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INTERNATIONAL MARKET SELECTION AND  
PROSPECTS FOR FUTURE INTERNATIONALIZATION:  
CASE HARJU SOLUTIONS OY

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# KANSAINVÄLINEN MARKKINAVALINTA JA TULEVAISUUDEN KANSAINVÄLISTYISMÄHDOLLISUUDET: CASE HARJU SOLUTIONS OY

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Tämä tutkimus esittelee kansainvälisen markkinavalinnan ja tulevaisuuden kansainvälistymismahdollisuuksien opinnäytetyön mikroyrityksille, sekä pienille ja keskiuurille yrityksille (PK), jonka tarkoituksena on auttaa Harju Solutions Oy:tä sekä muita pieniä yrityksiä yrityksen laajentamisessa. Tutkimus keskittyy kansainväliseen markkinavalintaan, joka sisältää markkinaseulonnan, markkina-analyysin ja toteutettavissa olevien markkinoiden valinnan case -yritykselle. Kansainvälisen markkinavalinnan lisäksi opinnäytetyössä mainitaan ilmaston lämpenemisestä ja saasteiden liisäntymisestä johtuvia muutoksia ilmastoinnin käytössä.

Case -yritys Harju Solutions Oy on suomalainen mikroyritys, jolla on mahdollisuus laajentaa toimintaansa kansainvälisille markkinoille. Vaikka yrityksellä ei ole aikomusta laajentaa toimintaansa ulkomaille lähiaikoina, niin tämä tutkimus luo pohjan pitkän aikavälin suunnitelmalle toiminnan laajentamiseen tulevaisuudessa. Lämpö, vesi, ja ilmanvaihto (LVI) toimiala lisää markkinavalintaprosessin haastavuutta, mutta lisää myös arvoa tutkimuksen aiheelle. Tutkimuksen kirjoittaja on suorittanut kolmen kuukauden työharjoittelun case -yrityksessä, josta on kertynyt jonkin verran kokemusta ja tietoa toimialasta. Työharjoittelun aikana työnkuvaan kuului markkinointisuunnittelua, tutkimusta sekä yrityksen prosessien parantamista, joista sai jonkin verran tietoa yrityksen sisäisestä toiminnasta.

Tutkimuksessa toteutetaan Svend Hollensenin kansainvälistä markkinaseulontamallia case -yrityksen avulla. Tutkimus suoritettiin kvalitatiivisena tutkimuksena esittelemällä ensiksi markkinaseulonnan, valinnan ja analyysin teorian, jonka jälkeen teoria tutkittiin case -yrityksen avulla. Tutkimuksen tuloksena valittiin potentiaalinen markkina ja analysoitiin sen mahdollisuuksia mahdollisena tulevana markkinana. Tutkimuksen lopussa esitellään markkinaseulonnan kautta valittu maa sekä myös maa-analyysin tulokset. Kohdemarkkinaksi markkinaseulonnessa valitut Malesia, jonka kasvava talous ja lisääntyvä kysyntä LVI-palveluille tekivät maasta potentiaalisimman kohdemarkkinan case -yrityksen tarpeisiin. Lisäksi, tutkija on antanut suosituksia loppupohdintoissa case -yrityksen mietittäväksi. Tutkimuksen lopputuloksena on yritysten käyttöön soveltuva tietopaketti, joka ohjaa markkinaseulonnan ja valinnan sekä markkina-analyysin toimeenpanossa.

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This study introduces International market selection and prospects for future internationalization research for micro-enterprises, as well as small and medium-sized enterprises (SME). The purpose was to create a thesis that would be helpful aid for Harju Solutions Oy and other small companies during the internationalization process. The study concentrates on the topic of international market selection that includes market screening, market analysis and choosing feasible markets for the case company. Besides international market selection the thesis discusses changes in the use of air conditioning that is influenced by the global warming and increase in pollution.

Harju Solutions Oy is a Finnish micro-enterprise, which has a possibility to expand its business into international markets. Although the company is not ready to expand its business at the moment, this study will create a basis for the long-term plan of internationalization in the future. The heating, ventilating and air conditioning (HVAC) industry gives a certain challenge to the market selection process, but also value for the topic of the thesis. The researcher has had a three-month practical training with the case company, thus has some experience and knowledge of the industry. During the practical training, the job description included marketing planning, research and enhancing the company processes providing researcher with some internal knowledge of the company.

This study implements the International market screening model, by Sven Hollensen through a case company. The study was implemented as a qualitative study by firstly presenting the theory of the market screening, selecting and analysis, after which the theory was researched with the help of the case company. As a result for the study, a market was selected with the help of market screening and the market was analyzed as a potential market to enter. The conclusion of this thesis presents the market that was selected through the market screening and the results of the analysis of that particular market. Malaysia was analyzed to be a growing economy with increasing demand for heating, ventilating and air conditioning services, thus the most potential target market for the case company. In addition, the researcher gave recommendations for the case company to consider. The outcome of the study is an informational package suitable for companies, which guides the implementation of the market screening, selection and analysis.

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## 1 INTRODUCTION

The awareness of the indoor air quality and the health risks affiliated by poor indoor air are rising and becoming more relevant in today's society. Due to the climate change and increasing amount of pollution, also the demand for air conditioning services, such as cooling and ventilation services, are increasing. As the awareness and the demand for air conditioning services are growing, also the building service technology companies are expanding their operations, which is why this study is implemented. The building service technology company Harju Solutions Oy, that is used as a case company in this thesis, is located in Finland, but as a fairly new and growth seeking small business it has great opportunity to expand its business further and meet the increasing demand.

The study begins with the purpose and objectives of this study that also includes the conceptual framework of the study, followed by the company introduction, explaining the services it provides and its customer base in Finland. After the company introduction there are chapters on international market selection, market screening and market analysis that will introduce the theory of how to select and analyse an appropriate market for an expanding company. The market screening in this study is based on the model of Svend Hollensen, who is an associate professor of international marketing, has worked as an international marketing manager for a multinational enterprise, and has published several articles and books regarding the topic of international marketing. The thesis continues to the research methods of the study, after which comes the research part of the study. The research chapter includes an interview with the CEO of the case company, market screening, and market analysis with different tools, such as SWOT analysis. Finally, there is the summary and conclusion of the study, where also the research results and the validity and reliability of the study are evaluated.

## 2 PURPOSE OF THE STUDY AND CONCEPTUAL FRAMEWORK

### 2.1 Purpose

The purpose of this study is to help the case company, and other small and medium-sized enterprises, to expand their businesses by creating a study of International market selection and prospects for future internationalization. Entering foreign countries is becoming more attainable for SME's, but they may not have the information needed to expand their business, which is why this thesis is needed for guidelines. Possible challenges and issues that may arise during the research will be approached in a solution finding way. This thesis provides instructions on how to screen and analyze the potential markets and consists of screening methods, market analysis tools, and the explanation of the process. The thesis will not cover other processes in the internationalization process, such as entering a market, marketing planning, financing and strategies. The topic will be further outlined with the help of a case company in order to elaborate the research topic in a certain industry and market. By creating an instructional study of International market selection for the companies willing to internationalize, it might increase internationalization and possibly create new job opportunities at the foreign markets.

By using a micro-enterprise as a case company in this study, the rules of internationalization are applied into a different scenario, opposite to the scenario where a larger company seeks growth, thus producing results and information which are at disposal of smaller companies. Also, by using the case company the decisions during the internationalization process can be implemented to real life situation in an exact solution finding way rather than writing general instructions. The company can utilize the study since the management of the company does not have previous experience in international business, thus this thesis may provide information and new perspective for them.

The International market selection and prospects for future internationalization thesis for SME's is beneficial for the case company Harju Solutions Oy but also for other SME's or entrepreneurs that are looking to expand their business. The thesis can be

used for seeking the information about internationalization, how to use business tools, and how to apply the given information on a specific industry. The thesis can also be used by students who are interested in international business, marketing, and international markets. The thesis provides information for people who do not have business background or are otherwise interested in gaining more information on the matter.

## 2.2 Objectives and research questions

In internationalization choosing the right market is crucial for the survival of business in a foreign market. The right decision can be made with a thorough market screening, market research and analysis, but there are some research questions, which can be seen below, to be considered during the internationalization process. Every research question is in balance with the purpose of this study and the answers to these questions can also be seen in the conceptual framework.

How to select a market?

How to implement market screening?

How to analyze the market?

The objectives of this study are to research and find solutions for these questions on how to choose an appropriate market to enter with market screening and how to analyze the chosen market. The expected outcome of the International market selection and prospects for future internationalization thesis is a study, which explains the process of selecting a market and provides the information about appropriate markets to enter in the future.

## 2.3 Conceptual framework

The conceptual framework, as can be seen below, explains the process the SME and other small enterprises has to go through to choose an appropriate target market. The conceptual framework is modified from Hollensen's International market segmentation figure. At first there is the four step market screening, which is crucial in order



to find the appropriate target market. Step 1 and 2 defines which criteria to use when screening markets with different factors, such as demographics and geographic location. In the step 3 the segments are screened by using preliminary screening and fine-grained screening. During step 4 the prime markets have been identified after which the markets can be divided into sub segments. After the steps, the company can choose one or several markets to be analyzed. (Hollensen 2012, 173.)

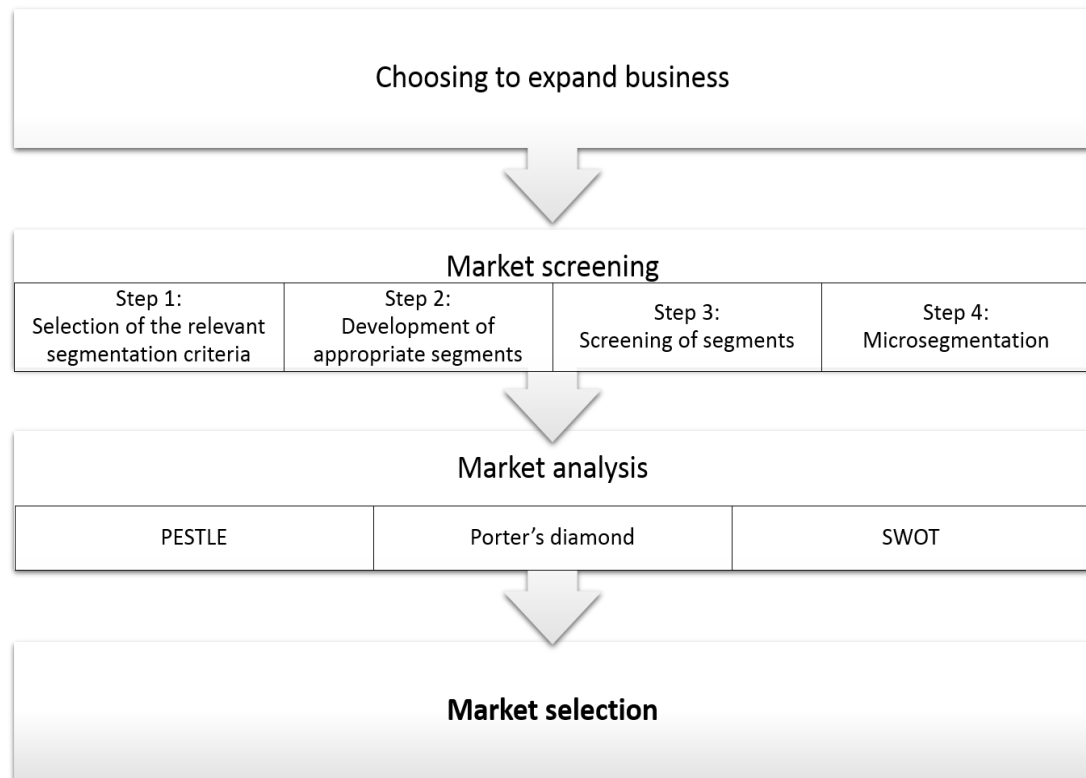


Figure 1. Conceptual framework: International market selection (Hollensen 2012, 173)

The markets can be analyzed with different analysis tools, such as PESTLE, Porter's diamond and SWOT. The company's internal and external factors can be analyzed with SWOT analysis that defines the strengths, weaknesses, opportunities and threats of the company. PESTLE analysis and Porter's diamond can be used to analyze the competitiveness level of the market, as well as how different factors would affect business operations in a macro environment. Through the different steps of market selection, a SME can understand the process of market selection better. (Hollensen 2012, 173.)

### 3 HARJU SOLUTIONS OY

Harju Solutions Oy is a building service technology (HVAC) company located in the west coast of Finland in the city of Pori. Tomi Harju, the CEO of Harju Solutions Oy, started firstly as a sole proprietor in 2011 and after several successful years, as well as getting a firm foothold in the Satakunta region, Harju Solutions Oy was founded by Tomi Harju and Sanna Harju in 2014. Tomi Harju continued as the CEO of the company and Sanna Harju as a Chairman of the Board. Together both of the founders have education and experience to succeed in their future endeavours, since Tomi Harju has several years of experience from the industry, but also international experience as he has worked with air-conditioning in shipbuilding industry in Panama and Norway. Also, Sanna Harju is currently studying her master's degree of Knowledge-Intensive Organizations and Expertise Services, which includes Management and Organization, in the University Consortium of Pori, which is part of Turku School of Economics'.

With the help of loyal customers, business partners, and professional services Harju Solutions Oy has extended their operations to include the Southern and Central Finland. Harju Solutions Oy is also a member of Sisäilmayhdistys ry, which is an ideological organisation that has a goal of improving work conditions by ensuring a healthy and comfortable microclimate in various buildings. One of the tasks of the organisation is to enhance data transfer from research to practice and also to educate people on how to maintain healthy indoor air. These ideologies harmonize with the vision and values of Harju Solutions Oy that seeks to be a professional and responsible company that operates innovatively, informatively and the customers' needs in mind. (Website of Harju Solutions Oy 2012; Website of Sisäilmayhdistys ry 2016.)

Harju Solutions Oy provides heating, ventilating, and air conditioning (HVAC) services, such as AC solutions, installation, inspections and evaluations, and consulting, as well as cooling devices, pipeline condition surveys, energy certificates, and indoor air surveys. The services are designed to improve the quality of indoor air and thus reducing health risks and prolonging the life cycle of the property. For example, in-

door air surveys are used to find impurities that can be caused by construction and decoration materials, moisture damaged structures, human activities, and outside influences, such as emissions and industries. The services are also used for protecting the property and environment but at the same time are useful for the residents, since poor quality in indoor air can cause health risks and it affects the wellbeing and coping of residents. In addition, the services such as energy certificates are useful when considering the energy consumption and possible actions to save energy. The customer base to which these services are provided for are comprised of households, business premises, housing cooperatives, house managing agencies, municipalities and cities. (Website of Harju Solutions Oy 2012; Website of Sisäilmayhdistys ry 2016.)

## 4 INTERNATIONALIZATION PROCESS

Internationalization stands for doing business in several countries and it is becoming more accessible for small and medium-sized enterprises due to globalization. Globalization is somewhat enhanced by the use of internet and e-commerce and thus increases the companies attempts to internationalize. Internationalization can be the logical step for a company that has a solid foundation on its home market, but there are also proactive and reactive motives behind the internationalization decisions of the management. Proactive reasons for internationalization can be the profit and growth goals, managerial urge, unique product and tax benefits. A company can also decide to expand its business if they have information on a certain market or they discover opportunities on a foreign market. Reactive reasons for internationalization can be competitive pressures, overproduction, extend sales of seasonal products and company's proximity to international customers. Also, if the home market has become small and saturated or there are unsolicited foreign orders the company may need to expand their business operations. The decision to internationalize is the first

step of the five-stage decision model, which can also be seen below. (Albaum & Duerr 2008, 76; Hollensen 2012, 36-40.)

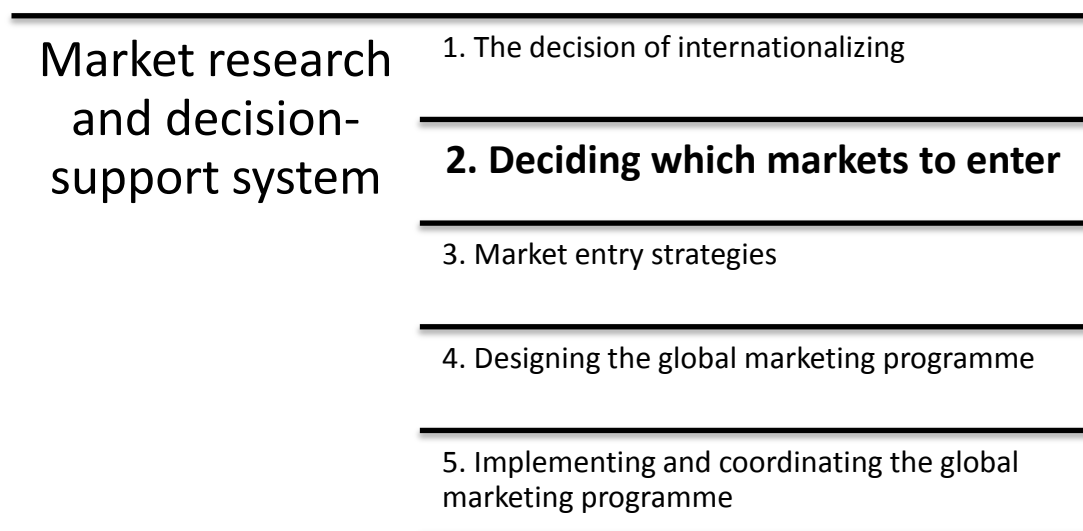


Figure 2. The five-stage decision model in global marketing (Hollensen 2012, 5)

According to Svend Hollensen, the internationalization process includes 5 different stages: the decision of internationalizing, market selection, market entry, and designing marketing, as well as implementing and coordinating the marketing program. The decision to internationalize can be based on various factors, such as the readiness of the company, type of the industry, international experience, resources and the position at the home market. Deciding which markets to enter requires market screening and intensive market research. When considering different market entry strategies one needs to apply the company's positioning and possibilities in relation to the appropriate market. Designing the global marketing program has various factors to consider since even the managements beliefs and knowledge reflect on the marketing decisions. Implementing and coordinating the global marketing program is a factor itself since successful business in a new market requires more than just the right product and strategy. This study concentrates on the second stage of the five-stage decision model. Deciding which markets to enter requires information on market screening, market analysis and information on the different environmental factors influencing the markets. (Hollensen 2012, 5.)

## 5 MARKET SCREENING

Selecting a market for future endeavors can be done through market screening. Selecting a target market can be implemented in many ways, for example the company can select to observe a few countries that show promise or it can observe countries in at global level, e.g. by continent. If there are many potential countries, it is recommended to screen the countries in a preliminary screening and a more thorough screening, in order to find the most promising countries. In addition, the company should select a product or service which it will provide in the new market. Selection of a product or service is important especially when the company has extensive selection of products or services. Generally, the company should select such products or services and target markets from which it can gain the most profitable sales. Selection of a product or service that has demand in international markets provides assistance for the market screening process. Also, the timing of entering a market or markets should be considered. The market screening process used in this study is the one Svend Hollensen introduces in his book *Essentials of Global Marketing* (Figure 3). (Hollensen 2012, 173; Äijö 2008, 100-101, 105.)

