

Bachelor's Thesis

Degree programme in International Business

2018

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# MARKET ENTRY STRATEGY FOR A MED-TECH SOLUTION FROM FINLAND TO VIETNAM

– case study



BACHELOR'S THESIS | ABSTRACT

TURKU UNIVERSITY OF APPLIED SCIENCES

Degree programme in International Business

2018 | 54 (7)

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# MARKET ENTRY STRATEGY FOR A MED-TECH SOLUTION FROM FINLAND TO VIETNAM - CASE STUDY

When a young company enters a new market with a medical technology solution it is vital to understand the possible threats and opportunities. Understanding the different market entry modes and selecting the one that benefits the company most, while targeting the correct market segments is important for an internationalizing company. When these factors are identified the market entry happens with sufficient information. If the factors are misunderstood or inappropriate, it can damage the company and its reputation in present and future business operations.

This thesis pursues to research the three key factors when considering the market entry strategy for a young company with a medical technology solution. The three factors are industry threats, market entry mode(s) and suitable market segments. Based on the research the most notable threat for our case company is the threat of suppliers, due to lack of alternative suppliers and intellectual property. The most suitable market entry mode is direct exporting, as it needs minimal number of middlemen and fits the regulations in Vietnamese medical technology markets. The most suitable market segment is large public hospitals in urban areas in Vietnam, as they have the infrastructure and demand to execute the solution in their usage.

The research was based mainly on qualitative methods. Interviews and marketing tools were applied in answering the research questions. The interviews were conducted on participants who were selected in advance to ensure the relevancy of the answers. Based on the answers the factors that need to be considered in the internationalization process and how they can be applied in practice were identified.

The findings, analysis and estimates for our case company are public in this thesis, however some details were left out for commercial secrecy and as they were not vital in the research.

## KEYWORDS:

internationalization, medical technology, SME, market entry mode, Porter's five-forces model, market screening

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# MARKKINOILLEMENOSTRATEGIA LÄÄKETEKNOLOGIARATKAISULLE SUOMESTA VIETNAMIIN

- tapaustutkimus

Kun nuori yritys tähtää kansainvälisille markkinoille lääketeknologiatuotteen kanssa, sen on tärkeää ymmärtää uusien markkinoiden uhat ja mahdollisuudet. Sen on myös oleellista ymmärtää eri markkinoilletulomallien merkitys sekä valita markkinoilletulomalli, joka auttaa yritystä saavuttamaan tavoitteensa parhaiten.

Tämä opinnäytetyö tutkii kolmea avaintekijää markkinoilletulostrategiassa. Nämä ovat merkittävimmät uhat toimialalla, markkinoilletulomallit sekä sopivimmat markkinasegmentit. Tutkimukseen perustuen merkittävin uhka toimeksiantajayrityksellemme on tuottajien muodostama uhka. Tämä johtuu tuottajien vähydestä toimialalla sekä immateriaalioikeuksien tuomista rajoitteista. Sopivin markkinoilletulomalli toimeksiantajalle on suora vienti. Se vaatii vähän välikäsiä ja sopii säänneltyyn toimialaan Vietnamissa parhaiten. Toimeksiantajalle sopivin markkinasegmentti on suuret julkiset sairaalat kaupunkiympäristössä. Tämä segmentti on potentiaalisin, sillä kysyntä tässä segmentissä on voimakkainta ja julkisten sairaalojen infrastruktuuri on kokonaisuudessaan paremmassa kunnossa.

Tutkimusmenetelmänä käytettiin laadullista tutkimusta. Asiantuntijahaastatteluja ja markkinointityökaluja käytettiin johtopäätösten tekemiseen. Haastattelut tehtiin etukäteen valituille osallistujille, jotta voitiin varmistua, että vastaukset olisivat mahdollisimman oleellisia. Vastauksiin perustuen otettiin huomioon tekijät, jotka tulee ottaa huomioon kansainvälistymisprosessissa ja miten yritys voi soveltaa näitä tekijöitä käytännössä.

ASIASANAT:

kansainvälistyminen, markkinoille tulo, Pk-yritys, lääketeknologia, markkinaseulonta

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## **LIST OF ABBREVIATIONS**

B2B	Business to Business
B2C	Business to Consumer
B2G	Business to Government
CPI	Corruption Perception Index
DMU	Decision Making Unit
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IMS	International Market Segmentation
Med-tech	Medical technology
SME	Small and Medium-sized Enterprise
IP	Intellectual Property
PESTLE	Political, Economic, Social, Technological, Legal, Environmental

# 1 INTRODUCTION

Globalization has been speeding up since 1980's and more companies are dealing with international stakeholders than before. Due to globalization, firms meet both new opportunities and threats and focus cannot lie totally on domestic markets anymore. Because of this, companies should widen their business environment to foreign markets.

The objective of this thesis is to research the market entry strategy of a Finnish company that starts operating in Vietnam. The thesis commissioner is a Turku-based start-up company, hereafter called the case company. The case company operates in the field of medical technology. Medical technology is any technology that is used to save lives of people suffering from a wide range of conditions. (Medtecheurope, 2018) The term also refers to the use of novel technology to develop highly sophisticated electronic products or medical devices for application in healthcare markets (Washington Lifescience, 2018). In Europe, 80 % of the medical technology industry consists of SME's and the total revenue of the industry was 403 billion US dollars in 2017 (Statista, 2018); (Hed & Malmström, 2010). The high rate of competition makes the industry highly innovative.

The case company has researched potential countries to expand to and identified Vietnam as the most suitable country to enter. During the first meeting with case company's managers, it was decided that the authors would focus on entering Vietnamese markets with case company's portable medical tracking device. The system is a real-time cardiac monitoring and early warning system. It is designed for people who have issues related to cardiovascular diseases. (Case company's info material, 2018) There is an increasing need for case company's product in healthcare markets in Vietnam, the Vietnamese government supports financially foreign medical technology companies and the case company already has networks in the medical technology industry in Vietnam.

Case company's portable medical tracking device consists of three parts. The first part of the system is the device, the actual hardware that user carries with himself and which is attached to user's chest with leads. The second part is an application that user can download on his smartphone. It allows the user to monitor his health status in real time and it also works as an early warning device if it notices cardiovascular issues. When the system is used in cooperation with a local hospital, the application can also make automated emergency calls that allow the help to arrive faster. The application can notify



relatives in the case of an emergency. The third part, the cloud storage is a database which collects all electrocardiographical data from user's device. The algorithm of the cloud analyzes this data and compares it with user's previous data. The cloud restores user's data for up to 30 days, but it can store the data for longer if needed. The cloud supports mobile network data connection and it allows the device to be online all the time. (Case company's info material, 2018)

There are three research questions:

- "What is the most suitable market segment for the case company in Vietnam?"
- "What are the industry threats for the case company in Vietnam?"
- "What is/are the most suitable market entry mode/s to Vietnam for the case company?"

This thesis consists of three parts, presenting the theoretical frameworks, conducting research and analyzing and drawing conclusions from the research data. In the first part authors provide the theoretical framework of internationalizing to Vietnamese markets. The sources in the first part are secondary, scientific articles and literature are used. In the second part the authors conduct interviews to gather primary data. The goal of managerial interviews is to collect data on how the case company sees the internationalization process. In the third part the results from the interviews are applied to different marketing tools to achieve concrete results from case company's market and from med-tech industry in general.

The topic of this thesis was selected because both authors have worked in start-up companies and are interested in technology business. This thesis can be used as a source for background information for any Finnish SME who is planning to expand their business operations to foreign B2B-markets.

## 2 INTERNATIONALIZATION THEORIES

There are various definitions for internationalization. The definition of the term has varied over time and currently there is no standardized definition for the term. For example, according to Calof and Beamish (1995), internationalization is: “the process of adapting firms’ operations, strategy, structure, resource, etc. to international environments” (Calof and Beamish, 1995). Hitt et al. (1994) suggest that internationalization is a process of “expanding across country borders into geographic locations that are new to the firm”. Calof and Beamish (1995) and Hitt et al. (1994) have given their definitions of internationalization in 1990’s. These definitions provide the basic idea of internationalization but identifying more recent definitions is useful for the case company.

Hollensen (2017) makes a difference between globalization and internationalization. The globalization of companies regards the involvement of customers, producers, suppliers and other stakeholders in the global marketing process. Global marketing is “firm’s commitment to coordinate its marketing activities across national boundaries to find and satisfy global customer needs better than the competition” (Hollensen, 2017). The firm should be able to develop a global marketing strategy, exploit the knowledge of the headquarters through worldwide diffusion and to transfer knowledge and best practices from any of its markets and use them in other international markets. (ibid.)

All definitions of internationalization above are valid but this study approaches the internationalization from Hollensen’s definition since it is the most up to date. The term global marketing is more suitable for the case company than the term internationalization. since the case company is creating a global marketing strategy.

The authors of this thesis stress that when researching companies’ internationalization processes a holistic approach should be adopted. It means that a single theory of internationalization should not be viewed as the only correct way of internationalizing. Seeking growth abroad involves combining knowledge from several theories.

## 2.1 Internationalization process

### 2.1.1 Market research system

International markets can be defined in two ways. The first views the international market as a country or a group of countries, the second view it as a group of customers with nearly the same characteristics in different countries (Hollensen, 2017). The five-staged decision model describes company's internationalization process. The stages are presented in the figure 1. After a company decides to internationalize, it selects the countries and markets it enters. After the selection of the countries and markets a company decides its market entry strategies to the selected countries and markets. After this the company designs a global marketing program and then supervises and coordinates it.

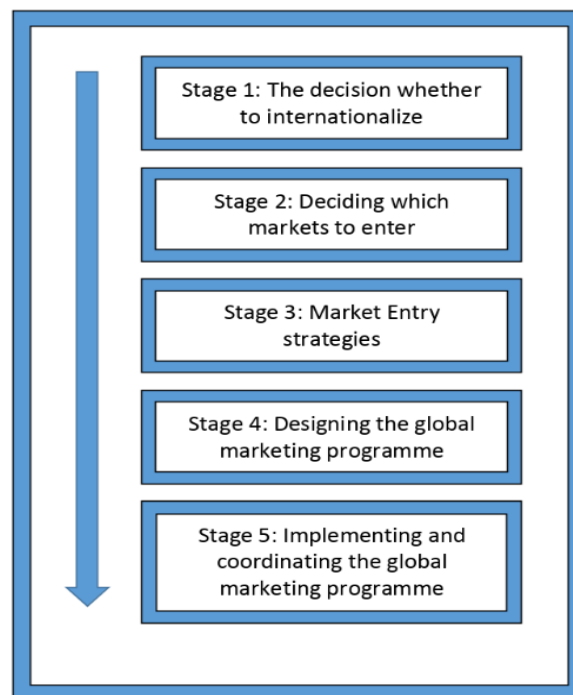


Figure 1. The five-stage decision model in global marketing (Hollensen, 2017)

The case company has already decided to internationalize, and selected Vietnam as its target country. However, the case company is undecided about specific market segments and market entry modes to use. This thesis provides the case company the suitable market segment and the suitable market entry mode. (ibid.) This is done by screening the market. The authors don't take part in stages four and five which are

designing the global market program and coordinating it. Selecting the market segment and market entry modes is done through market screening. Hollensen (2017) presents the International Market Screening model in his book Global Marketing.

### 2.1.2 Market Screening

International Market Segmentation model (hereafter IMS) is used for identifying suitable market segments in the selected country. Before selecting the target markets the criteria for feasible markets is created. After the creation of the criteria it is further developed to match company's needs. When the criteria exist and is feasible for the internationalizing company, the screening is conducted. After the market screening process micro-segmentation is conducted. The micro-segmentation divides the markets within or across the countries. (Hollensen, 2017) In commissioner's case Vietnam is the target country and different market segments are identified within Vietnam. The whole process of the IMS model is presented in the figure 2. Every stage of the model is presented in this chapter.

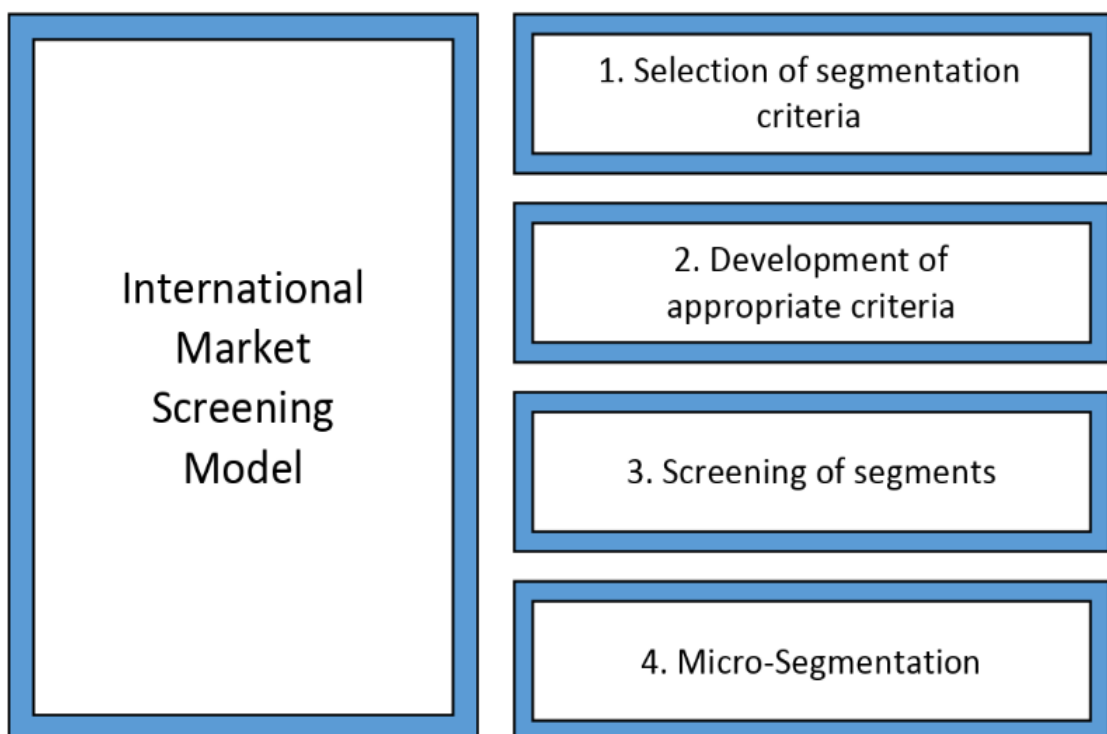


Figure 2. International market screening model (Hollensen, 2017)

The first step of the IMS process is to create the criteria for the segmentation. There are four criteria for an effective segmentation. These are measurability, accessibility, profitability and actionability. Measurability is the degree to which the size and purchasing power of segments can be measured. Accessibility means the degree to which the segments can be reached in the market. Profitability is the degree to which segments are large and profitable enough. Lastly, actionability means the degree to which the company can make things happen in the segment and whether it has sufficient resources for it. If the degree of measurability, accessibility and actionability are high it indicates more general characteristics as criteria and vice versa. Examples of characteristics in segmentation are geographic, language, political factors, demographic characteristics. (Hollensen, 2017) Multiple criteria can be used at the same time. This is recommended since it creates a comprehensive segmentation and gives an accurate picture of the market. (Leino, 2016)

A market segment is a subgroup of people or organizations that share one or more characteristic. Market segments can be created based on different criteria such as income, age, gender, ethnicity or any other that are relevant for the company. (Hollensen, 2017); (Wall, Minocha and Rees, 2010) In the Figure 3 different characteristics for International Market Segmentation are listed.

