness expresses the intrinsic desire of employee to build the relationship when employees have not got the official relationship yet with their employers.

As relationship proneness is personality trait which expresses the strong desire to commit to the relationship, employee relationship proneness is seen as an individual

difference variable (Bloemer and Odekerken-Schröder, 2006) that is employed to indicate which individual is most inclined to reveal attitudinal and behavioural loyalty with the bank.

2.2. Employee loyalty

Although loyalty is one of the topic which has gained a lot of interest since 1960s (Ibrahim and Falasi, 2014) and has wide discussion of literature (Martensen and Gronholdt, 2006), its' concept remains loosely expounded (Aityan and Gupta, 2012). Thus, in order to understand thoroughly the meaning of employee loyalty, it is worth considering different perspectives about employee loyalty.

In the attitudinal approach, loyalty is seen as the psychological state, a feeling of attachment (Leck and Saunders, 1992) or commitment to organization (Yee et al, 2009; Allen and Meyer, 1990). From this perspective, employee loyalty can be seen as the feeling of desire to remain relationship with their organizations. This psychological inclination can derive from emotion (Hajdin, 2005), moral nature (Coughlan, 2005) or the combination of many factors including emotional, calculative and moral nature (Meyer and Allen, 1991). The strength of this pure attitudinal approach is that because this perspective defines loyalty as a feeling, it interprets clearly the true motivation that feeling or loyalty derives from. However, since loyalty, in this purely attitudinal approach, is seen as the psychological state, the main shortcoming is that loyalty is difficult to measure or observe directly (Guillon and Cezanne, 2014). Thus, it is difficult for employers to evaluate which employee is loyal to them.

In contrast to attitudinal approach, behavioural approach defines loyalty as apparent and favourable actions that employees behave for their organization's goal (Guillon and Cezanne, 2014). Because this purely behavioural approach see loyalty as obvious actions, therefore, it is easier to measure directly compared to the loyalty's concept of attitudinal approach. However, this method still contains drawback. Although it appears easily to observe directly, the interpretation about the true motivation behind that action remains fragile. It is argued that some behaviours which are considered as loyalty such as the action of intending to stay in the current organization in the long term may reflect the truth that this individual lacks opportunities to be mobile (Guillon and Cezanne, 2014).

Hence, after analysing the attitudinal and behavioural approach we can see that, each approach has its own advantages and disadvantages. In order to compensate for these shortcomings of the attitudinal and behavioural approaches, a mixed method was utilized in this study. This perspective argues that loyalty contains two dimensions: Internal and external (Mehta et al., 2010). The internal dimension which refers to attitudinal loyalty, taken from attitudinal approach, is considered as explanatory or complementary constructs for behavioural loyalty (Guillon and Cezanne, 2014). The external dimension which is considered as behavioural loyalty, employed from behavioural perspective, is the manifestation of attitudinal loyalty (Mehta et al., 2010). To sum up, this approach seen employee loyalty as a procedure in which attitudinal loyalty toward organization is reflected to external environment by behavioural loyalty.

2.2.1. Attitudinal loyalty

As mentioned in the section 2.2, attitudinal loyalty is the antecedent process of behavioural loyalty which is defined as psychological commitment or attachment that makes employee has a strong feeling of desiring to maintain the relationship with their organizations. There are many perspectives about the nature of psychological commitment that drive the employees' action of being loyalty to their organization (Allen and Grisaffe, 2001). As a result, multi-dimensional construct, which is the combination of different components representing for distinguishable nature of psychological state, has received wide acceptance (Allen and Grisaffe, 2001). In this study, the three-component model offered by Allen and Meyer (1990) is adopted as it incorporates the majority of characteristics of attitudinal loyalty (Ibrahim and Falasi, 2014). The model presents three components which characterizes attitudinal loyalty or attitudinal commitment of employee toward their organizations namely: Affective, continuance (calculative) and normative commitment.

Affective commitment represents for the most common perspective about the nature of psychological state of attitudinal loyalty (Allen and Meyer, 1990). This viewpoint was adopted by Kanter (1968) and Buchanan (1974) who saw commitment as a strong feeling of affection, created by the enjoyment that employees have with their organizations, to the organization's goal. Hence, affective commitment is considered as an emotional attachment which strongly committed employees have toward their organizations (Allen and Meyer, 1990; Geyskens et al., 1996). Since this commitment are established by the enjoyment of remaining the relationship with the organization, the employee who has affective commitment is willing to devote their ability to work for the sake of their firms. In other words, affective commitment is driven by intrinsic motivation which has dedicated fundamental.