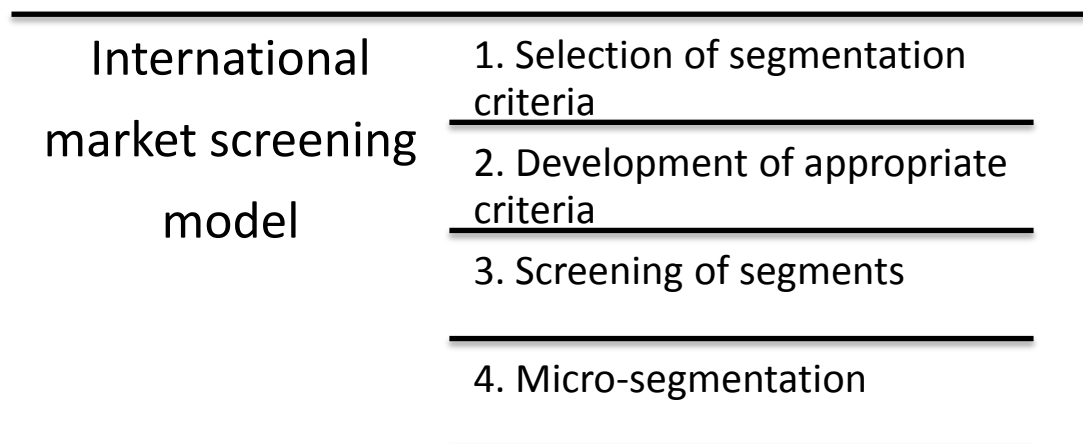


Figure 3. International market screening model (Hollensen 2012, 173)

The market screening model is used for identifying appropriate target markets by using various screening techniques. However, before screening or selecting the markets, also the criteria for a feasible market needs to be selected, thus selection of segmentation criteria is the first step on the international market selection. The ap-

appropriate criteria selected are developed in order to identify opportunities and needs. With the carefully prepared segments the screening of markets can be conducted, after which the screening ends with micro-segmentation that segments markets within or across countries. After the target market has been selected it is time to study the selected markets in detail. Issues to consider in international business are for example market entry barriers, customer analysis and market analysis. Market analysis may include issues, such as marketing, competitors, culture research, as well as the size and development of the market and demand. (Hollensen 2012, 173; Äijö 2008, 100-101, 105.)

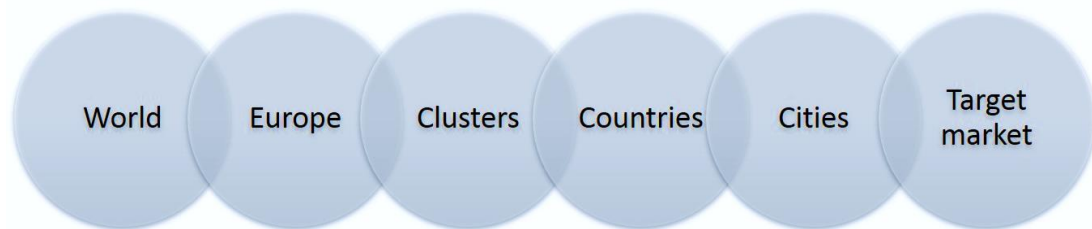


Figure 4. The international market screening process (Hollensen 2012, 183)

Before making the final decision of the target markets that should be analyzed further, the international market screening process can have been a time-consuming process of narrowing down the options. A possible scenario of this process is presented above in Figure 4. The widest possible starting point of the screening process can consider the whole world from which it may be simplest to concentrate on the most feasible continent, e.g. Europe, which can be screened into several clusters. A company can lean towards entering a market in e.g. Europe because of the existing demand for the products or services. Country clusters in Europe can be for example, Nordic countries, central Europe, and southern Europe, or any other decided by the company. One cluster may include several similar countries, but these clusters may have different demands regarding the product, which needs to be considered in further examination. Clusters can be further screened into e.g. countries that can be screened into cities or regions. As the screening has been completed the target market, e.g. a certain region or city, can be selected among the most potential markets. (Hollensen 2012, 183.)

### 5.1 Step 1: Defining criteria

There are several criterion combinations that should be used on segmenting customers or markets to fit the company and its products or services. Multiple criteria can be used at the same time, which is recommended since it creates more comprehensive segmentation, as well as gives a more accurate picture of the market. The criteria can be divided into two types: general characteristics and specific characteristics, which are listed with criteria examples on the Table 1 below. General characteristics identify the information of the segment that is more calculable, such as the location and size of the market. They also provide specific information on the customers in the market by e.g. by their religion or language. This makes the general characteristics more measurable, accessible and actionable compared with the specific characteristics. Even though the specific characteristics are not as calculable as general characteristics they are relevant in a way that defines, for example, the purchasing behavior and interests of the customers. By combining different characteristics, a company can create a market profile that it would prefer when entering a market and thus exclude markets that are not suitable for the company's needs. The characteristics on the Table 1 are only examples that can be modified according to the company and its products or services. (Hollensen 2012, 174-177.)

Table 1. Characteristics for international market segmentation (Hollensen 2012, 174)

<b>General characteristics</b>	<b>Specific characteristics</b>
Geographic	Cultural characteristics
Language	Lifestyle
Political factors	Personality
Demographic	Attitudes and tastes
Economy	
Industrial structure	
Technology	
Social organization	
Religion	
Education	

General characteristics are listed as geographic, language, political factors, demographic, economy, industrial structure, technology, social organization, religion and education. Geographic characteristics define the market features, such as location and climate of the market, which can affect the sales in the market, e.g. when selling seasonal products. Language reflects the culture in the market, which can create challenges in negotiations and business operations, as well as influence on the adaptation requirement of the product and its marketing. Political factors can cause challenges or barriers for exporting to certain countries by setting regulations. In some cases, entering the market would be too difficult due to e.g. importing restrictions, which can result in excluding the market from the list of potential markets. Demographics, such as the population's average age, life expectancy and birth rate, are crucial since they influence on the size of the market and the target customers' age group. Economic factors of the market are important when the product or service, e.g. electric home equipment, requires a certain level of economic development. Industrial structure characteristics should be considered when there are countries that already have production of their own, e.g. United States is saturated with HVAC manufacturers and service providers, which can make it an undesirable target market for other HVAC service providers. Technology characteristics are important for the companies in technology industry. For example, internet is not as attainable in every part of the world and that can create a barrier for exporting certain technological products. Social organization characteristics can be e.g. different socio-economic groups or even the size of the family. In some countries it is more common to have only the nuclear family under the same roof and in other countries there can be the whole extended family, thus they have different demand for services. Religious customs can influence on the marketing and sales of products and services, e.g. in Islamic countries the marketing of products may not be as provocative as in others. Education characteristics, such as level of literacy, can give information on the education level and on how the marketing communication should be done in the market. (Hollensen 2012, 174-177.)

Specific characteristics are cultural characteristics, lifestyle, personality, attitudes and tastes. Cultural characteristics are what drive customer behavior and form out of language, religion, values and attitudes, material elements and technology, aesthetics, education and social institutions. Different layers of cultural characteristics can also



be used as criteria for segmentation. Lifestyle may be difficult to calculate but is important part of buying behavior, since it shows the interests, opinions and behavior of an individual or group. Lifestyle may also be connected to the geographical location, e.g. the countries with cooler climate have higher demand for ventilation. Differences in personality can show how people behave or react in certain situations. This can include differences in purchasing situations by the tendency to haggle or behavior in a restaurant. Attitudes and tastes provide information on people's interests and how they enhance their perception by other people. For example, people who tend to show their social status by purchasing luxury items are more interested in the features and appearance of the products bought, opposite to the 'green' customers who are interested in the origins of the components. However, also different criteria, for example PESTLE approach, can be used for the segmentation. The factors of PESTLE approach will be further discussed in Chapter 6.1 PESTLE analysis. (Hollensen 2012, 174-177.)

With the right criteria, it is easier to find the appropriate market that reflects the company and its products or services. The criteria should reflect the characteristics of the products or services as it provides the company marketing information. The information includes appealing aspects of the product and customer characteristics. Carefully selected criteria will help the screening process since it give the foundation for the market screening and thus has an influence on the end result. (Hollensen 2012, 174-177.)

## 5.2 Step 2: Development of appropriate criteria

A market segment is a subgroup of people or organizations that share one or more characteristics. These groups can be created by developing segments from a vast selection of different criteria, such as income, age, sex, and ethnicity that are relevant to the company. Thus developing segments identifies opportunities and needs as it presents the selected criteria as a group of definite characteristics that need to be considered when selecting the target market. Developing segments also improves marketing mix for each segment for further use. (Hollensen 2012, 174; Wall & Rees 2001, 303.)

When selecting the criteria base on the segmentation the company should know its products or services well enough to identify its basic appeal and demand. Determining what kind of market has the demand for the company's products or services can be considered through what the product or service provides. The climate in the market can determine if there is demand for certain seasonal products, e.g. the demand for cooling systems is more likely in warm climates. Also, some countries can have import restrictions that can exclude some market options depending on the product. Determining the availability of resources can be useful when selecting the criteria if the company would need services or manufacturing at the target market. If there is a need for local manufacturing the availability of resources, such as labor and raw materials, should be considered. (Hollensen 2012, 174; Wild, Wild, & Han 2010, 354-355.)

After all the factors have been considered, the segments can be formed in order to implement the market screening. There can be multiple segments formed from multiple criteria that complement the company's product or service. For example, a company that imports HVAC equipment could have a segment with the criteria of geographic location, age and lifestyle, which would define the customer base to be the age of 20 to 50 years old with an owner-occupied house and ecological lifestyle. If there is a certain service the company is concentrated on, e.g. the maintenance of HVAC systems, the segment can be limited in geographic areas where the HVAC systems are commonly used, thus the market has demand for the maintenance of HVAC systems. The chosen segments should be evaluated in order to determine which segments are important for the product or service and then select the segment to be used in the market screening. (Hollensen 2012, 174-177.)

### 5.3 Step 3: Screening of segments

The screening of segments is divided into two phases; *preliminary screening* and *fine-grained screening*. In preliminary screening the markets or countries are screened with external criteria that define the state of the market where as the fine-grained screening considers the competitive power and attractiveness of the market. These

screening methods can also exclude some markets or countries entirely so that there is no further need to consider those markets. Other markets that remain attractive target market options can be further screened in the screening process. (Hollensen 2012, 177.)

The screening can be executed in different scales of intensity. A wider and more extensive screening would start by covering all the continents which would provide a variety of market options to be screened and analyzed. If preferred, the company can exclude markets from the screening process by choosing to concentrate on certain continents or other geographical areas, e.g. the company may choose to concentrate on Europe which can be ideal for smaller businesses but can also exclude possible opportunities that are farther from the home country. The criteria for the preliminary screening can be seen in the Table 2. (Hollensen 2012, 177.)

Table 2. Screening criteria (Hollensen 2012, 177)

**Preliminary screening criteria**

Restrictions in the export of goods from one country to another

Gross national product per capita

Government spending as a percentage of GNP

Cars owned per 1,000 of the population

Population per hospital bed

*Preliminary screening* is executed by using certain criteria in order to reduce the number of markets. The preliminary screening criteria are: restrictions in the export of goods from one country to another, gross national product per capita, cars owned per 1,000 of the population, government spending as a percentage of GNP, and population per hospital bed. *Restrictions for goods exported* can vary greatly depending on the export market, e.g. when exporting from Finland to Malaysia the plastics waste is disclosed as prohibited goods. The restrictions can have an influence on the market selection since it may not be possible, or is more difficult, to import all goods. The gross national product (GNP) shows the value of goods and services produced in a year in domestic and international activities whereas the gross domestic product (GDP) regards only the goods and services by domestic economy. GNP,

which is used in this study, can determine the wealth of a population and it is commonly used when considering a purchase of a certain country's products. *GNP per capita* is simply calculated by dividing the GNP by the country's population. *Government spending as a percentage of GNP* can show country's expenditure especially when comparing the numbers with recent years. *Cars owned per 1,000 of the population* as well as *population per hospital bed* can give information on the development level of a country and thus give important information for the screening process. These factors show the state of the markets and can reveal possible risks in market entry, e.g. a poor market may not have the purchasing power to buy the products or services offered. (Hollensen 2012, 177-178; Website of Export Finland 2016; Wild, Wild, & Han 2010, 38, 155.)

There are also other ways to get information for the screening of markets, e.g. tools created by marketers and shift-share approach. Business Environment Risk Index (BERI) is a tool created by marketers in order to examine the quality of a business environment. Criteria used in the BERI index include e.g. political stability, economic growth, labor costs, and attitude towards the foreign investor and profits, thus the index creates information on the political risk of entering a country. The shift-share approach is helpful when determining the growing and declining markets. The base for the approach is the changes in international import shares between various countries; hence it compares the country's growth rate with the average growth rate, but does not consider other criteria. (Hollensen 2012, 177-178.)

*Fine-grained screening* contemplates on the attractiveness and competitive strength of the markets or countries. The combination of these two dimensions can be used to identify the most feasible markets. Both dimensions contain several variables which can be seen in the Table 3 below, such as market size, market growth, image, and contribution margin, which are crucial for identifying appropriate markets. The selected variables should be looked up for every country that are considered as a target market after which the countries can be compared with each other in order to identify the best opportunities. (Hollensen 2012, 178-179.)

Table 3. Market/country attractiveness and competitive strength (Hollensen 2012, 179)

<b>Market/country attractiveness</b>	<b>Competitive strength</b>
Market size (total and segments)	Market share
Market growth (total and segments)	Marketing ability and capacity (country-specific know-how)
Buying power of customers	Products fit to market demands
Market seasons and fluctuations	Price
Average industry margin	Contribution margin
Competitive conditions (concentration, intensity, entry barriers, etc.)	Image
Market prohibitive conditions (tariff/non-tariff barriers, import restrictions, etc.)	Product quality
Infrastructure	Market support
Economic and political stability	Quality of distributors and service
Psychic distance (from home base to foreign market)	Financial resources Access to distribution channels

Psychic distance demonstrates the differences between the markets that should be considered when entering a market, since they might influence the continuity of information and services between the market and the company. Psychic distance can cover various characteristics, such as income levels, lifestyles, education, language, cultural values, economic development level, communication infrastructure, and technical requirements. Often but not always, the psychic distance becomes higher as the countries are further apart geographically. High psychic distance results many times to the adaptation of the marketing mix in order to increase sales. Adaptation can occur in any aspect of the product of service, such as product, price, place, and promotion. (Hollensen 2012, 55-56, 179.)

Market size can be calculated with the formula presented below by using the amount of production of a product in the country and then reducing the changes in stock size. Figures used in the formula (Table 4) can often be found in the country statistics if the product is standardized and has an identifiable customs position. If there are no

figures to be found, the market size has to be estimated by using indirect methods, e.g. the market size may need to be estimated by using the amount of population or customers and their financial statistics. (Hollensen 2012, 180; Äijö 2008, 102-103.)

Table 4. Calculating market size (Hollensen 2012, 180)

### **Market size**

<b>Production (of a product in a country)</b>
+import
-export
<b>= theoretical market size</b>
+/- changes in stock size
<b>= effective market size</b>

After the information on every country has been collected, the countries can be arranged in three different categories based on the levels of market attractiveness and competitive strength. The categories are arranged in an order of the best market opportunity to the least attractive one. Category A countries are the primary markets that obtain the best opportunities as a long-term investment, and such they have high levels of market attractiveness and competitive strength. Category B countries are secondary markets that obtain opportunities but also possible political or economic risks, hence short-term investments are preferred regarding secondary countries. Category C countries are tertiary markets with low levels of market attractiveness and competitive strength. Tertiary countries are also high risk countries and should be handled with little commitment and finances in order to reduce, for example, financial losses. (Hollensen 2012, 180.)

With preliminary and fine-grained screening, the number of potential markets is reduced by excluding the markets that are not attractive for the company. The preliminary screening excludes the poor and undeveloped markets and the markets with import restrictions that affect the company. The fine-grained screening reduces the number of potential markets even more by using different variables that define the attractiveness and competitive strength of the markets. The variables used, such as the market size, price, buying power and access to distribution channels, help the company to comprehend the way the market would influence their business. After

the two phases of screening, the markets left are the prime markets, which should be concentrated on the next step of screening. (Hollensen 2012, 177-180.)

#### 5.4 Step 4: Micro-segmentation

The prime markets, which have been identified in the previous steps, will continue to the micro-segmentation that includes developing sub segments in each appropriate country and across countries. Developing sub segments can be done by using variables, such as demographic or economic factors, lifestyles, consumer motivations, geography, buyer behavior, and psychographics, which have been introduced in the earlier steps. When developing segments one should make a point of using various variables and not only e.g. geographic variable. Different variables create multidimensional sub segments that target the customers more efficiently. (Hollensen 2012, 180.)

In order to study further the most qualified markets a questionnaire by Svend Hollensen can be a useful tool. The questionnaire comprises two parts: *market attractiveness* (Figure 5) and *relative competitive strength* (Figure 6). Market attractiveness covers the overall picture of the market by using variables such as market size, prices and market power. Relative competitive strength compares the company's strengths in comparison with the strongest competitor in e.g. marketing. With the questionnaire, the variables are weighted with a percentage that is decided by the company according to the company's needs and objectives. Results are created by multiplying the grading of the variable with the weight factor, which makes it easier to compare different countries between each other and to discover the highest sales potential markets. (Hollensen 2012, 181.)

**A. Market attractiveness**

	1 Very poor	2 Poor	3 Medium	4 Good	5 Very good	% Weight factor	Result (grading x weight)
Market size							
Market growth							
Buying structure							
Prices							
Buying power							
Market access							
Competitive intensity							
Political/economic risks							
<b>Total</b>							

Figure 5. Market attractiveness questionnaire (Hollensen 2012, 181)

**B. Relative competitive strengty**

with regarding to the strongest  
competitor

	1 Very poor	2 Poor	3 Medium	4 Good	5 Very good	% Weight factor	Result (grading x weight)
Product's fit to market demand							
Prices and conditions							
Market presence							
Marketing							
Communication							
Obtainable market share							
Financial results							
<b>Total</b>							

Figure 6. Relative competitive strength questionnaire (Hollensen 2012, 181)

The results of the questionnaire can be clarified by positioning the countries into a country attractiveness and competitive strength matrix. The matrix can be also used when contemplating which strategy to use in a particular country or when considering which countries provide growth opportunities. Countries that have high attractiveness and high competitive strength are categorized as invest and grow countries, which require strong commitment and consequential financial investment, but also have growth opportunities. Countries that have low attractiveness and low competitive strength are categorized as harvest, divest, license and combine countries. These countries probable characteristics are strong competitors, a small market area and small market share which can result in harvesting profits or selling the business. Dominate or divest countries have a high attractiveness level but low competitive



strength, which can be a challenging market due to the strong competitors and small market share, thus there is a need for a stronger market position. Selectivity countries have median attractiveness and competitive strength levels, thus there can be strong cash flows but it is difficult to maintain market share due to intense competition. These markets may provide opportunity to gain more market share if the company has strong competitive advantage, e.g. technological advantage. Figure 7 below presents the country attractiveness and competitive strength model. (Albaum & Duerr 2008, 207-209.)

