New Product development: An analysis of two small and medium enterprises in Vietnam

Duc-Anh Tran

St. Paul American School Hanoi

Email: tranad@stpaulhanoi.com

Abstract

The reasons for this exploratory investigation are to give a comprehension of the role of small and medium-sized enterprises (SMEs) in the new product development (NPD) procedure of SMEs in Vietnam and make a comparison between the NPD process and a particular case from the personal interview. The goal is to explore whether particular industries fully follow the NPD process or not. Firstly, discover the meaning of family business and SMEs; secondly, the NPD procedure; thirdly, using the NPD in the particular setting of SMEs (comparison). In addition, there are two questions, which are "How do small and medium-sized businesses conduct NPD activities?", and "Which are the enabling factors and the constraining factors for NPD?"

Keywords: Small and medium-sized enterprises, New Product Development (NPD), NPD's success contributors.

INTRODUCTION

Employability is an issue drawing attention from not only recruiters but also higher education institutions, employees (Holmes, 2016, Jackson & Wilton, 2017). Moreover, Understanding graduate employability is a very important issue because there are different contexts for the issue. There are also different perspectives to look at employability: from companies' perspective, from graduates' perspective and from universities' perspective (Guilbert et al., 2016, Selvadurai, Choy, & Maros, 2012).

NPD process is one of the basic types of business development because it acts as the main thrust of organizations and essential for their natural development. Unquenchable customer craving, substantial overall challenge, changing shopper conduct and innovation, power organizations to put resources into new items to succeed or for their survival. NPD has seven notable notions why it is essential for business development:

- **Changing consumer:** consists of eight critical ideas for SMEs' development.
 - ❖ **To design production policies:** implies that all the design

production policies have planned to mull over the purchaser inclination so the item can be useful in the market. In every business, the principal basis is to refine production and just as wholesale-or-retail selling of the organization. Any organization needs to win the trust of its clients and learning about their tastes and preferences.

❖ **Know the effect of price on buying:** implies that customers' demeanors can help in understanding the impact of cost on purchasing. At whatever point the cost is moderate, more client will purchase the item. There will be a stage where the organizations need to determine what the cost of their item will be. It aids clients' types and furthermore achieves more sales.

❖ **Exploit market opportunities:** implies that the adjustment in buyers' tastes and preferences can be a decent open door for the imprint to bring something, which cannot be a revaluation in the market. For instance, Apple has its successful product – iPhone X – by its design and more futuristic features.

❖ **Design marketing mix:** implies that customer conduct is particularly crucial in planning and moving toward marketing. Some of the marketing targets are the product, price, place, and promotion. The most important thing is determining whether the product should be valuable and moderate, and place distribution should be intensive.

❖ **Implement STP strategies:** take three steps to execute – segmentation, targeting, positioning strategies – and is actualized by understanding the demeanors of shoppers towards the different brands.

⌘ **Market segmentation:** intends to separate the market into parts, which are accessible and profitable, and have development potential. Otherwise stated, an organization would think that it is nonviable to focus on the whole market, because of time, cost, and effort restrictions. Segmentation process enables the seller to produce the products depending on customers' financial income, needs, and wants. Furthermore, it also allows the seller to focus on their resources, money, time, effort on the market. In summary, appropriately segmenting the market can decide whether an organization can succeed or go broke. The companies can evaluate and identify different market segments using three criteria:

- ⌘ Homogeneity (segments' everyday needs).
- ⌘ Distinction (how one group differs from other).
- ⌘ Reaction (consumers' response to market).

Companies also can execute a segmentation process on the market in four ways:

- ⌘ Geographically by country then small-scale areas.
- ⌘ Demographically by gender, age, marital status, education.
- ⌘ Psychologically by class, values, risks.
- ⌘ Behaviorally by usage, benefits, loyalty.

⌘ **Targeting:** find the most attractive group. To achieve, the companies must measure the ability to get profit in each segment. Then analyze the development potential of each group. The most crucial thing to think of is can they be service of a particular market using PESTLE analysis.

⌘ **Positioning strategies:** distinguish how companies need to position their item to focus on the most profitable client sections. At that point, the companies can choose the promoting blend that will be best for every one of them. Initially, think about why clients should buy their item instead of the others. Do this by distinguishing the companies' compelling selling proposition, and an attractive map to see how each section sees their goods/services.

❖ **Comprehend diversified tastes and preferences:** purchasers' tastes and preferences differentiated naturally, and they continue changing over a specific time.

❖ **Grasp the concept of consumer's roles:** follows five different steps of consumers' decision-making process.

- ⌘ Needs recognition.
- ⌘ Information search.
- ⌘ Evaluation of alternatives.
- ⌘ Purchase decisions.
- ⌘ Post-purchase behavior.

❖ **Consumer's satisfaction:** the companies' job is to ensure that all consumers have satisfactorily used their products.

• **Increasing competition:** five factors that help boost the competition such as product features, the number of sellers, barriers to entry, information availability, and location.

❖ **Product feature:** implies that the uniqueness of a product. If it is the same, then it is the same as the product sold by rivals, leading to heavy competition. On the other hand, if a product can be distinguished, there will be low-level competition and few alternatives.

❖ **Sellers' number:** more sellers lead to more supply, demand, thus causing high competition rate; and vice versa. If there is an only seller, the market is considered a monopoly.

❖ **Entry barriers:** barriers can affect the number of sellers. The entry-level requirements passed by the market has to be in a high standard. Thus, this prevents start-up companies from entering the market. Firms will charge expensively if the competition is low-level.