Calculative commitment was built by the viewpoint that affective commitment just plays small role in explaining the nature of psychological state of attitudinal loyalty (Allen and Meyer, 1990). Calculative commitment is seen as the inclination to involve in the range of activities (Becker, 1960) depended on the comparison of profit and cost between activities (Rusbult and Farrell, 1983). In other words, the commitment to particular organization will occur when the individual sees the benefit to stay is bigger than the benefit of leaving. Thus, Calculative commitment or continuance commitment can be describe as a need to remain in the organization with the given transition cost they perceived (Geyskens et al., 1996). This indicates that calculative commitment is not formed by intrinsic motivation but extrinsic motivation that is the consideration of financial cost.

Normative commitment is the less popular perspective about the nature of psychological state of attitudinal loyalty (Allen and Meyer, 1990). This approach is based on the perspective that commitment is the result of internalizing moral obligation to act responsibly to the organization to help them achieve their goals (Wiener, 1982). This approach believed that individuals will base on their moral standards to figure out what is

right and wrong and then act according to the right things. These moral obligations of employee are constituted by two types of moral standards including the moral values the individual takes from family, social, culture of the period before the individual starts to work for the organization and the moral values the individual learns in the period of working for the organization. (Wiener, 1982).

As affective, calculative and normative commitments are three separate components representing for three psychological states of attitudinal loyalty, thus, the extent to which individual encounters these states is varied. (Allen and Meyer, 1990). This indicates that each commitments can be used to measure separately and the set of behavioural loyalty is the result of separable commitments (Allen and Meyer, 1990)

2.2.2. *Behavioural loyalty*

As analysed in section 2.2, behavioural loyalty is defined as the reflection of attitudinal loyalty, the favourable actions which employee behaves to express the strong feeling of wanting to remain the relationship with their organizations. In order to measure the employees' behavioural loyalty, the model of Zeithaml et al (1996), adjusted by Bloemer and Odekerken-Schroder (2006) was adopted in this study as it is the model offers the comprehensive framework about multi-dimensional aspect of behavioural loyalty concept (Bloemer and Odekerken-Schroder, 2006).

In the customer context, Zeithaml et al (1996) presented multi-dimensional framework which incorporates different types of customers' behaviours when they interact with the sellers, namely: Word-of-mouth, purchase intention, price sensitivity and complaining. The model of Zeithaml et al (1996) was established by basing on the previous researches' results.

Firstly, the finding illustrated that there is a strong connection between the perception of service quality and behaviour intention namely word-of-mouth (Parasuraman et al, 1991). This indicates that, the customer who is satisfied with the company's products is willing to say positive thing about company (Boulding et al., 1993) and suggest the company's product to other people (Reichheld and Sasser, 1990).

Similarly, the study of Anderson and Sullivan (1990) demonstrated that satisfied customer will be willing to buy the product again. Thus, purchase intention regarding as the intention to buy the product again is derived from the satisfied feeling of customer.

Moreover, according to Zeithaml et al (1996), the satisfied customer is going to pay higher price for the product. This demonstrated that price sensitivity, referring to the action of paying higher price comparing to other products with the same quality, is driven by satisfied feeling.

Contrary to word-of-mouth, purchase intention and price sensitivity driven by satisfaction, the finding of Singh (1988) proved that complaining behaviours are the result of customer's dissatisfaction. Furthermore, complaining and leaving are two main consequences of dissatisfaction (Hirschman, 1970) and they are usually go together (Solnick and

Hemenway, 1992). This means that complaining is driven by dissatisfaction and the customer who has high level of dissatisfaction will get high probability of leaving organization.

As each researches' findings above illustrated each types of behaviours driven by two main type of customers' feeling constituting satisfaction and dissatisfaction when they interact with the sellers, Zeithmal et al (1996) integrated all these behaviours to result in multi-dimension framework used to measure customers' behaviours when customers use the company's products. Zeithmal et al (1996) stated that favourable actions from satisfied feeling are the representation of customer loyalty. Although complaining from dissatisfied feeling is not the sign of loyalty, the low level of complaining might be the loyal indication. Thus, these four types of customer behaviours are combined to measure loyal behaviours in the customer context (Blomer and Odekerken-Schroder, 2006). In line with Zeithaml et al. (1996), Bloemer and Odekerken-Schroder (2006) adapted these concepts in the employee context with some adjustments to illustrate different aspects of behavioural loyalty of employee.

Word-of-mouth (WOM) refers to the situation in which employees are willing to comment positively about their organizations and to introduce their organizations to others.

Intention to stay (In the customer context, it is purchase intention) is the situation in which the employees always sees their organizations as the first choice in choosing employers to work for.

Benefit insensitivity refers to the situation in which employee still stays at their current organization despite the fact that they are offered a higher benefits or salaries from other companies.

