

**PONTIFICIA UNIVERSIDAD CATÓLICA DEL PERÚ
ESCUELA DE POSGRADO**



Consulting Report – DSB Mobile

**THESIS FOR THE DEGREE OF MASTER IN
BUSINESS ADMINISTRATION**

**GRANTED BY THE
PONTIFICIA UNIVERSIDAD CATÓLICA DEL PERÚ**

PRESENTED BY:

Ever Mitta

Advisor:

Sandro Sanchez

Lima, August 2017

Acknowledgment

This thesis would not have been possible without the support of my friends Abigail Atebawone, Mona Muronji and Oisín Singh. This thesis also belongs to them. In addition, I want to express my gratitude to Zico Herrera, General Manager at DSB Mobile, for his willingness to help us accomplish this project. Lastly, I would like to thank Professor Sandro Sánchez and Professor Ruben Guevara for their assistance. Special thanks to University of Victoria, Maastricht University and Centrum Graduate Business School for all the lessons learnt, which will be of great value in my personal and professional career.



Abstract

DSB Mobile is a small Peruvian software developing company based in Lima. DSB Mobile specializes in the development of both mobile and web applications and has worked with major companies such as Samsung, Claro & Entel. The company is composed of the General Manager, Zico Herrera, a sales manager, operations manager and both fulltime and contract based software developers that are hired based on the current demand for service. DSB Mobile has established a strong reputation and brand in Peru and is now looking to expand outside of Peru where they can introduce their software products into international markets. In their aspiration to internationalize, DSB Mobile is seeking to find out not only the most profitable markets for their company but also markets that would best align with DSB Mobiles mission.

The solution to their question of expansion was to determine the best markets using a variety of both quantitative and qualitative factors. In using an IT Competitiveness report that was done by the British Software Alliance this was used as a reference point to determine the best ranked countries for IT competitiveness and the best countries to conduct business in base off of important IT indicators. Combined with software data statistics in terms of charges per project and cost of IT Consultants, this further narrowed down the scope to the most attractive, profitable and mutually beneficial market for DSB Mobile. The implementation plan proposed involved two market lines namely, the North American market line and the European Market line. The proposed solution takes into consideration different scenarios, one of them being the moderate work balance of 1 project per month, giving a total cost of \$391,065 per year with a profit of \$180,736. The Gantt chart outlined is intended to guide the company with the step by step implementation of this international expansion and prepare them to execute this plan in the most efficient and effective manner.

Resumen Ejecutivo

DSB Mobile es una pequeña empresa peruana de desarrollo de software con sede en Lima. DSB Mobile se especializa en el desarrollo de aplicaciones móviles y web y ha trabajado con grandes empresas como Samsung, Claro y Entel. La compañía está compuesta por el Gerente General, Zico Herrera, un gerente de ventas, un gerente de operaciones y desarrolladores de software a tiempo completo y algunos que se contratan en base a la demanda actual de servicio. DSB Mobile ha establecido una fuerte reputación y marca en Perú y ahora está buscando expandirse fuera de Perú donde puedan introducir sus productos de software en los mercados internacionales. En su aspiración de internacionalización, DSB Mobile está tratando de descubrir no sólo los mercados más rentables para su empresa, sino también los mercados que mejor se alinean con la misión DSB Mobile.

La solución a su problema de expansión fue determinar los mejores mercados utilizando una variedad de factores tanto cuantitativos como cualitativos. Al utilizar un informe de competitividad de TI que fue realizado por la British Software Alliance, se utilizó como punto de referencia para determinar los países mejor clasificados para la competitividad de TI y los mejores países para llevar a cabo negocios en base de importantes indicadores asociados a estos. Combinado con estadísticas de datos de software en términos de gastos por proyecto y coste de consultores en TI, esto permitió reducir aún más el alcance para obtener un mercado más atractivo, rentable y mutuamente beneficioso. El plan de implementación propuesto involucró dos líneas de mercado, a saber, la línea del mercado norteamericano y la línea del mercado europeo. La solución propuesta posee diferentes escenarios; por ejemplo, el escenario con trabajo moderado consta de 1 proyecto por mes y tiene un costo total de \$391,065 por año obteniendo así una rentabilidad de \$180,736. El gráfico de Gantt esbozado pretende guiar a la compañía con la implementación paso a paso de esta expansión internacional y prepararlos para ejecutar este plan de la manera más eficiente y efectiva.