❖ **Information availability:** if a buyer knows about the price over contenders, organizations are less ready to set costs, and the competition is fiercer.

❖ **Location:** choosing a precise location analytically can acquire the

group of potential clients. This method is more effective than having the competition if the companies reach them.

- **Technological advancement:** technologies can aid business in internal, external communication, maximizing production, and being organized.

- ❖ **Improved business communication:** internal communication involves the business exchange of ideas. Business agents going for work can remain associated with the workplace and partners, and email many messages to individuals crosswise over topographical limits. For external, technology assists the marketing strategy. However, technological communication is not always an excellent method. For instance, some business requires face-to-face discussion.

- ❖ **Production benefits of technology in business:** business can maximize their production. Technology enables small-scale companies to compete with prominent firms.

- ❖ **Inventory management:** technologies help firms to organize information, associating pull stock as soon as possible.

- ❖ **Record keeping:** technology oversees financial record-keeping limits manual procedures, diminishes expenses, and mistakes.

- **New opportunities (growth and development):** NPD process helps firms to foresee and analyze the opportunities of selling new products on the market and upgrading their quality. Furthermore, this factor enables companies to make more profit.

- **Diversification:** reduces risk by putting resources into speculations that length distinctive money-related instrument, ventures, and other categories.

- **Increasing company & brand reputation:** the more new products companies sold, the more customers buy. Thus, this helps companies to have their brand improved gradually from small-scale to large-scale firms.

- **Utilizing excess capacity:** technologies can help companies to use excess capacity and produce more goods than expected. Furthermore, it can assist the Research & Development in analyzing stock-market goods requirements in order to make a profit.

Besides the reasons why NPD is essential, the companies should be averse from common risks that lead to NPD's failure:

- **Overestimate market size.**
- **Mistake consumers' requirements.**
- **Wrong launch time.**
- **Poor product design.**
- **High price.**
- **Target customers requirement mismatch.**
- **Poor marketing strategy.**

- **High PD cost due to resource overuse.**
- **Competition dangers.**

In addition, the purpose of this research is to analyze the importance of NPD in SMEs and the enabling, constraining factors that affect NPD in two firms. They are TNP and CodeGym and will be analyzed in section 4 with an in-depth analysis following with 8-stage NPD process.

The paper is organized into five main sections:

The following section is dedicated to the review of the literature on (I) family business, its traits, management system, and SMEs; (II) the NPD process; (III) the general factors that impede or enable the NPD process, a short description of SWOT analysis, and the factors that make NPD a success.

Section 3 describes the research methodology.

Section 4 illustrates a real-life example of the SMEs on NPD process in Vietnam based on the research methodology.

Section 5 concludes the research to acknowledge the exploration in a particular industry and make comparisons between the process and the example(s).

The first review will go over the meaning of a family business. The further explanation will go into details over the relationship between SMEs and family business. In addition, family business wields the six most essential characteristics, five types of the management system that aid the structure of many SMEs. Furthermore, SMEs also play an essential role in society with four different models and their importance in society.

The second review is the NPD process. It consists of eight steps, and each step has its significance. The core of NPD process is the “concept development and testing,” which consists of two necessary-but-struggling factors (Research and Development department, and the fee for R&D to research the stock market), focuses on the stock-market research. The research on the stock market will be made clear in the literature review.

The last one will cover the enabling and constraining factors that handicap the NPD. Using the business term “SWOT analysis” (short analysis of its meaning) and a real-life example in Vietnam, the analysis will describe everything related to enabling and constraining factors. To set up a short example, the event EVFTA (European Union and Vietnam free trade agreement) will be used in general. Apart from scanning the EVFTA, the general factors that enable and restrain the NPD process, and the factors that subscribe to NPD’s success.

Literature review

The literature review reflects and explicates about the three most essential facts of family businesses in general, NPD and SMEs, precisely. There are three different known issues about the family business and the NPD process (both generally and individually). The first one relates to family-business features and the family management system in a firm, including small and medium-sized businesses (core); the second one is NPD process; and the third one is the ordeals, opportunities that are currently hampering on small and medium-sized business’ NPD process (example).

Definition of a family business (support for the SMEs), its traits, the management systems (5) in the firm, and the meaning of SME

A family business is a business in which at least two relatives are involved, and most of the proprietorship exists in a family. The family business can create jobs, spur innovation, and drive superior returns (Fernandez-Araoz, Iqbal, Ritter, and Sadowski, 2019). As explained in the introduction part, SMEs indeed supply jobs for people. Recent research shows that in Vietnam, SMEs offered and boosted 50% of employment (Das, 2017). Family businesses not only provide jobs for unemployed people but also contribute to the nation's GDP. In accordance with Thoi bao Tai Chinh Viet Nam (Vietnam financial news), Dr. Vu Tien Loc (chairman of Vietnam Chamber of Commerce and Industry) asserted that "Currently 40 % of GDP in the world economy is created by family-business corporations with famous brands such as Hermès, Ford, Toyota, Samsung, Hyundai, Estée Lauder ..." (citation). In addition, specifically, "In Vietnam, 95 % of Vietnamese enterprises are the largest mobile phones and 100 mobile phones in Vietnam, contributing about 25 % of the country's GDP." These suggestions prove that family business act as an essential type of company that provides many improvements for nations. Besides the meaning of family business, from HBR's article, it also has its six own crucial traits, which HBR considered as "family gravity":