Finally, Bloemer and Odekerken-Schroder (2006) present the concept of complaining behaviour which has opposite meaning compared to the concept of complaining offered by Zeithaml et al (1996). Complaining in the employee context pertains to the willingness and readiness of employees to give their voice about shortcomings of their organization to improve it and not criticize it to external organizations or leave their organization without further notice. As a result, complaining has positive meaning which enable the organization to be improved by basing on the criticism of the company's problems.

Hence, word-of-mouth, intention to stay, price insensitivity and complaining in the employee context are driven by employees' attitudes. Additionally, as these behaviours in the employee context contain positive meaning, they are seen as favourable actions which manifest the attitudinal loyalty of employee who are intrinsically want to remain the relationship with their organizations.

3. Hypothesis Development

3.1. Hypothesis of testing relationship between employee relationship proneness and attitudinal loyalty

Employee relationship proneness is considered as personality trait or individual different construct (Bloemer and Odekerken-Schröder, 2006). According to Rylander et al (1997), individual traits are seen as an antecedent of attitudinal commitment. Moreover, in the customer context, it is illustrated that relationship proneness influenced on the commitment to a relationship (Storbacka et al., 1994). Hence, as employee relationship proneness is the individual trait which describes the desire of employee to commit to relationship with their employers consciously, it is expected that employee relationship proneness impacts on three components of attitudinal loyalty.

Furthermore, as mention in section 2.2.1, while affective and normative commitment express the intrinsic motivation which are driven by dedicated fundamental and moral standard respectively, calculative commitment is formed by extrinsic motivation that is financial cost. Hence, as employee relationship proneness expresses the intrinsic motivation to commit in relationship with employers, it is expected that employee relationship proneness has positive influence on affective and normative commitment and has negative effect to calculative commitment. Thus, basing on these analyses, the hypotheses are as below:

H_{1a}: Employee relationship proneness has positive influence on the affective commitment.

H_{1b}: Employee relationship proneness has negative influence on the calculative commitment.

H_{1c}: Employee relationship proneness has positive influence on the normative commitment.

3.2. Hypothesis of testing relationship between attitudinal loyalty and behavioural loyalty

Attitudinal loyalty is considered as explanatory constructs for behavioural loyalty (Guillon and Cezanne, 2014). Furthermore, it is illustrated that the individuals who are committed to a relationship are likely to act as they are consistent with their commitment (Moorman et al., 1992). This illustrates that commitments representing for attitudinal loyalty have influence on behavioural loyalty.

The psychological nature of normative, calculative and normative commitment is distinguished in terms of the motivation underpinning them namely, dedication, moral obligation and financial benefits respectively. (Allen and Meyer, 1990). This leads to the independence and difference in the antecedent function of these three attitudinal commitments to behaviours (Mowday et al, 1982). Thus, the influence of each commitments on loyal behaviours is different.

In terms of affective commitment, as analysing in the section 2.2.1, this commitment expresses the intrinsic desire, driven by dedicated fundamental, to be loyal to the organization. Additionally, as scrutinizing in the section 2.2.2 behavioural loyalty refers to the favourable actions which bring benefits for organization to achieve their goals. Thus it is expected that affective commitment has positive influence on the behavioural loyalty.