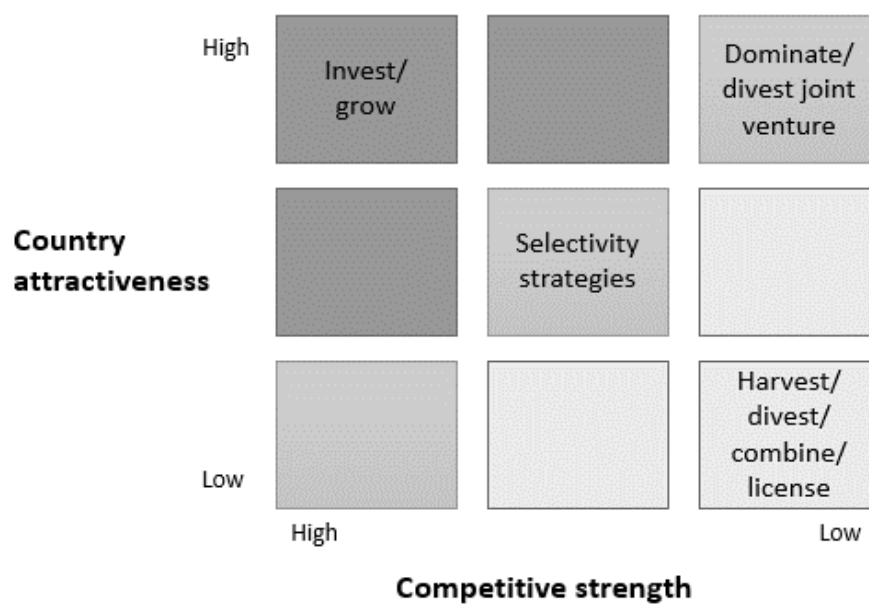


Figure 7. Country attractiveness/competitive strength matrix (Albaum & Duerr 2008, 207)

As the last step of the screening process is completed, the markets have been screened with multiple criteria with a result of only a few potential markets to select from. The screening has included many variables of market attractiveness and competitive strength in order to find the appropriate market that suits the company's needs and provides a profitable business environment. In a case that the last few potential markets are on equal grounds after the screening process it is up to the company to select from the options. Also, if the company is prepared to enter a few markets at the same time, it is possible to use multiple entry as a strategy, which requires market analysis from all the selected markets. (Hollensen 2012, 183.)

## 6 MARKET ANALYSIS

As the market screening process is completed, the feasible markets can be analyzed. The market analysis concentrates on the macro environment, since it is a supporting tool throughout the five-stage decision model in global marketing (Figure 2), which is the basis of this study. This also provides the company an opportunity to deepen the knowledge of the market as it continues to the next stages of the decision model. The macro environment factors used in the foreign market analysis are general, such as regulations, geographic, and economic, factors. There are various analysis tools for macro environment that can be used in order to gain better understanding about the market, such as PESTLE analysis, Porter's diamond and SWOT analysis. PESTLE analyzes the macro environment and Porter's diamond analyzes it even further with the industry and market analysis. SWOT analysis covers the internal and external environments of the case company and the market. With market analysis, one can gain knowledge of the markets purchasing power, price level, risks to take into consideration, competitors, and other factors. For example, purchasing power is important part of the analysis since it shows whether the market has possible buyers and whether entering the market would be profitable. Market analysis also gives guidelines on how the products or services can be promoted in the market. (Hollensen 2012, 5, 10; Kananen 2010, 30-31.)

### 6.1 PESTLE analysis

PESTLE analysis comprise six different environments; political, economic, social, technological, legal, and environmental, as can be seen in Figure 8 below. It is used in analyzing how these factors have an effect on the company's operations, success and performance in macro environment. For example, analyzing these environments can help to gain knowledge on the adaptation requirements and how the company should adapt their operations according to the market demand. Political factors in this analysis can be government regulations and legal factors, such as political stability, tax guidelines and trade regulations. Economic factors that are considered in PESTLE analysis can be factors, such as inflation, interest rates, economic growth

and unemployment rate. Social factors to be considered in the new market are the customer demographics, cultural limitations, lifestyle attitude and education. Technological factors that can have an impact on the company processes are technological advancements, lifecycle of technologies and the attainability of internet. Legal environment considers factors, such as legislation that affect the business operations. Environmental factors can consider, for example, global changes in the climate. (Website of Pestleanalysis 2016.)

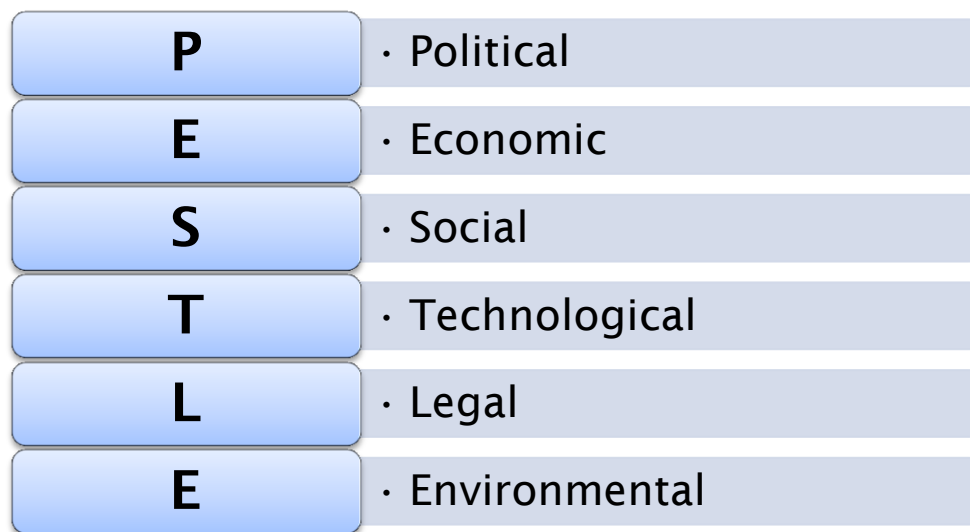


Figure 8. PESTLE analysis (Website of Pestleanalysis 2016)

*The political environment* of a market should be considered carefully before entering the country in order to discover possible risks and how to manage them. The political factors that can affect the international business include the political stability, type of the government, trade agreements, taxes, labor legislation, inflation, government attitude towards global trade and regulations. There are three types of political risks in international trade, which are ownership risk, operating risk and transfer risk. Ownership risk occurs when a firm's property is threatened through confiscation or expropriation. Operating risk is a risk that interferes with the company's operations. Transfer risk occurs when capital is transferred between countries. Political risks can be caused by government actions or even actions that are outside government's control. Actions that can cause risks in international trade can be e.g. import restrictions, local-content laws, market control, price control, tax control, and labor restrictions. (Hollensen 2012, 123-124; Griffin & Pustay 2010, 97-98.)

*The economic environment* includes the factors that affect consumer purchasing power and spending patterns and thus measure the health of the economic region. Economic environment and its development is based upon several factors, such as level of inflation, unemployment, economic growth, and international trade. One should expect the factors to fluctuate over time and thus consider the changes one may have to adapt to. Other economic factors can be the disposable income of buyers, credit accessibility, unemployment rates, and interest rates. Economic development can be a result of three types of economic activity: primary, secondary and tertiary. Primary activities are activities connected with agriculture and extractive processes, thus they are activities that acquire: raw materials such as coal, iron ore, gold, and fishing. Secondary activities are manufacturing activities, e.g. a country can start to process their primary products and manufacture other items from them. Tertiary activities depend on services, such as tourism, insurance and health care, which have an impact on the spending patterns of the consumers. (Hollensen 2012, 128; Website of Pestleanalysis 2016.)

*The sociocultural environment* comprises several layers that can differ greatly between countries and that affect the strategies used in different markets. For example, in some markets the product has to be differentiated according to the language or culture in order to reach customers and profitable sales. Culture can be seen as lifestyle, body language, behavior and in simple things as drinking and eating habits, but the visible daily behavior rests on the deeper layers of culture. This phenomenon is illustrated in Figure 9 below. What guides the everyday behavior of people is the values and social morals, as well as basic cultural assumptions. For example, family values can guide the actions of people and is often learned from the family members, at the same time family values can origin from religion or beliefs. Besides learning from others, the cultural characteristics can also be shared or interrelated, e.g. attitude towards marriage can be interrelated with religion. As all aspects of culture have an impact on the behavior, one must consider them carefully to understand how to do business in the market efficiently. (Hollensen 2012, 149-150.)

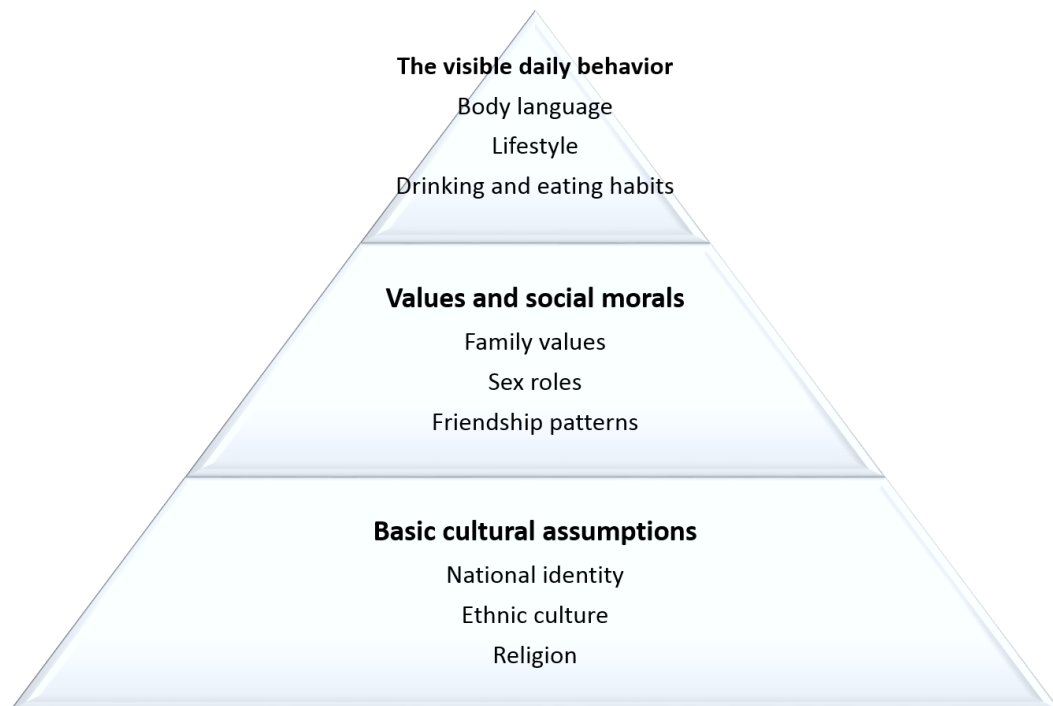


Figure 9. The visible and invisible parts of culture (Hollensen 2012, 150)

*Technological environment* describes the forces that create new technologies by creating new product and market opportunities (Kotler, Armstrong, Harris, & Piercy 2013, 91). Observing the technological environment of the market will give the opportunity to recognize the technologies available as well as identifying the level of development in the market. One should consider the possibility of new discoveries and innovations, technological advances, and thus whether some technologies are out of date or compatible with the level of technological environment in the market. For example, internet has created many opportunities in the technological field but it has also created a rapidly growing industry. With the new innovations, other innovations may become obsolete, thus requiring new more advanced discoveries in order to keep up with the technological development. (Website of Pestleanalysis 2016.)

*Legal environment* consists of the internal and external environment. The external legal environment includes laws and regulations, e.g. consumer laws, safety standards and labor laws, which can have an influence on business. For example, a company that provides human resources and recruitment expertise should be familiar with the target markets' labor laws and regulations. The internal legal environment consists of the policies that are maintained by the company itself. The company policies can include guidelines for any action that is necessary or otherwise important for

the company. For example, following the work safety policy is important in many companies, since it can reduce the amount of accidents. (Website of Pestleanalysis 2016.)

*Environmental* factors to be considered in the market can be, for example, climate, weather, geographical location, global changes in climate and environmental regulations. For example, the geographical location defines the climate and weather characteristics in the market and such they have an influence on the agriculture on the market. There are also environmental regulations that regulate the effect of human activity on natural environment, e.g. there can be regulations of the legal emissions levels that the company should follow. (Website of Pestleanalysis 2016.)

## 6.2 Porter's diamond

The porter's diamond is based on a National Competitive Advantage Theory, by Michael Porter, which is to be used in this study to determine the competitiveness of the chosen market and industry and explains why some countries have international success in an industry. The porter's diamond is comprised of four elements: (1) firm strategy, structure and rivalry; (2) factor conditions; (3) demand conditions and; (4) related and supporting industries, which can be seen in relation to each other in Figure 10. The four elements are considered interdependent and are important in order to comprehend competitiveness level and resource level of the market. The resources to be considered can include e.g. human resources, physical resources, knowledge resources and capital resources that are crucial for business. (Porter 2006, 114-115; Wild, Wild, & Han 2010, 188-190; Wall & Rees 2001, 73.)

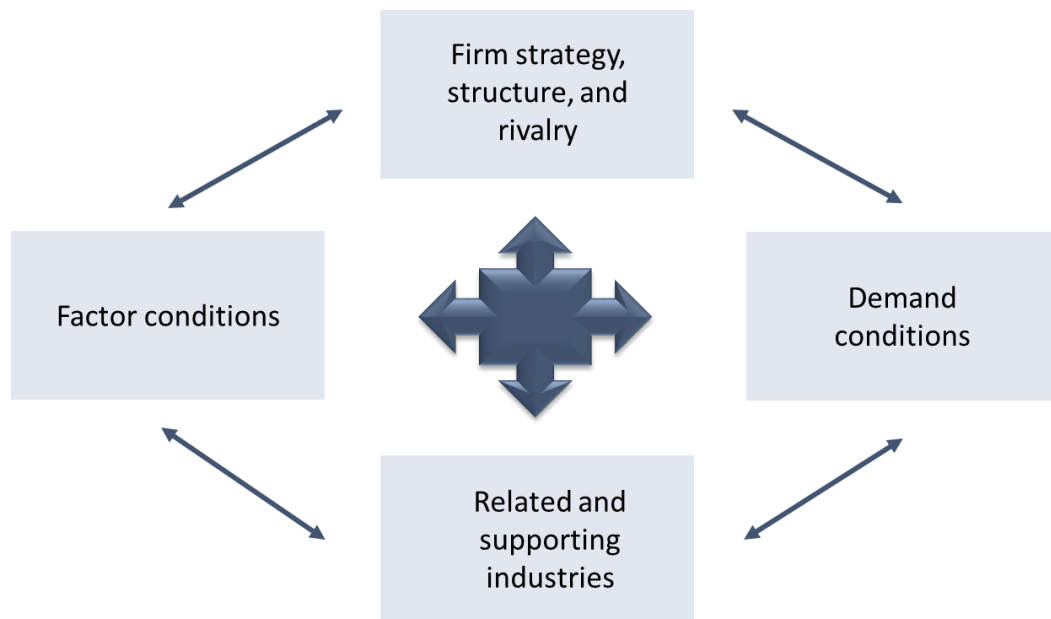


Figure 10. Porter's diamond of national competitive advantage (Porter 2006, 115)

*Firm strategy, structure and rivalry* consider the founding of a company, organization and management, as well as the level of competition in the market. A company's strategies, goals and organization can vary greatly based on the country, since the country's conditions affect the manner of the company's management system. Leadership differences between countries can result from e.g. the manager's education, background, emphasis on hierarchy, and nature of customer relations. Domestic rivalry, as any other competition, can cause improvement and innovation pressures on the company. (Porter 2006, 114-115, 155-156, 167; Wild, Wild, & Han 2010, 188-190; Wall & Rees 2001, 73.)

*Factor conditions* consider not only the land, labor and capital, but also the infrastructure, national resources and human capital endowments. The traditional trade theory is based on the factor conditions. According to the theory, countries have different factor condition reserves and a country exports goods that benefit from the factors conditions it possesses. For example, the United States exports agricultural goods since it has extensive amounts of farmland. When considering the human capital endowments, the education or skills can be benefitted from, e.g. well educated people in the information technology industry can help a company to enhance its operations by recruitment. National resources can include the amount, quality, availability and costs of the resources, such as soil, water, minerals, wood, and wind power. Infrastructure may include e.g. transportation systems, communication network,

forwarding of payment, and health care. (Porter 2006, 114-115, 117-119; Wild, Wild, & Han 2010, 188-190; Wall & Rees 2001, 73.)

*Demand conditions* consider the extent and characteristics of domestic demand. The facts of demand conditions can shape the quality and speed of the companies' improvements and innovations in a country. Domestic demand consists of the composition of demand, the scale of demand and growth of demand. The scale and growth of demand depends on the composition of demand, since the quality of demand is more important when regarding the competitive advantage. The composition of domestic demand influences on how the companies perceive the needs of the customers and the company that understands the needs better and reacts to them, usually succeeds in their operations. The size of the market is important in industries that thrive from research and development, and new innovations. In these kind of industries, a large market gives the companies confidence to invest. (Porter 2006, 114-115, 131, 139; Wild, Wild, & Han 2010, 188-190; Wall & Rees 2001, 73.)

*Related and supporting industries* consider the quality and extent of supply industries, as well as supporting business services. For example, a company that processes zinc can benefit from the companies that produce zinc as a side product. With related and supporting industries that are internationally competitive, the company can access e.g. the components, know-how, or raw materials needed more efficiently, quickly and with ease. Also, when a company has quality suppliers it will create value for the product or service. A close cooperation with supporting industries provides access to new information, ideas, and more efficient solutions, as well as boosts the research and development. (Porter 2006, 114-115, 148-150; Wild, Wild, & Han 2010, 188-190; Wall & Rees 2001, 73.)

### 6.3 SWOT analysis

SWOT analysis, that comprises from the words *strengths*, *weaknesses*, *opportunities* and *threats*, can be used when analyzing the company to develop the company's strategy in internationalization. SWOT analysis is divided into internal and external environments, as can be seen in Figure 11 below. Strengths and weaknesses are used



to identify the internal characteristics, as well as opportunities and threats are used to identify the external characteristics of the company. With thorough investigation of different characteristics, one can gain strategic information on, e.g. which market to focus on or which service, product or process gives the company a competitive advantage. (Griffin & Pustay 2010, 341-343; Äijö 2008, 126.)



Figure 11. SWOT analysis tool (Website of Pestleanalysis 2016)

Internal and external environments in the analysis can contemplate issues regarding the market, regulations, competitor, production, and labor. Issues to consider in the external environment can be e.g. economic, financial, political, legal, social, and competitive changes in markets. Issues in internal environment can be e.g. technology, well-known brands, image, strong market share and organizational strengths, such as skills, resources and other advantages possessed by the company. These factors lead to a conclusion made from the basis of SWOT analysis that can lead to strategic challenges and strategic options. Strategic challenges present the challenges that should be faced in order to succeed in international environment. Strategic options present ways of overcoming the challenges. (Griffin & Pustay 2010, 341-343; Äijö 2008, 126.)

SWOT analysis should always be done in relation to the competitors. Things to consider regarding the competition are e.g. the most important direct competitors in different product or customer categories, most important indirect competitors, volume and structure of competition, level of competition, number of competitors, market shares of the competitors, and substitute products. Other factors that may be crucial

are customer loyalty, potential new competitors, and whether the competitive product attracts to a specific segment or a larger mass segment. A similar product of a competitor may attract a different market depending on the characteristics of the product. For example, differences in quality and price may attract different customers. By using the product variables, the competitors can be placed in a positioning map to clarify the competition structure in the market. An example of this positioning map can be seen below in Figure 12. The variables in the positioning map are the price and quality of the product, but they can be replaced with any other variables which are relevant to the business and its products. (Wild, Wild, & Han 2010, 366; Äijö 2008, 109.)