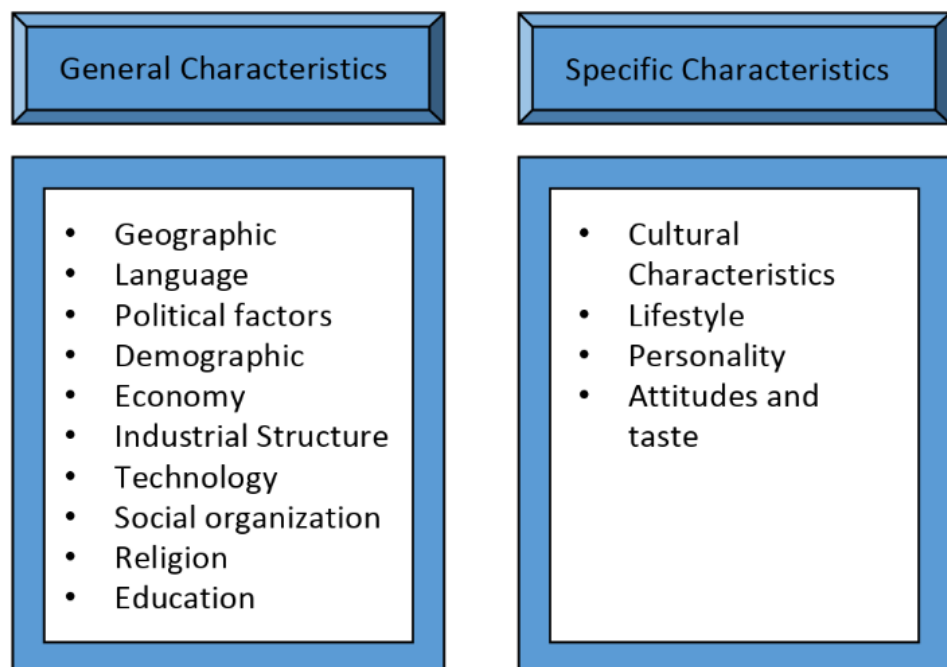


Figure 3. Characteristics for international market segmentation (Hollensen, 2017)

The possible market segments for the case company are based on general characteristics of geographic, economic, demographic, educational, political and technological characteristics. For the case company different market segments are identified between rural and urban areas; large and small- and medium sized hospitals; and public and private hospitals. The differences in segments in urban and rural areas regard geographic, educational, economic, technological and social organization characteristics. Differences between segments of public and private hospitals regard differences in political, economic characteristics and in attitudes and tastes. (ibid.)

Three possible market segments for the case company were identified in Vietnam. These are large public hospitals in urban areas, small and medium-sized private hospitals in urban areas and public and private hospitals in rural areas. The first possible market segment, large public hospitals in urban areas consists of public hospitals in cities with population over 5 million. The cities that fall into this segment in Vietnam are e.g. Hanoi, Ho Chi Minh and Da Nang (CIA, 2018).

The second possible market segment is small and medium-sized private hospitals in urban areas. The private owned hospitals are generally smaller than public ones in Vietnam (Vietnam Medical Device Research Report, 2016).

The third possible market segment is public and private hospitals in rural areas. This makes the difference between urban and rural hospitals and studies the impact of medical devices between market segments in cities and countryside.

Screening of segments consists of two stages, the preliminary screening and the fine-grained screening. The preliminary screening is done according to the external criteria. When it comes to SMEs, the internal resources that are limited must also be considered. Fine-grained screening helps to identify company's competitive power in the different markets in comparison to its competitors (Hollensen, 2017).

This thesis focuses on the fine-grained screening of segments since the case company has already done the preliminary screening of the Vietnamese market. The preliminary screening works best on the country level because the criteria only identifies characteristics on the international level (Hollensen, 2017). Using fine-grained screening inside a country is more feasible for the case company.

Fine-grained screening studies the attractiveness and competitive strengths in the market. Using the combination of these two factors helps identifying the most feasible

market segments. Both factors contain large number of variables which are listed on the Figure 4 below. Each variable is studied for every market and after all the markets are considered, different segments can be compared to identify the most suitable ones for the case company. (ibid.)

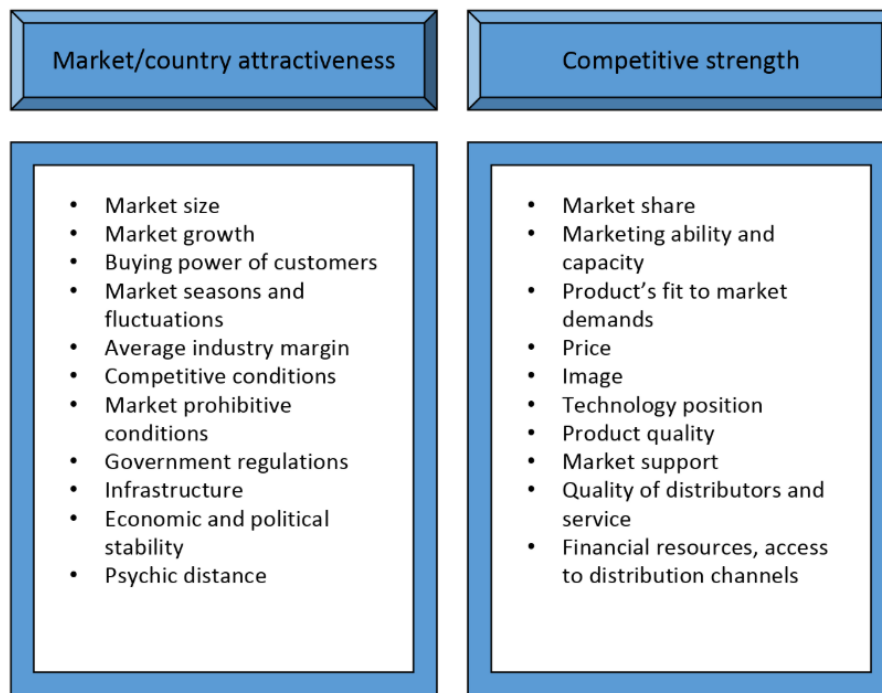


Figure 4. Dimensions of market/country attractiveness and competitive strength (Hollensen, 2017)

In the fine-grained screening, each possible market segment gets a score and markets are prioritized and marked as A, B and C countries or markets in the Market Attractiveness/Competitive Strength matrix, shown in the Figure 5. The vertical axis in the Figure 5 shows the degree of market attractiveness and the horizontal axis the competitive strength of the company. A segments are perceived as the primary markets of the company. This category offers the best long-term opportunities for growth. In this segment company might want to establish a permanent presence and should study the opportunities further. B segments are the secondary markets for the company. There are opportunities, but risks are seen too high to make long-term commitments. Further research should be carried out, but not as intensively as in the A segments. The C segments are tertiary markets which carry high risk. The allocation of resources to these markets should remain minimal. No research is needed in this market segment since opportunities for profiting are minimal. (Hollensen, 2017)

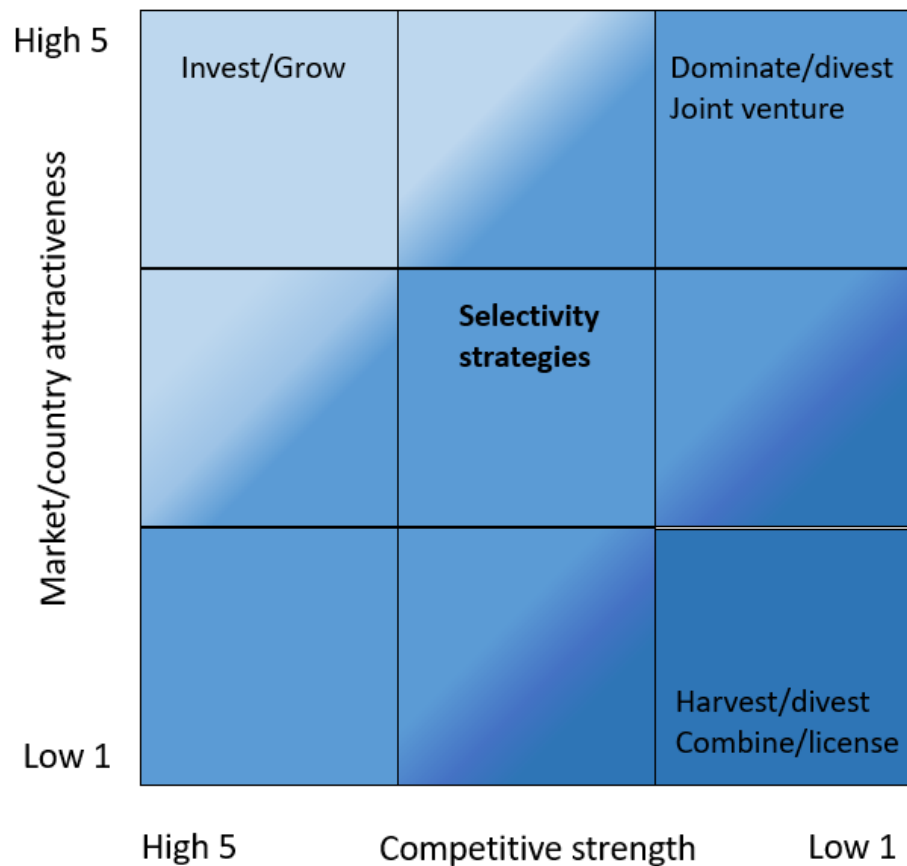


Figure 5. Market Attractiveness/Competitive Strength Matrix (Hollensen, 2017)

### Micro-segmentation

After the identification of the most feasible countries, standard techniques are used to segment markets further within countries. The variables for this segmentation are such as: demographics, lifestyles, consumer motivations, geography, buyer behavior and psychographics. The prime segmentation basis is by country and the secondary is within countries. This thesis identifies secondary segmentation bases for the case company in Vietnam.

### 2.2 Business to business markets

The case company sells its products to hospitals in Vietnam which means that it operates in business to business markets. The size of the business to business (B2B) markets is large, far larger than the businesses to consumers (B2C). Operating in the B2B-sector



is essentially different than operating in the B2C-sector as B2B-buyers do not consume the products or services themselves. The companies that operate in the B2B environment are usually more involved both in organizational selling and buying processes than companies that work in the B2C-sector. The large size of the market leads to a higher level of devotion in the buying and selling. (Fill & McKee, 2011)

There are four key aspects that define B2B-markets. These are the nature of demand, the buying process, international dimensions and the relationships between organizations in the buying and selling process. (Fill and McKee, 2011); (Hutt et al. 2012) These aspects should be considered in the internationalization process.

The nature of demand in B2B markets is only applicable to companies that sell products and is therefore not directly relevant for the case company. The nature of demand consists of three aspects. The demand is derived, variable and it has limited elasticity. The fact that demand is derived means that it arises from private consumption. (Gummesson and Polese, 2009). Private persons who consume determine the demand in B2B-sector. The demand is also variable, which means that the consumer preferences and behavior in the private sector develop fluctuations in the B2B-sector. The fact that demand has limited price elasticity means that the raw material price increases must be absorbed until a new sellable product can be taken into use. The raw material price increases cannot be directly transferred to the price of the product or service that is sold to the private consumers. (Fill and McKee, 2011); (Hutt et al. 2012)

The second defining aspect of B2B-markets are the buying processes. When selling to businesses it is important to recognize the target market and its customers. Understanding organizational buying behavior is the key to understanding the nature of B2B selling. Different organizations buy products and services differently, just like private persons have different ways of buying. Unlike in B2C, organizational buying involves many people. Every organization that buys products or services has a decision-making unit (or DMU). DMUs differ in size and composition and it consists of different roles in the buying process. (Fill and McKee, 2011); (Hutt et al. 2012); (Webster and Wind, 1972) In the figure 6 different roles of the decision-making unit are introduced.

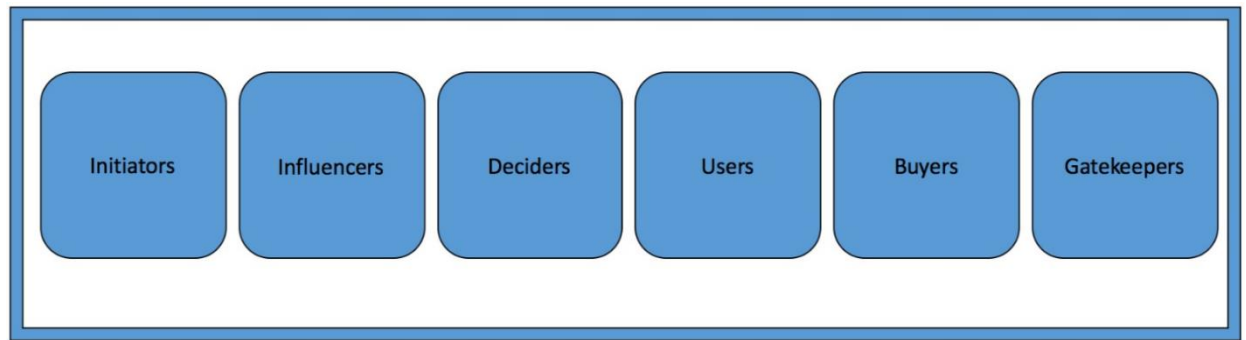


Figure 6. Roles in the decision-making unit (Webster and Wind, 1972, according to Fill & Fill, 2005, 116)

International dimensions have a significant role in B2B-operations. According to Fill and Mckee (2011), in comparison to international consumer markets, doing international business in the B2B sector is easier. This is due to the lower need of local diversification of the product or service. The need to make changes in promotion methods, language, packaging, visual design and buying processes is less important in B2B- than in B2C-markets. In the B2B-sector there are lots of standards relating to content and performance. Also, the trading associations in different industries make the international business simple for companies in B2B-sector.

The end consumers of medical equipment in Vietnam can be categorized to four groups. These groups are government-funded hospitals, clinics and healthcare centers, foreign-owned and joint-venture hospitals, clinics and healthcare centers, local private hospitals and medical education and research institutions. The government-funded hospitals purchase the largest quantity of medical equipment, 70 % of the market. The buyers often purchase brand name medical devices made in the large, industrialized countries such as Europe, US, UK and Japan. However, the bidding process is mandatory. For purchases under 85000 euros hospitals can nominate the bidding suppliers themselves but above that the results of the bidding must be approved by the Ministry of Health. Foreign-owned and joint-venture hospitals are major buyers, but they normally purchase medical equipment from their country of origin. Local private hospitals are expected to grow strongest because of the political environment is positive towards private ownership in the healthcare sector. (Medical Device Research Report, 2016)

## 2.3 PESTLE-analysis

PESTLE-analysis is a tool for studying the business environment of a company. The name PESTLE comes from Political, Economic, Social, Technological, Legal and Environmental. These are the aspects that the PESTLE-analysis identifies and studies. The analysis gives a broad view of the business environment from multiple angles. PESTLE-analysis is used in analyzing how each factor affect company's operations, success and performance in the macro environment. PESTLE-analysis helps to understand how the company should adapt their operations to market's requirements and demand. (PESTLE Analysis, 2018)

Vietnam is a country in the Southeast Asia, in the eastern part of the Indochina peninsula. The total land area of Vietnam is 310,070 square kilometers and the population is 96,740,368. (Worldometers, 2018) In this chapter the authors analyze the Vietnamese market from the macroenvironmental perspective by using PESTLE-analysis and how the factors affect the case company.