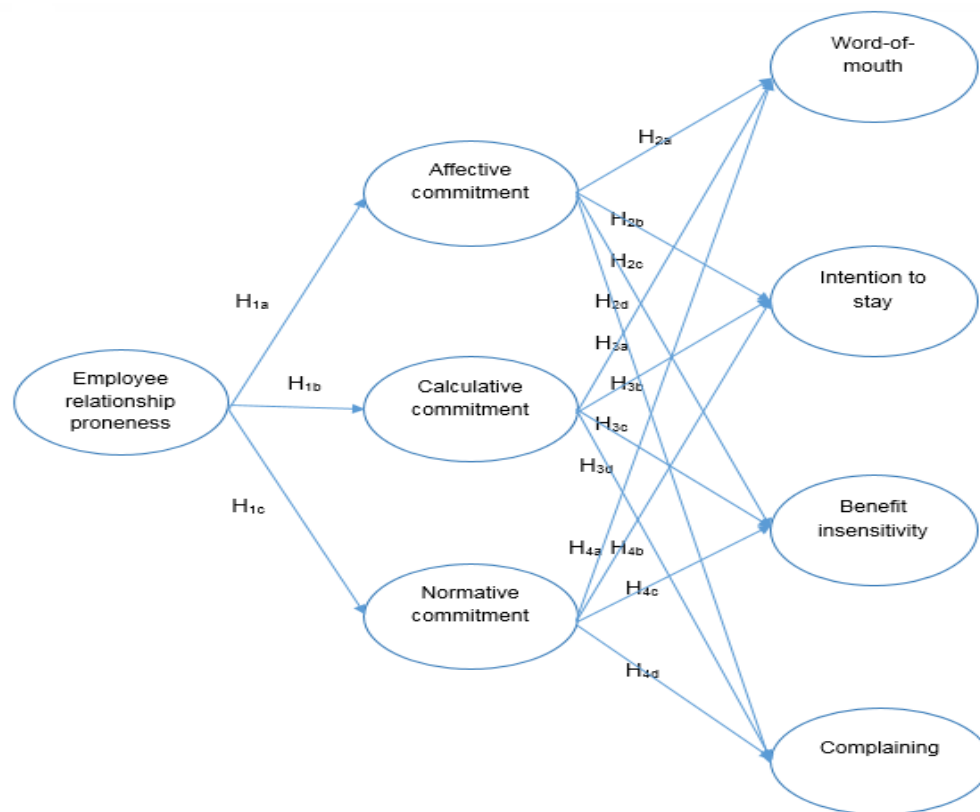
In contrast to affective commitment, calculative commitment is established by the comparison of financial benefits between staying and leaving (Rusbult and Farrell, 1983). This indicates that the reason which keeps the employee remaining relationship with their employers is the benefits offered by that firms are greater than the others, instead of the intrinsic desire. Meanwhile, as illustrated in the section 2.2.2, loyal behaviours are the reflection of the intrinsic desire of employee to work for their organizations. Therefore, owing to the opposite between the nature of calculative commitment and the nature of psychological state which drives loyal behaviours, it is expected that calculative commitment has negative influence on the behavioural loyalty, including positive word-of-mouth, complaining, benefit insensitivity, with the exception of intention to stay. The employee, driven by calculative commitment, always depends on the consideration of benefits between choices to make decision. Therefore, the decision of staying in the current organization illustrates that it is the best choice when comparing to others. As a result, it causes the strong feeling of wanting to stay, thus, calculative commitment might be expected to have positive impact on intention to stay.

In the case of normative commitment, this commitment is based on the moral obligation to act responsibly to help organization reach its' goals (Wiener, 1982). Thus, the employee who has high level of normative commitment will intrinsically want to do the right things base on the moral values they perceived. Additionally, as mentioned in the section 2.2.2 behavioural loyalty are not only the actions which reflect the attitudinal loyalty but also the favourable actions which bring the benefits for the organization to help them achieve its target. As a result, it is expected that normative commitment will have positive influence on behavioural loyalty.

Base on above scrutiny about the influence of affective, calculative and normative commitment on behavioural loyalty, the hypotheses are as below:

- H_{2a}: Affective commitment has positive influence on word of mouth
- H_{2b}: Affective commitment has positive influence on intention to stay
- H_{2c}: Affective commitment has positive influence on benefit insensitivity
- H_{2d}: Affective commitment has positive influence on complaining
- H_{3a}: Calculative commitment has negative influence on word of mouth
- H_{3b}: Calculative commitment has positive influence on intention to stay
- H_{3c}: Calculative commitment has negative influence on benefit insensitivity
- H_{3d}: Calculative commitment has negative influence on complaining
- H_{4a}: Normative commitment has positive influence on word of mouth
- H_{4b}: Normative commitment has positive influence on intention to stay
- H_{4c}: Normative commitment has positive influence on benefit insensitivity
- H_{4d}: Normative commitment has positive influence on complaining

Figure 1 Research's model



4. Research Methodology

4.1 Measurement Development

This study used self-completed questionnaire with convenient sampling technique to collect quantitative primary data. Specifically, web-based questionnaire was used to collect data in Vietnam.

This study recruited 8 constructs, including employee relationship proneness, affective commitment, calculative commitment, normative commitment, word-of-mouth, intention to stay, benefit insensitivity and complaining based on multiple-items scale of prior studies.

The scale for measuring employee relationship proneness adapted in this study was originally derived from the scales of De Wul et al, (2001) who develop the measurement for ERP in the customer context and Blomer and Odekerken-Schroder (2006) adopted it in the employee context. Affective commitment, Continuance Commitment Scale items and Normative commitment were adapted from Allen and Meyer (1990).