**Example. Company X in relation to the competitors**

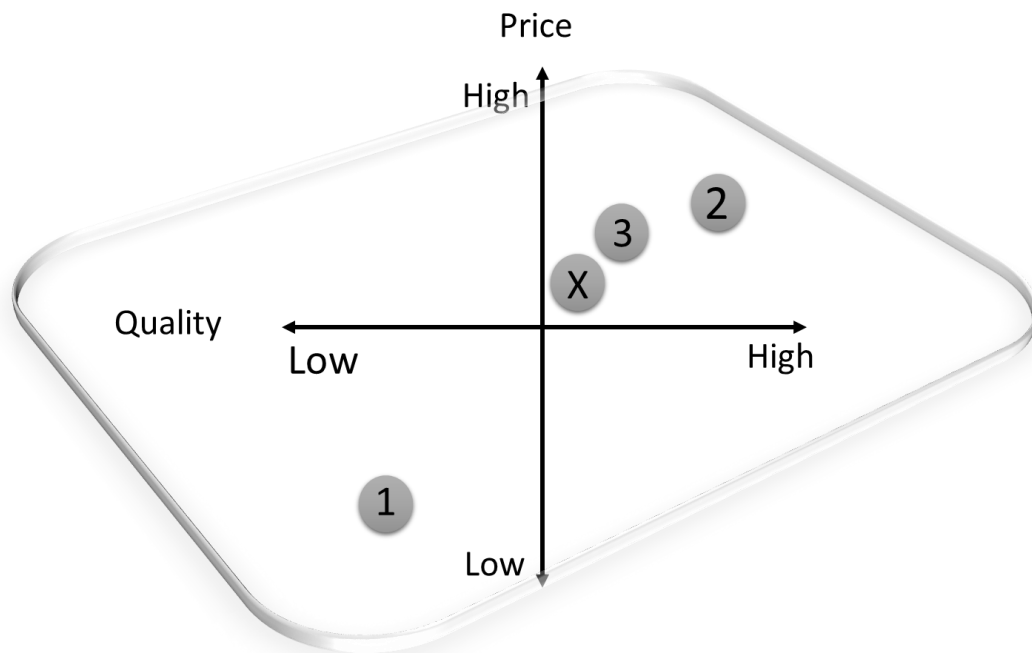


Figure 12. Positioning map example (Website of Neil Bendle 2012)

## 7 METHODOLOGY

### 7.1 Research methods

This is a qualitative research on international market selection. Qualitative study is a method where the aim is to understand the quality, characteristics and meaning of the subject completely. The characteristics of qualitative study are e.g. the preference of a human as a method of data collection, aim of revealing unexpected factors, complex and detailed examination of information and a flexible implementation of the study. Generally, in a qualitative study the interview is performed with certain selected individuals, rather than random a sample of people, as an open or theme interview. Also, the cases should be managed as unique and thus should be interpreted as such. (Hirsjärvi, Remes & Sajavaara 2009, 164; Hirsjärvi, Remes & Sajavaara 2009, 164.)

The research methods that are implemented in this study are the interview, observation, and collecting data, especially on the subject of international market selection process. The primary data of the research is the interview with the CEO of the case company. The main secondary data information used in this thesis is the market screening model by Svend Hollensen and other secondary data is gathered from various sources, such as studies and statistics, in order to support the core theory. (Website of Jyväskylän yliopisto 2015; Website of Tilastokeskus 2016; Hollensen 2012, 173.)

The empirical part of the study includes data from the interview, as well as the market screening, selection and analysis of the market. The interview will be implemented as a theme interview where the central topics of the market selection process will lead the discussion. Each of the themes will be analyzed in order to gather the results of the primary research. An interview is a great tool for finding and clarifying information, or to heighten interviewee's information to a wider context. The interview model used in this thesis is a theme interview, which focuses on certain topics that should be discussed. Theme interview does not obtain specific questions and orders as in structured interview, since it is a semi-structured interview due to the free con-

versation on the certain topics. The interview results and secondary data collected, are analyzed with tools, such as PESTLE analysis, Porter's diamond and SWOT analysis, in order to reach the objectives of the study. In addition, tacit knowledge, that is knowledge of the industry or company that the researcher has learned during her practical training in the company, can be introduced in the study. (Website of Jyväskylän yliopisto 2015; Website of Tilastokeskus 2016; Hirsjärvi & Hurme 2008, 35, 47-48.)

## 7.2 Theme interview

The interview will be a personal interview with the CEO of the case company. The interview will be implemented as a face to face discussion and the interviewee will be informed of the discussion topics beforehand. The discussion will be free but follows the previously planned themes. Topics of the interview are: expanding business abroad and the expectations, resources and the objectives of doing international business. Theme interview is a suitable tool in this case since the company is considering expanding their business but there is no information e.g. on the company objectives. Also, there is no need for multiple interviews since the case company is entrepreneur-driven company, where the manager's decision influences the decisions the most. The interview will complement the study with additional information that can guide the international market selection process. The themes of the interview are to be seen below. (Hirsjärvi & Hurme 2008, 35, 47-48.)

- ❖ Case company
  - Company readiness for growth and internationalization
  - Company objectives
- ❖ Business environment
  - Existing demand for the services
  - Current customer segment
- ❖ Internationalization
  - Core service provided in international markets
  - Appropriate market

As can be seen above and in Appendix 1 the interview will include discussion on the topics of readiness for growth and internationalization, company objectives, as well as service and market selection. The interview will discuss of whether the company is ready for international markets and what are the company's objectives regarding internationalization. Also, the existing demand for the company services and the adaptability of the services in a new market will be discussed. The current customer segments are one of the topics to ensure the success of the screening process and selecting screening criteria. In addition, the management's opinion of the potential markets for future endeavors is to be discussed. (Äijö 2008, 51-53.)

### 7.3 Validity and reliability

The reliability of the study defines the ability whether the study can be repeated and whether the results would be the same. The reliability of a qualitative research can be enhanced with an exact explanation of the implementation phases during the research. The explanation of phases concerns all the phases of the study. As the data is produced, e.g. through an interview, the conditions of the interview should be informed clearly and truthfully. (Hirsjärvi, Remes & Sajavaara 2009, 231-233.)

The validity of the study defines the ability to measure what is supposed to be measured. In a qualitative study the validity of the study can be measured by considering whether the description and the explanation as well as interpretations are compatible with each other. The validity can be intensified with the use of several research methods in the research. (Hirsjärvi, Remes & Sajavaara 2009, 231-233.)

## 8 MARKET SELECTION AND INTERNATIONALIZATION PROSPECTS FOR HARJU SOLUTIONS OY

### 8.1 Interview results

The interview was conducted 26<sup>th</sup> April 2016 as a personal theme interview with the CEO of Harju Solutions Oy. The interview was held in a quiet space with enough privacy to ensure the conversation flow. The interviewee Tomi Harju has been in the HVAC industry for several years firstly working as a sole proprietor and later as a manager of a limited company. Tomi Harju has a vocational degree in Building service technology and is studying to be an engineer in Building and community development, which will deepen his knowledge on planning, implementation and maintenance of buildings and technical building systems. The company provides heating, ventilating, and air conditioning services in Finland, but is considering expanding its business into an international environment. During the interview there was discussion on the topics relating to the expanding of business. The topics of the discussion are: (1) *company readiness for growth and internationalization*, (2) *company objectives*, (3) *existing demand for the services*, (4) *current customer segment*, and (5) *possible core service provided in international markets*, and (6) *possible market opportunities*.

On the topic of (1) *company readiness for growth and internationalization*, Tomi Harju contemplated that the company would need to grow and gain more market share in the domestic market before expanding its business abroad. With internationalization the company would need to obtain certain resources to ensure the internationalization process. A successful transition to an international company would most likely require e.g. the recruitment of personnel, financial resources, a contact at the new market and readiness to adapt to the market, as well as knowledge of the market. (Harju, personal communication on 26.04.2016.)

(2) *Company objectives* regarding the internationalization would be to enter a market with a long-term strategy that would help the company to gain market share in a relatively stable market. The interviewee also stated that the company could expand even further after the position in the first market would be stabilized. Possible ways to en-

sure the objective could be by ensuring the expertise of the personnel recruited, enhancing internal communication, using a business agent, or by cooperating with a company in a relating industry, e.g. a company that specializes in HVAC equipment. (Harju, personal communication on 26.04.2016.)

As the discussion proceeded to (3) *the existing demand for the services*, it became clear that there will be differences in the domestic and foreign market in regard to the needs of the customers. In Finland there is more demand for the ventilation opposite to the markets with warmer climates that have demand for cooling services. According to the interviewee the increase in pollution and awareness of the indoor air quality, as well as the climate changes, will increase the demand for HVAC services. Harju Solutions Oy will try to answer the demand by offering comprehensive expertise instead of concentrating only on one sector of HVAC services. (Harju, personal communication on 26.04.2016.)

(4) *The current customer base* consists of many different types of customers from municipals and housing cooperatives to private customers, whose needs for the services are usually based on the needs of the household. The larger customers are the municipals, larger buildings, offices, factories and stores, which often use competitive tendering when selecting the preferred bidder. The criteria the customers use when selecting the bidder depends on the commissioned work. When the service needed is a service with lesser quality value, e.g. maintenance, the price seems to be more important for the customers, but when the work concerns indoor air quality the customers prefer a trustworthy and careful bidder. (Harju, personal communication on 26.04.2016.)

The interviewee had a clear vision of what should be (5) *the core service provided in international markets*: indoor air quality surveys and consulting. The indoor air surveys would encompass the evaluation of the indoor air quality and a plan how the quality could be improved. With consulting, the company could provide their comprehensive knowledge on HVAC services. As previously said, some markets may have more need for cooling, which could be a stepping stone for the company. As a long-term plan, the company could offer cooling services to create more orders, e.g.

maintenance and consulting, and thus create opportunities for indoor air quality. (Harju, personal communication on 26.04.2016.)

Tomi Harju considers the less developed economies, such as South America, to be (6) *potential markets* to enter in the future. The less developed economies have growing demand for the HVAC industry, but could have many challenges regarding the condition of the buildings and the possible building regulations in the market. As the demand for AC systems increases, it should be considered whether the maintenance companies have enough knowledge of the industry to provide quality maintenance services. Also, the building should be considered as a whole with building regulations, which can include ventilation, indoor climate, indoor air quality, and the cleanliness, and maintenance of the ventilation system, to ensure the quality of ventilation. This could be challenging especially in a less developed market, since the building regulations might not have reference values for ventilation or other relating issue. One solution for the building regulations differences could be offering after-care consult service for the maintenance companies. (Harju, personal communication on 26.04.2016.)

Compared with the larger companies Harju Solutions Oy, and other small enterprises, have generally speaking simpler, internal organization that is more flexible, faster and adaptable than in larger companies. However, SME's also often have less financial and other resources than the larger companies, which makes the SME's more affected by external environment and changes in it. On the basis of this interview and the characteristics of a micro-enterprise, Harju Solutions Oy should target one market to enter after growing and gathering capital in the domestic market, as entering a new market requires resources. By targeting one market, they can centralize their financial and non-financial resources in one direction to maximize their effort. The decision of entering a less developed market can be supported by studies, which shows the high demand for HVAC services in less developed countries. Also, awareness of the potential challenges, such as the building regulations, in these markets can be considered as an advantage since failing to recognize the risks can cause, such as customer loss, damaging liability, environmental damage, and loss of income. By providing immaterial services, consulting and expertise in HVAC industry, Harju Solutions Oy can benefit from its adaptation and flexibility as a micro-enterprise to



their advantage when entering the market by adapting their service selection according to the demand in the market. In addition to the adapting to the environment, Harju Solutions Oy can build its business on that fact that the market and its demand for the services will develop in time. (Harju, personal communication on 26.04.2016.)

For a company like Harju Solutions Oy operating in a challenging industry it would be sensible to stabilize its operations on the domestic market before expanding into the international markets, but they should consider the possibility of a competitor reaching the market first. The company could consider also small short-term projects in foreign markets and use them as a stepping stone to the international markets. Also, the experiences in foreign markets can be possibly be used later in a market research. The projects can lead to important contacts in the HVAC industry and thus create new opportunities for the company especially if there is no clear image which markets to enter in the future. Networking is important as the company may need an agent or cooperative company in a relating industry in the future, which would make the transition to a new market easier. In a new target market, the company should concentrate firstly in the services that have high demand and build the operations further from there. In order to be prepared for the upcoming challenges, e.g. with the building regulations, the company should implement a proper market research to ensure their success in the market.

## 8.2 Screening criteria and defining segments

Since Harju Solutions Oy provides HVAC services, it should be considered in what kind of countries the services are needed. Commonly countries with warm climate could benefit from the cooling services more than countries with cooler climates. Also, the political environment should be stable enough for entering the country, the technology should be developed enough so the equipment needed, e.g. air conditioning systems, could be used, the education level and the economy should be at certain level so that the potential customers would have enough understanding about the importance of indoor air quality, as well as purchasing power. In addition, the ease of doing business in the selected market should be relatively high. Thus the criteria for the market screening are *geographical location, level of technology, political factors,*

*education, economic situation and quality of the business environment.* This will create a market segment with suitable characteristics: a warm climate with a high demand for air conditioning, as well as stable and open market with educated population and purchasing power. The criteria chosen for this case company can be seen more thoroughly in the Table 5 below. (Hollensen 2012, 174-177; Website of Meteoblue 2016.)

Table 5. Screening criteria and market segment (Hollensen 2012, 174-177; Website of Meteoblue 2016.)

<b>Geographic:</b>	Tropical or Subtropical climate
<b>Technology:</b>	Availability of electricity
<b>Political factors:</b>	Political stability, corruption, criminal activity
<b>Demographics:</b>	Median age, literacy level
<b>Economy:</b>	Poverty, economic growth
<b>Business environment:</b>	Ease of Doing Business rank

### *Geographic*

In highly developed countries, e.g. United States, the HVAC technology may be highly used and the industry is highly competitive as the market is already saturated by competition. "According to the U.S. Energy Information Administration, 87 percent of American households are equipped with air-conditioning" (Sivak 2015). Also, the energy demand for air conditioning is estimated to have increased in 2100 by 72 percent because of the climate changes, which creates opportunities for companies in the HVAC industry. This is why the case company should consider less developed countries, as in continents like Asia and Africa. Developing countries have growing markets and gaining market share can be more accessible than in fully saturated countries. (Sivak 2015; Website of Meteoblue 2016.)

The paper "Contribution of air conditioning adoption to future energy use under global warming" studies the relationship between the temperature, income, and air conditioning by using Mexico as an example country. The results of the paper show that the use of air conditioning increases as the temperature and income level rises and thus predicts that income level growth in warm climates results in adoption of air conditioning use. Also, as the cooling devices become more affordable for larger

masses, it results in the saturation of air conditioning increases. Even though, The United States use more electricity in air conditioning than other countries, there are countries, like China, that will surpass the United States in energy consumption for air conditioning. The potential markets for the air conditioning are predicted to be in Asia, Middle East and Africa, as can be seen from Figure 13 below that is based on a study, which considers the local climate and population as potential market factors. Table 6 deepens the information of Figure 13 with the screening factors of the potential countries. The annual cooling degree days (CDDs) at Table 6 shows the amount of energy used to cool a home or business. (Bump 2012; Davis & Gertler 2015; Sivak 2015.)

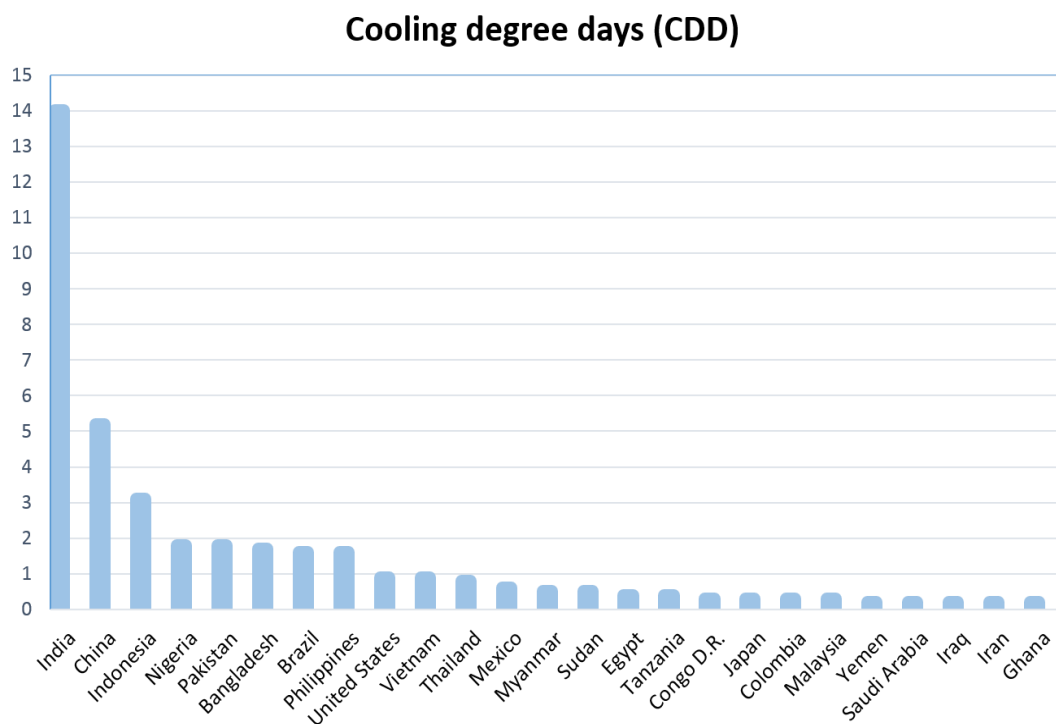


Figure 13. Cooling degree days per country (Sivak 2015)

Table 6. Top 12 of potential air conditioning countries (Davis &amp; Gertler 2015)

<b>Country</b>	<b>Population (in millions)</b>	<b>Annual CDDs</b>	<b>Annual GDP per capita</b>
<b>India</b>	1,252	3,120	1.5
<b>China</b>	1,357	1,046	6.8
<b>Indonesia</b>	250	3,545	3.5
<b>Nigeria</b>	174	3,111	3.0
<b>Pakistan</b>	182	2,810	1.3
<b>Bangladesh</b>	157	2,820	1.0
<b>Brazil</b>	200	2,015	11.2
<b>Philippines</b>	98	3,508	2.8
<b>United States</b>	316	882	53.0
<b>Vietnam</b>	90	3,016	1.9
<b>Thailand</b>	67	3,567	5.8
<b>Mexico</b>	122	1,560	10.3

As the previously selected screening criteria and the characteristic of the potential countries complement each other, the sample of countries that will be further screened will be the countries from Figure 13. The most frequently appearing countries in the list are the countries from Asia and Africa, which is why the chosen areas to consider markets from are Asia and Africa that also belong to the tropical and sub-tropical zones. The sample of potential countries will exclude the United States, Brazil and Colombia since the continents concentrated on are Asia and Africa, which also are the most frequent areas to appear in the list. Since the list of countries is vast and basically only the geographical characteristics have been considered, the list will be screened further with the other characteristics; technology, political factors, economy, ease of doing business and demographics.

#### *Technological, Political and Economic factors*

As the countries in Africa: Nigeria, Sudan, Egypt, Tanzania, Democratic Republic of the Congo and Ghana are viewed through the political, technological and economic points of view one can easily realize the challenges with these countries. Even though they might be potential air conditioning users in the future, currently there might be challenges such as political and economic stability. Some of these countries have managed e.g. to boost up their economic growth or securing the political envi-

ronment but they still have issues to consider, such as poverty, reduced economic growth, unstable political environment, massive corruption and criminal activity, all of which create more challenges entering a market. Still, the leading issue with these countries is the lack of electricity. “At the moment the country’s big stations produce a pitiful 2,800MW, which is about as much as is used by Edinburgh. Only just over half of Nigerians have access to electricity, and it is still harder for businesses to hook up to the grid than almost anywhere else” (Powerless 2016). Lack of electricity shows that the market may not be developed enough for creating demand for air conditioning services. (Website of CIA World Factbook 2015; Website of World Bank 2016.) Because of the instability in their politics, lack of electricity, poverty and reduced economic growth, the countries from Africa are excluded from the list of potential countries at the moment, but the progress in these countries should be followed up in the future.

#### *Business environment*

Doing business report is an annual report that includes characteristics that have an effect on the economy’s health, performance and growth. The report covers business regulation data, such as starting a business, getting electricity, registering property and getting credit, which are relevant when setting up and operating business abroad. In Table 7, the countries of the potential markets are listed according to their ranking in the ease of doing business. The most challenging countries to do business in are Iran, Iraq, Pakistan, Myanmar, Bangladesh and Yemen, not only because of their ranking but also because of the political instability, poverty and restrictive business environments that weaken the economic growth. For example, a full-fledged military conflict emerged in Yemen in March 2015. (Doing Business 2016, IV, 1, 5; Website of CIA World Factbook 2015; Website of World Bank 2016.)