Table of Contents

List of Tables	6
List of Figures	7
Chapter I. General Situation of The Organization	1
1.1. Presentation of the Organization	1
1.1.1. History	1
1.1.2. Vision, Mission and Strategic Objectives.....	2
1.1.3. Business Units	3
1.1.4. Organizational Structure.....	4
1.1.5. Presence in the Market	5
1.2. Industry Analysis.....	6
1.2.1. Supplier Power	9
1.2.2. Buyer Power	9
1.2.3. Competitive Rivalry	10
1.2.4. Threat of Substitution.....	11
1.2.5. Threat of New Entrants.....	12
1.3. External Analysis	14
1.3.1. Political.....	14
1.3.2. Economic	15
1.3.3. Social	17
1.3.4. Technological	18
1.3.5. Environmental	19

1.3.6. Opportunities and Threats	20
1.4. Internal Analysis	20
1.4.1. Administration	21
1.4.2. Marketing and Sales	21
1.4.3. Operations.....	22
1.4.4. Finances	23
1.4.5. Human Resources and Organizational Structure	24
1.4.6. Information and Technology	25
1.4.7. Strength and Weaknesses	26
1.5. Conclusions	27
Chapter II. Key Opportunity	29
2.1. Description	29
2.2. Timing and Magnitude	29
2.3. Location.....	30
2.4. Ownership	30
2.5. Conclusions	31
Chapter III. Literature Review	32
3.1. Literature Mapping.....	32
3.2. Literature Review	33
3.2.1. Internationalization of SMEs.....	33
3.2.2. Marketing - Modes of Entry & Marketing Strategies.....	38

3.2.3. Market Selection.....	41
3.3. Conclusions.....	50
Chapter IV. Quantitative and Qualitative Analysis	52
4.1. Quantitative Analysis - Indicators.....	52
4.3. Conclusions.....	58
Chapter V. Analysis of the Opportunity.....	60
5.1. Identified Reasons for International Expansion	60
5.2. Conclusions	69
Chapter VI. Assessed Solution Alternatives.....	71
6.1. Alternatives to Capitalize on the Opportunity.....	71
6.2. Assessment of Alternatives	72
6.2.1. Switzerland.....	75
6.2.2. Finland.....	80
6.2.3. Sweden.....	82
6.2.4. Germany.....	85
6.2.5. Mexico.....	89
6.2.6. United States of America.....	93
6.3. Conclusions	96
Chapter VII. Proposed Solution	98
Chapter VIII. Implementation Plan and Key Success Factors.....	102
8.1. Activities	102

8.1.1. European Market Line	102
8.1.2. North American Market Line	108
8.2. Implementation of Gantt Chart.....	110
8.3. Key Success Factors.....	112
8.3.1. Enablers:	112
8.3.2. Risks	114
8.4. Conclusions	116
Chapter IX. Expected Outcomes	118
9.1. Qualitative Expected Outcomes	118
9.2. Quantitative Expected Outcomes	121
9.3. Conclusions	126
Chapter X. Conclusions & Recommendations	127
10.1. Conclusions	127
10.2. Recommendations	128
References.....	132
Appendix A: Interview with DSB General Manager.....	140

List of Tables

Table 1. <i>Clients of DSB Mobile by the Year 2017</i>	6
Table 2. <i>Opportunities and Threats for DSB Mobile</i>	20
Table 3. <i>Value of Sales in Peruvian Soles for DSB Mobile from 2012-2016</i>	22
Table 4. <i>DSB Mobile's Net Income, Total Assets, Total Liabilities and ROE</i>	24
Table 5. <i>Strengths and Weaknesses of DSB Mobile</i>	26
Table 6. <i>Examples of CF and MS Entries Associated with the Two Types of Service Firms</i> ..	38
Table 7. <i>Country Rankings: Data Recollected for the Year 2016</i>	73
Table 8. <i>Country Rankings: Ranking of Countries per Indicator by the Year 2016</i>	74
Table 9. <i>Country Rankings: Ranking of Countries per Indicator by the Year 2016</i>	75
Table 10. <i>German Software Market Value Forecast:2016–21</i>	86
Table 11. <i>Market Value Forecast for Mexico</i>	91
Table 12. <i>North America Software Market Value Forecast: \$ billion, 2016–21</i>	95
Table 13. <i>Procedures to Create a Company in Switzerland</i>	103
Table 14. <i>IT Consultant Description Proposed by PayScale</i>	104
Table 15. <i>A List of Key Enablers and How to Ensure Them</i>	114
Table 16. <i>A List of Key Risks and How to Avoid Them</i>	116
Table 17. <i>The Breakeven Points for Markets in North America</i>	123
Table 18. <i>The Breakeven Points for Markets in Europe</i>	124
Table 19. <i>Prices per country according to the year of entrance</i>	125