- **Values system:** this idea connects many employees and high-level executives or the company in general. In addition, values system can also form a secure network and give people moral, ethics in applying them to decipher challenges and differentiate the type of problem in the marketplace. For example, team building can bring people even newbies together.
- **Vision:** the goal, the aim of a particular company for both the companies' and the nations' future. This idea is based on the inspiration of the values system and is essential to the business environment. This idea, additionally, aids the SMEs in making their decisions for the future and in setting their crucial priorities.
- **Involvement:** based on the first two traits, involvement reflects on the contribution and participation of the employees in exchanging their information. This furtherly supports and suggests that people carry out their responsibilities and make a positive change in an enterprise.
- **Cohesion and interaction:** understanding, respect, support, and exchange of information are the crucial factors of cohesion and interaction in the company. Furthermore, it helps the family to acquire the skill in responding to a significant change, even the slightest changes.
- **Family governance:** guaranteeing that choices made are professional, beneficial, and suitable to each of every people in the company. This idea can be used as a way to be averse from conflicts, refines the commitment to be a professional, and expresses the talent in real life.
- **Leadership principles and roles:** each order is led and is performed by different levels such as COO, CEO (department), and Security... The orders are decided and passed by the Chief of Board of Directors in a company.

In addition to family-business firm traits, following HBR's research (Lachenauer;

Baron, 2016), there are five different models of the family-business firm. These are a partnership, distributed, owner/operator, nested, and public. Each has its function and systemic administration. They are explicated below:

- **Owner/operator:** A person or a couple commonly control this type of firm, which is the most fundamental model of the family firm. To make the model works perfectly, the family needs to analyze the capabilities and abilities of each heir then decide the final successor. For instance, the Bruneian monarch Sultan Muda Waddaulah was chosen as the next inheritance of Bruneian kingdom over many businesses in Brunei; or Elizabeth queen of the British monarchy of the UK.

- **Partnership:** Solitary heads can determine this type of model in the business can be proprietors and can be benefited monetarily from it. Case in point, the F2 (new generation) and their siblings inherit F1's (old generation) property and asset. Their salaries, profits, and contributions are the same even if they both make an effort to upgrade the business. Besides, the partnership model can be quite complex and challenging to maintain the system for the next generation.

- **Distributed:** this is a default type of family business. The family has to pass the proprietary rights to the next generation whether they want or do not want to work. This model, furthermore, has a disadvantage – family often objects to the policies and wage laws and outside its business, in general.

- **Nested:** this model can be determined when two small family businesses participate in one larger group if they have signed and have understood all the terms they proposed. To make this operates in a stable condition; the family maintains the center business as a benefit-making activity and generally conveys enormous profits to the branches. The profits they earned will be used in creating a profile for their business. Furthermore, making use of this model can mitigate the conflicts between families and easily keep the family work together as a strong team.

- **Public:** the families decide to run as a public company even though it remains privately held. In this model, the owners do not have any rights to control, and the power belongs to professional-and-high-level managers. Sometimes, the member in public company elects to be a controller over this company, but this action is limited. To make public model works, the number of owners should be high and, more importantly, they should not be interested in decision-making circumstances. In addition, the public model does have a challenge – how the owners can maintain control when their role is minimal.

In general, these summaries of family-business characteristics and the management systems make up small and medium-sized enterprises. There are four types of small and medium-sized enterprises, which are non-employee businesses, main-street, high-growth, and suppliers.

According to HBR, the non-employee business is the best established with 23 million self-possessor. As sole owners, they do not make good on government expenses on their gross income. They only pay self-employment tax to the government. The next type of SMEs is Main Street, which is referring to individual investors, employees, and the overall economy. Main Street is different from Wall Street, in terms of budgetary markets, major monetary institutions, big firms, high-level workers of those organizations. Wall Street firms serve massive speculators with multi-million dollar companies, while Main Street firms will be more qualified to serve singular financial specialists by giving personal service. Wall Street relies upon assets and different accumulations of Main Street like the financial

framework in order to produce the capital and charges that keep the firm develop (Kenton, 2019). In short, Main Street is a local business serving based on people's demand and has a significant effect on the stock market. Both Main Street and freelancers are crucial since their role is to maintain the economic mobility. If Main Street cannot expand job opportunities, it, indeed, attracts a large number of people and assign them to service-based companies such as restaurant, shops, or market, preserving a community's values (Mills, 2015).

Besides, HBR also implies that approximately 1 million of commercial-and-government-supply small businesses concentrate on growth, exports, and operate under high-level managerial executive(s). A robust system of small suppliers is critical to the long-term competitiveness of huge U.S. enterprises and for organizations considering moving creation back to the U.S. from seaward (using B2B service). Success and development of a firm depend on a secure system of suppliers. In addition, a robust supply chain in a supplier business determines that many firms have "low logistical costs, rapid problem solving, and easier joint innovation (Porter, Rivkin, 2015)." The high-growth business represents the best job-creating companies such as Amazon, Google, or Tesla. It produces a considerable profit and grows faster than the overall economy.