### 2.3.1 Political factors

Vietnam, officially the Socialist Republic of Vietnam, is one of the five countries in the world under a communist leadership together with China, Laos, Cuba and North Korea (Rosenberg, 2018). Head of the state in Vietnam is the president who doesn't have any administrative power. The Prime minister together with cabinet holds the real decision-making power. (Costello, 2010) However, it is argued that Vietnam is a communist nation only by name. In 1986, a Doi Moi (economic renovation) -policy was started. Its aim was to open Vietnam to foreign direct investments, hereafter called FDI's. Vietnam has been a part of World Trade Organization since 2007. (Costello, 2010); (The Economist, 2018)

The Communist Party rules the Socialist Republic of Vietnam. This slows down private consumption, increases unemployment and decreases borrowing money (Costello, 2010). The basic rights in Vietnam are restricted, including freedom of speech, opinion, press, religion and association. Also, the criminal justice system lacks independence (Human Rights Watch, 2018). Corruption levels in Vietnam are perceived high. It ranks in the position 107 out of 180 nations compared. Vietnam's Corruption Perception Index

(CPI) in 2017 was 35. In 2015 the CPI was 31 and in 2016 33. CPI of 100 means “very clean” and 0 “highly corrupt”. (Transparency, 2018)

When the case company starts operating in Vietnam it should take into consideration that free speech is limited, and corruption exists in the nation. This increases the instability of the market and makes it challenging to predict the future of the market. Especially in the regulated field of medical technology unpredictability can pose a threat for operating in Vietnam. However, the overall trend looks positive and the corruption levels have decreased in latest years. Vietnam is welcoming towards foreign direct investments and the positive trend that Doi Moi -policy started in 1980's makes Vietnam an interesting target of internationalization. (Vietnam Medical Device Research Report, 2016)

The political environment in Vietnam differs a lot from a Finnish political field. Medical technology and healthcare industry is regulated in Vietnam; however, the degree of regulation is lighter than in Europe or in the United States (Vietnam Medical Device Research Report, 2016). Vietnam's healthcare sector consists of both public and private elements. In 2015 there were 200 private hospitals in Vietnam. Since the lifting of the ban of private ownership in 1989 the number of private hospitals has increased steadily in the country. Most public healthcare stations are in Hanoi and Ho Chi Minh, the two largest cities of Vietnam. (export.gov, 2018)

Imported medical devices don't have quota restrictions and they have low import duties (Vietnam Medical Device Research Report, 2016) However, the selling of medical devices is regulated, and licensing requirements are set by Ministry of Health in Vietnam. Still the regulatory environment for the medical devices is much lighter compared to Europe or the United States. (export.gov, 2018)

### 2.3.2 Economic factors

Vietnam's GDP per capita in 2017 was 2343,1 USD. Vietnam belongs to the lower-middle income economy group. (Worldbank, 2018) In 2017 the inflation rate of Vietnam was 3,52 % as the average global inflation rate was 3,05 %. Vietnam's inflation rate was mildly over the average. In 2012 the inflation rate in Vietnam was 9,1 %, which is considered high. (Statista, 2018) The situation has stabilized since and the current inflation rate is in normal level. The unemployment rate in 2017 was 2,05 %. It has

remained around 2 % during the last decade which is low level. In 2018, credit rating agency Moody's upgraded Vietnam's credit level to BA3 from B1. The agency also changed the outlook of economy from stable to positive. Vietnams national debt is also decreasing, and this trend is likely to continue. (Moody's, 2018) This is positive for foreign companies expanding to Vietnam. In 2015 the market value of the medical equipment sector in Vietnam was 698 million euros. In 2019 it is estimated to reach 978 million euros.

### 2.3.3 Social factors

In 2017 the yearly population growth rate of Vietnam was 1,02 %. (Statista, 2018) The average yearly global population growth rate in 2017 was 1,12 %. (Worldometers, 2018) The population growth rate in Vietnam is below the global average. However, this difference falls into the margin of error and should not be given much value. In 2017 the population density of Vietnam was 308 people per square kilometer. The world average was 58 people per square kilometer. (Worldbank Data, 2018) In 2018 the rate of people living in urban areas in Vietnam was 35,9 % of the whole population. The largest urban areas are Ho Chi Ming with 8,1 million people, Da Nang with 1,4 million people and Hai Phong 1,2 million people. (CIA, 2018) The largest number of population live in rural areas. It can be challenging for the case company to access these people with marketing operations due to lack of education, infrastructure and purchasing power.

Vietnam has a large work force. In 2015 the number of people over 15 years was 69,74 million. Number of people in working age covers approximately 70 % of the total population. (Statista, 2018) Despite the large number of working age population, the labor force is underskilled. Vietnamese workers lack language, technical and behavioral skills. Because of this it is challenging to hire people to managerial positions. Especially the lack of language skills poses a challenge for foreign companies planning to seek growth in Vietnam. This is important when the case company selects the entry mode to Vietnamese markets.

Vietnamese people are informal, relaxed and close to each other (Bao Dung, 2015). Loyalty and trust are important in relationships, either in business or private life. Vietnam is a collectivistic society (Hofstede Insights, 2018). This means that active relationship building is important in business operations in Vietnam. This becomes even more enhanced in B2B-activities, where long-term relationships are vital and should be actively

nurtured. (Fill and McKee, 2011); (Hutt et al. 2012) Vietnam's population is ageing, and more people are likely to suffer from chronic non-communicable diseases, such as cardiovascular disease. (export.gov, 2018) Urban hospitals suffer from overcapacity since people from rural areas use health services in urban areas. At the same time rural health establishments remain under-utilized.

#### 2.3.4 Technological factors

The number of internet users in Vietnam in 2017 was 53,86 million people which is around 55 % of the whole population. The number of mobile phone users in Vietnam is approximately 90 million people, 93 % of the whole population. The number of mobile phone internet users (smartphone users) in Vietnam in 2017 was 42,18 million people, around 46 % of all mobile phone users. (Statista, 2018) In rural areas the number of people using smartphones is lower. There is little reliable data of the number of people using smartphones in the rural areas. To achieve reliable data on this more research is needed. In 2017 the ratio of social media users in Vietnam was 39 % compared to the whole population (Statista, 2018). This means 37 million people are active on social media channels.

The old-fashioned medical equipment is still in use in Vietnamese healthcare establishments which leads to ineffective treatment of patients (Vietnam Medical Device Research Report, 2016). Case company's product is a medical device that links to user's smartphone and needs a stable internet connection. It is important to realize that half of the population uses smartphones. Also, the infrastructure in countryside is underdeveloped (Vietnam Medical Device Research Report, 2016). When the case company plans marketing activities this is important to bear in mind.

#### 2.3.5 Legal factors

Two main laws govern FDI's in Vietnam, the Unified Law on Enterprises and the Common Law on Investment. These two laws cover the most aspects of FDI's in Vietnam from business registration to operations. In addition, there is the Commercial Law which stipulates the necessary procedures to set up offices and branches in Vietnam. (Vietnam Briefing, 2010) In general the legal environment in Vietnam is complicated (Bao Dung, 2015). This is mainly because of the relatively high corruption rate and the lack of

transparency. Health care sector where the case company operates is generally seen strictly regulated. This is also the case in Vietnam, however the level of regulation is lower when compared to Europe or the United States. (Case company's info material, 2018)

Only companies with a legal business entity registered in Vietnam and that have an import license are eligible to distribute medical equipment. To fulfill this requirement, foreign suppliers often sell through local distributors or agents. (export.gov, 2018) This means that the case company needs to find a partner in Vietnam who is eligible of selling medical equipment in the country.

### 2.3.6 Environmental factors

Vietnam is a country in the Southeast Asia with over 3000 kilometers of coastline. The country shares its borders with China, Cambodia and Laos. During the last three decades Vietnam's economy has been in a rapid growth after the launch of the Doi Moi-policy in 1986. This poses significant pressures for environmental sustainability in Vietnam. (Costello, 2010)

The rapid economic growth leads to a higher consumption of natural resources. In Vietnam the labor force is relatively cheap which directs investments towards manufacturing sector. The manufacturing sector needs more energy than knowledge work sector (professions such as accountants, lawyers and consultants). This leads to a high amount of emissions. Hanoi is the most polluted city in Vietnam and one of the most polluted cities in Southeast Asia. This is because of high population density and transportation in the city. (Bao Dung, 2015) In 2003 a Ministry of Environment and Natural Resources was founded. It was an important step in being able to pursue economic growth while taking care of the environmental matters. (Costello, 2010) Regarding the geography of Vietnam 71 % of the healthcare establishments are in Northern Vietnam. (Medical Device Research Report, 2016)

The environmental factors don't affect the case company as directly as other factors in the PESTLE-analysis. There are indirect effects that environmental matters pose to the med-tech sector. If the environmental protection doesn't grow together with the economy people are at risk of health problems. This might increase the need for med-tech services in Vietnam.

## 2.4 Porter's Five Forces

Porter's five-forces -model studies company's competitive situation in an industry level (Porter, 1979). Despite it being old it is still a valid theory since the five forces affecting the competitive situation have the same effect for the case company even if the factors behind the forces have changed from 1979. For example, the bargaining power of

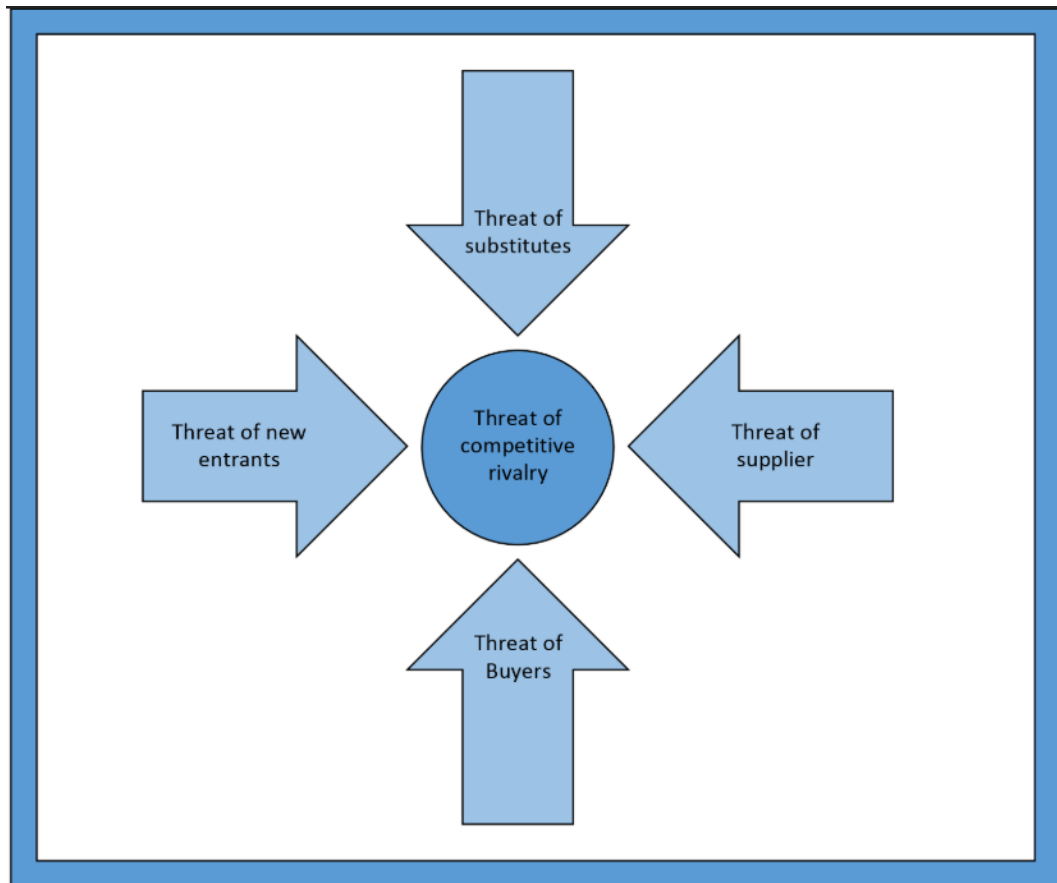


Figure 7. Five-forces model (Porter, 1979)

customers can arise from different factors today than it did 40 years ago, but a company needs to formulate a strategy to position itself in the industry like it had to in 1979. According to Porter the competition in an industry derives from the underlying economic structure and goes beyond the behavior of current competitors. The competitive situation depends on five competitive forces, shown in the Figure 7.

The five forces that affect the competitive situation in the industry level are threat of new entrants, threat of substitute products or services, bargaining power of suppliers, bargaining power of customers and the market competitors. The goal of this analysis is



to identify company's position in industry where it can defend itself against the five forces. (Hollensen, 2017) Each of the five forces are described in the following sub-chapters.

#### 2.4.1 Threat of competitive rivalry

There are multiple factors that affect rivalry between existing competitors in an industry. These are concentration of the industry, rate of market growth, structure of costs, degree of differentiation and exit barriers.

The concentration of the industry describes the general competitive situation in the market. Many same-sized competitors lead to intense rivalry. There is less rivalry if there is a clear industry leader with significant cost advantages. The rate of market growth is linked to the number of competitors in the industry. If market grows slowly there is a lot of competition and if the growth is rapid there is less competition. If the industry has high fixed costs it encourages to cut prices to fill the capacity. Highly differentiated products generate less intense rivalry and normal, commodity products attract more competition in the industry. Switching costs are costs that consumers face when they change brands, suppliers and services or products (Investopedia, 2018). When the switching costs are high the rivalry is reduced. This is because a single actor in the field has invested a lot in research and development and this is only useful for the company that made the investment, not for the whole industry. If the exit barriers are high the competition is also high since no player in the field wants to exit the industry. This can be because of high vertical integration, high cost of shutting down plants or emotional barriers. (Porter, 1979); (Hollensen, 2017)

It is important to bear in mind to not to disturb the competitive stability of an industry. For example, starting a price war with competitors can gain a small gained share in the market but it might lead to an overall fall of profits in the industry. The eventual benefit is therefore nonexistent. (ibid.)

#### 2.4.2 Threat of suppliers

Suppliers can implement their bargaining power on the industry participants in two ways, by raising prices or reducing the quality of purchased goods or services. If a company buys products or services from a powerful supplier, it can drain the profitability of an

industry if the buyers can't increase prices accordingly. (Porter, 1979) The higher the bargaining power of the suppliers, the higher the cost is for the buyer (Hollensen, 2017).

Suppliers have the power in the industry in following cases. (1) The supply is dominated by few companies and they are more concentrated than the industry they sell to. (2) Supplier is powerful if its products or services are unique and differentiated or they have high switching costs for the buyer. (3) Switching costs are costs that buyers face if they changed the supplier. These arise if the buyer has exact demands for product specifications, it has invested in specialized supporting equipment or the production lines are connected to the supplier's manufacturing processes. However, these switching costs are often related to companies that buy products instead of services and therefore are not fully applicable for the case company. Supplier also has the bargaining power if it (4) doesn't have to compete in selling other products for the industry, (5) it poses a threat of entering the industry's business which makes it challenging for the industry to improve its terms of purchases or (6) the industry is not an important customer for the supplier. (Porter, 1979)

A company can deal with the bargaining power of suppliers by seeking new suppliers or by making its offering simpler so that the components can be bought from several suppliers. (Hollensen, 2017)

#### 2.4.3 Threat of buyers

Buyers are powerful in following cases. (1) A buyer purchases in large volumes. They are particularly powerful if the selling industry has high fixed costs. (2) The purchased products are standard and undifferentiated. In this situation the buyers know that they always find alternative suppliers. (3) The buyers pose a threat of starting to manufacture product/raw material by itself which is called backward integration. (4) There are many suppliers of the product. (5) Buyers earn low profits which creates an incentive to lower purchasing costs. (6) The quality of industry's product is insignificant to the buyer's products or services. If the quality of industry's product is significant to the buyer's product or service, the buyers are less price sensitive. This includes industries where a malfunction can lead to large losses, such as medical instruments. Therefore, this is important for the case company. (Porter, 1979)

Companies can try to lower the power of buyers by increasing the number of buyers, threatening to integrate forward into the buyer's industry and producing highly valued and differentiated products. (Hollensen, 2017)

#### 2.4.4 Threat of substitutes

Substitute products reduce the attractiveness and profitability of an industry because they create a price ceiling, after which it is cheaper for buyers to purchase substitute products. The threat of substitutes depends on following factors. (1) The buyer is willing to purchase substitute products. (2) The relative price of the substitutes is low, and they have good quality. (3) The costs of switching to substitutes is low. (Porter, 1979)

The threat of substitute products can be lowered by building up switching costs. These costs may be psychological, such as strong brands or by offering great service for the buyers. (Hollensen, 2017)

#### 2.4.5 Threat of new entrants

New entrants increase the competition in an industry. They bring in new capacity, they desire to gain market share and substantial resources. The threat of new entrants is strongly linked to the barriers of entry in the market. If the barriers of entry are high the newcomers don't pose a serious threat of entering. There are six major sources of barriers to entry; the economies of scale, product differentiation and brand identity, capital requirements, access to distribution channels, switching costs and government policy. (Porter, 1979); (Hollensen, 2017)

The economies of scale mean that a company willing to enter the market needs to make the entrance with large scale or to accept cost disadvantage. Scale economies can act as hurdles in distribution, sales, financing and almost in any part of business. Product differentiation is achieved by winning the customer loyalty. The most common way of doing this is by branding. When a company has a strong brand within an industry it makes it difficult for the newcomers without a solid reputation to gain market share in the industry. Entering a market needs financial resources and if the need for capital in the industry is high it creates a market entry barrier. Capital is needed for day to day operations, marketing, research and development and to purchase inventories. Small

actors can find this barrier very limiting whereas large companies with solid financial resources can theoretically enter any industry they want. A company who wants to enter the market must establish distribution channels for its product or service. The more limited the distribution channels are and more existing competitors that have these taken over the more challenging the market entry will be. If this barrier is very high in the industry, the company willing to enter might have to create its own distribution channels. However, it might become expensive. Governments can limit entry to certain industries with such controls as license requirements and limitation to access to raw materials. Different countries limit access to different industries, but most commonly regulated industries are related to retailing of harmful products such as tobacco or alcohol, medical products or services and industries that are harmful for environment. (Porter, 1979); (Hollensen, 2017)

A company wanting to enter the market needs to research the competitive situation in the industry thoroughly. At first glance an industry might seem lucrative, but high barriers of entry might change this totally.