List of Figures

<i>Figure 1.</i> Share of sales at DSB Mobile for the year 2016.....	3
<i>Figure 2.</i> Stages of the Use of Mobile Applications.	4
<i>Figure 3.</i> Structure Organization of DSB Mobile.	5
<i>Figure 4.</i> Client Distribution of DSB Mobile for the year 2016.	5
<i>Figure 5.</i> Global Software Market Value in Billions of Dollars for the years 2012 to 2016. ...	7
<i>Figure 6.</i> Global Software Market Geography Segmentation: % Share, by value, 2016.....	7
<i>Figure 7.</i> Global Software Market Value Forecast: \$ Billion, 2016-21	8
<i>Figure 8.</i> Forces Driving Competition in the Global Software Market, 2016.....	8
<i>Figure 9.</i> Drivers of supplier power in the global software market, 2016.....	9
<i>Figure 10.</i> Drivers of buyer power in the global software market, 2016.	10
<i>Figure 11.</i> Drivers of degree of rivalry in the global software market, 2016.....	11
<i>Figure 12.</i> Factors influencing the threat of substitutes in the global software market, 2016. 11	11
<i>Figure 13.</i> Factors influencing the new entrants in the global software market, 2016.....	14
<i>Figure 14.</i> Review of the Literature Map	33
<i>Figure 15.</i> International Process.....	35
<i>Figure 16.</i> International business.....	35
<i>Figure 17.</i> Internationalization.	36
<i>Figure 18.</i> Basic mechanism of internalization.	38
<i>Figure 19.</i> The Characteristics of Different Entry Models.....	39
<i>Figure 20.</i> International Market Selection.....	42
<i>Figure 21.</i> Four-stage model of export market selection.....	43
<i>Figure 22.</i> Ansoff Matrix.....	45
<i>Figure 23.</i> Determinant of Success.....	47

<i>Figure 24.</i> The effectiveness of government-sponsored programmes in supporting the SME sector in Poland.....	48
<i>Figure 25.</i> Breakdown of the Opportunity.	60
<i>Figure 26.</i> Index Top 20 in 2011.	72
<i>Figure 27.</i> Prices for IT Services in Central and Western Europe.	76
<i>Figure 28.</i> Internationalization of Manufacturers of Standard Software.....	77
<i>Figure 29.</i> Hofstede analysis of Switzerland in comparison with Peru.....	79
<i>Figure 30.</i> Prices for IT Services in Scandinavia.	80
<i>Figure 31.</i> Hofstede analysis of Finland in comparison with Peru.....	82
<i>Figure 32.</i> Hofstede analysis of Sweden.	85
<i>Figure 33.</i> Hofstede analysis of Germany in comparison with Peru.	89
<i>Figure 34.</i> Prices for IT Services in America.	90
<i>Figure 35.</i> Mexico software category segmentation.....	91
<i>Figure 36.</i> Hofstede analysis of Mexico in comparison with Peru.....	93
<i>Figure 37.</i> Hofstede analysis of United States in comparison with Peru.	96
<i>Figure 38.</i> Proposed Solution for DSB Mobile.	99
<i>Figure 39.</i> IT Consultant Salary for Switzerland.....	105
<i>Figure 40.</i> IT Consultant Salary for Germany.....	106
<i>Figure 41.</i> IT Consultant Salary for Finland.	107
<i>Figure 42.</i> IT Consultant Salary for Sweden.....	108
<i>Figure 43.</i> IT Consultant Salary for USA.....	109
<i>Figure 44.</i> IT Consultant Salary for Mexico.	110
<i>Figure 45.</i> Implementation Gantt Chart of the Proposed Solution.....	111

Chapter I. General Situation of The Organization

The general situation of DSB Mobile is described in this chapter. In order to get a better understanding of the company, this brief analysis will talk about the history of the company, its purpose, and how it is doing in the Peruvian market. Moreover, an industry analysis about the global software development sector will be presented, taking into consideration the desire of DSB Mobile to enter into a foreign market, as well as an internal and external analysis. Finally, the conclusion will address the general situation of the organization.