Table 7. Ease of doing business ranking (Doing Business 2016, 5)

<b>Countries</b>	<b>Ranking out of 189 countries</b>
Malaysia	18
Japan	34
Thailand	49
Saudi Arabia	82
China	84
Vietnam	90
Philippines	103
Indonesia	109
Iran	118
India	130
Pakistan	138
Iraq	161
Myanmar	167
Yemen	170
Bangladesh	174

Since Iran, Iraq, Pakistan, Myanmar, Bangladesh and Yemen have clearly the poorest performance in the Ease of doing business rankings are clearly they will be excluded from the sample of potential markets. The remaining countries to examine are: Malaysia, Japan, Thailand, Saudi Arabia, China, Vietnam, Philippines, Indonesia, and India.

### *Demographics*

When contemplating on the demographics of the countries, one could view the median and literacy level of the population in order to get a grasp of what kind of customer base could the country have. A relatively low median age could mean that the population is growing and there are working people with purchasing power. Literacy level shows the percentage of how many of age 15 and over can read and write thus a population with high literacy level can be defined as better educated. (Website of CIA World Factbook 2015.) A young and educated population is more likely to respond positively to the importance of the indoor air quality. Table 8 below will present the median age and literacy level of every country and as can be seen there is a little difference between the countries. Most of the countries have literacy level of over 90 percent and median age between years 20 and 30, and even though Japan has

the highest median age with 46.5 it also has the highest literacy level with 99 percent. With these figures there is no reason for excluding any of these countries.

Table 8. Country demographics (Website of CIA World Factbook 2015)

Country	Median age	Literacy level %
<b>China</b>	36.8	69.4
<b>India</b>	27.3	71.2
<b>Indonesia</b>	29.6	93.9
<b>Japan</b>	46.5	99.0
<b>Malaysia</b>	27.9	94.6
<b>Philippines</b>	23.2	96.3
<b>Saudi Arabia</b>	26.8	94.7
<b>Thailand</b>	36.7	96.7
<b>Vietnam</b>	29.6	94.5

### 8.3 Preliminary screening

Preliminary screening is done with certain characteristics, after which the fine-grained screening takes place. Preliminary screening covers external criteria, such as *restrictions in the trade of goods from one country to another, GNP per capita, cars owned per 1,000 of the population, government spending as a percentage of GNP and population per hospital bed*, which will define the state of the market. Countries in this screening phase are the following: Malaysia, Japan, Thailand, Saudi Arabia, China, Vietnam, Philippines, Indonesia, and India. (Hollensen 2012, 177.)

The first of the preliminary screening criteria to be examined is *the trade restrictions*. Many of the potential countries do not have direct ban on AC products, but they may require e.g. an import license for certain products or registration to the Ministry of Commerce. Companies who import to China are required to register into the Registration Bureau of the State Administration for Industry and Commerce (SAIC). Importing to Indonesia requires registering the company into the Ministry of Commerce. If the value of the goods imported to Japan is more than 1,000,000 yen, the importer has to make a notification to an authorized foreign exchange bank. Vietnam

prohibits the import of second-hand consumer goods, such as electronic goods, refrigerators, and household electrical appliances, which does not directly concern the case company, but should be kept in mind (Website of Vietnam Law Guide 2016). When importing to Saudi Arabia most goods can be imported with or without import license, but for example certain refrigerant in AC products are forbidden, which are clarified below. (Website of Export Finland 2016; The Kingdom of Saudi... 2014.)

“Forbidden refrigerants in products (ACs, Fridges, Freezers, etc.):

- R11, R12, R 22 (except for window ACs), R123
- CFC11, CFC12, HCFC-22 (except for window ACs), HCFC-123
- Freon 11, Freon 12, Freon 22 (except for window ACs), Freon 123
- Trichloromonofluoromethane, Dichlorofluoromethane, Chlorodifluoromethane (except for window ACs), Dichlorotrifluoroethane
- CCl<sub>3</sub>F, CCl<sub>2</sub>F<sub>2</sub>, CHClF<sub>2</sub> (except for window ACs), C<sub>2</sub>HCl<sub>2</sub>F<sub>3</sub>”

(The Kingdom of Saudi... 2014).

As the *GNP per capita* figures of the countries are viewed, can be seen that Japan and Saudi Arabia have the highest figures with USD 42,000 and USD 25,140 per capita. China, Malaysia and Thailand have their figures between USD 5,000 and USD 12,000 per capita whereas Vietnam, India, Indonesia and Philippines have the lowest figures. These figures suggest that the countries with higher figures are wealthier and possess more purchasing power. *The government spending percentage of GNP* stayed level in most of the countries between the years 2011 and 2014 with a little fluctuation, aside from the percentage of Saudi Arabia that rose 6.7 percentage points. This could be explained by the changes made in the kingdom from 2005 to 2015 by King Abdallah. The changes included social and economic initiatives, such as expanding employment and social opportunities for women and attracting foreign investment. In addition, the military conflict with Yemen in 2015, which led to the reinforcement of the border, could be part of the reason the country's expenditures have risen. The criteria of preliminary screening, excluding the import restrictions, and potential countries can be seen in Table 9 with the addition of statistics of Finland for perspective. (Website of CIA World Factbook 2015; Website of World Bank 2016.)



Table 9. Preliminary screening criteria (Website of CIA World Factbook 2015; Website of Macro Economy Meter 2011; Website of World Bank 2016)

Country	GNP per capita (USD)	Government spending % of GNP		Cars owned per 1,000 of the population	Hospital beds / 1,000 population
		2011	2014		
China	7,400	13	13.6	69	3.8
India	1,570	11.2	11.4	18	0.7
Indonesia	3,360	9.1	9.5	69	0.9
Japan	42,000	20.4	20.6	588	13.7
Malaysia	11,120	13.3	13.3	378	1.9
Philippines	3,500	9.7	10.4	30	1
Saudi Arabia	25,140	19.4	26.1	185	2.1
Thailand	5,780	16.1	17.1	172	2.1
Vietnam	1,890	5.9	6.3	14	2
Finland	48,440	23.6	24.8	551	5.5

*Cars owned per 1,000 of the population* include all the motor vehicles besides two-wheelers. *Population per hospital bed* in the table is illustrated as hospital beds per 1,000 population and it shows the availability of inpatient services, e.g. in China the number is 3.8. This means they have 3,800 hospital beds per 1,000 people. These two criteria can give an idea of the development level of the country, but in some cases the figures can be misleading. In some countries it might more common e.g. to use motor bikes than cars or to use public transportation. Amount of hospital beds is relative because there is no international norm in how many hospital beds there should be and other countries may have more people hospitalized than others. However, the figures do imply that Japan is by far the most developed one from these countries regarding the amount of both vehicles and hospital beds. Other countries with considerable figures in the cars owned are Malaysia, Saudi Arabia and Thailand. The amount of hospital beds is considerable in Malaysia, China, Saudi Arabia, Thailand and Vietnam. The countries with least vehicles are India, Indonesia, China, Philippines and Vietnam and the countries with the least available hospital beds are India, Indonesia and Philippines. (Website of CIA World Factbook 2015; Website of Macro Economy Meter 2011; Website of World Bank 2016.)

The results of the preliminary screening criteria show that there are no major differences between the potential countries. There were no trade restrictions that would prevent the case company entering the market. Harju Solutions Oy provides HVAC services, thus the trade restrictions should not be a reason for excluding markets, but they might become crucial later on. The figures regarding the GNP per capita, government expenditure, cars owned and the amount of hospital beds can seem quite level. However, there are four countries that appear most often in the bottom four: India, Indonesia, Philippines and Vietnam. In order to reduce the amount of countries that will be screened further, these countries will be excluded from the list of potential countries, which means the countries left for the fine-grained screening are: China, Japan, Malaysia, Saudi Arabia and Thailand.

#### 8.4 Fine-grained screening

Fine-grained screening will concentrate on *the competitive strength and market attractiveness* of the market. In the fine-grained screening the countries are being screened according to market attractiveness and competitive strength. The criteria for market attractiveness are *buying power of customers, economic growth, business environment and psychic distance*. The buying power of customers is measured with GDP per capita (PPP) that shows the gross domestic product based on the purchasing power parity (PPP). GDP real growth rate percentage measures the economic growth within the year. Business environment has multiple sublevels that relate to different issues of doing business, such as enforcing contracts, getting credit and trading across borders. Table 10 shows the countries' rank out of 189 countries in every issue. In the rankings, matters such as time, costs and amount of procedures are taken into consideration. (Website of CIA World Factbook 2015; Hollensen 2012, 55-56, 177,179.)

Table 10. Market attractiveness of the potential markets (Website of CIA World Factbook 2015; Doing business 2016, 194-239)

	<b>China</b>	<b>Japan</b>	<b>Malaysia</b>	<b>Saudi Arabia</b>	<b>Thailand</b>
<b>Purchasing power</b>					
<i>GDP per capita (PPP)</i>	14,300	38,200	26,600	55,400	16,100
<b>Economic growth</b>					
<i>GDP real growth rate</i>	6.8%	0.6%	4.7%	3.3%	2.5%
<b>Business environment</b>					
<i>Enforcing contracts</i>	7	51	44	86	57
<i>Dealing with construction permits</i>	176	68	15	17	39
<i>Getting credit</i>	79	79	28	79	97
<i>Trading across borders</i>	96	52	49	150	56
<i>Resolving insolvency</i>	55	2	45	189	49
<b>Psychic distance</b>					
<i>high or low</i>	high	high	high	high	high

#### *Market attractiveness*

According to the figures China has the lowest purchasing power with GDP per capita (PPP) of USD 14,300. This could be explained with the large population and high income differences between urban and rural areas. Nevertheless, China's economy is still growing with real growth rate of 6.8 percent that is highest among the potential countries. In the business environment China ranks relative high in most parts, e.g. resolving insolvency and getting credit. Enforcing contract is the highest rank for China and dealing with constructions permits is the lowest. Psychic distance between Finland and China is high. China has different government system, language, culture, religions, values and communication infrastructure. For example, the use of internet is highly restricted by the Chinese government. (Website of CIA World Factbook 2015; Doing business 2016, 194-239.)

Japan has the second highest purchasing power with USD 38,200 on GDP per capita (PPP), but it also has the lowest economic growth among the potential countries. In business environment Japan has the second highest overall ranking and especially high rank in resolving insolvency. The high purchasing power, low economic growth and high ranking in business environment is explained by the highly developed economy of Japan. Psychic distance between Finland and Japan is high. Japan has different government system, language, culture and religions and beliefs. For example, the main religions in Japan are Buddhism and Shinto, which have contributed to the Japanese culture. (Website of CIA World Factbook 2015; Doing business 2016, 194-239.)

Malaysia obtains relatively high purchasing power with USD 26,600 and its economy is growing fast with the GDP real growth rate of 4.7 percent. According to the figures Malaysia has the highest overall ranking among the potential countries in business environment. Especially business environment parts getting credit and dealing with construction permits have high rankings. Psychic distance between Finland and Malaysia is high. Malaysia has different government system, language, culture, religions and beliefs and economic development. One of the major differences between Finland and Malaysia are the multiple ethnic groups in Malaysia and its affects to the culture. (Website of CIA World Factbook 2015; Doing business 2016, 194-239.)

Saudi Arabia has the highest buying power among the potential countries with GDP per capita (PPP) of USD 55,400 and its economy is growing with 3.3 percent. Saudi Arabia has the lowest overall ranking in the business environment with especially low rank in trading across borders and resolving insolvency. It also has the lowest ranking in enforcing contacts between the potential countries. Psychic distance between Finland and Saudi Arabia is high. Saudi Arabia has different government system, language, culture and religions and beliefs. For example, the lifestyle and family values in Saudi Arabia are greatly influenced by the religion. (Website of CIA World Factbook 2015; Doing business 2016, 194-239.)

Thailand has the second lowest purchasing power of customers with GDP per capita (PPP) of USD 16,100 and its economy is growing slow and steady with 2.5 percent.

The business environment ranking of Thailand is relatively good since all the parts are in the top 100 of the ranking countries. The lowest ranking Thailand has in the part of getting credit with the rank of 97. Psychic distance between Finland and Thailand is high. Thailand has different government system, language, culture, religions and beliefs, and economic development. For example, Thailand and Finland have different government types that affects to their government procedures. (Website of CIA World Factbook 2015; Doing business 2016, 194-239.)

### *Competitive strength*

The competitive strength is defined with the company image and how the services fit to the market demands. The need for HVAC services in the potential countries provides the case company a competitive strength, since its services fit the market demands in the countries. This is also supported by the studies that show the rising air conditioning demands in these countries. Even though Harju Solutions Oy has expertise in the HVAC industry, it is still unknown in these countries. But since Finland has a good image regarding knowhow and technology, it can be perceived as one of the advantages to benefit from in addition to the company's own expertise.

Also, Harju Solutions Oy provides services, thus the contributions margins are quite different compared to selling of goods. For example, a consultation does not require manufacturing or processing of goods and may only require contribution of time and expertise, as well as the costs of travelling to the destination. Due to this the contribution margin is quite large but is dependent on the price levels and the purchasing power of customers. All of the potential countries, excluding Japan, have considerably lower price levels compared to Finland. (Hollensen 2012, 179-180; Website of Numbeo 2016.)

As the market attractiveness and competitive strength are examined one can compare the country-specific figures and information to each other and ponder which are appealing for the company. One can also modify the factors according to the company. As for this case company the overall performance in the business environment and the overall performance in the economic environment are appealing. Regarding market attractiveness Malaysia has the most appealing overall ranking in the business environment, as well as good purchasing power and economic growth. Also, Japan

has performed well in business environment, but it can be considered to be too developed country, as the aim is to look for a less developed country with high demand for air conditioning. In addition, Japan had a low ranking on the list of cooling degree days per country (Figure 13). Saudi Arabia does not reach the same level with Malaysia in the business environment but has in relation the highest purchasing power and economic growth. China has demand for services, but also low purchasing power. Thailand has good business environment ranking, but also low purchasing power, low economic growth and some political instability. In conclusion the most appealing countries in this case are Malaysia and Saudi Arabia.

Table 11. Results of the fine-grained screening

<b>A</b>	<b>Primary markets</b>	
	Malaysia	Saudi Arabia
<b>B</b>	<b>Secondary markets</b>	
	China	Thailand
<b>C</b>	<b>Tertiary</b>	
	Japan	

As a result of the fine-grained screening the potential countries have been categorized into primary, secondary and tertiary countries that can be seen in the Table 11 above. Primary markets, Malaysia and Saudi Arabia, possess best opportunities, have high levels of market attractiveness and competitive strength thus will be screened further in micro-segmentation. Secondary markets are China and Thailand, which obtain possibilities but also risks. Japan is categorized as a tertiary country since it is more developed country with high price levels, and low economic growth rate. (Hollensen 2012, 179-180.)

## 8.5 Micro-segmentation

The primary markets Malaysia and Saudi Arabia are compared with each other with the help of the questionnaire model of Svend Hollensen, which is divided into two parts: *market attractiveness* and *competitive strength*. The results of the market attractiveness questionnaire are based on the information of the economy, price level,

demographics, ease of doing business, political stability, economic growth and research of the AC services available in the market. The variables in the questionnaire are modified to fit the case company and attainable information better. The competitive strength questionnaire is evaluated in comparison to the strongest competitor in the market. The competitive strength questionnaire is modified to fit the HVAC industry better and it is based on the services Harju Solutions Oy provides, e.g. assessing indoor air quality is one of the competitive advantages of the case company and it should be compared to the competitors. Also, the case company provides only services thus the variables are concentrated on the variety of services and customer service rather than providing AC systems. The variables in the questionnaires have been evaluated and rated according to the previously presented figures and information. The results of the questionnaires can be seen in Appendix 2 and Appendix 3. (Hollensen 2012, 181.)

Since the Competitive strength questionnaire is done in relation to the strongest competitor a research was implemented to gather information on HVAC companies. Appendix 4 and Appendix 5 show the results of this research, which includes information on HVAC companies. The information includes the scope of the company's operations, location, services provided, and some personal notes made by the author. There are all together with the six most prominent companies from both countries. The companies have been evaluated and compared with each other in order to find a company that could possibly be the strongest competitor to the case company. The results of this research have also been taken into consideration in the market attractiveness questionnaire as there is the variable of competitive intensity.

### *Malaysia*

Market attractiveness of Malaysia (Appendix 2) is high with the points of 4.1 out of maximum of 5 points. Malaysia is large and growing market with great demand for HVAC services. Malaysia has relatively low prices compared to Finland but also quite high level of buying power in relation to the price level. Malaysia is an accessible market with Ease of doing business rank of 18 out of 189 countries. There are many larger companies that provide HVAC equipment but few companies that specialize in providing HVAC services. The companies that provide HVAC equipment provide some services but they are often limited to the maintenance of the company's

own products or after sales customer support. The companies that provide HVAC services are usually small local businesses that have little visibility. The political environment of Malaysia is stable and it has a growing economy with great opportunities. (Website of CIA World Factbook 2015; Doing Business 2016, 5; Website of Numbeo 2016.)

In the competitive advantage part of the questionnaire the competitor used is a company called Acontech. Acontech was chosen from the list of competitors (Appendix 4) for it is one of the few companies that operate with HVAC services rather than providing HVAC equipment. The other competitors are focusing mainly on AC systems and are considerably larger compared to Acontech and the case company. Acontech is a SME located in the center of Kuala Lumpur and it specializes in HVAC services, such as maintenance, chemical cleaning, normal cleaning and repair service, thus it competes in same area of expertise with the case company. In addition to the providing of HVAC services, it is also a small and relatively new company with young personnel thus competes in the same area as the case company. Even though, Acontech provides similar services as the case company it does not have services such as Indoor air quality surveys, which creates a competitive advantage for the case company. (Website of Acontech 2016.)

Relative competitive strength of Harju Solutions Oy (Appendix 2) compared to Acontech is high with 4.4 points out of 5. Both of the companies have services that fit the market demand. Since there are only few companies that focus on services rather than offering HVAC equipment with customer support, there is a market gap for providing HVAC services. In assessing indoor air quality (IAQ) the case company has a stronger foothold since Acontech does not provide IAQ surveys. Furthermore, Harju Solutions Oy has a larger variety of services. Acontech may be more capable at the moment in customer service because for example the language, which is why the case company would need some local reinforcement. With the local cooperation there is no reason why Harju Solutions Oy would be less capable. Both of the companies have good images and are relatively unknown in the market. Market share is obtainable for the case company due to the few companies that focus on services and because Acontech operates only in the area of Kuala Lumpur. Regarding expertise Acontech has advantage of being familiar with the culture and language, but Harju



Solutions Oy has more knowhow in variety of services, as well as more experience as it has operated longer. (Website of Acontech 2016.)

### *Saudi Arabia*

Market attractiveness of Saudi Arabia (Appendix 3) is high, but lower than Malaysia, with the points of 3.9 out of maximum of 5 points. Saudi Arabia is a large growing market with a lower price level but higher purchasing power compared to Finland. The market of Saudi Arabia is not as easily accessible as Malaysia since its Ease of doing business rank is 82 out of 189 countries. Similarly, to Malaysia, also Saudi Arabia has larger companies that provide HVAC equipment but few companies that specialize in providing HVAC services. Even though the economy is growing, the political environment of Saudi Arabia is not as stable as in Malaysia due to the full-fledged military conflict with Yemen. Also, the existing import restrictions regarding the certain refrigerants can cause challenges with the business operations. (Website of CIA World Factbook 2015; Doing Business 2016, 5; Website of Numbeo 2016; Website of World Bank 2016; The Kingdom of Saudi... 2014.)