## 2.5 SWOT-Analysis

SWOT-analysis is a tool that helps to identify company's internal and external factors that affect doing business in the market. Strengths and weaknesses are internal characteristics and opportunities and threats are external characteristics. Investigating these characteristics makes it possible to collect strategic information about the markets. When doing SWOT-analysis it is important that the focus lies on relative rather than absolute strengths and weaknesses. In other words, the competitors need to be taken into consideration when analyzing internal characteristics. (Fahy and Jobber, 2015)

The strengths of the case company are multinational and high-skilled team, long experience from the healthcare field, technology that can be protected with patents, existing networks in Vietnam and the ability to compete with price compared to traditional heart-related medical tracking devices. Founders also have a full control of the company and the case company has various supporting groups in business. The offering is customizable for each customer and its manufacturer in Finland has relevant approvals and it meets the industry standards.

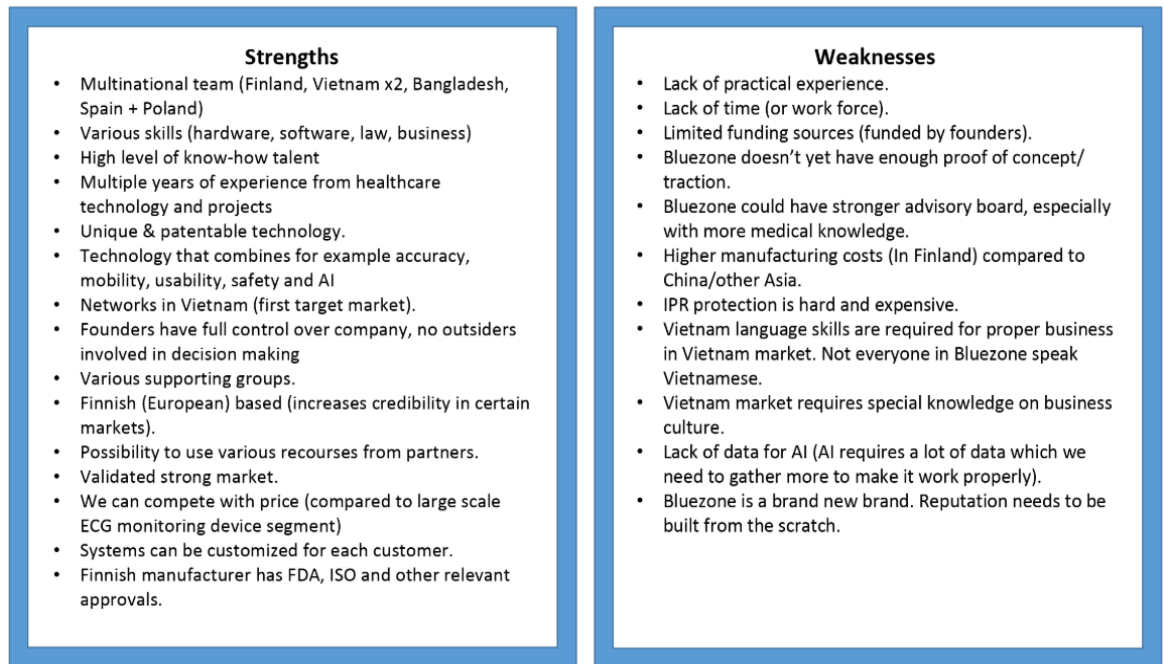


Figure 8. Strengths and Weaknesses of the case company

The key growth drivers and opportunities for medical technology companies operating in Vietnam are the modernization of Vietnam's healthcare industry, international aid funding and free trade agreements. Vietnam's government aims to develop its healthcare facilities and it is estimated that it needs to spend around 1,07 billion euros per year to achieve its object. For the case company this means that in the public sector there is money and will to buy their products and services.

Another nations and organizations give funding for Vietnamese health sector. For example, the European Union and the World Bank have funded Vietnam's goal to develop its healthcare sector. Since 95 % of medical equipment of Vietnam is imported, Vietnam has tied free trade agreements with e.g. South Korea, Japan and EU. (Vietnam Medical Device Research Report, 2016)

As a part of developing the health care industry Vietnam has abolished laws and regulations that make importing medical equipment complicated. (export.gov, 2018); (Vietnam Medical Device Research Report, 2016)

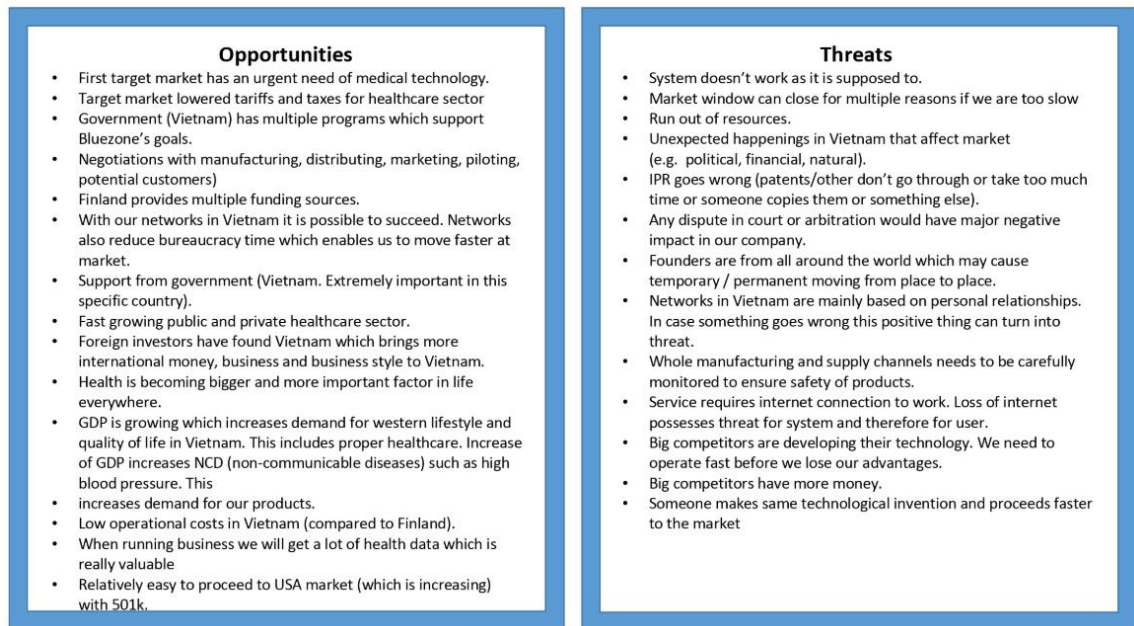


Figure 9. Opportunities and Threats of the case company

Weaknesses of the case company are the lack of time, work force and practical experience, and the funding sources are also limited. The case company doesn't have enough proof of the concept used in the device and the medical know-how could be better. The manufacturing costs are higher when compared to China or other Asian countries and the case company lacks people who can speak Vietnamese. The cultural knowledge of Vietnam is required. Artificial Intelligence products need a lot of data and currently the case company doesn't have enough data. The brand is new and not yet renowned, the reputation needs to be built from the scratch.

There are many opportunities for the case company in Vietnam. These can be seen from Figure 9. There is an urgent need for medical technology in the country and the level of regulation and taxes are low. Vietnamese government has implemented national programs that support case company's goals. The government support is important since the selling of healthcare products is regulated (although not as much as in the Western countries). There are ongoing negotiations with different entities that can help the case company in marketing, manufacturing, distributing and piloting. Few potential customers are also identified. Finland is case company's home country and it provides many opportunities to get funding. Foreign investors have found Vietnam and it activates the business environment in the country as more money flows in. Both the public and private health sector grow fast and people in Vietnam live longer than before. The GDP of

Vietnam is growing, and it improves the quality of life. This includes proper health care. As country's GDP increases also the number of patients with non-communicable diseases increase. This increases demand for case company's products. The operational costs in Vietnam are low and from Vietnam it is relatively easy to proceed to US markets.

The case company has identified the threats it can encounter when doing business in Vietnam. There is a chance that the medical device doesn't work as intended. The market window can also close if the market entry is not made fast enough. The case company can also run out of resources and unexpected happenings in the political, economic or natural environment can take place. There is a chance that the patents don't go through or the process takes too much time. Someone can also copy the patents of the case company before the patents are active. Any dispute in the court would have a major negative impact for the company. Networks in Vietnam are based on personal relationships which is good in a normal situation. However, if something goes wrong in the personal relationships it can threaten the business. The service needs an internet connection to work, if a loss of internet connection takes place it is a threat for the system and the user as well. Large scale competitors are developing similar technology and fast moves are needed before the case company loses its advantage. The large competitors also have more resources than the case company.

### 3 INTERNATIONAL MARKET ENTRY MODES

When a company internationalizes, after the selection of the target country, a market entry strategy should be developed (Vahvaselkä, 2009). The market entry strategy consists of a plan for the operation form that is used when expanding abroad and the way the product or service is made accessible for potential buyers (Vahvaselkä, 2009). Different market entry modes can be divided in export entry modes, joint venturing entry modes and direct investment entry modes. Amount of risk, control, commitment and profit potential grows when transferring from export entry modes to investment entry modes. (Kotler et. al, 2013). Normally after gaining more market share companies transfer from export entry modes to joint venturing where after they make direct investments in the target market. The selection of inappropriate entry mode in the foreign market can have significant and far-reaching consequences on a firm's performance and survival (Quer, Claver, Rienda, 2007).

#### 3.1.1 Indirect export

Indirect exporting belongs to export entry modes. When using indirect export mode, a company uses an intermediary located in the producer's country to take care of all exporting activities. The intermediary can be an export buying agent, a broker, an export management company or a trading company. The exporting company can also engage in piggyback-exporting where an inexperienced company, 'rider', deals with a larger and experienced company, 'the carrier' who exports the product or service on rider's behalf. (Hollensen, 2017)

In indirect exporting the sale is like a domestic sale where the company doesn't really engage in global marketing. (Kotler et. al, 2013); (Hollensen, 2017) This requires less investments since no overseas marketing organizations or networks are involved. The risk level of indirect exporting is low since the knowledge level of the intermediary is higher than the company's. (Kotler et. al, 2013) However, indirect exporting is relatively expensive, since the chain of exporting might consist of several middlemen each charging a separate fee. (Vahvaselkä, 2009) Using an intermediary in exporting can alienate the company from the situation in the target country and make managing



operations challenging. The company has little control over the way the product or service is marketed in the target country.

### 3.1.2 Direct export

Direct exporting also belongs to export entry modes. When exporting directly a company takes care of the exporting process independently. After the product has arrived at the target country an import agent, retailer, commissioner or broker takes care of the selling the product to the final customer. It is important to know the target market well and select the distributor with care. Direct exporting might require an internal export department. This mode carries more risk than indirect exporting, but it is less expensive since there are no domestic partner charging for services. Its upsides are shorter supply chain and more direct touch with the final customer. (Vahvaselkä, 2009)

### 3.1.3 Licensing

Licensing is a form of joint venturing where a foreign company buys the right to use company's intellectual property or IP. Intellectual property can include manufacturing knowhow, patent, trademark or copyright. After the purchase of the IP the buyer can manufacture or sell other company's products in its home country for a fee that can be a single payment, down-payment or royalty. Licensing is a way to collaborate strategically with other organizations. Licensing means sharing IP so that each party can cooperatively develop, manufacture and market products for their mutual benefit. A license is limited to a certain geographic area with a contract that defines the contents of the license, the price, the amount manufactured or sold and the marketing operations. (Successful Technology Licensing, 2018); (Vahvaselkä, 2009)

There are 6 fundamental factors to consider in licensing:

1. Technology licencing can only occur when one of the present parties own the IP.
2. There are different kinds of licences for the technology fields. The agreement of licensing must be agreed per business relationship.
3. Technology licensing requires business relationship between the both parties where other agreements have great value, with in the both parties and third parties outside if the licensing agreement.

4. All licensing contracts must benefit both parties. A mutual win-win situation must be created.
5. Commonly the licensing agreements contain complex and multiple terms that must be agreed on by both parties with a contract
6. Licensing is not the same as transferring the rights. The licensing agreement's terms commonly contain trade secrets that are not revealed to the other parties.

The fundamental factors are to be used in the given order when preparing for licensing and its negotiations. (Successful Technology Licensing, 2018)

#### 3.1.4 Contract manufacturing

Contract manufacturing is a form of joint venturing where a company makes a contract with a local manufacturer in the target country to manufacture its product or provide its service. The company agrees with the manufacturer on the price, the quantity and the manufacturing method used. (Kotler et. al, 2013) Contract manufacturing doesn't mean that the company only sells products manufactured in the target country to the same country. For example, a Finnish company who wants to expand to Sweden makes a contract manufacturing deal with a Swedish manufacturer. If Denmark is also seen as an interesting market the Swedish manufacturer can deliver the Finnish company's products to Denmark. The upsides in contract manufacturing are the fast start in internationalizing, with less risk and the change for the company to later buy out the local manufacturer. The downsides are limited control over the manufacturing process and increased costs of manufacturing compared to owning the manufacturing unit. (Vahvaselkä, 2009); (Kotler et. al, 2013)

#### 3.1.5 Manufacturing facilities

Launching manufacturing facilities in the target country is a way to make foreign direct investments or FDI's. For a company it becomes highly important to have a strategy formulated around its manufacturing unit. A manufacturing unit is the place where all inputs such as raw material, equipment, skilled labours and software come together and create a product for customers. One of the most critical factors determining the success of the manufacturing unit is the location. Many view the location on a narrow scale as domestic and foreign, but those are part of the larger strategy plan. Once a company has

decided if they want to have their manufacturing facilities either domestic or foreign they must consider the actual location and its environment as factors. When considering the manufacturing facilities, there are a few key factors to consider while making the strategy:

- 1) Cost
- 2) Available infrastructure
- 3) Labour skill
- 4) Government policies
- 5) Environment
- 6) Location

Considering all factors above is highly important in the decision-making process as it optimises the delivery time and keeps the process costs low. For example, if the factory location is far away to keep the running costs low, the labour costs might increase as skilled workers need to move to an undesired location. The transportation costs increase whereas the actual property might cost more in more desirable location, but the labour and transportation costs might compensate the property costs. (Management Study Guide, 2018)

## 4 METHODOLOGY AND ANALYSIS

### 4.1 Research approach

This study applies the deductive approach to research. Rather than finding a theory to support our research data, we test the compatibility of known theories to our data. The research modifies and adapts the theories so that they are compatible with the research approach. The next step in the deductive approach is to gather the empirical data that is relevant for the area and compare it with theories to find similarities, differences, links and correlations between the empirical data. This gives an unbiased and justified conclusion for our study. (Bryman & Bell, 2007)

This thesis uses qualitative data collection methods in form of interviews. Qualitative data refers to all “non-numeric data or data that have not been quantified and can be a product of all research strategies” (Saunders et al. 2009). Examples of qualitative data might be answers to open ended questions that can be found from questionnaires, notes taken during a lecture, minutes of a meeting or notes from an interview. To be useful qualitative data needs to be analyzed and understood. (Saunders et al. 2009)

However, using marketing tools such as Market Attractiveness/Competitive Strength matrix and Five-forces tool by Dobb’s brings a quantitative angle for this research. Quantitative data is numeric data which can be quantified and analyzed statistically (Saunders et al. 2009).

#### 4.1.1 Case Study

According to Bryman and Bell (2007) case study is a detailed analysis of a single case. The case can be a company, an organization or a project. A case study is used as a research method when the researchers are interested in studying a complex object that requires a more detailed and deeper study to understand the underlying factors.