NPD process and its two most notable weaknesses in the Vietnamese stock market specifically

To introduce the topic, NPD, which covers the complete process of bringing a new product to market, has product design, along with various business considerations as the core department. Furthermore, the process takes eight crucial steps in order to publish the goods publicly. Each step carefully explains and provides many alternative occurrences (Claessens, 2015). The NPD process is listed and is clarified below:

The very first step is idea generation, which involves in two different ways of idea sources (internal and external), required the companies to brainstorm plenty of ideas (even thousands) and choose only one or more if possible. The internal idea comes from the Research and Development department, which is a compartment that has the job to

research the NPD in the stock market. In addition to the internal idea, the firm can also garner other information from competitors, distributors, or suppliers; but the core structure is customers because the NPD process focuses on creating customer value (external sources).

The second step is idea screening, the process that involves picking up the germane idea in order to develop the new product. The reason is that item advancement costs rise significantly in the later stages. Consequently, the organization might want to proceed with just those item thoughts that will transform into profitable products.

The third stage involves concept development and testing. There, attractive ideas should be distinguished in three factors: an idea for a possible product; a detailed version of the idea sketched following the consumer's terms; and the way consumers perceive an actual product.

In half of the whole process, marketing strategy development is a crucial step since it consists of three different criteria:

- The target market, profit, share, sales, and value proposition (for example, Uber: "Get there: Your day belongs to you").
- Outline for the first year: marketing budget, product's price.
- Long-term sales, profit goals, and the marketing mix strategy.

In the fifth stage, the boss of a firm has to analyze the business work for the NPD process. The boss has to review sales, profits, and costs to compare to his company's planned targets for the new product. In order to estimate sales, the company could conduct market surveys and look at the sales history. Then, it should be able to estimate the minimum and maximum sales to assess the range of risks. It helps the company analyze the new product's financial attractiveness. Furthermore, business analysis can be useful if the second step is applied with carefulness. This stage is based on stock-market research (six steps) follow with those three factors aforementioned:

- **Surveys:** using short questions but scientific in order to analyze the particular group of purchasers. The bigger the sample space, the more exact the results for the research topic. There are five different types and ways to garner personal opinion from the public:

- ❖ **In-person survey:** this type of survey commonly takes place at the shopping malls since there are many people going there for spending their leisure time playing and hanging out. It can also help the company in advertising product samples to consumers and can collect feedback immediately. The in-person survey ensures feedback up to 90% but requires high costs due to time and human resource requirements.

- ❖ **An in-person survey using technological means:** uses questionnaires on tablets that associates with the program on the server, ensuring the authenticity of the survey better than the transmitting questionnaire methods system. This technique is the best for saving up data and mitigating analysis errors.

- ❖ **Telephone survey:** it is cheaper than utilizing in-person survey but more expensive than mailing survey one. However, because people often react negatively to telemarketing, it is difficult to convince people to participate in a phone

interview. Thus, the market research response rate is only 50 to 60%.

❖ **Mail survey:** this way needs a little investment and marketing strategy, and it will attract many people into declaring it. Truthfully, mail survey is even cheaper than the two ways above; nevertheless, the response rate for the mail survey is from 3 to 15%.

❖ **Online survey:** this means of getting a response is untrusted, unreliable, and the response rate is unpredictable since the researchers either are unable to control or edit the feedback on their questions. Still, an online survey is inexpensive; and the vital thing is that the researchers can collect pieces of evidence and customer opinions and priorities. Today, the age of industrialization 4.0 provides technologies to attract more respondents by top-up their mobile accounts as a grateful gift. However, other struggles are that online survey requires simple questionnaires or direct impact on the respondents.

- **Focus groups interviews:** using this group-interview method, the researcher(s) will use their prepared questions that can extend the duration when discussing with a specific group of people. This method only happens and works when it is located in a neutral room where the surveillance system is tight, and there are many recorders. Furthermore, once focus-groups interviews last one to two hours, the researchers should interview three or more groups in order to get reliable results.

- **Personal interviews:** this method has the same system as a focus group interview but more open and unstructured questions. It often lasts more than an hour and often recorded. In general, focus-groups interview and personal interviews yield better data quality than using surveys because the researchers can analyze their subjects' emotions (attitudes) and demands. These two interviews lead the researchers to develop even novel products and services based on the customers' reactions.

- **Observation:** sometimes, in-depth interviews and focus groups interviews are not consistent with people's right demeanor. The researchers can observe consumers' actions at work, at home, or the store; additionally, the researchers can scrutinize how the customers buy and use the product. This method helps the researchers to imagine and get data based on customers' behaviors and usage habits.

- **Field trials:** this process requires putting the new product in some stores up to the researchers' choice to test customer reactions in real terms of sale can help them to complete the product, adjust prices or improve quality. Moreover, not all SMEs acquire, collaborate, and cooperate with small local stores, so they have to build relationships with local retail store owners and shopping sites to try out their products on the market.

- **Internet-use behavior:** this method is the most popular way to gather information. Because people use the Internet a lot, the ability to study behavior and interests of customers is significantly increasing day by day. Utilizing this way can advance the NPD process even further.

The sixth step is developing the product. Up to this point, for many new product concepts, there may exist only a word description, a drawing, or perhaps a rough prototype. Moreover, this step is costly because the fee spent for Research and Development department is very high and cause a massive jump in investment. The Research and Development division will create and test at least one physical variants of the item idea. Building up an adequate model, nevertheless, can take days, weeks, months, or even years,

contingent upon the item and model techniques. Some case involves the consumers evaluating prototypes and work with pre-release products.

The last stage before commercialization in the NPD process is a marketing test. The prototypes are being tried in real life with R&D's survey. R&D needs to see the reaction of the buyers to the company's newly-pre-release products. This stage enables the organization to test the item and its showcasing program, including controlling system, promoting, dispersions, bundling, and so forth before the full investment is made.