1.1. Presentation of the Organization

The presentation of the organization will be done by reviewing the history, vision, mission, and strategic objectives of DSB Mobile. This section also shows the business units and the current organizational structure, as well as the market presence such as customers that DSB Mobile is currently working with.

1.1.1. History

DSB Mobile was founded in 2008 by three software engineers as a formal company to sell freelance software development projects. In its initial years, the company's main area of expertise was the gaming development industry and it had a presence in the Peruvian and Colombian markets. In 2012, DSB Mobile began gaining recognition in the mobile development industry and increased the number of employees to nine. The crowning achievement for DSB Mobile in the industry occurred after it developed an iPad application for Gildemeister in a Motor Show. Motor Show is the major auto festival in Peru, and the application made it easier for the public to view the catalog of products as well as a price quotation before completing the sale. Another major achievement for DSB Mobile occurred when it became a partner of Nextel and began developing software applications for the company. At the end of the year, the brand recognition and demand for DSB Mobile

applications in Peru increased which caused the company to increase its staff. DSB Mobile grew its personnel to 15 collaborators in 2014 and 26 in 2016. 2016 was an important year for DSB Mobile because it added two core business units: web development and the mobile device management.

1.1.2. Vision, Mission and Strategic Objectives

The mission of the company is to provide mobility solutions that help businesses and individuals to improve processes, including the development of the mobilization strategy, product development, integration with internal systems, assurance quality of its solutions, post implementation support, and management of mobile assets. The goal is to fully use all resources, alliances, and technologies that are available to achieve a successful return on investment (DSB Mobile, 2017).

The vision of the company is to be a national and international leader in providing mobility solutions and business support, integrating as many web technologies, mobile, and on Internet of Things. Along with this, DSB Mobile aims to generate new solutions and information and transform it into knowledge which can be easily used by the final customers (DSB Mobile, 2017).

The strategic objectives of DSB Mobile are divided into four perspectives. These perspectives are as follows: (a) financial perspective, (b) client perspective, (c) operational perspective, and (d) team perspective. From the financial perspective, the main goal is to increase sales by 30% over prior year by the end of 2017. From the client perspective, DSB Mobile wants to penetrate different cities in Peru, as well as new external markets. It also wants to target small businesses as the volume of sales will add to the bottom line and will increase the total profit. From the internal perspective, the improvement of operations is the main objective through the standardization and documentation of processes. Finally, from the learning and growth perspective, employee training has a fundamental role because it is the

main priority of the company. DSB Mobile invests time and money on both internal and external trainings with collaborators in topics including development, coding, architecture, and other technical knowledge.

1.1.3. Business Units

The core business units of DSB Mobile are software development and mobile device management. Software development represents 65% of sales and mobile device management (MDM) represents 30% of sales. Moreover, DSB Mobile also has business operations in the consultancy and training sector which represent a 5% share of total sales. The software development unit is divided into web development with a 60% share and mobile development with a 40% share. Figure 1 shows the distribution of business units of DSB Mobile.