The case study is often associated with using a qualitative approach. It enables the researchers to conduct an unstructured interview or observation of the case. These methods are useful when the goal is to examine the case intensively and with detail. (Bryman & Bell, 2007) In this thesis the authors use the case study approach together

with semi-structured interviews. This allows the authors to capture the specific features and factors that affect case company's internationalization process, yet it also allows the respondent to describe phenomena freely.

## 4.2 Data Collection Methods

### 4.2.1 Secondary sources

The secondary sources used were primarily books, scientific journals, articles and other theses that were relevant to this study. The authors used these as the foundation from which the tools and information was gathered so that they could be adapted to the research. From these sources the authors picked relevant tools to answer the research questions and on to which to base the primary sources. With large number of secondary sources in the field guarantees the validity and relevancy of the information and how they can be used in the current markets.

The authors searched mainly for secondary sources that were published within 10 years, but since some theories and tools are older and still applicable in the modern world, they were used. If the sources were older, the authors have stated why they are used and how they can be applied to the research, while regarding their year of publication. These older resources function also as the foundation for the newer sources, but commonly the usage of the newer publications are more specific rather than the original the authors deemed the originals fit for use as they could be applied and modified accordingly for the research.

### 4.2.2 Primary sources

In this thesis the authors use qualitative approach together with semi-structured interviews. Bryman and Bell (2007) describe semi-structured interviews a research process where the interviewer has a set of questions regarding specific topics. The respondent can answer freely to these questions. This is beneficial for both the respondent and the researcher since the respondents stay close to the themes throughout the interview and the researcher can categorize and analyze the data easily

since the questions follow the same pattern between different respondents. (Bryman & Bell, 2007)

The idea for the interviews was to present questions regarding internationalization for the case company's founders. The questions regarded the PESTLE-analysis, market segments and market entry modes. The marketing tools were filled together with case company's managers after the interviews. The authors interviewed 4 out of 5 case company's managers. The answers were compared with each other to achieve reliable data. The interviewees were the case company's director of the board, the chief executive officer, the technical planner of the company and one employee. Two out of four interviewees had Vietnamese citizenship, which increased the degree of validity of the answers.

In the fine-grained market screening, formulating the factors and applying the data consistently across the market segments is challenging because the data is normally available on the country-level, not inside the country-level. This is a limitation in the research process. However, its impact can be minimized with careful research and planning.

The calculations in the Porter's five forces tool by Dobbs (2014) and in the Market Attractiveness/Competitive Strength tool were done by using average values. We found it to be the clearest option for the readers and it gave sufficient results from which the findings could be gathered. We tried valuing the trending values higher with weight factors according to how often they occurred, but soon realized it complicated the research and could have misled results. Because of this we chose using average figures. Also, as the results were gathered from experts of their own field we found the answers following a common trend and there were no large differences on the answers from which the calculations were done. At the same time, we had similar questions in different instances that would support the overall results and minimize the risk of misunderstandings and unsure the reliability. Also, we requested that if the person's answers didn't have knowledge or did not feel comfortable answering some questions on the survey that they would leave the section blank to minimize answers that were not based on any knowledge. By doing this we were able to gather sufficient amount of answers from which we base our answers. Doing so the results become unbiased and reliable.

The research is valid since data was gathered broadly from secondary and primary sources after which it was applied to marketing tools. These tools are widely used, and they were applied for the case company. However, it is challenging to generalize the research findings, since every tool was applied specifically for the case company.

#### 4.3 Analysis of the interview answers

Analyzing interview's answers gives a precise picture of the case company's future operations in the target market and it helps to answer the research questions which are following:

- “What is the most suitable market segment for the case company in Vietnam?”
- “What are the industry threats for the case company in Vietnam?”
- “What is/are the most suitable market entry mode(s) to Vietnam for the case company?”

<b>Introductory Questions</b>
How long have you been in business?
In what stage is the business currently?
What are the reasons for the case company to internationalize?
What makes Vietnam attractive to your business?
Which sectors do you believe will generate the most revenue?
Why did you choose the answer to the question above?
When do you plan to generate income from domestic markets?
When do you plan to generate income from foreign markets?
How do companies like yours generate networks in target segments commonly?
What kind of existing connections do you currently have?
Are you planning to start networking in your target country upon entry during the following 3 years?

Table 4. Introductory questions, managerial interviews

The case company has been in business for a year and it is about to enter the Vietnamese markets with the commercial product. It is currently doing final designing for the prototype of the cardiovascular tracking device. The case company also plans the future business activities in Vietnam. Reasons for the case company to internationalize are the stability and low level of openness towards new devices in Finnish healthcare market. The case company also has networks in Vietnam and the market size is better there. Competitive field is also more accepting towards the case company and a fast

market entry is possible in Vietnam. The Vietnamese government is supportive towards the case company's industry (medical technology). Vietnam is seen as an attractive market since the country needs efficient medical equipment. There is also a lack of doctors and the population with medium and high-class income level use increasingly hospital services. The case company also has existing relationships in med-tech industry in Vietnam which increases the attractiveness of the market.

The case company plans to generate the largest revenue from Vietnamese B2B-sector during the following 1,5 years. It is not interested in going to B2C-sector since it is too large, and it would be hard to create a strong brand name there. Hospitals are case company's main customers, but individual patients are end users of the device. Therefore, it is also possible to benefit from other sectors than B2B. Targeting B2G (business to government) was also discussed, but the negotiation power in that sector is limited so the case company will mainly focus on the B2B-sector. Gaining positive reputation and credibility in the B2B-sector makes it easier to expand to B2C-sector in the future. The case company plans to generate income from domestic markets (Finland) in coming 2-5 years.

Med-tech companies normally create networks in target markets by targeting large customers first and achieve positive reputation among the large customers. When the case company's' device is accepted by the large customers, it is easily to go deeper to the market. The case company also partners with local consultants and marketing companies to deepen their knowledge of the market. Foreign companies that have previously operated in Vietnam are a valuable source of information for the case company.

The case company has started initial negotiations with a SME network in South Vietnam. It also has connections to one major distributor, to several heads of hospitals and to any authorities in the health sector. The case company hopes for connecting with Vietnam's largest hospitals as well as with industry and opinion leaders in med-tech industry. (Case company's managers 2018, Managerial Interviews)



<b>Entry Modes</b>
Where do you plan on developing and maintaining the software?
How are you planning to manufacture the hardware?
How will the training of hospital staff take place?
How will the after-sale service function and where will it be located?
What kind of middlemen are you planning on using in domestic markets in the next 3 years?
What kind of middlemen are you planning on using in foreign markets in the next 3 years?
Do you plan to have your manufacturing in domestic or foreign facilities during the following 3 years?
What is your reasoning for the answer above
Do you plan to own you own manufacturing unit during the following 3 years?

Table 5. Entry mode questions, managerial interviews

Currently the case company plans to manufacture its product in Finland, but manufacturing in some other European country is possible during the following 3 years. The same applies for the software, as it will be developed and maintained from Finland. Domestic manufacturing protects the intellectual property better and the quality control is better. The case company wants to use “Manufactured in Finland” -idea in branding, which is an asset when selling to Vietnam. However, the case company won’t buy its own manufacturing unit since it would tie too much financial resources at this point.

The training of the hospital staff happens by the case company’s personal in the initial stage. Also, a guidebook and demo videos are used to train people to use the device. The case company will take care of the maintenance of the device through local distributor.

The case company won’t use a middleman in Finland in the first years, later it might become possible. In Vietnam the case company uses local consulting and marketing services and distributors for selling the product. (Case company’s managers, 2018, Managerial Interviews)

<b>PESTLE</b>
What kind of existing government support is there for companies targeting Vietnam from Finland?
How do you see corruption affecting your business in Vietnam?
What is your reaction towards bribery?
Do you see the political environment in the target country as a barrier or benefit?
Do you see the economic environment in the target country as a barrier or benefit?
Do you see the social environment in the target country as a barrier or benefit?
Do you see the technological environment in the target country as a barrier or benefit?
Do you see the environmental atmosphere in the target country as a barrier or benefit?
How do Vietnamese patients react to doctors’ recommendation?

Table 6. PESTLE questions, managerial interviews

Both the Vietnamese and Finnish government are ready to support the case company financially through different business start-programs. The corruption exists in Vietnam, but it is not the only way to do relationship building. The case company is actively against bribing authorities in the market entry process.

The political environment in Vietnam is both a barrier and benefit for the case company. The regulation is lighter than in the Western world, but the situation can also turn around fast. Vietnam's government is receptive towards foreign companies and this combined with the country's will to improve the health sector leads to a positive outlook in the political aspects. However, if the political decisions started to shift towards more protective and conservative approach, this currently positive situation could turn against the case company. The case company is aware that country's political decision makers at any level are prone to corruption. The case company is against corruption and knows that their offering is superior when compared to other products in the market segment. This relieves the pressure of someone asking for bribes. (Case company's managers 2018, Managerial Interviews)

The economic situation is good, the GDP is growing in Vietnam and the health care sector is growing even faster. This is a benefit for us.

Social aspect is that people are going to cities. After the war everybody had lots of kids. 15-35 is the largest age group and the population is ageing. People are more in need of new technologies in health care market. This is a benefit.

Technology is developing, if you are in big cities the technology is developed and it's a benefit. In the countryside this is not the case and the technology is a barrier.

The legal environment is a benefit. There is less regulation in Vietnam and it means that entering the market is faster. The environmental issues matter for the case company. We target to be as environmentally friendly as possible. Focus is also here. One reason why the case company manufactures in Finland is that they can control the procedures and that it remains environmentally friendly, if manufactured in Vietnam people don't care about this so much.

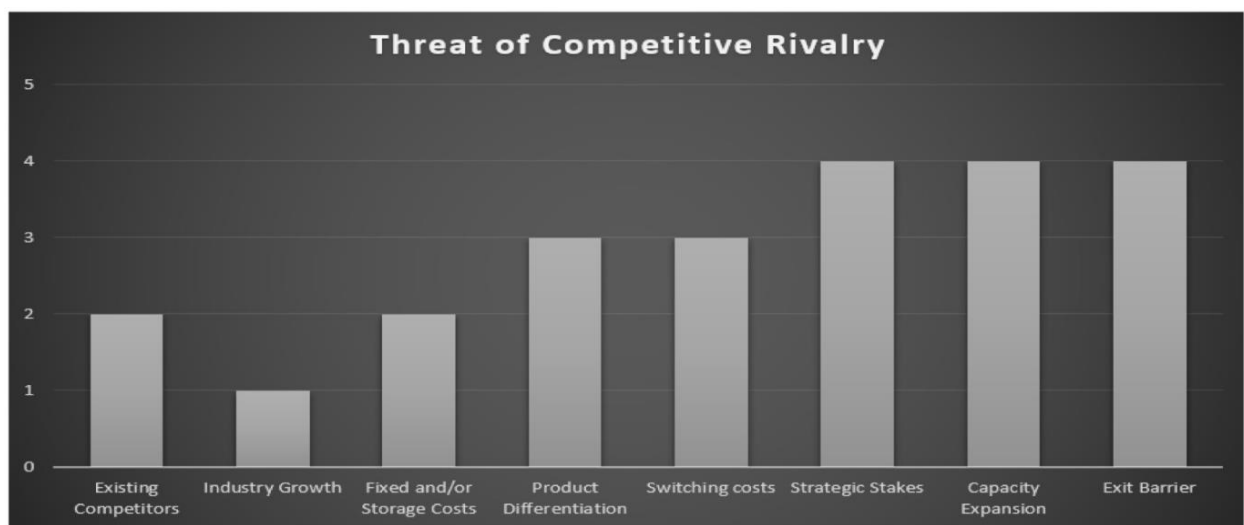
The Vietnamese people listen well to the doctors' recommendations. The main competitors for the case company are large companies that sell large and bulky ECG-monitors. However, there is not direct competition since the case company is the only company that can offer hospital level ECG-tracking in a portable form. The strength is

portability without trading of accuracy and the ease of use. (Case company's managers 2018, Managerial Interviews)

#### 4.4 Analysis of Porter's Five Forces tool by Dobb's

Dobbs (2014) has created a tool for practitioners to identify the degree of competitiveness of each force in the industry. Dobb's template is used in this thesis to study the competitive situation in the case company's industry. In Dobb's tool each five forces are given factors which are rated on scale from low threat to high threat. For the case company the most feasible way of doing this is to use score from 0 to 100 to describe the level of threat. (Dobbs, 2014) The closer the score is 100, the more credible threat is posed.

##### 4.4.1 Threat of competitive rivalry



**Score 57,5/100**

Figure 10. Threat of competitive rivalry

The existing competitors of the case company are relatively few in Vietnam. However, this depends on the point of view and the scale of observation. There are no other companies that offer portable devices that are as accurate to monitor user's vital functions. The nearest competitors are the hospitals that use traditional. non-portable

tracking devices. It can be argued if these are competitors of the case company since hospitals' tracking devices can't be put in the pocket to allow them to be carried around. (Case company's managers 2018, Managerial Interviews)

The industry growth in the case company's industry is high. The average growth of med-tech industry is above the GDP of Vietnam, which was 6,4 % in 2016. The government of Vietnam is also very supportive for the renewal of hospitals' devices. (Vietnam Medical Device Research Report, 2016); (Case company's managers 2018, Managerial Interviews)

Fixed and storage cost of case company's industry are relatively low, which leads to low threat of competitive rivalry (Case company's managers 2018, Managerial Interviews). The case company doesn't own any office or manufacturing facilities. However, there are some warehousing costs for the case company.

Product differentiation in the case company's industry is on average level. This leads to increased threat level in competitive rivalry. The case company is planning to differentiate itself with a portable device with low or average price (Case company's managers 2018, Managerial Interviews). Other organizations in the industry offer similar and undifferentiated products compared to each other and therefore industry's level of product differentiation is on relatively low level. (Vietnam Medical Device Research Report, 2016); (Dobbs, 2014); (Case company's managers 2018, Managerial Interviews)

Switching costs in the industry are on average level. If a hospital decides to buy case company's device and it turns out that it is not suitable for the hospital, it is relatively easy to go back to the traditional non-portable tracking devices. This forms a threat for the case company. However, since business relationships are built on personal relationships in Vietnam, the emotional barrier for hospitals to turn case company down after the purchase might be too high. (Hofstede Insights, 2018)

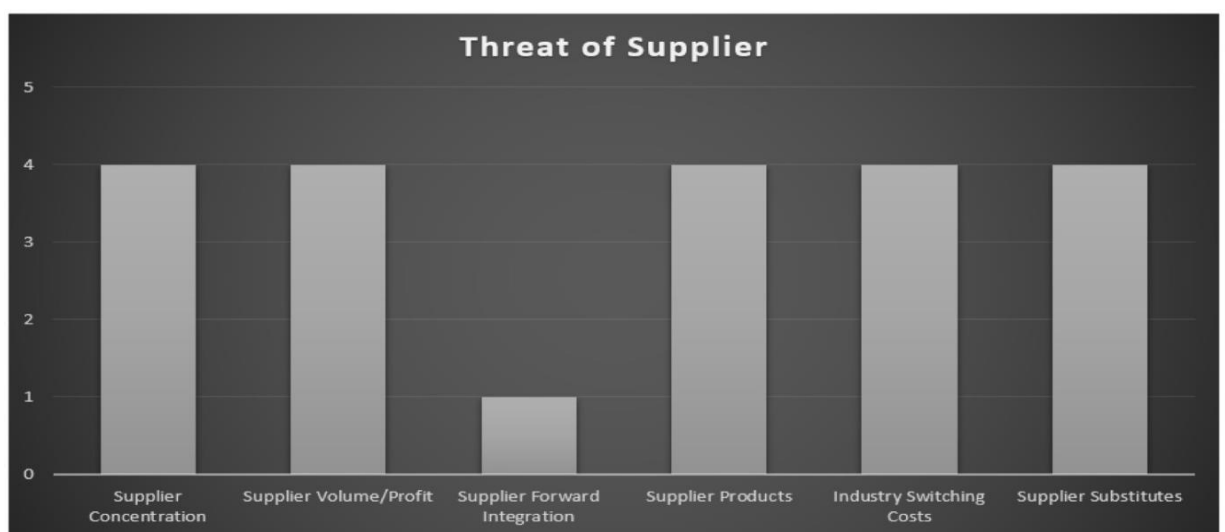
Strategic stakes in the industry are relatively high for the case company, which creates a high level of threat. Vietnam is strategically important for the case company since it is the first market it will enter, and it plans to gather a lot of strategic data from the markets in Vietnam. If something didn't go as planned in Vietnam and it had to leave the market it could create irreversible reputational damage for the case company.