In the competitive advantage part of the questionnaire, the competitor used is a company called Al Hashim Air Conditioning Company, which operates throughout Saudi Arabia. Al Hashim Air Conditioning Company was chosen from the list of competitors (Appendix 5) since the other competitors are focused on AC systems and do not provide as wide selection of services as Al Hashim Air Conditioning Company. Even though, it is a large commercial contractor, one of the services it provides is air testing and abatement, which includes testing and improving the quality of the indoor air thus is a great competitor for Harju Solutions Oy. Al Hashim Air Conditioning Company is a larger company with long history and many services, such as design and implementation, service and repair, predictive maintenance, air testing and abatement (IAQ) and sheet metal fabrication. (Website of Al Hashim Air Conditioning Company 2008.)

Relative competitive strength of Harju Solutions Oy (Appendix 3) compared to Al Hashim Air Conditioning Company is high with 3.7 points out of 5, which is slightly less than Malaysia's points in relative competitive strength. Both of the companies have services that fit the market demands, including the indoor air quality surveys.

Both of the companies have variety of services, but since some of them differ from each other the case company can find a competitive advantage. The competitor may be more capable at the moment in customer service capability due to the cultural knowledge, but as in the Malaysian market Harju Solutions Oy should have local contacts in order to understand the market. As a new company in the market Harju Solutions Oy would need to fight harder to reach as good image as Al Hashim Air Conditioning Company for it has operated for almost 34 years and it has many well-known customers. Al Hashim Air Conditioning Company is a leading company in Saudi Arabia, but since there are little other companies that compete in the same service area, Harju Solutions Oy can compete by e.g. offering other, differentiated, or enhanced services, such as consulting services. And because there are few other companies competing in the same area of expertise the case company has competitive advantage. (Website of Al Hashim Air Conditioning Company 2008.)

The questionnaire results (Appendix 2 & 3) present Malaysia with higher points both in market attractiveness and in competitive strength questionnaires. In Malaysia entering to the market is easier and there is less competition compared to Saudi Arabia. Malaysia also has fewer political and economic risks to consider. In relation to the competitors, in Malaysia the case company can benefit more from the competitive advantage of assessing indoor air quality. Also, in Malaysia the case company has higher level of expertise and experience in relation to the competitor.

## 8.6 Market selection

As the markets are positioned in the country attractiveness and competitive strength matrix in Figure 14, Malaysia is identified as a country for invest and growth and Saudi Arabia is identified as a country for selectivity strategies. Malaysia is a country for invest and growth because it has the best opportunities for the case company, but it also requires strong commitment. As the case company aims for long-term plan, Malaysia is a good option for establishing a permanent presence, which will require a comprehensive market research. Saudi Arabia is a selectivity country because of the stronger competition in the HVAC industry compared to Malaysia. Due to the intense competition it can also be hard to gain market share if the company does not

have a strong competitive advantage over the competitors and since Al Hashim Air Conditioning Company is also providing indoor air services. Also, the possible political and economic risks create a more challenging business environment for a long-term investment. Both of these markets are good options for the case company to enter, but because of the case company's aim is a long-term plan, the intense competition in Saudi Arabia, and the performance of Malaysia was better in the questionnaires, the selected market in this study is Malaysia. (Albaum & Duerr 2008, 207-209; Harju, personal communication on 26.04.2016.)

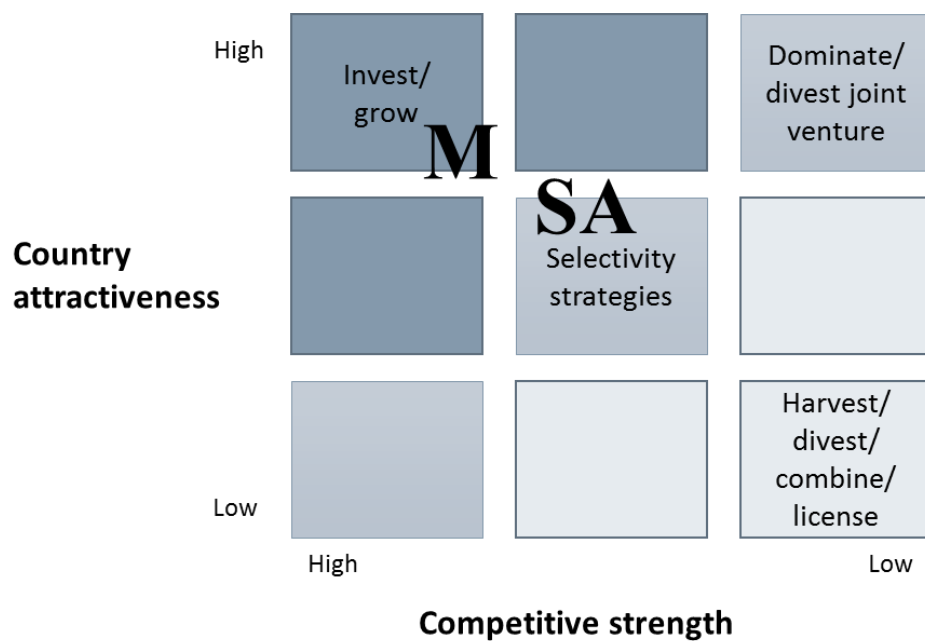


Figure 14. Potential markets in country attractiveness and competitive strength matrix

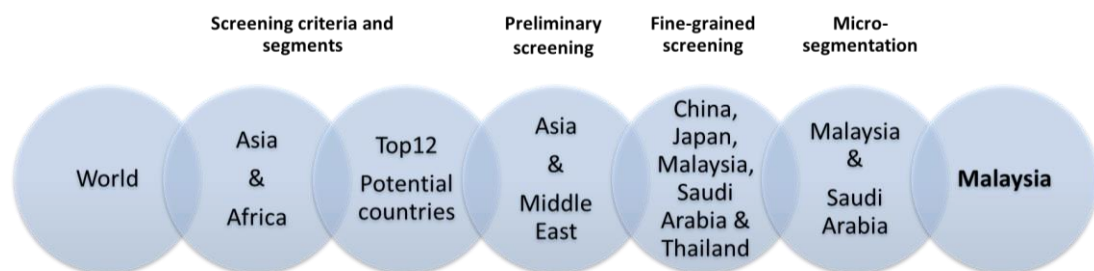


Figure 15. International market screening process

Figure 15 above presents the international market screening process, through which the market selection has been accomplished. The screening process started with selecting the screening criteria and segment whereby all of the countries were nar-

rowed down to Asia and Africa. Since these continents include dozens of countries the list was reduced to top 12 countries, with the help of the studies by Michael Sivak and Davis & Gertler, in order to find the most potential countries. The top 12 countries were screened more thoroughly with the previously selected screening criteria, which resulted in narrowing down the countries to countries in Asia and Middle East. In the preliminary screening the countries in Asia and Middle East were further screened to the following countries: China, Japan, Malaysia, Saudi Arabia and Thailand. From these countries Malaysia and Saudi Arabia were selected with fine-grained screening to proceed to the micro-segmentation. In the micro-segmentation the two countries were compared with each other in order to find the target market. Lastly, Malaysia was selected as the target market that will be further analyzed with macro environment analysis tools.

## 8.7 PESTLE analysis

### 8.7.1 Political environment

Malaysia is a constitutional monarchy, which became independent from the United Kingdom in 1957. The capital of Malaysia is Kuala Lumpur and in the center of it locates Putrajaya, the administrative center of Malaysia. The head of state is the King Tuanku Abdul Halim Mu'adzan Shah. The most important international relations of Malaysia, which enhance the economy of Malaysia, are the strong relations with Australia and the improving bilateral ties with Singapore. However, there are some challenges with establishing democratic institutions and the territorial dispute with Philippines. Future political risks for Malaysia are growing authoritarianism and rising dissatisfaction among ethnic minorities. The facts of Malaysia, such as the Independence Day, population, capital, and head of state, can also be seen in the Table 12 below. (Website of World Factbook 2015; Country Analysis Report 2015, 15.)

Table 12. Introduction of Malaysia (Website of World Factbook 2015)  
**Malaysia**

Constitutional monarchy	
<b>Independence:</b>	31 August 1957
<b>Population:</b>	30,513,848
<b>Capital:</b>	Kuala Lumpur
<b>Head of State:</b>	Tuanku Abdul Halim Mu'adzan Shah

Malaysia and Australia have cooperated for several years and are still improving their bilateral relations. Malaysia-Australia relations cover several issues, such as education, economy, defense and security issues. For example, the countries have agreed to focus on preventing human trafficking. Also the economic ties are strong between the countries, since the Malaysia-Australia Free Trade Agreement (MAFTA) was enforced in 2013 and Malaysia is one of the largest trading partners of Australia. Besides Australia, also the relations with Singapore are improving and the disputes, such as the use of Malaysian railways in Singapore land, are being solved which will benefit both economies. (Country Analysis Report 2015, 15-17.)

Malaysia continues to disagree with Philippines on the matter of whom has the claim on Sabah, one of the 13 states of Malaysia. Sabah has been inhabited by Filipino before the independence of Malaysia leading to a dispute over the land that has continued over 50 years. Sabah is one of the largest states and rich in natural resources, such as palm oil, which increases the attractiveness of the territory. The situation resulted in a conflict in 2013 as Sabah was infiltrated by Filipinos and the conflict led to increased tension between the countries, as well as accusation of Malaysia violating human rights. In addition, the prime minister of Malaysia and the image of the country have experienced a setback due to the allegations of the corruption and allegations of the funds of a state-owned enterprise 1MDB. (Country Analysis Report 2015, 16-17.)

Challenges in Malaysian government are the performance of democratic institutions and the unresolved territorial dispute. Malaysian government is a democracy but its performance in democracy is poor showing weaknesses in the citizens' rights and

free press, thus the issues in democratic institutions should be addressed. “It was ranked in the 36.95 percentile for voice and accountability in 2014. The voice and accountability parameter measures the extent to which a country's citizens are able to participate in selecting their government, along with freedom of expression, freedom of association and freedom of the media.” (Country Analysis Report 2015, 17).

There are also possible risks in the Malaysia political environment, such as dissatisfaction among ethnic minorities and growing authoritarianism. The population of Malaysia is diverse with 50.1% of Malays, 22.6% of Chinese, 11.8% of Indigenous, 6.7% Indian and 0.7% of other ethnic groups. The government of Malaysia offers special treatment for Malays, e.g. easy access to educational institutions, cheaper housing, low interest rates and others, in order to protect the economically weaker majority, which creates tension between the ethnic groups. The government has strict rules that limit the freedom of citizens and push the country to growing authoritarianism with characteristics of strong central power and limited political freedom. Malaysia has strict restrictions regarding the civil-society movements and organizations, but despite them demonstrations and protests have occurred and are creating instability to the political environment. (Country Analysis Report 2015, 18; Website of CIA World Factbook 2015.)

Malaysia is an attractive target market for foreign investment, due to the extensive international trade involvement. Malaysian government considers international trade to be an important part of the economy of Malaysia, which is why the trade policy is created in order to establish a liberal and fair global trade. Malaysia's trade is operated according to the system of World Trade Organization (WTO), but Malaysia has also regional and bilateral trading and it is highly involved in Free Trade Agreements (FTA). FTA provides efficient market access and trade guidelines for the participants. The guidelines can consist e.g. of investment, trade facilitation, intellectual property rights, competition policy, standards and conformity assessment, information and communication technology, education and training, research and development, SMEs development and paperless trading. Malaysia has Free Trade Agreements with Japan, Pakistan, New Zealand, India, Chile and Australia, and it is also a member of Association of Southeast Asian Nations (ASEAN) Free Trade Area that includes members like Brunei, Cambodia, Indonesia, Lao, Myanmar, Philippines,

Singapore, Thailand and Vietnam. (Website of Ministry of International Trade and Industry 2016; Website of ASEAN 2016.)

### 8.7.2 Economic environment

The booming economic growth is one of the current strengths of the Malaysian economy. In the Global Competitiveness Index Malaysia ranks 18<sup>th</sup> out of 140 countries and places as 9<sup>th</sup> in the Financial market development pillar. Financial market development consists e.g. of the affordability of financial services, financing through local equity market, the ease of access to the loans and soundness of banks. In the ease of access to loans and venture capital availability Malaysia ranks 2<sup>nd</sup> out of 140 countries. Some of the economic figures of Malaysia can be seen from Table 13 below. (Country Analysis Report 2015, 20; Global Competitiveness Report 2015, 248-249.)

Table 13. Economic figures of Malaysia (Website of World Factbook 2015; Website of World Bank 2016; Country Analysis Report 2015, 53)

#### **Economy**

	<b>2015</b>	<b>2014</b>
<b>GDP (USD billion)</b>	313.5	338.1
<b>GDP PPP (USD billion)</b>	813.5	777
<b>GDP real growth rate</b>	4.7%	6%
<b>Inflation rate</b>	2.1%	3.1%
<b>Interest rate</b>	3.25%	3.0%

Malaysia has continued a steady economic growth with GDP real growth rate of 4.7 percent, which has slightly slowed from the year 2014. The GDP of Malaysia is USD 313.5 billion and even though GDP has decreased, the purchasing power of the Malaysian economy has still increased from USD 777 billion to USD 813.5 billion. “The strong performance is due to expansion in private consumption and fixed investment. According to BNM, private consumption has increased by 7.1% in 2014 and contributed the most to GDP growth” (Country Analysis Report 2015, 20). The interest rate in Malaysia has risen from 3% to 3.25% in order to avoid financial im-

balances created by the fast economic growth. Inflation in Malaysia has fluctuated over the years, but some of the effects on the global economy has been reduced with controlled prices and petrol and petroleum-related products. The inflation rate was decreased from 3.1% to 2.1% between the years 2014 and 2015. Even though there are also challenges with the rising household debt, the economy is expected to retain the steady growth. (Country Analysis Report 2015, 20, 53; Website of World Factbook 2015; Website of World Bank 2016.)

### *International trade*

The amount of the export in Malaysia was USD 203.8 billion in the year 2015. The main export partners were mainly countries from Asia, but also from North America. The main export partners were Singapore, China, Japan and United States. Singapore was the largest export partner with 14.2 percent of the exported goods and China became second with 11.2 percent. Singapore being the largest export partner can be explained with the lack of natural resources in Singapore as well as with the location of Singapore. The US had 10.3 percent and Japan had 9.3 percent of the exported goods. The main export products are electrical & electronic products, chemicals & chemical products, petroleum products, machinery, equipment & parts, and liquefied natural gas. Electrical & electronic products were the most exported with the percentage of 35.9. Other products, such as petroleum and liquefied natural gas can be explained with the rich natural resources of Malaysia. The main trade figure of Malaysia can be seen below in the Table 14. (Website of World Factbook 2015; Website of the Malaysia External Trade Development Corporation 2016.)



Table 14. International trade of Malaysia (Website of World Factbook 2015; Website of the Malaysia External Trade Development Corporation 2016)

International trade

Exports		Imports	
USD 203.8 billion		USD 174.7 billion	
Main export partners (%)		Main import partners (%)	
Singapore	14.2	China	18.9
China	11.2	Singapore	10.9
US	10.3	US	8.7
Japan	9.3	Japan	8.5
Main export products %			
Electrical & electronic products		35.9	
Chemicals & chemical products		7.4	
Petroleum products		6.0	
Machinery, equipment & parts		5.3	
Liquefied natural gas		5.1	
Main import products %			
Electrical & electronic products		31.2	
Chemicals & chemical products		10.0	
Machinery, equipment & parts		9.0	
Petroleum products		6.7	

The number of imports were a little less compared to the exports with USD 174.7 billion. The main import partners were the same as with exports: China, Singapore, the US and Japan, but instead of Singapore the main import partner is China with 18.9 percent of the imported goods. Since China is one of the largest economies with the high production of electronics it is no wonder it has such a large share of the imports. Singapore is the second largest import partner with 10.9 percent of the imported goods. Japan had 8.5 percent and US had 8.7 percent of the imports. The main import products are electrical & electronic products, chemicals & chemical products, machinery, equipment & parts, as well as petroleum products. The most imported product is electrical & electronic products with the high percentage of 31.2, thus it can be assumed that the manufacturing levels in Malaysia are high. The other imported products are the following: chemicals & chemical products, machinery,

equipment & parts and petroleum products. (Website of World Factbook 2015; Website of the Malaysia External Trade Development Corporation 2016.)

### *Labor force*

Malaysia has the labor force of 14.3 million people and in estimation 2.7 percent of the population is unemployed. The unemployment rate is slightly decreased from the percentage of 2.9% in 2014. The unemployment rate quite low but can be explained with the policy of how the employed and unemployed are calculated, since “All people who, at any time during the reference week worked at least one hour for pay, profit or family gain (as an employer, employee, own-account worker or unpaid family worker)” are counted as employed (Website of the Department of Statistics 2015). Over half of the labor force, with the estimation of 53 percent, is working in the service sector. It is estimated that 11 % of the labor force are working in the agriculture sector and 36 % in the industry sector. The high numbers of service sector can be somewhat explained with the influence of tourism since Malaysia is a popular destination for travelers. Also, the restaurant culture in Malaysia must increase the size of the service sector. The size of the industry sector can be explained with the manufacturing of goods, such as electrical & electronic products, that are being traded. Also, the natural resources of Malaysia create work positions for the agriculture sector. (Website of CIA World Factbook 2015.)

### 8.7.3 Social environment

Malaysia has a diverse social environment with many aspects to consider. The demographics of Malaysia include the different ethnic groups, main languages, religions, median age, life expectancy, amount of urban population and population below poverty line. All of the factors have an impact on the social environment of Malaysia. The social environment of Malaysia is highly influenced by the ethnically diverse population. Table 15 present the demographics of Malaysia and as can be seen from the figures, half of the population are Malay, 22.6 percent Chinese and the rest of the population consist of indigenous, Indian and other ethnic groups. (Website of World Factbook 2015.)

Table 15. Demographics of Malaysia (Website of World Factbook 2015)

<b>Ethnic groups</b>	Malay 50.1%
	Chinese 22.6%
	Indigenous 11.8%, Indian 6.7%, other 0.7%
<b>Main languages</b>	Bahasa Malaysia (official)
	English
	Chinese
	Tamil
<b>Main religions</b>	Muslim 61.3%
	Buddhist 19.8%
	Christian 9.2%
<b>Median age</b>	27.9 years
<b>Life expectancy</b>	74.75 years
<b>Urban population</b>	74.7% of total population
<b>Population below poverty line</b>	3.8%

Due to the various ethnic groups, Malaysia has several languages and religions. Bahasa Malaysia is the official language, but other languages in the country are English, Chinese and Tamil. The main religions in Malaysia are Islam, Buddhism and Christianity, with the percentages of 61.3 % of Muslims, 19.8 % Buddhist and 9.2 % of Christians. The ethnic groups and different religion are highly seen in the street scene of Malaysia with the multiple mosques, temples and churches. The median age of Malaysia is 27.9 years, which is relevantly low especially when compared to the Finnish median age of 42.4 years. Even though the population is young the life expectancy in Malaysia is still high with 74.75 years. The urban population of Malaysia is 74.7 percent of the total population, which can be the result of higher job opportunities in urban areas. Only 3.8 percent of the population in Malaysia live below poverty line, which can be influenced by the high urbanization. (Website of World Factbook 2015.)