Commercialization, the last stage of the NPD process, only needs the product to be shown and to be sold publicly. Now, the most elevated expenses are brought, suggesting that the organization may need to construct or lease an assembling office. Huge sums might be spent on publicizing, deals advancement and other showcasing endeavors in the first year. This process can be done when these two conditions are followed: Where and When? For the location, it is the vital part since organizations do not have the certainty, capital, and ability to dispatch new items into full national or worldwide dissemination from the beginning. Instead, they, for the most part, build up an arranged market rollout after some time. In addition, for the timing, it may happen when the economy is down, or stock market depletes. Thus, introduce and open sooner and sell at the place where the environment and scale are germane to the company's stores are the best choices.

However, besides the NPD process, it has two most notable obstacles, which impede the development of new items in an individual firm. Specifically, the two obstacles are the fees for research and development, and research on the stock market. Currently, Vietnamese private firms do not pay sufficient attention to research and development activities (Minh, 2018). Thus, a recent World Bank's report (2017) reported that Vietnamese enterprises only spend about 1.6% of annual revenue for Research and Development, while the correspondent rate in Malaysia is 2.6% and Laos is 14.5% (Minh, 2018). Vietnamese enterprises have knowledge, creativity, and patents but rarely apply new research into the operation process, which leads to no innovation. This evidence illustrates that Vietnam pays less for the Research and Development activities, showing that our economy is not well developed. Thus explains that spending less money on ordering the Research and Development activities to try out new ideas, the higher the chance Vietnamese enterprises cannot pay them for research on the stock market. This is the reason why all Vietnamese companies and organizations only have two weaknesses: Research and Development department and fee for researching on the stock market.

General factors that impede the NPD process, factors for NPD's success, and SWOT analysis

In the NPD process, companies always utilize SWOT analysis to involve in decision-making circumstances for companies' futures. SWOT analysis is composed of four indispensable components, which are Strengths, Weaknesses, Opportunities, and Threats. According to Investopedia, a SWOT analysis helps the boss to identify the companies' core strengths, weaknesses, opportunities, and threats, and it assists the boss to be more creative. These hints lead to a significant change in expressing new ideas for improving the NPD process. The details of SWOT analysis are analyzed below:

- **Strengths:** used to determine what a company is excellent at and why it is different from other companies in business competition. To make some examples for strengths, a company has an active organization, reliable technology (in industries, network), strict KPI rating...

- **Weaknesses:** they hamper a company from operating and working at its best level. However, weaknesses do help the company improve some turnovers, such as having an unattractive logo (or slogan), lack of capital, lack of human resources.

- **Opportunities:** it can be understood as the chances that a company or an organization can take advantage of as a competitive advantage. Most opportunities come from the external environment, and less comes from the internal environment. For instance, the United States of America has cut off tariffs on a specific industry, and all other countries will export more quantity of particular goods, expand more sales in a new market, thus creating a remarkable macroeconomic development.

- **Threats:** they are the risks that have the potential or possibilities to have an impact on a company or an organization. Case in point, the harsh temperature affects tree-to-paper industries by bringing an immense blaze on the forest, which causes the industries to improve the protection for trees, increase the material cost.

Overall, SWOT analysis is a reliable technique for the bosses to analyze their own companies and can be used by governments, nonprofits, investors, and entrepreneurs. It will help the nation relate to PESTLE analysis for macroeconomic growth.

There are many enabling, and restraining factors stymie the NPD process. An example is mentioned in the introductory part – EVFTA. In EVFTA, there are five opportunities and challenges that Vietnamese enterprises will struggle (Du, 2019):

- **Opportunities:**

- ❖ **Export:** since the EU is one of Vietnam's biggest export market, Vietnam's market share of goods is still modest because the competitive potential is limited, especially in goods' price. In the EVFTA agreement, the condition is that if the EU cuts off 99% of tariffs on Vietnam, all of the Vietnamese enterprises will have a significant opportunity to compete with EU in term of goods' price when being imported.

- ❖ **Import:** Vietnam is a developing country with a rising number of the middle class and young labor force. The Vietnamese market also offers many opportunities for EU agricultural, industrial, and service exports. In addition, in Vietnam's perspective, its enterprises will be profited because they have imported materials and source of goods. More importantly, EU's technology is advanced, specially produced in Germany, which gives Vietnam an excellent opportunity to approach and to use its technology, drives Vietnam to improve productivity and quality.

- ❖ **Industry development:** Vietnam's seafood industry will be the most benefited from the EVFTA agreement because its seafood good will not be taxed (0%). However, the EU needs to impose a limited quota on certain Vietnam's agricultural products.

- ❖ **Competitive advantage:** only Vietnam and Singapore earn satisfaction from EVFTA. Their goods are different and have different requisites for entering the EU's market. Nevertheless, other ASEAN countries (including Singapore) have not done their negotiations with the EU, so only Vietnam is benefited from low imported tariffs.

- ❖ **Business environment:** based on many advantages EVFTA

brought, Vietnam will make a significant change in governmental and law policy in order to make itself pragmatic to international practices.

- **Challenges:**

- ❖ **Hard-responding rules of products' origin:** Vietnamese goods should have their origin only in Vietnam in order to be benefited from cut-off tariffs policies EVFTA proposed.