4.2 Data analysis

The data analysis of this study used IBM SPSS Statistical Package and AMOS software. The descriptive statistics analysis was initially taken by using SPSS to gain the general information about the demographics of the participants and the scales' scores. Then, the two steps modelling approach (Anderson and Gerbing, 1988) were performed to employ structural equation modeling (SEM) with maximum likelihood method supported by AMOS software

5. Results

5.1. The descriptive statistics of sample demographics

The target population of this study was the employees working in Vietnamese bank. After the procedure of collecting data, total valid 315 questionnaires were achieved. Table 1 illustrated that the majority of participants were male employees that accounted for 53.7%. Furthermore, the number of participants with the age group of 26-30 accounted for the greatest proportion with the percentage of 56.8%, while the smallest at 0.3% were for the age group of 46-50 and over 55. In terms of education level, the vast majority was comprised of Bachelor degree and Master degree which were 97.1%. Finally, in case of working experience, almost respondents had 1 to 5 years of working for the current bank, followed by the group of below 1 year, 5-10 years and over 10 years with the percentage of 20.6, 19.4, 2.2 respectively.

Table 1: Participants' statistic demographics

	Frequency	Percent (%)	Cumulative (%)
Gender			
Male	169	53.7	53.7
Female	146	46.3	100
Age			
21-25	38	12.1	12.1
26-30	179	56.8	68.9
31-35	79	25.1	94.0
36-40	9	2.9	96.8
41-45	5	1.6	98.4
46-50	1	0.3	98.7
51-55	3	1.0	99.7
Over 55	1	0.3	100.0
Education level			
College degree	8	2.5	2.5
Bachelor degree	196	62.2	64.8
Master degree	110	34.9	99.7
Doctorate degree or above	1	0.3	100.0
Working experience			
Below 1 year	65	20.6	20.6
1-5 years	182	57.8	78.4
5-10 years	61	19.4	97.8
Over 10 years	7	2.2	100.00

5.2. Scale assessment

5.2.1. Reliability testing

As can be seen in table 2, the Cronbach's alpha for all constructs' scales ranged from 0.868 to 0.950 which exceed the threshold of 0.7 recommended by Nunnally (1978). This presented that all the measurement scales for all constructs in this study achieved high reliability which refers to the high consistency within items in each construct.

5.2.2. Convergent and discriminant validity testing

Table 2 clearly shows that all the values of standardized factor loading of measured items were bigger than 0.5 and the Average Variance Extracted (AVE) of all scales of all constructs above 0.5. Hence, the measurement scales of this study obtained convergent validity (Hair et al, 2010).

Table 2: Items' Standardized Factor Loading and measures' AVE

Items	Standardized Factor Loading	AVE	Cronbach's alpha
Employee relationship proneness		0.694	
ERP1	0.880		0.868
ERP2	0.846		
ERP3	0.769		
Affective commitment		0.659	
AC1	0.808		0.939
AC2	0.783		
AC3	0.793		
AC4	0.802		
AC5	0.846		
AC6	0.819		
AC7	0.847		
AC8	0.795		
Calculative commitment		0.705	
CC1	0.874		0.950
CC2	0.842		
CC3	0.872		
CC4	0.848		
CC5	0.816		
CC6	0.849		
CC7	0.819		
CC8	0.795		
Normative commitment		0.625	
NC1	0.765		0.930
NC2	0.802		
NC3	0.816		
NC4	0.794		
NC5	0.769		
NC6	0.829		
NC7	0.795		

Items	Standardized Factor Loading	AVE	Cronbach's alpha
NC8	0.751		
Word of mouth		0.852	
WOM1	0.906		0.945
WOM2	0.924		
WOM3	0.939		
Intention to stay		0.839	
ITS1	0.960		0.939
ITS2	0.855		
ITS3	0.930		
Benefit insensitivity		0.815	
BI1	0.912		0.948
BI2	0.949		
BI3	0.844		
Complain		0.823	
C1	0.911		0.948
C2	0.895		
C3	0.871		
C4	0.949		

Table 3 presents the squared correlation coefficients between constructs and constructs' AVE illustrated in the black boldface. It is clearly shown that almost the value of squared correlation coefficients between constructs were lower than the AVE of measures. There only one exception that was the squared correlation coefficient between ERP and AC exceed the AVE of ERP. Therefore, it could be stated that the measurements scales of all constructs of this research achieved the discriminant validity (Hair et al, 2010)

Table 3: Squared correlation between constructs and the scales' AVE

	C	WOM	BI	ITS	AC	CC	NC	ERP
C	0.823							
WOM	0.0029	0.852						
BI	0.0096	0.1656	0.815					
ITS	0.0083	0.2756	0.3306	0.839				
AC	0.0529	0.2480	0.3697	0.5198	0.659			
CC	0.0420	0.1134	0.2694	0.2735	0.2070	0.705		
NC	0.0182	0.0999	0.0581	0.0576	0.0471	0.0655	0.625	
ERP	0.0392	0.1705	0.3047	0.3249	0.7832	0.1731	0.0449	0.694

Source: Authors

5.2.3. The evaluation of model fit

After the reliability and validity of measurement model were checked, the next step was to assess the model fit to examine how well the model fit the data collected (Barret, 2006).