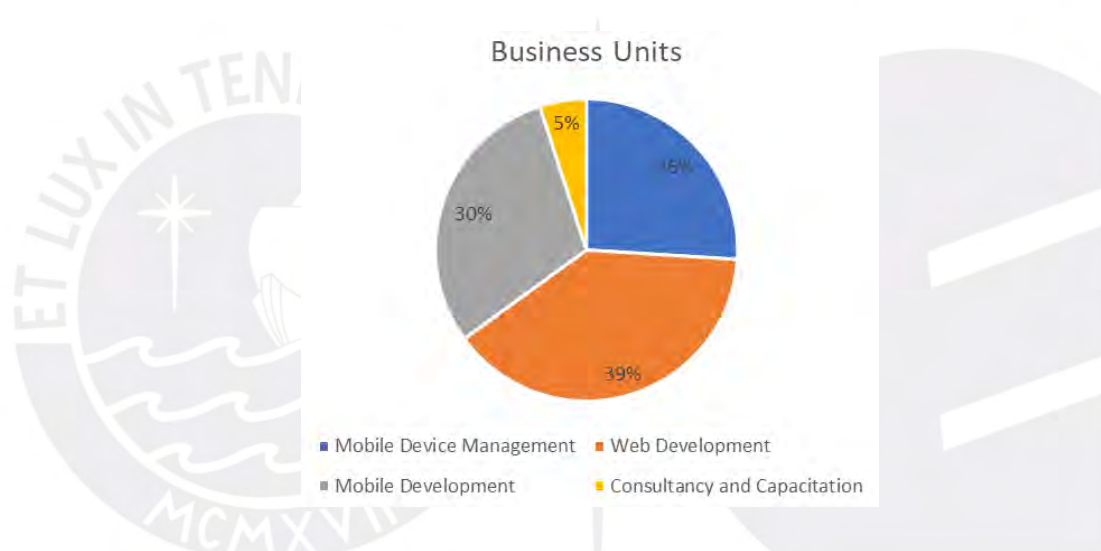


Figure 1. Share of sales at DSB Mobile for the year 2016. Data are from the General Manager and Sales Manager at DSB Mobile, 2017.

In the case of software development, DSB Mobile develops mobile and web applications that are integrated into an ecosystem of processes, infrastructure, and technology for their clients. DSB Mobile also offers its own developed products that are easily extendible, customizable, and can be integrated with customer applications. This unit includes the development of mobile applications for smartphones and tablets, the development of web applications, integration with systems, cloud computing support, and integration with peripheral equipment.

With regards to mobile device management, DSB Mobile is the official representative of SOTI MobiControl in Peru. DSB Mobile implements different MDM solutions for companies that try to reduce the cost of deploying enterprise applications on many devices. It also helps to increase the control of devices inventory, and helps companies control all applications used by employees on corporate devices. Finally, with regards to consultancy and training, DSB Mobile focuses on themes of business mobility and adapts to the individual needs of its clients' sectors. The company focuses on developing value propositions that focus on the following: increasing productivity, process improvement, increasing of revenues, and reducing costs. Figure 2 shows the stages used by DSB Mobile in the consultancy process.

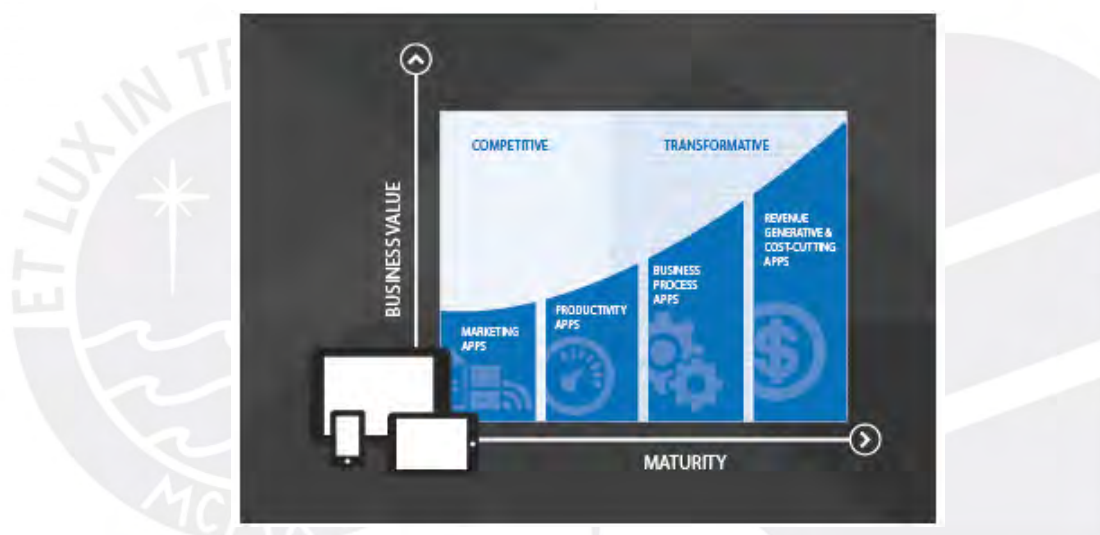


Figure 2. Stages of the Use of Mobile Applications.