The Human Development Index (HDI) evaluates the development of the country by using certain factors, such as a long and healthy life, being knowledgeable and have a decent standard of living, rather than just concentrating on the economic growth of the country. The HDI is a simplified measurement and does not cover issues, such as

poverty or human security, but covers issues such as life expectancy and education dimensions. Malaysia ranks 62 out of 186 countries in HDI and thus is identified as a country with high human development. There are 49 countries that have very high human development and these include countries, such as France, Hong Kong and Singapore. (Website of UNDP 2015.) Thus Malaysia has a relatively high human development and standard of living, which enhances the prospects of Malaysia as a target market as a more developed market might be more attractive for services, such as Indoor air quality surveys.

#### 8.7.4 Technological environment

The Global Competitiveness Index evaluates the country's competitiveness by assessing 12 different pillars that include for example institutions, infrastructure, goods market efficiency, financial market development, technological readiness and innovation. The rankings of Malaysia in the 9<sup>th</sup> and 12<sup>th</sup> pillar are to be seen in Table 16 below. In the 9<sup>th</sup> pillar of Technological readiness, the factors considered are e.g. the availability of the latest technologies, Foreign Direct Investment (FDI) and technology transfer, and individuals using Internet. In the 12<sup>th</sup> pillar or Innovation, the factors considered are e.g. capacity for innovation, research and development (R&D) spending, the availability of scientist and engineers and the amount of the PCT patents. The Patent Cooperation Treaty (PCT) is an international patent law treaty that gives the applicant a chance to file international patent protection instead of filing multiple separate national applications. (Global Competitiveness Report 2015, 248-249; Website of WIPO 2016.)

Table 16. Malaysia's ranking in 9th and 12th pillar (Global Competitiveness Report 2015, 248-249)

<b>Global Competitiveness Index</b>	
<b>9<sup>th</sup> pillar: Technological readiness 47/140</b>	
▪ Availability of latest technologies	30
▪ Firm-level technology absorption	23
▪ FDI and technology transfer	5
▪ Individual using Internet	45
▪ Fixed-broadband subscriptions	77
▪ Mobile-broadband subscriptions	48
<b>12<sup>th</sup> pillar: Innovation 20/140</b>	
▪ Capacity for innovation	7
▪ Quality of scientific research institutions	20
▪ Company spending on R&D	8
▪ University-industry collaboration in R&D	12
▪ Government procurement of advanced tech products	3
▪ Availability of scientist and engineers	5
▪ PCT patents	33

Malaysia ranks 47 out of 140 in Technological readiness and one of the strongest point for Malaysia in this pillar is FDI and technology transfer with the ranking of 5 out of 140. In FDI, e.g. a company from one country invests in another company in another country in order to gain influence on the management of the invested company. Other factors that Malaysia has good rankings in include e.g. firm-level technology absorption and the availability of the latest technologies. Also, the use of Internet and the amount of broadband subscriptions are high in Malaysia. From the rankings of the 9<sup>th</sup> pillar can be concluded that Malaysia has relevantly high technological readiness for technological growth, but may still have some technology that needs to be updated. (Global Competitiveness Report 2015, 248-249; Website of World Bank 2016.)

Innovation level in Malaysia is high and it ranks in the 12<sup>th</sup> pillar as 20 out of 140 countries. Malaysia has high capacity for innovation, high R&D activity and the

government of Malaysia supports innovation and new technology with procurement. The strongest points of innovation for Malaysia are the government procurement of advanced tech products, the availability of scientist and engineers, capacity for innovation, and company spending on R&D. Since the innovation and technology readiness are high in Malaysia, there are many possibilities of discovering technological advances and the level of technological development should be sufficient for the investing companies. (Global Competitiveness Report 2015, 248-249.)

#### 8.7.5 Legal environment

Malaysia has a legal system that has components from English common law, Islamic law and customary law. The most problematic legal factors in Malaysia for doing business are the restrictive labor regulations, complexity of tax regulations and foreign currency regulations. Even though Malaysia ranks 54 out of 168 in Corruption Perceptions Index that is in the middle of highly corrupted and very clean, corruption is still considered to be one of the problems when doing business. Regarding the restrictive labor regulations, Malaysia has the mandatory hiring of ethnic Malays restricting the hiring of employees. Still, Malaysia provides some flexibility for companies, e.g. in the manufacturing sector there is no national minimum wage, which creates different wage levels depending on the location and industrial sector, as well as opportunities for the companies to influence the wage levels. The government of Malaysia has made electronic filing compulsory as well as reduced the property tax rate in order to make paying taxes easier and less costly for companies and thus attract more foreign investment. (Website of CIA World Factbook 2015; Global Competitiveness Report 2015, 248-249; Country Analysis Report 2015, 5, 68-69; Website of Transparency International 2015.)

According to the Global Competitiveness Report 2015, Malaysia ranks as 23 out of 140 in Intellectual property protection. Even though there are laws of intellectual property protection they are not properly enforced by the government, and thus create problems for the companies that need patent protection. Also, the laws restricting freedom of speech is one of the problems in Malaysia. There have been changes made to the Evidence Act of 1950 that influence the human rights and freedom of

speech, e.g. internet access and website service providers or a person who owns, administers or edits subject matter in Internet is considered the owner of the content and thus legally responsible for the content. This can create problems for any company that has Wi-Fi access point for the customers, since then they are responsible for the customer's actions. (Global Competitiveness Report 2015, 248-249; Country Analysis Report 2015, 31, 69.) The intellectual property rights are relevant to the case company if the company decides e.g. to apply their own methods or equipment, such as sensors, which other companies do not have.

The labor regulations are important for the company to know if they recruit more personnel or work with subcontractors. As can be seen in Table 17 below, also Malaysia as any other country, has many regulations defining e.g. the hiring, working hours and redundancy rules, which should be known by the company's management. Regarding the regulations of hiring, there is no limit for a maximum length of a fixed-term contract and they are not prohibited for a permanent task. The minimum wage for a full-time worker is USD 230.38 per month. The maximum working days per week is six days and there are no restrictions on night work. The employees in Malaysia can receive premium for work on weekly rest day and for overtime work, but not for night work. Premium for overtime is 50 percent of the hourly pay and premium for work on weekly rest day is 100 percent of the hourly pay. There are no restrictions regarding the weekly holiday work or overtime work. Employees are entitled to have a paid leave annually that is 13.3 working days. Dismissal of an employee due to redundancy is allowed by law and there is no requirement to inform a third-party. The severance pay, for an employee who has been dismissed due to redundancy, is 22.8 weeks of salary payment. There is a notice period for dismissal and it is measured in weeks of the salary, in Malaysia the notice period is 6.7 weeks of salary payment. (Doing Business 2016, 258-259.)

Table 17. Labor market regulation data (Doing Business 2016, 258-259)

**Hiring**

Fixed-term contracts prohibited for permanent tasks	No
Maximum length of fixed-term contracts (months)	No limit
Minimum wage for a full-time worker (USD/month)	280.38
Ratio of minimum wage to value added per worker	0.22
Incentives for employing workers under age 25	No
<b>Working hours</b>	
Maximum working days per week	6
Premium for night work (% of hourly pay)	0
Premium for work on weekly rest day (% of hourly pay)	100
Premium for overtime work (% of hourly pay)	50
Restrictions on night work	No
Non-pregnant and non-nursing women permitted to work same night hours as men	Yes
Restrictions on weekly holiday work	No
Restriction on overtime work	No
Paid annual leave (working days)	13.3
<b>Redundancy rules and costs</b>	
Severance pay for redundancy dismissal (weeks of salary)	22.8
Dismissal due to redundancy allowed by law	Yes
Third-party notification if one worker is dismissed	No
Notice period for redundancy dismissal (weeks of salary)	6.7

Different countries may have different parameters regarding the indoor air quality and possible air contaminants, which is why a company should be aware of the regulations enforced by the government of the target market. Malaysia has enforced regulations such as The Industry Code of Practice on Indoor Air Quality 2010, as well as parameters for indoor air contaminants, both of which can be seen below in Table 18 and Table 19. (Website of DOSH 2016; Website of DOSH 2016.)



Table 18. Acceptable range for specific physical parameters (Website of DOSH 2016)

Parameter	Acceptable range
Air temperature	23-26 °C
Relative humidity	40-70%
Air movement	0.15-0.50 m/s

Table 19. List of indoor air contaminants and the acceptable limits (Website of DOSH 2016) \*excess of bacterial counts does not necessarily imply health risk but serve as an indicator for further investigation.

Indoor Air Contaminants	Acceptable limits		
	ppm	mg/m3	cfu/m3
<b>Chemical contaminant</b>			
Carbon monoxide	10	-	
Formaldehyde	0.1	-	-
Ozone	0.05	-	-
Respirable particulates	-	0.15	-
Total volatile organic compound (TVOC)	3	-	-
<b>Biological contaminant</b>			
Total Bacterial counts	-	-	500*
Total Fungal counts	-	-	1000*
<b>Ventilation performance indicator</b>			
Carbon dioxide	C1000	-	-

The Industry Code of Practice on Indoor Air Quality 2010 has been compiled to ensure employee's well-being against health problems that are caused by poor indoor air. The Code defines the acceptable range for physical parameters as well as the acceptable limits for indoor air contaminants. Table 18 presents the acceptable range for specific physical parameters, such as air temperature, relative humidity and air movement. The acceptable range for air temperature is 23-26 Celsius, for relative humidity 40-70 percent and for air movement 0.15-0.50 meters per second. There

parameters are created to ensure the optimal working conditions for the employees. (Website of DOSH 2016.)

Possible air contaminants for poor indoor air can be chemical or biological contaminants. The chemical contaminants include: carbon monoxide, formaldehyde, ozone, respirable particulates and total volatile organic compounds. The biological contaminants include the totals of bacterial and fungal counts. The acceptable limits for the contaminants can be seen in Table 19. In addition, Table 19 includes the ventilation performance indicator. The indicator defines the acceptable levels of carbon dioxide, meaning if the level is higher than the ceiling limit presented the ventilation in the space is inadequate. (Website of DOSH 2016.)

#### 8.7.6 Environmental

Malaysia locates in Southeast Asia and it is geographically divided into the Peninsular Malaysia and the East Malaysia. The countries bordering Malaysia are Brunei, Indonesia and Thailand. Malaysia has surface area of 330 thousand square kilometers and in the east it has access to the South China Sea. Malaysia is rich with natural resources, such as tin, petroleum, timber, copper, iron ore, natural gas and bauxite. The terrain in Malaysia is coastal plains that rise to hills and mountains. Climate in Malaysia is tropical and as in many other countries in Asia it also suffers from natural hazards such as flooding, landslides and forest fires. The map of Malaysia can be seen in Figure 16. (Website of World Factbook 2015.)



Figure 16. Map of Malaysia (Website of World Factbook 2015)

Malaysia has environmental regulations, such as The National Policy on Environment and National Biodiversity Policy, which are created to fight against environmental problems that have increased because of the fast economic growth. The environmental challenges in Malaysia are deforestation, air and water pollution and contamination by industrial waste. The National Biodiversity Policy protects the biological diversity as well as sustainable development. (Country Analysis Report 2015, 70-71.) “The National Policy on Environment provides broad guidelines through which the government seeks to achieve its policy objectives. The policy aims to achieve:

- A clean, safe, healthy, and productive environment for current and future generations.
- The conservation of the country's unique and diverse cultural and natural heritage, with effective participation by all sectors of society.
- Sustainable lifestyles and patterns of consumption and production.”

(Country Analysis Report 2015, 70-71).

Malaysia has many international agreements regarding the environment that are created in order to preserve the environment and to reduce pollution. The environmental agreements Malaysia is part of are, for example, Biodiversity, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, and Wetlands. Kyoto Protocol was approved in Kyoto, Japan in 1997 and enforced in 2005. One of its main reasons is to set internation-

ally binding emission reduction targets that followed by the signed countries. Every country has emission targets and reports them annually. The Kyoto Protocol has three mechanisms, which help the countries to reach their emission targets: International Emissions Trading, Clean Development Mechanism and Joint Implementation. (Website of CIA World Factbook 2015; Website of UNFCCC 2014.)

## 8.8 Porter's diamond

### 8.8.1 Firm strategy, structure and rivalry

Firm strategy, structure and rivalry consist of conditions related to founding, organizing and leading of a company, as well as domestic competition. These factors are considered through the ranking of Malaysia in the Ease of Doing Business. The rankings and scores for starting a business, registering property and enforcing contracts in Malaysia can be seen below in Table 20 Doing business in Malaysia.

Table 20. Doing business in Malaysia (Doing Business 2016, 217)

#### **Starting a business (rank) 14/189**

▪ DTF score for starting a business	95.34
▪ Procedures	3
▪ Time (days)	4
▪ Cost (% of income per capita)	6.7
▪ Minimum capital (% of income per capita)	0.0
<b>Registering property (rank)</b>	<b>38/189</b>
▪ DTF score for registering property	76.32
▪ Procedures	8
▪ Time (days)	13
<b>Enforcing contracts (rank)</b>	<b>44/189</b>
▪ DTF score for enforcing contracts	66.61
▪ Time (days)	425
▪ Cost (% of claim)	37.3
▪ Quality of judicial processes index (0-18)	12

Starting a business in Malaysia is considered relevantly easy, as it is also indicated in the Starting a business ranking where Malaysia ranked 14 out of 189. The distance to frontier (DTF) measures the absolute level of regulatory performance and the DTF score for starting a business is 95.34, Malaysia performs very well as the score of 100 is considered the highest. Starting a business takes only four days and includes three procedures. The costs are low with 6.7 percent of income per capita and there is no minimum capital required when starting a business. Also, the Global Competitiveness Index rank Malaysia as 9<sup>th</sup> in Number of procedures to start a business and as 24<sup>th</sup> in Number of days to start a business, which is consistent with the Ease of Doing Business rankings. (Doing Business 2016, 217; Global Competitiveness Report 2015, 248-249; Website of Doing Business 2016.)

Registering property and enforcing contracts in Malaysia is a little bit more difficult than starting a business, but they both still rank relevantly well. The registering property rank is 38 out of 189 countries and it consist e.g. of the DTF score for registering property, amount of procedures and time. The level of regulatory performance in registering property is 76.32, which means Malaysia has room to improve its processes. Registering property takes 13 days and includes eight procedures. The enforcing contracts rank is 44 out of 189 countries and it consist of the DTF score for the property registration, time, cost percentage of the claim and quality of judicial processes index. The level of regulatory performance in enforcing contracts is 66.61, which could be influenced by the government's inability to enforce laws and regulations as in the case of intellectual property rights. This can be seen also in the time it takes to enforce contracts, which is 425 days. The costs of enforcing contracts are quite high with 37.3 percent of the claim, which includes e.g. court fees and attorney fees. The quality of judicial processes is measured with an index from 0 to 18 and Malaysia scores 12<sup>th</sup>. This shows that Malaysia has somewhat adopted good practices in the following areas: court structure and proceedings, case management, court automation and alternative dispute resolution. (Doing Business 2016, 217; Website of Doing Business 2016; Country Analysis Report 2015, 31.)

With increasing demand for HVAC services, large service sector and the existing global AC manufacturers in Malaysia the domestic competition can be intense. The Global Competitiveness Report 2015 ranks Malaysia as 37 out of 140 countries in

Intensity of local competition. However, since there are few larger companies that specialize in HVAC services there is a potential market gap for the companies providing HVAC services. (Global Competitiveness Report 2015, 248-249; Website of CIA World Factbook 2015; Davis & Gertler 2015.)

### 8.8.2 Factor conditions

Factor conditions include factors such as educated labor force, physical resources and transport infrastructure. These factors are considered through the Higher education and training pillar, as well as the Labor market efficiency pillar. In the 5<sup>th</sup> pillar: Higher education and training (Table 21), which consists e.g. of the secondary and tertiary education enrollment and the quality of education, Malaysia is ranked as 36<sup>th</sup>. Even though the secondary education enrollment is low in Malaysia and is ranked only as 100 out of 140, the amount of tertiary education enrollment is much higher with the ranking of 9<sup>th</sup>. Also, the quality of the education system, math and science education and management schools are high, which refers to a well-educated labor force. (Global Competitiveness Report 2015, 248-249.)

Table 21. Labor force in Malaysia (Global Competitiveness Report 2015, 248-249)  
**5th pillar: Higher education and training** **36/140**

Secondary education enrollment	100
Tertiary education enrollment	9
Quality of the education system	6
Quality of math and science education	12
Quality of management schools	22
Internet access in schools	26
Availability of specialized training services	12
Extent of staff training	3

The 7<sup>th</sup> pillar: Labor market efficiency consists e.g. of the cooperation in labor-employer relations, pay and productivity and country capacity to retain talent, which can be seen in Table 22 below. Malaysia is ranked as 19 out of 140 countries in Labor market efficiency according to the Global Competitiveness Report. The leading

points for Malaysia in Labor market efficiency are the hiring and firing practices, pay and productivity, effect of taxation on incentives to work and country capacity to retain talent. Besides retaining talent, Malaysia has been successful in also attracting talent and thus creating a more skillful and competitive labor force and efficient labor market. In addition to the lower cost labor force, the Malaysian labor market is attractive for foreign investors. (Global Competitiveness Report 2015, 248-249; Doing Business 2016, 258-259.)

Table 22: Labor market in Malaysia (Global Competitiveness Report 2015, 248-249)  
**7th pillar: Labor market efficiency** **19/140**

Cooperation in labor-employer relations	11
Flexibility of wage determination	31
Hiring and firing practices	6
Redundancy costs	107
Effect of taxation on incentives to work	8
Pay and productivity	5
Reliance on professional management	16
Country capacity to retain talent	8
Country capacity to attract talent	11
Women in labor force, ratio to men	118

The transport infrastructure can consist e.g. of the number of railways, waterways and paved roadways. Malaysia has a vast transport infrastructure with 114 airports, 1,849 km of railways and 144,403 km, from which 116,169 km is paved, of roadways. Malaysia also has 7,200 km of waterways and multiple ports and terminals due to its location. There are 315 merchant marines, meaning ships that transport goods, in Malaysia and this ranks Malaysia as 31<sup>st</sup> compared to the rest of the world. With the central location in Southeast Asia and wide transport network Malaysia is attractive for foreign investors. (Website of CIA World Factbook 2015.)

### 8.8.3 Demand conditions

Demand conditions consider the extent and characteristics of domestic demand for the services provided. As already stated in the screening process, Malaysia is one of the countries that have rising demand for AC systems. The AC market thus demand for AC services, is growing fast due to increasing urbanization, electrification, rising incomes and declining prices of AC systems especially in developing countries. It is estimated that another 700 million AC units will be introduced to the global market by 2030. According to the Managing director of Panasonic Appliances Air-Conditioning System Engineering Sdn. Bhd. “Malaysia recorded the highest average percentage growth of the CAC segment at 170%, followed by Vietnam (151%), Indonesia (128%), the Philippines (116%) and Thailand (106%)” (Musa 2016) and the company’s investments on sales has been due to the growing demand from commercial and industrial businesses. Malaysian Air-Conditioning and Refrigeration Association president explains that during the heat waves the sales of AC systems can increase even by 10 percent. As the amount of AC systems increases in the market, so does the opportunities for HVAC services. (Shah, Wei, Letschert & Phadke 2015; Musa 2016; Wong 2016.)

Even though the demand in the market is growing also the consumer behavior is changing, which should be considered in the business operations. Buyer sophistication is one of the aspects that influences on the purchasing decisions of the buyer and thus to the sales and negotiation strategy of the company. According to the Global Competitiveness Report, Malaysia ranks 4<sup>th</sup> in Buyer sophistication thus referring that Malaysia has high buyer sophistication. The consumers often purchase more than one AC system, which creates the need for an energy-efficient AC system. As the consumers are seeking an energy-efficient system in order to save electricity in the future, they are also investing into new technology, which also has an effect the buyer sophistication in Malaysia. (Global Competitiveness Report 2015, 248-249; Wong 2016.)