The size of needed steps to expand capacity in the industry is on relatively high level for the case company. The hardware is easy to transport to other market segments in the

industry, but the software is challenging to expand with large increments in the industry. This is because expanding capacity needs training of staff and creating maintenance networks. Since the case company is a start-up company, the resources are limited even though there are feasible networks in the country. (Case company's managers 2018, Managerial Interviews)

Exit barriers in the industry are on a relatively high level. Since the case company is planning to export its hardware to Vietnam and not to invest heavily in the market right away, from a financial point of view the exit barriers are low. However, the market entry to Vietnam needs strong networks with Vietnamese partners. A lot of effort is put into these relationships and the emotional barriers brought by deep personal relationships with Vietnamese stakeholders can increase the level of exit barriers for the case company. Also, if the case company left the market it would leave hospitals without working medical tracking devices. This increases the degree of exit barriers for the case company in the industry.

The case company gets a score of 57,5 out of 100, which is on an average level of competitive rivalry. Therefore, the case company needs to recognize the threat for the competitive rivalry, but it doesn't need to actively monitor the threat. Most of the rivalry is indirect since there are no exactly similar products in the market at the moment. However, for the hospitals that are the main customers for the case company it is simple to start using the old and traditional stationary medical devices in hospitals if the case company's product doesn't work as intended. Threat of suppliers



**Score 70/100**

## Figure 11. Threat of suppliers

There are few supplier organizations for the case company which means that the supplier concentration is low. This leads to a relatively high threat for the case company. The case company buys its hardware straight from a Finnish manufacturer. Since there is only one supplier of the hardware, the risk is increased. However, the manufacturer is a large operator in the field and it sells to many other organization in addition to the case company. This makes it reliable but since the case company is not a notable customer for the supplier, the bargaining power of the supplier remains high. The software consists of a smartphone application and a cloud storage that stores user data. The software is created by case company's employees and therefore there is no need to buy it from any third party. (Case company's managers 2018, Managerial Interviews)

The supplier volume percentage is relatively low in the case company's industry. This leads to a relatively high-risk level. This derives from the fact that if the supplier went out of business it would create severe problems for the case company since it would take a lot of time and effort to find a replacing supplier. (Case company's managers 2018, Managerial Interviews)

It is highly unlikely that the supplier of the tracking device would integrate forward to the case company's market. This is because of the software encryption that the case company has programmed in the device, the regulation and the fact that the supplier could lose its good reputation within buyers if it interfered with their market segment. (Case company's managers 2018, Managerial Interviews)

Suppliers products are highly differentiated, and this leads to a relatively high threat level. These are tailor-made for each customer and they are for professional purposes. This means that the degree of investments made in the manufactured device both from the supplier's and case company's side are high. When a bought product is highly differentiated the case company doesn't want to start cooperating with another supplier to teach how to manufacture it. (Case company's managers 2018, Managerial Interviews)

The industry switching costs for the case company are relatively high and there are not many viable supplier options for it. This leads to a relatively high risk. The bought product is highly differentiated and professional and because of that it is challenging to find a

new supplier. The case company is dependent on a single supplier which increases the threat of suppliers.

The case company gets an overall score of 70 out of 100 in the threat of suppliers. It is between average and relatively high level and this is the most notable source of threat in the case company's industry. This means that the case company needs to actively monitor the threat of suppliers and change its behavior rapidly if it notices that something changes in the field of suppliers. Ways to reduce the bargaining power of suppliers are threatening to integrate backwards into supply and start designing standardized components so that many suppliers can produce them. (Hollensen, 2017)

The case company should start seeking new sources of supply, investigate the possibilities of manufacturing the hardware independently like it manufactures the software. If independent manufacturing isn't possible it should look for standardized components so that there would be more potential manufacturers for it.

#### 4.4.2 Threat of buyers



Figure 12. Threat of buyers

In the case company's industry, customers normally buy in large volumes. This creates a relatively high threat level for the case company. In Vietnam the hospitals are

overcrowded and the flow of patients to hospitals is constantly increasing. The medical device itself is a part of a larger offering which include training and maintenance. The hospitals that buy case company's product are investing in a new medical system in hospital-level and therefore the number of devices bought at once is large.

The level of buyer information in the med-tech industry in Vietnam is relatively high. This leads to a relatively high threat. The high level of buyer information results from the fact that the products are bought for professional use and they are used for medical purposes. Also, the regulation in the industry and importance of medical devices for the buyer organizations lead to increased buyer information level.

It is highly unlikely that buyers integrated backwards to supply and started to manufacture similar product than the case company independently. The threat level of buyer backward integration is low in case company's industry. This is because of the software of case company's product is encrypted and the same technology is hard to attain. An organization that manufactures medical devices and distributes them in Vietnam needs a license and it is unlikely that hospitals have the manufacturing licenses for a med-tech product. The hospitals use their scarce resources for treatment of patients instead of manufacturing medical devices. (Case company's managers 2018, Managerial Interviews)

The products in the industry are highly differentiated which leads to a low threat level. Medical devices are high-technology products and they need a lot of research and development before the selling can start. The devices are part of a broader offering which increases the degree of product differentiation.

Buyer switching costs in the industry are on an average level which means that the level of threat is also average when it comes to switching costs. The case company's product is useful for the hospitals and they solve an existing problem with population ageing, overcrowded hospitals and increasing number of diagnoses of cardiovascular diseases. (Case company's managers 2018, Managerial Interviews); (Vietnam Medical Device Research Report, 2016) However, if it turned out that case company's product doesn't work as intended it would be easy for a customer hospital to go back to using old technology.

The overall buyer costs are relatively low, which leads to a relatively low threat level. Buying case company's product is profitable for hospitals. This means that the threat level of buyer profitability is low. Using case company's product frees up hospitals'



financial, human and other resources. The hospitals that buy case company's product see it as an investment. For the same reasons buyer product has a relatively high impact for the hospitals. This leads to a relatively low threat level. However, it takes a while to implement the device to the hospitals' daily operations.

The overall score for the threat of buyers is 45 out of 100. This means that the threat level of buyers is on an averagely low level. Firms in the industry can lower buyer power by increasing number of buyers they sell to, threatening to integrate forward to buyer's industry and producing highly valued and differentiated products. Finding a lot of customer and maintaining the high-quality level of the product is important for the case company. (Hollensen, 2017) However, it is not possible to integrate forward to buyer's industry since the case company is not a hospital and it doesn't have requirements to provide medical services in Vietnam.

#### 4.4.3 Threat of substitutes

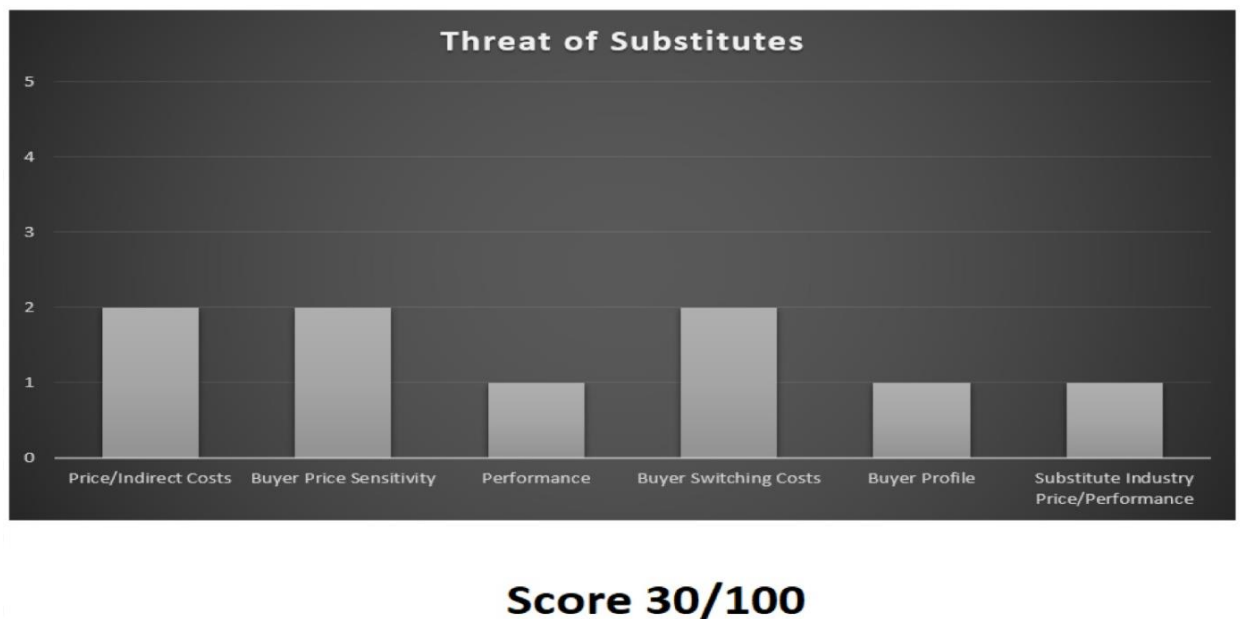


Figure 13. Threat of substitutes

As there is no direct competition on the market, but there are substitute products can the product is aiming to replace. The substitutes usually take more than one to cover the same functionality as case company's product but are proven to work and well-known products. Due to the factors above case company will price their product pricing low for

a faster penetration and to increase the attractiveness of the product for buyers. As the product will be cheaper than a single product that can measure the part of same data, the pricing will not be threat as the competition would need to reduce their price significantly to be a threat. Depending of the buyer, the price difference may cause problems since if the price range difference is too large, it might be inferior product falsely.

Due to low competition directly, once the product has been proven to function on a large scale, the price sensitivity is very low for potential buyers are there is no alternative plus the aim of the product is to increase productive by creating more available beds at the hospital and at the same time reducing unnecessary costs. The starting price can be easily increased in the future with minimal effect.

The performance of the case company's product makes substitute products obsolete as it can gather data that currently requires multiple products. Also, most of the substitutes use old technology and are not adaptive to changes and updates. Thus, the threat of current substitutes poses a minimal threat to case company's product.

If the product works as expected the buyers switching costs in the long run would be relatively high as they would need to purchase completely new equipment and when comparing pricewise they substitutes are exponentially more expensive or if they are looking for a direct alternative there is none.

Also, when switching to substitutes the hospitals would need to return to old practices losing the gained cost effectiveness. In the short run the switching costs would be minimal as they will have the old equipment as backup and could easily return to their old systems and simply stop using case company's product solution in general.

The buyer profile of hospital is very risk avoiding, as they deal in healthcare they can take minimal risks when ensuring accuracy and patient treatment. Hospitals don't aim to maximize their profits by taking risks, they optimize their effectiveness with highly calculated risks that pose minimal risk to the patient. Thus, the threat is low.

The score for the threat of substitutes is 30 out of 100. The threat of substitutes is the lowest of all five threats since the substitutes utilize old technology and would require more than one system to fully replace case company's product solution. However, despite of the fact that the threat of substitutes is the lowest of all threats, the case company should still focus on lowering the threat. Ways to do this are e.g. building up switching costs by keep developing a distinctive brand image and maintaining different

price level compared to competitors to generate perceived customer value. (Hollensen, 2017)

#### 4.4.4 Threat of new entrants

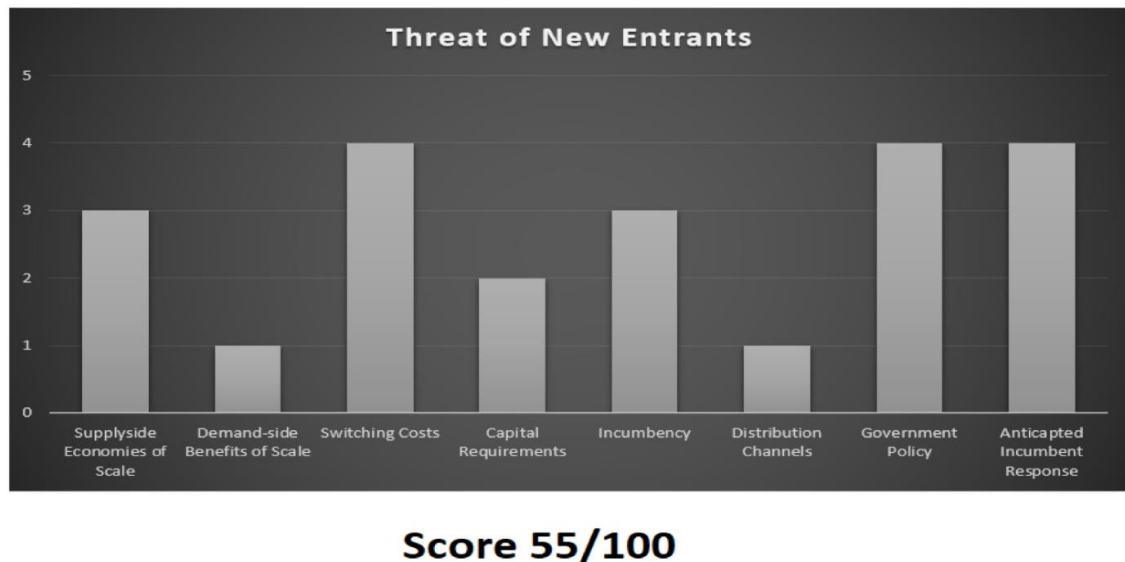


Figure 14. Threat of new entrants

The economies of scale in our case company's situation doesn't have a vast effect as the products are made to order, minimizing the financial risk, which doesn't allow the economies of scale to play a part in the costs of the manufacturing. This is the plan for the next few years, after which there should be demand for pre-manufactured products that can be shipped directly to the customer. This gives a competitive edge for the case company. Since the product is manufactured according to order the size of stock is minimal. Only few versions exist for demonstration purposes. (Case company's managers 2018, Managerial Interviews)

As the product consist of a software that functions based an algorithm and data, the more there are users for the device, the more data it can gather. This process plays a key role in research and development. It creates accuracy and increases device's capabilities for existing and new clients. Once the data base reaches a certain point, it is hard for competition to gain a similar database to compete and back their product. (Case company's managers 2018, Managerial Interviews)

The product of the case company is completely new to the Vietnamese professional medical device markets. If the product is found faulty or unreliable, the customers can easily return to their old health tracking methods as hospitals will not replace all their machinery at once with the new ones. The product replaces the old machinery and creates a new service for the hospitals, but saying that, it is very easy for them to return to the old systems and processes, with minimal costs. This helps when penetrating the market, but also creates an uncertain situation regarding the continuation of the products with the client, giving the competition a possibility. Also due to the unique capabilities of the product, if it is found useful on the promised level it can be easily seen as irreplaceable, giving it a vast edge on the competitors.

The capital requirements for the case company are moderate, with a correct order policy it can ensure the payment towards the order directly. As they are on the med-tech field of business they will continuously require research and development on the products that consumes their capital reserves, although it is possible to gather user data from the customers directly rather than a third party which reduces the capital requirements. Overall the demand for capital works parallel to the growth of the company. Once the initial development phase is completed, in time of writing the thesis it is, the case company will be funded by universities.

The case company utilizes the incumbency of their situation as they have found a complete new solution to an existing problem, which gives the benefit for the first one who makes the move. At the same time, it lays down the foundation for followers who would follow the footsteps of the case company to the same market, and even with a solution to the same problem, but overall due to the status the benefit is with the first movers.

The distribution channels are very limited due to regulations in Vietnam for foreign businesses. The distribution channels require a vast and influential network to function ideally, and when combining cultural factors which tend to be towards loyalty and old relationships rather than new, it creates a stepping stone for many new foreign competitors. This supports the ideology that the market favors the first ones penetrating and shun the ones following behind.