Data are from “Mobile Strategy”, DSB Mobile, 2017 (<http://dsbmobile.com/mobile-strategy/>).

1.1.4. Organizational Structure

The organizational structure at DSB Mobile is a strong matrix structure, meaning that each department has its own area of specialization and most of the power and authority of each project is the responsibility of the assigned project manager. The organization is divided into the following main areas: (a) Operations which is in charge of the execution of projects, (b) Sales which is in charge of the attraction of clients as well as the pre-sale and sale

process, and (c) Financials and Accountabilities which is in charge of the cash movements and the financial statements of the company. Figure 3 shows the structure of areas at DSB Mobile.

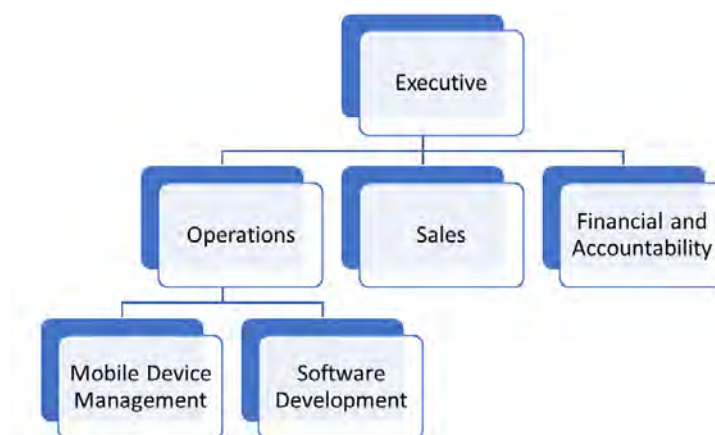


Figure 3. Structure Organization of DSB Mobile.
Data are from the General Manager at DSB Mobile, 2017.

1.1.5. Presence in the Market

DSB Mobile has a presence in different cities in Peru but most its focus is in Lima. Its main clients are in the telecommunication sector, including Entel and Claro which also happen to be two of the biggest telecommunication companies in Peru. DSB Mobile also has clients in other sectors like manufacturing, finance, insurance, services, and retailing. Figure 4 shows the client distribution of DSB Mobile highlighting the main clients.

Client Distribution of DSB Mobile

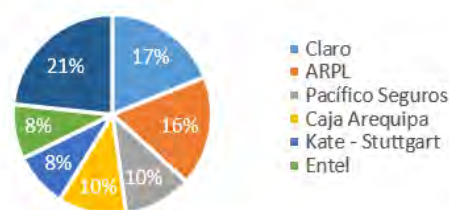


Figure 4. Client Distribution of DSB Mobile for the year 2016.
Data are from the Sales Manager at DSB Mobile, 2017.

In addition, Table 1 shows the list of all of DSB Mobile's clients in Peru as of 2017.

These clients are divided according to the market where they operate.

Table 1

Clients of DSB Mobile by the Year 2017

Client	Market
Aceros Arequipa	Industry / Manufacturing
San Fernando	Industry / Manufacturing
Paraíso	Industry / Manufacturing
Unicon	Industry / Manufacturing
ICCGSA	Industry / Manufacturing
CCL	Industry / Manufacturing
Camposol	Industry / Manufacturing
Banco Financiero	Financial / Insurance
Caja Arequipa	Financial / Insurance
Caja Cusco	Financial / Insurance
Profuturo	Financial / Insurance
CrediScotia	Financial / Insurance
Interseguro	Financial / Insurance
Sitel	Financial / Insurance
Pacifico Seguros	Financial / Insurance
Andreu	Services
ARPL Tecnologia Industrial	Services
Servir	Services
Belltech	Services
Lan	Services
Farindustria	Services
Sociedad Nacional de Minería Petróleo y Energía	Services
Yanbal	Commercial
Drokasa	Commercial
Bago	Commercial
Masaki	Commercial
Andreu	Commercial
Farindustria	Commercial
Relojin	Commercial
Empresa Panamericana de Alimentos	Commercial
Entel	Telecommunications
Claro	Telecommunications

Data are from the Sales Manager at DSB Mobile, 2017.