- ❖ **TBT, SPS, and customers' demand:** the EU has the strictest and the tightest policies in bringing exported goods. All European customers have high demands for product quality, causing Vietnam a struggle to make changes in making products (labeling) even though Vietnam is being benefited from cut-off tariffs.

- ❖ **Risk of trade defense measures:** enterprises in the import market only want to make use of the way to preventing price-breaking goods, preventing anti-subsidy, or self-protecting domestic manufacturing industry.

- ❖ **Competitive pressure from EU goods:** allowing European goods means that Vietnamese enterprises will have a problem with its market because European companies are better than Vietnamese in terms of quality, productivity, stock-market experience, FTA utilization.

- ❖ **Weak brand:** the Europeans do not know a lot about Vietnamese goods, thus explaining that marketing strategies are weak.

The example explains the enabling and stymied factors that have many effects on NPD process in EVFTA. Besides, both enabling and constraining factors to have the general rule in affecting the NPD process are listed:

- **Demand:** as society develops, people's demand for products becomes higher. For example, an American citizen can buy luxury cars and even trendy car introduced on the Internet. If the demand for goods or service is high, then the business will have the opportunity to expand and develop its market and vice versa.

- **Competition:** all the enterprises are unable to escape from competition because they will have a high chance to lose the market. This is the reason why enterprises should participate in the competition and use any practical uses of "weapons" such as advertisements, sales, promotions... Competing in the market will make the companies either expand or lose the market.

- **Price:** the ability to purchase goods of consumers is based on their financial income, and it is limited. Price is a modifiable factor of regulates all the business activities of the supplier and consumers' consumption. However, the price can be impacted by external factors. Price increases significantly when the demand for such goods or services will decrease, and vice versa. Each company has to develop a policy for price and focuses on price reduction. Discounts attract more customers and give them the chance to buy goods based on their income (can expand the market). If a company does not use the policy, the market will run in chaos and can lead to a loss.

- **Law:** every business person should study law to understand economics because law regulates everything, even the stock market. The state uses laws for regulating business activities of enterprises and for products such as VAT, sales tax, investment policies

...

- **Companies' potential:** is the ability of a company in meeting market share. This potential is distinguished into two types – visible and invisible:

- ❖ **Invisible:**

- ⌘ **Reputation:** if customers trust a specific business a lot, they will come more often and help them become more successful.

- ⌘ **Power:** business should grow more extensive and more prolific in revenue for each business cycle. Its power can be shown in: increasing in goods sold in the market, the level of dependence of other businesses in the market on enterprises and vice versa.

- ❖ **Visible:**

- ⌘ **Capital:** if a company has an enormous capital, the boss will expand business scale and production. Furthermore, the measures for preserving capital and develop business capital in order not to be backed down.

- ⌘ **Labor:** enterprises that have a suitable number of employees and level will produce services that meet the requirements of market share.

- ⌘ **Material:** improving products to speed up production circulation.

- ⌘ **Technology:** utilize it to expand productivity and market expansion.

While the general rule of impeding and enabling factors that have impacts on NPD process, eight pivotal factors that contribute to NPD's success are knowledge management, market orientation, NPD process, NPD Teams, NPD Speed, NPD strategies, technology, top management support (Cengiz, Ayyildiz and Kirkbir 2017).

- **Knowledge management:** the ability of understanding and applying information about different processes or departments in developing new products. Knowledge management involves gathering information and transferring information to demanders, effectively increasing the value of knowledge asset in a company.

- **Market orientation:** this factor reflects on the identification of people's demands and the creation of products that satisfy them. Market orientation is based on SWOT analysis and stock market research method (as described in 2.2).

- **NPD process:** the process should be analyzed in detail. For instance, checking for consumers' reactions to the new product, identifying attributes of the product, or market size.

- **NPD teams:** company usually integrates employees from various departments and gives opportunities for simplifying NPD process. The more diverse the team, the more creative they are and the easier they become successful. Each person has to carry 100% of his/her responsibilities and actions.

- **NPD strategies:** the detail of a plan designed to achieve a long-term goal. Three different types of organizations that utilize NPD strategy are reactors, planners, and entrepreneurs (Cengiz, Ayyildiz and Kirkbir 2017). Reactors wait for the problems to happen

while planners predict them. Entrepreneurs acquire both and analyze to find the opportunities then make a back-up plan for the competition. Additionally, two types of NPD strategy are offense and defense. Offense helps the company to expand the market or put more products inside it while defensive strategists scrutinize other companies.

- **Technology:** companies can satisfy consumers' demand by acquiring, taking advantage of advanced technology. Furthermore, advanced technologies promote new product introductions.

- **Top management support:** all the managers or CEO in a particular company have to be influenced by design teams in order to have them support the team in NPD. Notwithstanding, while the design team cannot urge managers to help their tasks, they can build up the political sharpness and goal to attract and have managers help them at their best. In addition, proper management support can brace for the new change, generate enthusiasm, and provide a clear vision for the product concept.

- **NPD speed:** the faster a company develops a product, the higher the chance they can put in the market, and the more products they can sell to increase total revenue.

Research methodology

The research methodology will cover three main categories: general questions, NPD-related questions, and opinions on SMEs. This research method adopted in this work is based on a two-case study. TNP and CodeGym are the subjects of this interview. General questions include personal details, the introduction of their businesses, their NPD product, and their instigations. The next category is NPD questions, which involve the 8-stage NPD process, as listed in 2.2. Each stage will be analyzed then make a comparison between two of the companies to see the difference in the process. The last set focuses on their personal opinions on two targets: (dis)advantage(s) in the NPD process and its ranking in their businesses.