#### 8.8.4 Related and supporting industries

Related and supporting industries are industries that support the company's processes. For companies in HVAC services the supporting services can be the companies, which manufacture and sell AC systems. There are many international companies in Malaysia that provide manufacturing or the sales of AC systems. For example, Panasonic Group has many subsidiaries located in Malaysia. Panasonic Appliances Air Conditioning Malaysia Sdn. Bhd. locates in Selangor, Malaysia and has R&D centers as well as manufacturing of Room Air-Conditioners, Big RAC components, Air-to-Water Heat Pumps and Compressors. (Website of Panasonic 2016.)

Proper business sophistication boosts the productivity of goods and services and thus has an impact on the business processes and competitiveness. The business sophistication is considered through the 11<sup>th</sup> pillar: Business sophistication. The pillar consists e.g. of local supplier quantity and quality, nature of competitive advantage and control of international distribution, which can be seen in Table 23 below.

Table 23. Business sophistication of Malaysia (Global Competitiveness Report 2015, 248-249)

<b>11th pillar: Business sophistication</b>	<b>13/140</b>
Local supplier quantity	6
Local supplier quality	19
Sate of cluster development	6
Nature of competitive advantage	23
Value chain breadth	11
Control of international distribution	7
Production process sophistication	22
Extent of marketing	6
Willingness to delegate authority	10

Malaysia is ranked as 13<sup>th</sup> out of 140 countries in Labor market efficiency according to the Global Competitiveness Report. The local supplier quantity is ranked as 6<sup>th</sup> and the local supplier quality is ranked as 19<sup>th</sup>. The value chain in Malaysia is quite wide with the ranking of 11 out of 140. State of cluster development defines whether

there are clusters of companies and their suppliers, which increase efficiency, create opportunities for innovation, and reduces the barriers of entry. Malaysia is 6<sup>th</sup> in the state of cluster development and 22<sup>nd</sup> in production process sophistication. The extent of marketing can be considered relevantly wide since the ranking for it is 6<sup>th</sup>. (Global Competitiveness Report 2015, 248-249; Website of World Economic Forum 2016.)

## 8.9 SWOT analysis

SWOT analysis supports the other market analysis of Malaysia and gives a new point of view, since the analysis has been implemented in consideration that the case company would enter the Malaysian market. The results of the SWOT analysis made for the case company can be seen in Figure 17 below. (Website of Pestleanalysis 2016.)

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> <li>• Knowhow</li> <li>• Education</li> <li>• Experience</li> <li>• Variety of services</li> <li>• IAQ surveys</li> <li>• No need for export</li> </ul>	<ul style="list-style-type: none"> <li>• Language skills</li> <li>• Lack of international experience</li> <li>• Financial resources</li> <li>• Lack of human resources</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of competitors</li> <li>• Supporting industries</li> <li>• Growing demand</li> <li>• Local agent</li> <li>• Expanding business in Malaysia</li> </ul>	<ul style="list-style-type: none"> <li>• Other growing HVAC companies</li> <li>• AC systems affect on Global Warming</li> <li>• Receiving electricity in developing countries</li> <li>• New innovations</li> </ul>

Figure 17. SWOT analysis of Harju Solutions Oy in Malaysia

*Strengths* of the case company are the knowhow, education, experience in the industry and the selection of services available. With the proper education and previous experience from the industry, the case company can answer to the existing demand with professional services. With the variety of services, the case company can adopt the customer's needs and create a vast customer base. With Indoor Air Quality surveys, the case company provides services that reduce health problems affiliated with

poor indoor air quality and improve working conditions, both of which are current and important issues. Also, since the case company provides services only, it does not have the need to export AC systems into Malaysia, which simplifies the entering of the country. (Harju, personal communication on 26.04.2016; Website of Harju Solutions Oy 2012.)

*Weaknesses* of the case company are language skills, lack of international experience and human resources, as well as financial resources. Even though the language for business is English there can be some difficulties if one does not speak the official language, e.g. in customer service the customer may not speak English. The case company lacks international experience, which could result in failure if not prepared and research properly. In addition, as the case company is not ready yet for entering foreign markets and as it is a micro-enterprise it may lack the financial and human resources needed to enter the market. (Website of Export Finland 2016.)

*Opportunities* of the case company are the lack of competitors, existing supporting industries, growing demand, and the possibilities of cooperation with a local agent and expanding the business further in Malaysia. Since there are a few competitors in the HVAC service industry in Malaysia, the competition in the market is not that intense. Also, the existing supporting industries that provide the customers with the AC systems is an advantage, since the case company can benefit from their sales or even collaborate with them. The growing demand, for AC systems and thus AC services, ensures a booming market with opportunities to even expand inside Malaysia after the case company has a steady foothold. In cooperation with a local agent, the case company can reduce some risks that can be faced e.g. in marketing or in the recruitment of staff.

*Threats* of the case company are other growing HVAC service companies, AC systems effect on Global Warming and the possibility of new innovations. Since there is a little competition at the moment with HVAC service companies, there might be some other companies that consider entering Malaysia or expanding their business. AC systems influence on the Global Warming due to the large electricity consumption and thus create a demand for electricity that the economy might not be able to meet. The large consumption of electricity results in billions of tons of carbon diox-

ide emissions, which has an unwelcoming effect on the Global Warming, as well as creates peaks on electricity demand that some developing countries may not be able to meet. Due to the increasing electricity consumption and carbon dioxide emission there have been studies, which concentrate on finding an alternative solution. The International Energy Agency has suggested the use of solar power instead of electricity. “The move would stop around 800 megatons of carbon dioxide from entering the atmosphere each year, says the International Energy Agency (IEA) – more than 1.5 times the annual emission in the UK.” (Bump 2012) and it would also reduce dependence on the electric grid. (Bump 2012; Davis & Gertler 2015.)

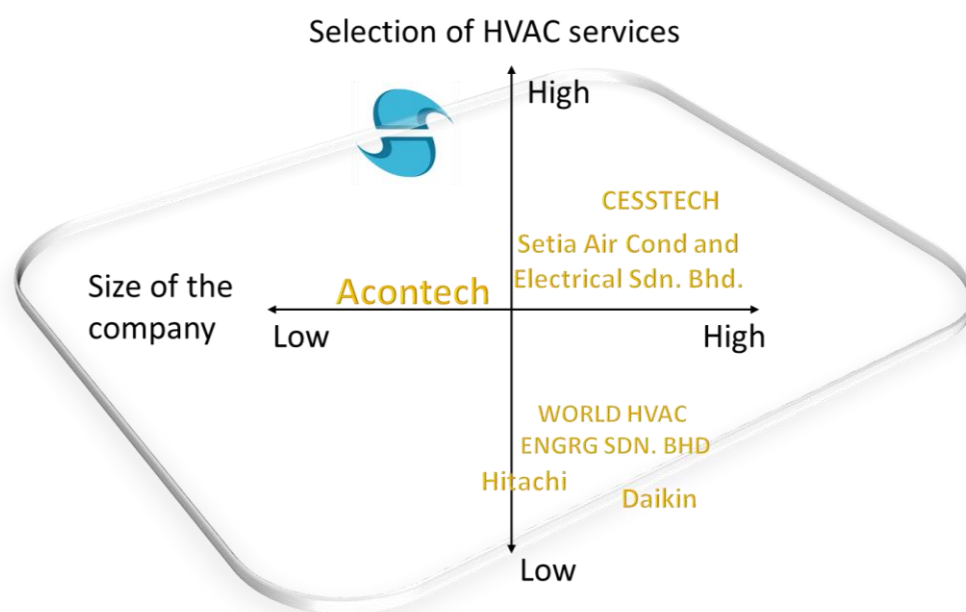


Figure 18. Positioning map with the case company in relation to the competitors

*The positioning map* for Harju Solutions Oy in relation to the Malaysian competitors can be seen in Figure 18. The variables chosen for the positioning map are the Selection of HVAC services and Size of the company. The Selection of HVAC services was chosen because many of the competitors focus on AC systems, have few HVAC services opposite to the case company. The Size of the company was chosen because it has an effect to the operations and resources of the companies. With these variables it can be determined, which competitors are similar to the case company or how they differ from it. The companies that have high Selection of variables also have many services or have strong specialization e.g. in Indoor air quality. The companies that have high points on the Size of the company operate throughout Malaysia and even

in other countries. Small or localized companies score low on the Size of the company variable. The companies presented in the positioning map are the result of the previously made competition research (Appendix 4). (Website of Neil Bendle 2012.)

There are many large companies in the positioning map, but not many of them have large selection of services or otherwise concentrate more on manufacturing or selling AC systems. Cesstech provides IAQ surveys, and Setia Air Cond and Electrical Sdn. Bhd. provides Filtration & Indoor Air Quality, which is why they are so high on the Selection of HVAC services. World HVAC Engrg Sdn. Bhd., Hitachi and Daikin are large companies but are more concentrated on the HVAC equipment. Acontech is located in the center of Kuala Lumpur and is concentrated on providing HVAC services like the case company. Acontech is in estimation the same size as Harju Solutions Oy but has fewer services in their selection, which is why it is lower on the Selection of services compared with the case company. Since the case company competes with a slightly different approach to the demand for HVAC services than the other companies it has good chances to succeed against the competition. The strengths the case company is to concentrate on its expertise in the services it provides without competing in the area of providing HVAC equipment. Also, the case company can benefit from the competitors HVAC equipment sales, since it creates more demand for the maintenance of the equipment, as well as consulting.

## 9 SUMMARY AND CONCLUSION

The purpose of this study was to help the case company and other small and medium-sized enterprises to expand their businesses by creating a thesis of International market selection and prospects for future internationalization. The information on international market selection and market analysis is crucial for the SMEs since they may not obtain the information or experience needed for the expanding of business. Thus this study aids the case company by presenting how to process large amounts of

information in the decision process and perhaps new points of view on the international business environment. The case company also receives information on the implementation of the market screening process.

This study has been success as a qualitative study, since it has many characteristics of a qualitative study. The study does not have a theory to prove, but adopts a market screening model and analysis tools on a case company with detailed examination of information. The study uses a theme interview as a research method which is one of the characteristics of a qualitative study as well as interviewing a selected individual. Also, the theory is applied flexibly in the empirical part of the study. There is the main source of information used in the theory of market screening, which is supported by several other reliable sources. The references are gathered from various sources and many of them are written by scholars or are from other official sources.

The study shows reliability and validity. The theory of market screening and market analysis is solid and universal, thus the study can be repeated by any company, including the case company. The repetition of the study may cause some of the results to change due to the changing environment, as well as the researcher's point of view of what is important for the company. What improves the reliability of the study is the detailed explanation of the decisions as the study proceeds. All of the decisions made in this study are explained and reasoned, as well as considered comprehensively. The study can be used in a wider context, with some limitations, as guidelines of how to implement a market screening and market analysis, which gives validity for the study. The sources listed in this study are up to date and from recent years, thus enhancing the reliability of the study.

The international market screening model has been followed quite strictly in this study in order to learn from the process. The model provides sufficient guidelines for the screening of markets without restricting the decision process excessively. The different phases in this screening process also provide information on what is important to know when selecting a market to enter. Each company that decides to benefit from this screening model and this study can modify it to their own needs and thus find suitable markets to consider, since the theory and empirical part of this study provide sufficient amount of information on market selection, market screening

and analysis of the market. This study can also be helpful when there is already a potential market that should be examined more closely.

The theoretical part consists of information about the market screening process as well as the tools that can be used in an analysis of a macro environment. The theory helps the reader to understand the process of market screening and market analysis and why they are implemented. The market screening model by Svend Hollensen introduces specific steps that are implemented in the market selection, as well as a selection of criteria from which a company can select the appropriate criteria according to the needs of the company. The theory of market analysis provides macro environment tools that can be used to analyze the selected market. In the market analysis, the analysis tools and their implementation are explained to the reader.

The empirical part consists of the interview, market screening and analysis of the macro environment of the selected market. The interview introduces the background and objectives of the case company, as well as the attitudes and perceptions of the management. The market screening process and market analysis that is implemented through the case company provide the reader information about the implementation of the market screening and market analysis. With the case study, the reader can gain information about the implementation process, HVAC industry, market analysis results and related current issues. Even though the case company does not have immediate plans to internationalize, this study presents a possibility of how a future target market could be selected and analyzed.

The implementation of the market screening resulted in a selection of one potential country: Malaysia. As it was discovered through the studies the potential markets to enter are the developing countries with warm climates and as the high temperatures and increasing amount of pollution increases the demand e.g. for ventilation, thus Malaysia is a viable option. In the market analysis, the macro environment of Malaysia is researched with the previously introduced analysis tools. The analysis includes the political, legal, economic, technological, social, environmental and global environments of Malaysia, as well as the global competitiveness of the market. It was also discovered that the HVAC companies in Malaysia are mainly focused on the manufacturing and sales rather than to the providing of services, which creates a

market gap for HVAC service companies. In addition, it became clear that the influence of air conditioning on the environment has been considered by many researchers. Even though the demand for air conditioning is increasing, there might be new innovations created in order to decrease the use of electricity and thus the carbon dioxide emissions.

Since the market selection resulted in Malaysia as the target market the company also learned about the macro-environment of Malaysia. There is no reason why the case company would not be suitable for the Malaysian business environment, since it has already been the target market for many other Finnish companies. The case company could also consider alternative ways to enter Malaysia or other international markets, such as participating in short-term projects abroad, which can create connections and lead to new opportunities in future.

If the case company were to continue with this market selection, it would be recommended to continue the market analysis further with micro environment analysis. The case company could also participate in one of the HVAC trade fairs in Malaysia in order to familiarize with the market and to network with the local companies. A local partner or an agent would be beneficial for the case company, thus the networking and creating connections in Malaysia would be useful. Also, the case company could ask for a second study e.g. on the entry modes that could be implemented when entering the market. Even though, the company would decide not to enter to Malaysia it has gained information on the market selection process.

Overall, this study has been a successful example of how the market selection could happen and it has provided research experience to learn from. The screening of markets was implemented efficiently with the screening model, thus presenting a clear process for the market selection. The writing of this study provided deepened knowledge on business and research, as well as practical experience on writing a study. Professionally, the most important learning point in the writing process was the implementation of the screening model, as it had many challenges due to the challenging industry. In addition, it has provided an opportunity to use and enhance the skills and knowledge learned from the studies, such as research skills, analytical thinking and reporting skills.



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## **INTERVIEW LAYOUT**

### **1. Execution of the Interview**

- ❖ Interviewer
- ❖ Location and time
- ❖ Duration
- ❖ Interviewee and his/her status in the Case Company Harju Solutions Oy

### **2. Discussion topics**

- ❖ Case company
  - Company readiness for growth and internationalization
  - Company objectives
- ❖ Business environment
  - Existing demand for the services
  - Current customer segment
- ❖ Internationalization
  - Core service provided in international markets
  - Appropriate market

## APPENDIX 2

### Questionnaire: Malaysia

#### MALAYSIA

##### A. Market attractiveness

	1	2	3	4	5	Weight factor	Result
	Very poor	Poor	Medium	Good	Very good	Percentage	(grading x weight)
Market size					X	0,2	1
Market growth				X		0,2	0,8
Prices			X			0,1	0,3
Buying power			X			0,1	0,3
Market access					X	0,1	0,5
Competitive intensity				X		0,1	0,4
Political/economic risks				X		0,2	0,8
<b>Total</b> (max. Points 5)							<b>4,1</b>

##### B. Relative competitive strength

with regarding to the strongest competitor

Acontech

	1	2	3	4	5	Weight factor	Result
	Very poor	Poor	Medium	Good	Very good	Percentage	(grading x weight)
Product's fit to market demand					X	0,2	1
Assessing indoor air quality					X	0,2	1
Variety of services				X		0,1	0,4
Customer service capability			X			0,1	0,3
Image			X			0,1	0,3
Obtainable market share				X		0,1	0,4
Expertise					X	0,2	1
<b>Total</b> (max. Points 5)							<b>4,4</b>

## APPENDIX 3

### Questionnaire: Saudi Arabia

#### SAUDI ARABIA

##### A. Market attractiveness

	1	2	3	4	5	Weight factor	Result
	Very poor	Poor	Medium	Good	Very good	Percentage	(grading x weight)
Market size					X	0,2	1
Market growth				X		0,2	0,8
Prices				X		0,1	0,4
Buying power					X	0,1	0,5
Market access			X			0,1	0,3
Competitive intensity			X			0,1	0,3
Political/economic risks			X			0,2	0,6
<b>Total</b> (max. Points 5)							<b>3,9</b>

##### B. Relative competitive strength

with regarding to the strongest competitor

Al Hashim Air Conditioning Company

	1	2	3	4	5	Weight factor	Result
	Very poor	Poor	Medium	Good	Very good	Percentage	(grading x weight)
Product's fit to market demand					X	0,2	1
Assessing indoor air quality				X		0,2	0,5
Variety of services				X		0,1	0,4
Customer service capability			X			0,1	0,3
Image			X			0,1	0,3
Obtainable market share				X		0,1	0,4
Expertise				X		0,2	0,8
<b>Total</b> (max. Points 5)							<b>3,7</b>

## Competitor research: Malaysia

## COMPETITORS IN MALAYSIA

Company	Scope	Services	Comments
Setia air conditioning and electrical Sdn Bhd	Malaysia Kuala Lumpur	<i>Residential</i>	New installation
			Upgrade or Replacement
			Repair Service
			Preventative Maintenance
		<i>Commercial</i>	Design of Air Conditioning Systems
			New installation
			Trouble Shooting and Repair services
			<i>Preventive Maintenance</i>
			Retrofit & System Replacement
			<i>Filtration &amp; Indoor Air Quality</i>
Acontech	Klang Valley (center of KL)		Adhoc General Maintenance
			Tenant Fit-Out
		<i>Electric</i>	Design and installation of electric wiring systems
			Maintenance
WORLD HVAC ENGRG SDN. BHD	Malaysia Indonesia		Chemical cleaning
			Normal cleaning
			Repair Service
			Services are similar to Harju Solutions OY
Hitachi	Malaysia	Sales	AC systems
		Services	Installation
			Repair Service
Daikin	Malaysia Exports		Maintenance
			AC systems
CESSTECH	Malaysia Hong Kong China	Sales	HVAC equipment
			Customer support
			Indoor Air Quality surveys
	<i>Strategic alliances:</i> <i>Thailand and Indonesia</i>		Testing Adjusting and Balancing (TAB) of HVAC Systems
			ESD Materials (Lab) Testing
			ESD Surveys, Audits and Field Testing
			Cleanroom and Contamination Control Testing

## Overall remarks:

There are dozens of small AC installation and repair companies in Kuala Lumpur, which do not provide website in English.



## Competitor research: Saudi Arabia

## COMPETITORS IN SAUDI ARABIA

Company	Scope	Services		Comments
Saudi Aircon	Saudi Arabia	Sales	Products	Focus on AC systems
		Services	Emergency services	
			System design	
			Maintenance	
			Installation	
			Duct fabrication	
Zamil air conditioners	Middle East	Sales	AC systems	Focus on AC systems
Daikin airconditioning Saudi Arabia LLC	Saudi Arabia	Products	AC systems	Focus on AC systems
		Services	After sales service	
			Servicing request	
			Parts and consumables	
			Equipment replacement	
			Warranty registration	
Al Shera'a air conditioning	Saudi Arabia Riyadh	Services	HVAC contracting, Installation, and Commissioning	Focus on design and installation No special services
			HVAC design	
			Duct fabrication services	
Carrier		Products	Improvement of IAQ	Market leader in AC industry
			AC systems (also for trucks)	Large company
		Services	Installation	Focus on AC systems
Al Hashim Air Conditioning Compar	Saudi Arabia	Services	Design and implementation	Large company
			Service and repair	Many services
			Predictive maintenance	IAQ
			Air testing and abatement (IAQ) ((OSHA clean air standards))	
			Sheet metal fabrication	