In order to achieve model fit, the value of Chi-square (X^2) should be ranged from 0.5 (Wheaton et al., 1977) to below 2.0 (Tabachnick and Fidell, 2007), the value of RMSEA should be below 0.08 (MacCallum et al, 1996), the value of NFI should be equal or over 0.9 (Bentler and Bonnet, 1980), and CFI should be equal or over 0.95 (Hu and Bentler, 1999). In case of PGFI, meanwhile other indices have the threshold value to compare, there are no threshold level for this index (Hooper et al, 2008). However, Mulaik et al (1989) recommended the value of this index is over 0.5.

Table 4 indicates that all the indices which were $X^2=1.4981 \leq 2$, $RMSEA=0.040 \leq 0.08$, $NFI=0.911 > 0.9$, $CFI=0.968 > 0.95$ and the PGFI was 0.746 which was over 0.5. Hence, it could be considered that the measurement model achieved the acceptable level of model fit.

Table 0: The fit indices of measurement model

Fit indices	Value
Chi-square/ degree of freedom ($0.5 \leq X^2 \leq 2$)	1.4981
Root mean square error of approximation (RMSEA) (≤ 0.08)	0.040
Normed fit index (NFI) (≥ 0.9)	0.911
Comparative fit index (CFI) (≥ 0.95)	0.968
Parsimony Goodness-of-Fit Index (PGFI) ≥ 0.5	0.746

5.3. The result of testing hypotheses

5.3.1 The result of testing relationship between employee relationship proneness and attitudinal loyalty.

The testing result in table 5 illustrated that employee relationship proneness had a significant and positive influence on the affective commitment ($\beta=0.886$, $P\text{-value}=\text{***}$), normative commitment ($\beta=0.229$, $P\text{-value}=\text{***}$) and had significant and negative influence on calculative commitment ($\beta= -0.446$, $P\text{-value}=\text{***}$). This indicated that, these results supported hypotheses H_{1a} , H_{1b} , H_{1c} . Hence, the testing result demonstrated that employee relationship proneness had strong and significant influence on three components of attitudinal loyalty namely affective, normative and calculative commitment.

Furthermore, in three relationships proposed in hypotheses H_{1a} , H_{1b} , H_{1c} , the value of β between employee relationship proneness and affective commitment is biggest. Thus, employee relationship proneness had the strongest effect on affective commitment.

Table 5: Path analysis of employee relationship proneness and attitudinal loyalty

	Path	Standardized coefficient (β)	P-value	Testing result	Hypotheses Testing result
H _{1a}	Employee relationship proneness → affective commitment	0.886	***	Significant	Supported
H _{1b}	Employee relationship proneness → calculative commitment	-0.446	***	Significant	Supported
H _{1c}	Employee relationship proneness → normative commitment	0.229	***	significant	Supported

Note: *** $P < 0.001$; Source: Authors

5.3.2 The result of testing relationship between attitudinal loyalty and behavioural loyalty

Table 6 shows that affective commitment had significant and positive influence on word of mouth ($\beta=0.331^{***}$), intention to stay ($\beta=0.595^{***}$), benefit insensitivity($\beta=0.468,^{***}$) and complaining ($\beta=0.190$). This indicates that hypotheses H_{2a}, H_{2b}, H_{2c}, H_{2d} were supported.

The evidences also confirmed that calculative commitment had significant and negative relationship with word-of-mouth ($\beta= -0.301^{***}$), benefit insensitivity ($\beta= -0.302^{***}$) and complaining ($\beta= -0.169$). These evidences supported hypothesis H_{3a}, H_{3c} and H_{3d}. However, due to the finding illustrated that there was a significant and negative effect of calculative commitment on intention to stay instead of positive influence like proposed in the hypothesis, thus, hypothesis H_{3b} was rejected

Finally, the evidence proved that the influence of normative commitment on word-of-mouth ($\beta=0.17^{***}$) was positive and significant, supporting hypothesis H_{4a}. However, since the finding presented that normative commitment had significant and negative effect on complaining ($\beta= -0.219^{***}$), the test failed to find support for hypothesis H_{4d} which assumed that normative commitment related significantly and positively to complaining. Moreover, with the P-value of 0.204 and 0.145 for the relationship between normative commitment and intention to stay, normative commitment and benefit insensitivity respectively, the evidence indicated that there were no significant relationship between normative commitment and these variables. Thus, hypotheses H_{4b}, H_{4c}, H_{4d} were rejected