Empirical cases

- Case 1:

General information: The small-sized TNP Company (established in 2018), which is being managed by a 41-year-old male director (Mr. Hung), specializes in cooperating and making electricity-generating products such as solar panel, solar wind ... His company has one core product and one new product in development that are the power plant and solar panel, respectively. His company makes a total revenue of 300 billion VND and is currently aiming at the electric market using B2B service. The time his product (solar panel) is in preparation to be on the market soon. His company is making use of solar panels by setting up an electric system to support people's houses' roofs and enterprises. The panel will convert the sun's energy using a photovoltaic process to energy with purposes of producing clean energy and protecting the environment. Since there are two products, the factory he mentioned "only takes approximately 10% of the enterprise's total revenue while solar panels take 90%" because the solar panels are the core new product. The NPD process will be explained below.

NPD process: About the NPD process carried out by TNP Company; it follows all the eight processes in details. **The first step** he and his leading employees generated ideas,

both internally and externally. The external ideas come from three ways: they worked with the suppliers because they provide low-priced materials (for making solar panels); investigated government's policies in order to get more ideas about the environment, and getting data from people's opinions and their use of solar panels. For internal one, his employees wanted to follow the trend, which is protecting the environment, can provide them a vast amount of profits. In addition, **in the second step**, they have thought seven ideas. However, due to lack of power, they had to reduce their ideas number (which are the factory and solar panels). **After that**, they tried two ideas on five different targets that are setting up solar panels on the roof of electric factories, workshops, traditional houses, enterprises, and lake surfaces. Nonetheless, they have not tested on houses and lake surfaces yet because people do not know much about economics and there is no lake, respectively. Furthermore, to introduce their products, they had a blueprint prepared before opening "a new electric factory"; and to attract customers, they simplified their products by recording how they work in real life on factory's roof as Hung said, "to focus on consumers' psychological emotions." **In marketing strategy development process**, TNP manager Hung said that he and his employees "are currently targeting at TNI (in charge of industrial zones), MSB officers, and industrial customers; they are attempting to make 100 billion VND in one year will profit of 5%." In addition, he also asserted, "we are currently using B2B service, setting prices of 20 billion for each Megawatt and it can last up to 3 years. We paid 1% budget for marketing media and used other budgets for the company's expansion." **The next step, business analysis**, they set up a plan in detail (process, customer, time to initiate). Furthermore, they maximally concentrate on the factory since it is the primary provider to all solar panels' energy conversion. **After that**, he averred, "we planned to test in March, but we changed it to June (the day they piloted it). Additionally, they rented 80% of external support and self-made 20% (blueprint and opening of the electric factory). **In the product development process**, they currently have an enterprise in Bac Giang province tried and are waiting for its feedback. Furthermore, they are modifying changes for the solar panels by researching on the stock market especially in the Central and the South because he posited, "they both have strong sunlight which can provide much energy for photovoltaics." Not only that he and his employees aim at the Central and the South's stock market, but they also advertise their products to MSB, TNI, Project managers by writing welcome letters so that they can be attracted into buying it. **For commercialization**, they will be starting the mass production of solar panels in October since they have to "expand the market and negotiate with workshops to set them up."

Role of the SMEs in NPD: The last topic of the question list is about the role of family SMEs in the NPD process. Director Hung said that there is no benefits or advantages but drawbacks. Three factors that impede the SMEs from developing NP, which are capitals, brand name, and human resource (HR). He explained, "Capital is an essential part of a bank because it is a part of an asset which can be used to repay its depositors, customers, and other claimants in case the bank does not have enough liquidity due to losses it suffered." Capital can also help the owner to produce wealth through investment. Besides, his company does not have a brand name, and it is not appealing enough to catch people's attention. Lastly, HR is very crucial because "every person has his or her traits and capabilities of doing something that is their favorites." On top of the factors, he ranked the NPD process as the first priority as he commented, "the employees and the bosses will be more creative, and the products will be novel as they developed based on the creativity of the employees' research."

- Case 2:

General information: A 37-year-old male entrepreneur, Tan, is a founder of CodeGym. CodeGym was an undertaking of Agilead effectively spinoff in 2017. Since December 22, 2017, Codegym has turned into an autonomous lawful element as CodeGym Vietnam, centers around programming preparing, programming advancement to take care of the issue of lacking HR in the product business in Vietnam, both regarding quality and amount. CodeGym wishes to turn into a critical player who pursues the innovative theory in the field of training in a brief timeframe. In April 2017, Agilead Global Joint Stock Company established CodeGym project. On April 21, the first training program – Co417G – was introduced. In December, CodeGym became independent and changed its name to CodeGym Stockholder Company. In March 2018, the first training program for programmer followed the newest structure and cycle. After that, the CodeGym HQ was established on 5th August in 2018. As the founder Tan said, “Our very main service product is Coding boot camp training program which lasts from 4 to 6 months, and, currently, we are having about 130 participants who joined this short course in three different cities: Hanoi, Danang, and Hue.” In addition, the core customers that he is targeting are those who nearly/just graduated from university/college, and those who want to change their job to programming. This company requires no allocation, but it sells its service through online and direct services (Facebook, websites, advertisements, and direct sales) (B2C service). His product has been on the market since the beginning of 2018 (sooner than establishing the main HQ). Furthermore, he said there are three pivotal characteristics of his product:

- The participants can practice for their profession.
- Short course; the participants pledge to work; however, if they do not, they will not get the fee back. The salary for the short-term course is 8 million while long-term is 14 million (after the course).
- Studying like working in a company, and the participants can acquire skills to be professionals in a short time. In addition, participants can make their products for distinguished tech companies such as Bkav, Intel, and Microsoft.