The governmental policies on the market are at the current time very low due to the reason that Vietnam's population's average age has risen. Because of this the government has reduced the regulations towards the medical environment to tackle the issues in the

medical field rapidly which applies also to in the med-tech field. Many hospitals are over populated, limiting the already scarce resources even thinner, to which the government is actively looking for working solutions. The past few years the regulations have diminished greatly, making the timing ideal for the case company, as the government aims to develop their healthcare system towards modern standards.

As the market share that the case company is now aiming for is relatively small and all the other possible competitors (for example, Philips) are competing for a far larger market share, most likely the case company is not seen as a threat and it will be allowed to operate on its own during its starting phase. Once it has proven that its products work and has created demand for their product on a larger global scale, then the game changes as the competitors will commonly try to buy them out or create a rival product, but by the current estimates it is not relevant soon at the given time.

The threat of new entrants got the score of 55 out of a 100 and while considering the factors above, the case company must keep developing existing networks and new ones constantly to gain the edge once the competitors react. As there is no direct competition at the given time, the company must plan out the future, what is their game plan once the competition begins to react on the market segment and how can they protect their market share.

#### 4.5 Analysis of the fine-grained market segment screening

The results for fine-grained market segment screening are gathered from a survey and discussions with case company's managers. The market segment screening consists of two parts, identifying the degree of market attractiveness and identifying the competitive strengths. Both market attractiveness and competitive strength get their own value in each possible market segment. Each possible market segment gets therefore two values in scale 1 to 5. Closer the value is to 5, the more attractive the market segment for the case company is and stronger competitive strengths the case company has. The weight factor is presented by a percentage in each graph below.

Four case company's members out of five filled the following graphs giving each factor a value from 1 to 5. After the results were gathered, a mean figure for each factor was identified. Three possible market segments were identified for the case company in Vietnam. These are large public hospitals in urban areas, small and medium-sized

private hospitals in urban areas and public and private hospitals in rural areas. The results from each possible market segment are described in this chapter and the most feasible market segment for the case company is identified.

#### 4.5.1 Large public hospitals in urban areas

<b>Large Public hospitals in Urban area</b>				<b>Value (A)</b>	<b>3,92</b>
	Very				
Part A: Market Attractiveness [Market size]	Attractive	5	15,39 %		0,692
Part A: Market Attractiveness [Market growth]	Very Attractive	5	15,39 %		0,769
Part A: Market Attractiveness [Price competition]	Attractive	4	15,39 %		0,615
Part A: Market Attractiveness [Market access]	Medium	3	15,39 %		0,462
Part A: Market Attractiveness [Political/Economical risks]	Medium	3	7,69 %		0,231
Part A: Market Attractiveness [Competition intensity]	Medium	3	7,69 %		0,250
Part A: Market Attractiveness [regulation on med tech]	Attractive	4	7,69 %		0,288
Part A: Market Attractiveness [buying power]	Attractive	4	15,39 %		0,615
				<b>Value (B)</b>	<b>3,43</b>
Part B: Competition Strengths on the market [Product fits market demand]	Very Strong	5	18,18 %		0,818
Part B: Competition Strengths on the market [Prizing and quality]	Strong	4	18,18 %		0,773
Part B: Competition Strengths on the market [Market presence]	Neutral	3	18,18 %		0,455
Part B: Competition Strengths on the market [Reputation]	Neutral	3	9,09 %		0,295
Part B: Competition Strengths on the market [Communication]	Neutral	3	18,18 %		0,545
Part B: Competition Strengths on the market [Obtainable market share]	Neutral	3	9,09 %		0,295
Part B: Competition Strengths on the market [Financial results]	Neutral	3	9,09 %		0,250

Table 7. Market Attractiveness/Competitive Strength matrix, segment A

Large public hospitals were identified as the most promising market segment for the case company in Vietnam. In the market attractiveness part, it scored 3,92 points out of 5, which is the highest score among the three possible segments. In the competitive strength part, it scored 3,43 out of 5, which is the second highest score among the three possible segments.

#### 4.5.2 Small and medium-sized private hospitals in urban areas

<b>Small and medium sized private hospitals in urban areas</b>				<b>Value (A)</b>	<b>3,73</b>
Part A: Market Attractiveness [Market size]	Attractive	3,5	15,39 %		0,538
Part A: Market Attractiveness [Market growth]	Attractive	4,25	15,39 %		0,654
Part A: Market Attractiveness [Price competition]	Attractive	4	15,39 %		0,615
Part A: Market Attractiveness [Market access]	Attractive	3,75	15,39 %		0,577
Part A: Market Attractiveness [Political/Economical risks]	Attractive	3,75	7,69 %		0,288
Part A: Market Attractiveness [Competition intensity]	Medium	3,25	7,69 %		0,250
Part A: Market Attractiveness [regulation on med tech]	Attractive	3,5	7,69 %		0,269
Part A: Market Attractiveness [buying power]	Attractive	3,5	15,39 %		0,538
				<b>Value (B)</b>	<b>3,55</b>
Part B: Competition Strengths on the market [Product fits market demand]	Strong	4,25	18,18 %		0,773
Part B: Competition Strengths on the market [Pricing and quality]	Very Strong	4,75	18,18 %		0,864
Part B: Competition Strengths on the market [Market presence]	Neutral	2,75	18,18 %		0,500
Part B: Competition Strengths on the market [Reputation]	Neutral	3,25	9,09 %		0,295
Part B: Competition Strengths on the market [Communication]	Neutral	3,25	18,18 %		0,591
Part B: Competition Strengths on the market [Obtainable market share]	Neutral	2,75	9,09 %		0,250
Part B: Competition Strengths on the market [Financial results]	Neutral	3	9,09 %		0,273

Table 8. Market Attractiveness/Competitive Strength matrix, segment B

Small and medium sized private hospitals in urban areas were identified as second most promising market for the case company in Vietnam. It scored 3,73 out of 5 points in market attractiveness and 3,55 out of 5 in competitive strengths.

The competitive strengths in this market segment got the highest score, but the difference is so small when compared to the first market segment that the large public hospitals are still seen as the most promising market segment for the case company.

#### 4.5.3 Public and private hospitals in rural areas

<b>Public and private hospitals in Rural areas</b>				<b>Value (A)</b>	<b>2,865</b>
Part A: Market Attractiveness [Market size]	Medium	3,25	15,39 %		0,500
Part A: Market Attractiveness [Market growth]	Medium	3,25	15,39 %		0,500
Part A: Market Attractiveness [Price competition]	Medium	2,75	15,39 %		0,423
Part A: Market Attractiveness [Market access]	Unattractive	2,25	15,39 %		0,346
Part A: Market Attractiveness [Political/Economical risks]	Medium	2,5	7,69 %		0,192
Part A: Market Attractiveness [Competition intensity]	Medium	3,25	7,69 %		0,250
Part A: Market Attractiveness [regulation on med tech]	Medium	3	7,69 %		0,231
Part A: Market Attractiveness [buying power]	Medium	2,75	15,39 %		0,423
				<b>Value (B)</b>	<b>3,068</b>
Part B: Competition Strengths on the market [Product fits market demand]	Very Strong	4,5	18,18 %		0,818
Part B: Competition Strengths on the market [Prizing and quality]	Very Strong	4,5	18,18 %		0,818
Part B: Competition Strengths on the market [Market presence]	Weak	1,75	18,18 %		0,318
Part B: Competition Strengths on the market [Reputation]	Neutral	2,5	9,09 %		0,227
Part B: Competition Strengths on the market [Communication]	Weak	2,25	18,18 %		0,409
Part B: Competition Strengths on the market [Obtainable market share]	Neutral	2,5	9,09 %		0,227
Part B: Competition Strengths on the market [Financial results]	Neutral	2,75	9,09 %		0,250

Table 9. Market Attractiveness/Competitive Strength matrix, Segment C

Public and private hospitals in rural areas got the lowest overall score among the three possible market segments. In market attractiveness it scored 2,87 out of 5 points and in competitive strengths is got 3,07 points out of 5.



#### 4.5.4 Market Attractiveness/Competitive Strength matrix in Vietnam

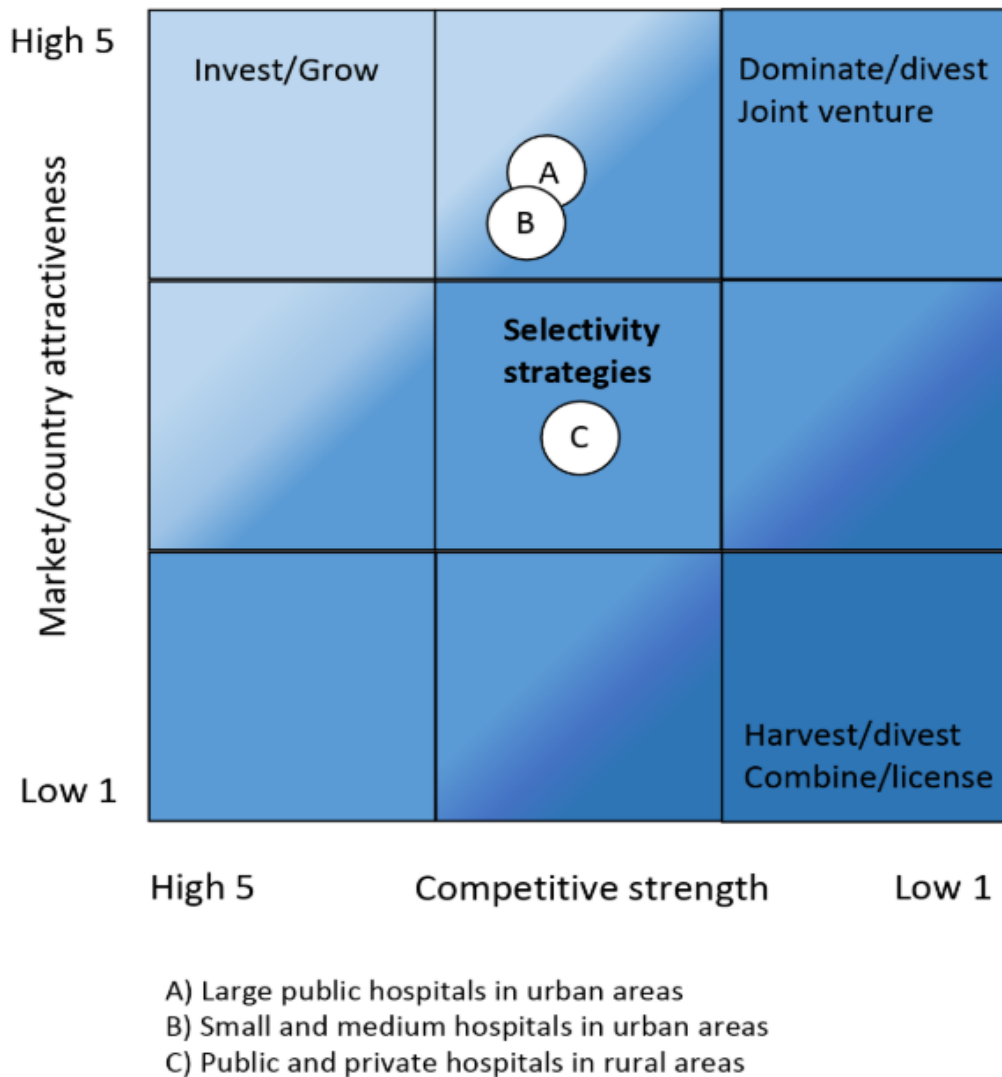


Figure 15. Market Attractiveness/Competitive Strength matrix in Vietnam

According to the fine-grained screening of the market, the case company should invest most to the segment of large public hospitals in urban areas in Vietnam. It is seen as the key market in Vietnam for the case company. The case company should establish a permanent presence and embark on a thorough research and development procedures in this segment. (Hollensen, 2017) The market segment B scored nearly as high as the segment A. This means that the market segment B is not as relevant for the case company and it should only invest partially in this segment (Hollensen, 2017); (Case company's managers 2018, Managerial Interviews).

## 5 CONCLUSION

In this chapter the authors combine the findings from the theoretical framework and qualitative research results and establish a clear understanding of these two. The research questions used in this study were:

- " What is the most suitable market segment for the case company in Vietnam?"
- " What are the industry threats for the case company in Vietnam?"
- " What is/are the most suitable market entry mode(s) to Vietnam for the case company?"

The political, economic, social, technological, legal and environmental factors make healthcare industry in Vietnam attractive for the case company. From a political point of view, Vietnams government's plans to modernize the healthcare industry makes it an attracting market for the case company. The economic situation also favors case company's plans in the industry. The economic growth in Vietnam is increasing rapidly and the med-tech industry grows even faster (Case company's managers 2018, Managerial Interviews). When it comes to social aspects, Vietnam's population is ageing and increasing welfare that is driven by the economic growth increases the number of patients with cardiovascular diseases. These facts reflect positively to case company's operations as the demand for its solution increases in Vietnam. Technological development in Vietnam is overall in a good level, however the infrastructure differences between urban and rural areas are vast. People in rural areas might not use smartphones and the degree of mobile network connection vary a lot in rural areas. The case company should take this into account and therefore it targets urban hospitals in the first place. The legal environment is favoring for the case company and the level of regulation is lower than in the rest of the world. The case company wants to be environmentally friendly and pollution that increases as economic growth increases might provide new opportunities for the case company.

The challenges in Vietnam's healthcare sector are overcrowded hospitals, obsolete medical equipment and shortage of qualified medical staff (Export Vietnam, 2018). These challenges result from Vietnam's low budget for the healthcare sector, however the financial situation in Vietnam has been improving since 1989's economic renovation. Also, the population is ageing which leads to a higher number of people suffering from

non-communicable diseases (Vietnam Medical Device Research Report, 2016); (CIA, 2018).

These challenges open a market niche for the case company. The uneven distribution of patients between urban and rural hospitals evens out and the overcrowding relieves since case company's solution allows tracking cardiovascular conditions remotely from home. Case company's device uses the latest technology and it decreases the problems with old medical equipment used in the treatment of patients. In the deployment of the device medical staff is trained to use it and even the personnel with lacking medical capabilities can treat patients with it. (Case company's info material, 2018) These facts combined with the free trade agreements and Vietnam's funding for new medical equipment make Vietnam a suitable market for the case company. The case company already has feasible networks in Vietnamese markets which further increases the attractiveness of the market. (Case company's info material, 2018); (Export Vietnam, 2018); (Vietnam Medical Device Research Report, 2016)

The B2B-markets in Vietnam rely heavily on personal relationships with different stakeholders. Operating in a regulated and fast-growing industry in a collectivistic society that values traditions high in business operations makes good networks irreplaceable for the case company to generate profit in Vietnam. (Vietnam Medical Device Research Report, 2016); (Case company's managers 2018, Managerial Interviews)

The most notable industry threat factors for the case company is the bargaining power of suppliers. In chapter 4.4 the case company scored 70 out of 100 regarding the threat of suppliers. In theory it is the most notable source of threat in the case company's industry. Due to this the case company needs to actively monitor the threat of suppliers and seek alternative options and change its behavior if something changes in the field of suppliers. The bargaining power of suppliers can be reduced by finding more manufacturers, integrating backwards into supply and start designing standardized components so that many suppliers can produce them (Hollensen, 2017). However, the high level of supplier threat depends only on the fact that now the case company is dependent on a single supplier. It is relatively simple to reduce this threat by seeking for new sources of supply and looking into the possibilities of manufacturing the hardware independently. If independent manufacturing isn't possible the case company should start buying standardized components which would have more potential manufacturers to produce the hardware for the solution.

When the case company has negotiated the threat of suppliers, it can be stated that the real threat is the competitive rivalry. The score for this threat is 57,5 out of 100 and the threat of competitive rivalry is a lot more challenging to deal with than the threat of suppliers. The case company should seek to be unique in the industry by providing exceptional value for the customers. By doing this it could charge premium prices from the hospitals that are its customers. This is because it can create a lot of added value for the hospitals. By purchasing the case company's medical solution, the hospitals solve an existing problem of overcrowding of hospitals and increasing number of diagnoses of cardiovascular diseases. Using case company's solution allows hospitals to allocate their resources more effectively. Buying the case company's solution is an investment rather than an expense for the hospitals. However, balancing in pricing should be considered since lowering the prices would reduce the threat of competitive rivalry. The case company also wants to penetrate the market and because of this it plans charging lower prices than it could being a premium product.