Table 6 Path analysis of attitudinal loyalty and behavioural loyalty

	Path	Standardized coefficient (β)	P	Hypotheses Testing result
H _{2a}	Affective commitment → word-of-mouth	0.331	***	Supported
H _{2b}	Affective commitment → intention to stay	0.595	***	Supported
H _{2c}	Affective commitment → benefit insensitivity	0.468	***	Supported
H _{2d}	Affective commitment → complaining	0.190	0.003	Supported
H _{3a}	Calculative commitment → word-of-mouth	-0.302	***	Supported
H _{3b}	Calculative commitment → intention to stay	-0.253	***	Rejected
H _{3c}	Calculative commitment → benefit insensitivity	-0.302	***	Supported
H _{3d}	Calculative commitment → complaining	-0.169	0.009	Supported
H _{4a}	Normative commitment → word-of-mouth	0.177	***	Supported
H _{4b}	Normative commitment → intention to stay	0.056	0.204	Rejected
H _{4c}	Normative commitment → benefit insensitivity	0.071	0.145	Rejected
H _{4d}	Normative commitment → complaining	-0.219	***	Rejected

Note: *** $P < 0.001$; Source: Authors

6. Discussion and managerial implication

6.1 The similarities and difference between research's finding and literature review

The result of testing illustrated that employee relationship proneness supported significantly and positively to affective and normative commitment. However, contrary to this study which proved the significant and negative relationship between employee relationship proneness and calculative commitment, the evidence of prior study presented no relationship occurred between them. The first possible explanation for the distinguished results between Vietnamese and Belgian context might be due to the difference in cultural values treasured in each countries. Culture is defined as the combination of beliefs, standards, customs (Goodenough, 1971) which shapes individuals' mind, distinguishes one individual from another (Hofstede, 1994; Hofstede and McCrae, 2004) and be manifested through behaviours (Stone and Stone-Romero, 2008) and culture is different in different countries (2001). Thus, it is clearly seen that people in different countries will have different thought and behaviours.

This leads to different perspectives about the same issue. Another possible reason is the difference in using sampling technique to collect data. One-stage cluster sampling technique, a kind of probability sampling technique which help to minimize the bias and enhance the generalization of sample to population, was utilized in the study of Blomer and Odekerken-Schroder (2006) to choose three random towns in Belgium to collect data from bank employees. Meanwhile, this study used convenience sampling technique, one types of non-probability sampling technique which has lower ability to minimize the bias than probability sampling technique (Saunders et al, 2016), to choose a bank to send questionnaires to the respondents. As a result, the research's finding, which is the relationship between employee relationship proneness and calculative commitment, in Belgium, a Western context was not consistent with the evidences in Vietnam, an Asian setting. Thus, the comparison showed that employee relationship proneness is a crucial individual different variable which should be considered when targeting to achieve attitudinal loyalty in terms of affective and normative commitment in a Western and an Asian context. Furthermore, the significant and negative relationship between employee relationship proneness and calculative commitment in Vietnam indicated the role of employee relationship in restricting the development of financial motivation in binding behavioural loyalty. However, as this relationship was different in different context, basing on particular situation to determine the role of employee relationship proneness to calculative commitment is recommended.

In case of the relationship between attitudinal loyalty and behavioural loyalty, this study's findings were succeeded to prove the significant and positive correlation between affective commitment and behavioural loyalty including word-of-mouth, intention to stay, benefit insensitivity and complaining. This results are also similar to the research's finding of Blomer and Odekerken-Schroder (2006) which presented that there are positive relationships between affective commitment and behavioural loyalty. Thus, in the light of these evidences, it can be clearly seen that despite of the distinguishable situation in different context, affective commitment play a pivotal role in determining positively behavioural loyalty.

Similarly, the testing outcomes also supported hypotheses H_{3a}, H_{3c}, H_{3d} which stated that there are significant and negative relationship between calculative commitment and word of mouth, calculative commitment and benefit insensitivity, calculative commitment and complaining. However, the influence of calculative commitment on intention to stay, found a significant and negative trend in this study, is different with the hypothesis H_{3b}. As illustrated in section 2.2.1 and 2.2.2, the concept of calculative commitment has benefit or cost trade-off based, while, intention to stay which is one of the component of loyal behaviours has the nature of dedication. Hence, the different in nature created the contrary relationship between these variables instead of positive impact proposed in hypothesis. Tracing back to the previous study, the similarities were found in the relationships between calculative commitment and benefit insensitivity, calculative commitment and complaining, with the exception of word of mouth and intention to stay. Thus, in different context, the influence of

calculative commitment on benefit insensitivity and complaining remain unchanged. The possible explanation for the distinguished results between Vietnamese and Belgian context might be due to the difference in cultural values and sampling technique which were analysed in the explanation for the distinguishable result of the relationship between employee relationship proneness and calculative commitment.