Lastly, since his company provides educational service, this product takes approximately 90% of the company’s revenue.

NPD process: this NPD process carried out by CodeGym is a lot different from that of TNP’s. **In the idea generation step**, he said, “I got this idea both externally and internally.” In his SWOT view, he averred, “he had a desire that he wants to create opportunities for those who like to program in order to help them to find technical jobs. For external idea, he experienced boot camps in the USA that can expand people’s views in working on innovations for the future. Based on his perspective, adopting the training program in America will provide a method for people who like programming, essential skills for working in America. In addition, at first, he thought of three ideas; they are:

- Franchises of his company in small provinces in Vietnam.
- Open more programs rather than keeping that short-course training.
- Deploy the programs that are germane to participants’ efficiencies.

In the second step in the NPD process, he humbly said, “there are two factors that determine the deletion of those ideas mentioned above; they are financial ability and HR.” For financial ability, his teammates evaluate, analyze the way that they can get money faster and safer; for HR, they need fewer people but operate effectively flexibly. In addition,

they should improve work and business quality. **In the concept development and testing stage**, they drafted the first training program (which lasts for two months and a half). The next step is they wait for the applicants to have them interviewed (since the company does not have much HR). After they waited for the results, the company will evaluate whether they are suitable or not. The chosen applicants will create a relationship with the co-founder [Tan] to hire more people for discussing how to develop the company. Come after hiring is fixing the program by cutting details gradually and thinking of practical ways to inspire the newcomers. The cycle keeps repeating. Furthermore, he introduced the idea by having the applicants met him to share out novel ideas using social and marketing means (Facebook, advertisements, websites) after being accepted by Tan. **In the marketing strategy development process**, he used guerilla method, which uses many ways to attract customers such as a small and simple idea, no money for educating participants to combine with step 3 in NPD process. For marketing, his company pays 30% to 35% of its total revenue then decreases little by little until it reaches 25%. **Next step is business analysis**; he assumed that in a year, his company would be able to get 100 joiners and suggest a big aim to get the expansion of the company. Additionally, using SWOT analysis, he only needs Strengths and Opportunities because his service product does not have threats and weaknesses in being sold directly or being stolen:

- Strengths:
 - ⌘ Experience in teaching programming.
 - ⌘ Provide IT knowledge.
 - ⌘ Deploy educational targets rapidly and quality.
- Opportunities:
 - ⌘ Provide jobs for university students to make a profit for both the company and them.

After that, the product was used in January. The detail of this product was 80% designed independently (using teachers, resources, learning system) and others for part-timers. He also has to pay salary and capital to have the self-made structure. **In the seventh step**, his product has many changes that need to be altered after being tried on the market. Those three problems are:

- Length of the program should decrease from 6 months to 4 months.
- The contents of the lesson should be lessened.
- Education fee should be raised from 5.5 to 8 million VND because the quality of the program is high and efficient.

The last step is commercialization. CodeGym began producing massively since March 2018; however, he still needs to expand his business scale in small provinces, as mentioned in the first step. On top of that, his company takes advantage of utilizing the number of applicants and teachers in order to refine the quality and present more ideas to his company's development. In addition, aforementioned, his product is currently being sold in three cities Hanoi, Hue, and Danang.

Role of the SMEs in NPD: In his opinion, one benefit and three challenges that affect the NPD process in SMEs are:

- Benefit(s):
 - ⌘ High demand can boost the production of service sold to buyers.
- Challenge(s):
 - ⌘ Capital to develop.
 - ⌘ Brand name since there is no capital to develop and to make the brand centripetal.
 - ⌘ Low number of HR because he is trying to hire suitable applicants who can contribute to his company's expansion.

Abreast with (dis)advantage(s), he ranked the NPD process as the first priority that can enable the development of his business. He said, "If we do that, the company will have a great ability to expand more and more, more new products released to satisfy consumers' demand, more capital to make investments in NPD process in order to develop further."

Conclusion

The interview has concluded many factors in the NPD process and has proven the importance of NPD in small and medium-sized enterprises. The introduction illustrates the seven core ideas of NPD's importance and analyzes it in-depth. Moreover, the three reviews in section 2 also subscribe to the NPD process in two empirical cases.

Case 1 involves energy-producing products – solar panels and electric factory, while case 2 involves special coding education. Mr. Hung is leading case 1, and Mr. Tan is operating case 2. Each company has a different method of developing their business and their use of NPD process even though the target is different. However, Mr. Tan's business does not target everyone except coders-and-programmers wannabe. In addition, Tan's business is developing faster than TNP because he has a schedule that marks the change in his company's aim while Mr. Hung develops gradually. These businesses are, generally, help to expand the market and bring many benefits for the consumers.

They are not able to skip any of those steps since each stage is very crucial to the development of the new product (as mentioned in 2.2). Overall, the NPD process is necessary going along with SWOT analysis and stock market research, and SMEs conduct the process following the picture in 2.2. Furthermore, the enabling and disabling factors are carefully explained in 2.3, and by relating them to the cases analytically, it would be perfect for the research to comprehend economic concepts.

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