The most suitable market segment for the case company is large and public hospitals in urban areas in Vietnam. This is because they are managed by the state and as good networks are needed with government and authorities targeting this segment is feasible for the case company. The case company views it easier to first sell to public hospitals and gain positive reputation among them, after which it can start selling to private hospitals. In a regulated field in a relatively bureaucratic country expanding to private sector is easier if the product is known in the public health sector (Case company's managers 2018, Managerial Interviews); (Vietnam Medical Device Research Report, 2016).

Other market segments that the authors considered were small and medium-sized private hospitals in urban areas and public and private hospitals in rural areas. The market segment of small and medium-sized private hospitals came close in feasibility with large and public hospitals in urban areas for the case company. The private hospitals are more willing to invest in new technologies and if there was less regulation the private companies were more feasible for the case company to target. The case company should invest mostly in the large public hospitals in urban areas for now and in the future in small and medium sized private hospitals in urban areas. Rural areas are not interesting for the case company since the infrastructure is not as developed as is required for case company's solution to function within the capability.

When it comes to the market entry modes, the case company buys the hardware from a Finnish company and then exports it to Vietnam. When a med-tech product is manufactured in Finland, it gives a better brand image for the hospitals and end users in Vietnam. Due to regulations, for foreign companies it's not a possibility to export healthcare products to Vietnam without a Vietnamese distributor. (Case company's managers 2018, Managerial Interviews); (Vietnam Medical Device Research Report, 2016)

The case company has a distributor in Vietnam for the solution and the entry mode is direct exporting. In direct exporting the supply chain is relatively short, and the case company is in close touch with the final customer. There is only one "middleman" between the case company and the hospital. This keeps the costs low since there is no need to pay anyone in the home country of the case company. (Vahvaselkä, 2009)

The servers of the cloud database must be stationary in the host country due to international regulation in case company's situation in Vietnam. However, the servers will be assembled in a way that they can be managed remotely in a global scale, e.g. from Finland.

Other market entry modes, such as joint venturing and foreign direct investments were considered, but due to regulatory issues in Vietnam the case company should focus on direct exporting. Making direct investments is difficult, because the degree of regulation for foreign companies investing in Vietnam is high. Joint venturing is possible in the future, but for the time being, since joint venturing needs a lot of resources, they are better allocated in other case company's tasks.

This thesis presents suitable strategies based on known studies in the internationalization process. Since the market segment, market entry mode and the industry threats are determined, it is possible to plan a marketing strategy to support the internationalization process. The marketing strategy can be created later based on this research.

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## Appendix 1. MACS-matrix of market segments

<b>Large Public hospitals in Urban area</b>				<b>Value (A)</b>	<b>3,92</b>
	Very Attractive	5	15,39 %		0,692
Part A: Market Attractiveness [Market size]	Attractive	5	15,39 %		0,769
Part A: Market Attractiveness [Market growth]	Very Attractive	5	15,39 %		0,615
Part A: Market Attractiveness [Price competition]	Attractive	4	15,39 %		0,462
Part A: Market Attractiveness [Market access]	Medium	3	15,39 %		0,231
Part A: Market Attractiveness [Political/Economical risks]	Medium	3	7,69 %		0,250
Part A: Market Attractiveness [Competition intensity]	Medium	3	7,69 %		0,288
Part A: Market Attractiveness [regulation on med tech]	Attractive	4	7,69 %		0,615
Part A: Market Attractiveness [buying power]	Attractive	4	15,39 %		
				<b>Value (B)</b>	<b>3,43</b>
Part B: Competition Strengths on the market [Product fits market demand]	Very Strong	5	18,18 %		0,818
Part B: Competition Strengths on the market [Prizing and quality]	Strong	4	18,18 %		0,773
Part B: Competition Strengths on the market [Market presence]	Neutral	3	18,18 %		0,455
Part B: Competition Strengths on the market [Reputation]	Neutral	3	9,09 %		0,295
Part B: Competition Strengths on the market [Communication]	Neutral	3	18,18 %		0,545
Part B: Competition Strengths on the market [Obtainable market share]	Neutral	3	9,09 %		0,295
Part B: Competition Strengths on the market [Financial results]	Neutral	3	9,09 %		0,250

<b>Small and medium sized private hospitals in urban areas</b>				<b>Value (A)</b>	<b>3,73</b>
	Attractive	3,5	15,39 %		0,538
Part A: Market Attractiveness [Market size]	Attractive	4,25	15,39 %		0,654
Part A: Market Attractiveness [Market growth]	Attractive	4	15,39 %		0,615
Part A: Market Attractiveness [Price competition]	Attractive	3,75	15,39 %		0,577
Part A: Market Attractiveness [Market access]	Attractive	3,75	7,69 %		0,288
Part A: Market Attractiveness [Political/Economical risks]	Attractive	3,75	7,69 %		0,250
Part A: Market Attractiveness [Competition intensity]	Medium	3,25	7,69 %		0,269
Part A: Market Attractiveness [regulation on med tech]	Attractive	3,5	7,69 %		0,538
Part A: Market Attractiveness [buying power]	Attractive	3,5	15,39 %		
				<b>Value (B)</b>	<b>3,55</b>
Part B: Competition Strengths on the market [Product fits market demand]	Strong	4,25	18,18 %		0,773
Part B: Competition Strengths on the market [Prizing and quality]	Very Strong	4,75	18,18 %		0,864
Part B: Competition Strengths on the market [Market presence]	Neutral	2,75	18,18 %		0,500
Part B: Competition Strengths on the market [Reputation]	Neutral	3,25	9,09 %		0,295
Part B: Competition Strengths on the market [Communication]	Neutral	3,25	18,18 %		0,591
Part B: Competition Strengths on the market [Obtainable market share]	Neutral	2,75	9,09 %		0,250
Part B: Competition Strengths on the market [Financial results]	Neutral	3	9,09 %		0,273

<b>Public and private hospitals in Rural areas</b>				<b>Value (A)</b>	<b>2,865</b>
	Medium	3,25	15,39 %		0,500
Part A: Market Attractiveness [Market size]	Medium	3,25	15,39 %		0,500
Part A: Market Attractiveness [Market growth]	Medium	2,75	15,39 %		0,423
Part A: Market Attractiveness [Price competition]	Medium	2,75	15,39 %		0,346
Part A: Market Attractiveness [Market access]	Unattractive	2,25	15,39 %		0,192
Part A: Market Attractiveness [Political/Economical risks]	Medium	2,5	7,69 %		0,250
Part A: Market Attractiveness [Competition intensity]	Medium	3,25	7,69 %		0,231
Part A: Market Attractiveness [regulation on med tech]	Medium	3	7,69 %		0,423
Part A: Market Attractiveness [buying power]	Medium	2,75	15,39 %		
				<b>Value (B)</b>	<b>3,068</b>
Part B: Competition Strengths on the market [Product fits market demand]	Very Strong	4,5	18,18 %		0,818
Part B: Competition Strengths on the market [Prizing and quality]	Very Strong	4,5	18,18 %		0,818
Part B: Competition Strengths on the market [Market presence]	Weak	1,75	18,18 %		0,318
Part B: Competition Strengths on the market [Reputation]	Neutral	2,5	9,09 %		0,227
Part B: Competition Strengths on the market [Communication]	Weak	2,25	18,18 %		0,409
Part B: Competition Strengths on the market [Obtainable market share]	Neutral	2,5	9,09 %		0,227
Part B: Competition Strengths on the market [Financial results]	Neutral	2,75	9,09 %		0,250

## Appendix 2. Porter's five-forces tool

### Threat of Competitive Rivalry\*

	Low	THREAT LEVELS	High
DF† <input type="checkbox"/>		Existing Competitors	
	<i>Few/Leader</i>		<i>Numerous/Balanced</i>
<input type="checkbox"/>		Industry Growth	
	<i>High</i>		<i>Slow/Negative</i>
<input type="checkbox"/>		Fixed and/or Storage Costs	
	<i>Low</i>		<i>High</i>
<input type="checkbox"/>		Product Differentiation	
	<i>High</i>		<i>Low</i>
<input type="checkbox"/>		Switching Costs	
	<i>High</i>		<i>Low</i>
<input type="checkbox"/>		Strategic Stakes	
	<i>Low</i>		<i>High</i>
<input type="checkbox"/>		Capacity Expansion	
	<i>Small Increments</i>		<i>Large Increments</i>
<input type="checkbox"/>		Exit Barriers	
	<i>Low</i>		<i>High</i>

THREATS
1.
2.
OPPORTUNITIES
1.
2.

(continued)

***Threat of Buyers/Buying Groups\* ( \_\_\_\_\_ )***

**Low THREAT LEVELS High**

DF†

Single/Few Buyer Orders Large Volumes

Low Buyer Information High

Not Feasible Buyer Backward Integration Credible Threat

Highly Differentiated Industry Products Standardized

High Buyer Switching Costs Low

Low % Overall Buyer Costs High %

High Profits Buyer Profitability Operating Losses

High Impact Buyer Product/Service Low Impact

THREATS	
1.	
2.	
OPPORTUNITIES	
1.	
2.	

(continued)

**Threat of Suppliers/Supplier Groups\* ( \_\_\_\_\_ )**

**Low THREAT LEVELS High**

DF<sup>†</sup>  \_\_\_\_\_

Many Organizations \_\_\_\_\_ Supplier Concentration \_\_\_\_\_ Few Organization

High % \_\_\_\_\_ Supplier Volume/Profit \_\_\_\_\_ Low %

Not Feasible \_\_\_\_\_ Supplier Forward Integration \_\_\_\_\_ Credible Threat

Standardized \_\_\_\_\_ Supplier Products \_\_\_\_\_ Highly Differentiated

Low \_\_\_\_\_ Industry Switching Costs \_\_\_\_\_ High

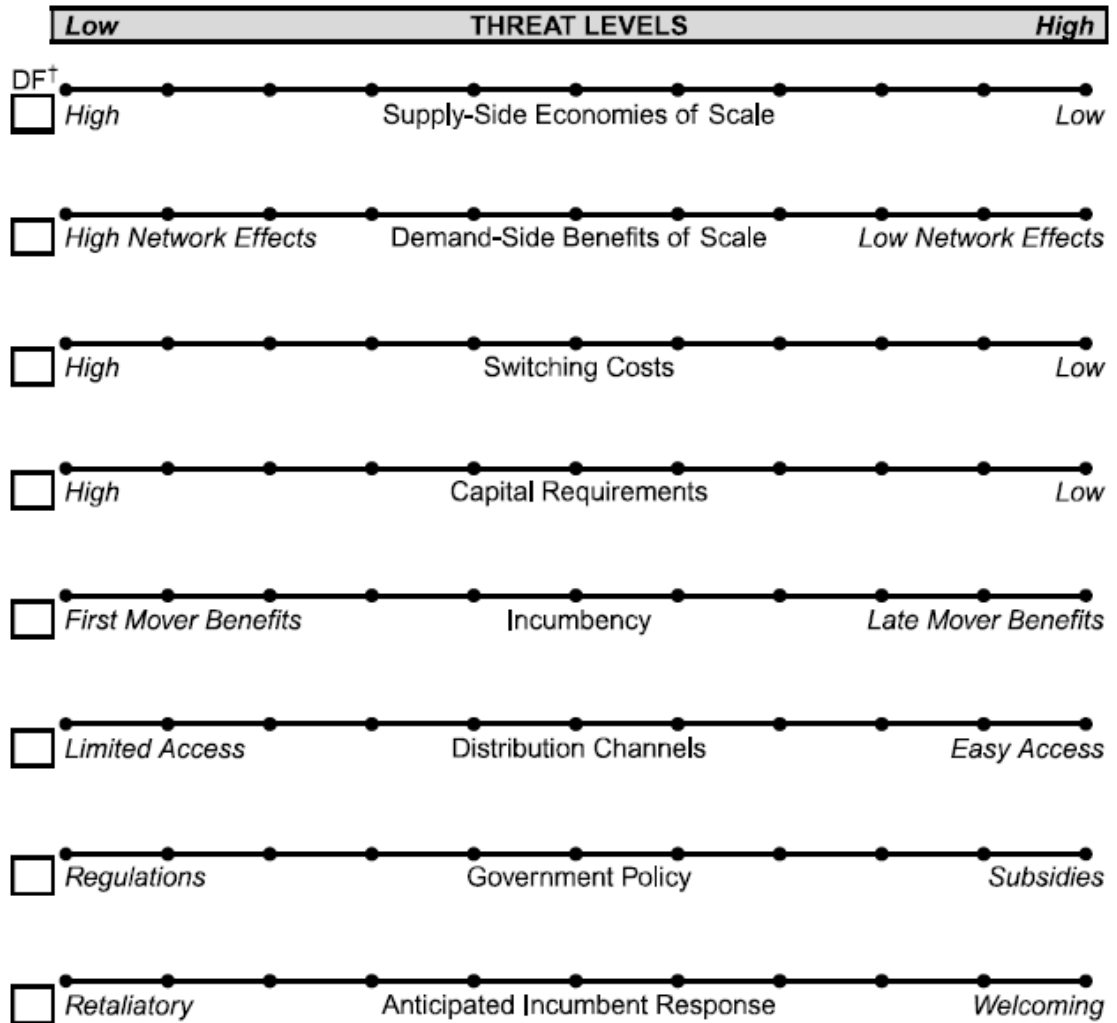
Many Viable Options \_\_\_\_\_ Supplier Substitutes \_\_\_\_\_ No Viable Options

THREATS	
1.	
2.	
OPPORTUNITIES	
1.	
2.	

(continued)

**Notes:** \*Powerful suppliers charge higher prices, limit product/service features/quality, and/or shift costs to other industry players; †DF – driving factors of industry dynamics to be indicated with check marks

**Threat of New Entrants\***



THREATS
1.
2.
OPPORTUNITIES
1.
2.

(continued)

**Threat of Substitutes\*( \_\_\_\_\_ )**

**Low THREAT LEVELS High**

DF †

More Expensive Price/Indirect Costs Less Expensive

Low Buyer Price Sensitivity High

Lower Performance Higher

High Buyer Switching Costs Low

Risk Avoidance Buyer Profile Risk Seeking

↓ Cost, ↑ Performance Substitute Industry Price/Performance Trends ↓ Cost, ↑ Performance

THREATS	
1.	
2.	
OPPORTUNITIES	
1.	
2.	

(continued)

**Notes:** \*Substitutes perform the same/similar function as products of the industry but by different means. Viable substitutes place a ceiling on prices and drive up costs related to product performance, marketing, service, and R&D; †DF – driving factors of industry dynamics to be indicated with check marks



## Appendix 3. Interview questions

<b>Introductory Questions</b>
How long have you been in business?
In what stage is the business currently?
What are the reasons for the case company to internationalize?
What makes Vietnam attractive to your business?
Which sectors do you believe will generate the most revenue?
Why did you choose the answer to the question above?
When do you plan to generate income from domestic markets?
When do you plan to generate income from foreign markets?
How do companies like yours generate networks in target segments commonly?
What kind of existing connections do you currently have?
Are you planning to start networking in your target country upon entry during the following 3 years?
<b>Entry Modes</b>
Where do you plan on developing and maintaining the software?
How are you planning to manufacture the hardware?
How will the training of hospital staff take place?
How will the after-sale service function and where will it be located?
What kind of middlemen are you planning on using in domestic markets in the next 3 years?
What kind of middlemen are you planning on using in foreign markets in the next 3 years?
Do you plan to have your manufacturing in domestic or foreign facilities during the following 3 years?
What is your reasoning for the answer above
Do you plan to own you own manufacturing unit during the following 3 years?
<b>PESTLE</b>
What kind of existing government support is there for companies targeting Vietnam from Finland?
How do you see corruption affecting your business in Vietnam?
What is your reaction towards bribery?
Do you see the political environment in the target country as a barrier or benefit?
Do you see the economic environment in the target country as a barrier or benefit?
Do you see the social environment in the target country as a barrier or benefit?
Do you see the technological environment in the target country as a barrier or benefit?
Do you see the environmental atmosphere in the target country as a barrier or benefit?
How do Vietnamese patients react to doctors' recommendation?