This study's findings also approved the positive impact of normative commitment on word-of-mouth. Nevertheless, contrary to expectation, the result figured out that there were no relationships between normative commitment and intention to stay, normative commitment and benefit insensitivity. Furthermore, this study illustrated the negative and significant relationship between normative commitment and complaining instead of positive correlation. As scrutinizing in section 2.2.1, normative commitment is driven by moral obligation. This means that the decision which is not seen as breaking moral values will be taken. So the possible explanation for the situation in which individual's moral standards can not force the employee to always see the current organization as the first choice to work for and to always stay with the current organization despite the higher benefits offered by other organizations is because this individual believed that working for more than one firm and choose the company that pays them higher benefits to work for are not breaking moral values. Moreover, while the target of complaining is to help the organization to improve by learning from mistakes, complaining might put the organization in a bad situation if that complaining is communicated in a wrong way to a wrong person or it is the result of bad judge. This leads to the cognitive dissonance (Aronson, 1992) which cause the discomfort for employee in giving criticism to the company. Thus, instead of having positive relationship, normative commitment impacted negatively to complaining. Comparing to previous research, almost findings are contrary to the results of Blomer and Odekerken-Schroder (2006). Specifically, while this study showed a positive link between normative commitment and word of mouth and proved no connections between normative commitment and intention to stay, normative commitment and benefit insensitivity, the prior study stated that there were no relationship between normative commitment and word of mouth but strong positive connections were found between normative commitment and intention to stay, normative commitment and benefit insensitivity. The differences between the studies conducted in two context might be the result of using distinguishable sampling technique and cultural difference analysed in the explanation of employee relationship proneness and calculative commitment. However, there is similar result in the evidence of negative relationship between normative commitment and complaining. Thus, the effect of normative commitment on complaining is unchanged in different context.

6.2. Managerial implications

The coincident results about employee relationship proneness (ERP) of two researches conducted in Belgium, a Western context and in Vietnam, an Asian setting illustrated the role of ERP as a strong antecedent variables for attitudinal loyalty in terms of affective and

normative commitment to achieve behavioural loyalty, despite of the differences of distinguishable contexts. Furthermore, the positive influence of ERP to affective and normative commitment illustrated that the employee who has higher score of ERP will have higher probability to be loyal. Additionally, as analysed in section 2.1, ERP expresses the desire of engaging relationship when the relationship has not been established yet. Thus, it is essential to consider ERP in the recruitment and selection process when aiming to achieve employee loyalty in global context. Beside the ability test, the screen on work experience, skills, it is worth conducting relationship proneness test to evaluate the ERP. Additionally, since ERP is driven by personality, it is pivotal to employ personality test together with ERP test to assess the candidates' ERP. However, there is likely that applicant might do fake in personality test to try to get the job (Morgeson et al., 2007; Hough and Oswald, 2008). Thus the retest of personality to achieve the appropriate level of reliability should be conducted.

The findings also suggested that affective commitment (AC) is the most important attitudinal variables in driving loyal behaviours. Thus, in order to achieve AC, the bank should have the strategies which create the sense of showing that the organization really care for their employees. This might be obtained by policies which help employee to develop themselves such as training or offering opportunities to study to have higher degree to improve skills and knowledge, supporting their jobs by meeting quickly their reasonable requests which enable them to have smooth procedure in satisfying customers, having flexible policy to deal reasonably with each individual's situation when they have problems.

Although this study illustrated that normative commitment (NC) does not relate to intention to stay and benefit insensitivity and has negative influence on the willing to give voice to improve organization, the action of always willing to give positive comments about their organization to other people enables NC to become important variable which the bank should put great emphasis on. In Vietnam 89% customers base on the recommendation of word-of-mouth to used product (Nielsen, 2015). Therefore, the employees' behaviours of willing to give positive comment about the bank will help them attracts many customers leading to high profit. Furthermore, the nature of NC is moral obligation including moral values from family, social, culture of the period before the individual stars to work for the organization and the organizational values the individual learns in the period of working for the organization (Wiener, 1982). From organizational aspect, the bank can not change the familial and social moral values, but they can alter organization's moral standards of organizational part of the individual's moral value as these values are learn from the period the employee working for their organizations. In order to enhance or obtain employees' NC by influencing the organizational moral standards of employees, the bank might put great emphasis on the responsible culture of the organization by some possible following methods.

Finally, as demonstrated in this study, calculative commitment does not result in behavioural loyalty. Therefore, caution should be taken with it.

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