1.2. Industry Analysis

The Software industry has revolutionized the tech world. Computer software companies have entered the market and offered several services that have not only simplified work processes, but have also significantly increased efficiency in daily work. Software companies offer a wide range of products and services, including personal computer operating systems, office productivity suites, network security applications, payroll

processing services, information technology consulting, and outsourcing services. According to Marketline (2017a), the global software industry had a market value of \$335.2 billion dollars in 2016. However, a decrease in the growth of the software industry is seen in the last few years culminating in 0.1% growth in 2016. Figure 5 shows the market value from 2012 to 2016 in terms of billions of dollars for the global software industry, as well as the percentage growth per year.



Figure 5. Global Software Market Value in Billions of Dollars for the years 2012 to 2016. Data are from “Global Software”, Marketline, 2017.

With regards to geographical segmentation, the major markets for the software industry are in Europe with a value of \$109.3 billion and in the United States with a value of \$105.7 billion of market value. Following these countries, the Asia-Pacific market has a value of \$80.5 billion, while the Middle East has a value of \$13.6 billion (Marketline, 2017a). Figure 6 shows the global market geography segmentation in terms of percentage share done by Marketline for the year 2016.

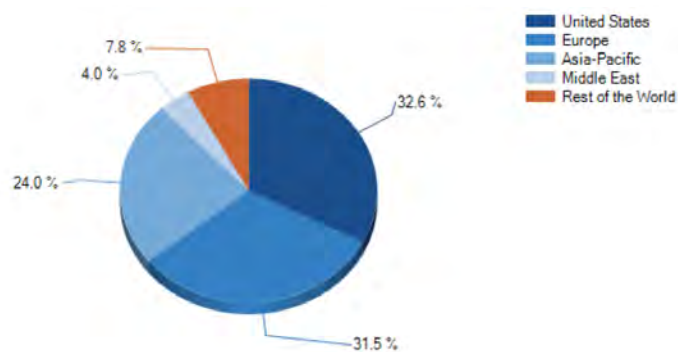


Figure 6. Global Software Market Geography Segmentation: % Share, by value, 2016. Data are from “Global Software”, Marketline, 2017.

The growth of the software industry decreased in the last few years, declining slightly in 2015 and showing minimum growth by 2016, a significant growth would not be a realistic assumption. Nevertheless, the industry is expected to grow by 1.1% in 2017 with a market value of \$338.9 billion. Furthermore, experts project the industry to grow by 14.62% for the year 2021 in comparison to 2016, with a market value of \$384.2 (Marketline, 2017a). Figure 7 shows the market value forecast of the global software industry for the years 2017 to 2021.

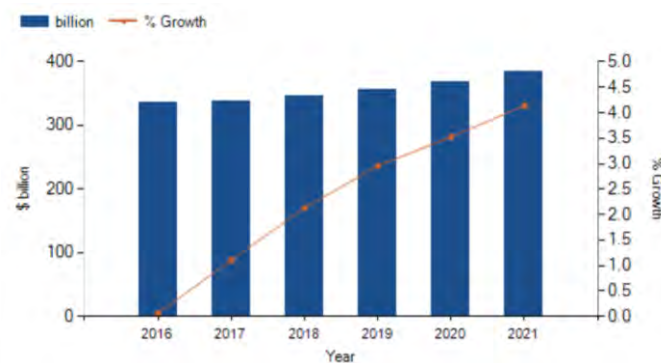


Figure 7. Global Software Market Value Forecast: \$ Billion, 2016-21
Data are from “Global Software”, Marketline, 2017.

Using Porter’s Five Forces framework, the analysis of the level of competition within the software industry and the business strategy development is described in the following points. Likewise, Figure 8 shows the Porter analysis for the global software industry done by Marketline for 2016, showing the qualification for each one of the Five Forces on a scale of 1 to 5, where 1 signifies a weak influence and 5 signifies a strong influence.



Figure 8. Forces Driving Competition in the Global Software Market, 2016.
Data are from “Global Software”, Marketline, 2017.

1.2.1. Supplier Power

In the case of software companies in Peru the only major suppliers are freelance workers and computers. There are plenty of options for suppliers of computers and freelance workers which suggests that the supplier power in the software industry is low. For DSB Mobile, freelance workers are important assets. Even though DSB Mobile has its own full-time staff to satisfy regular demand, the company relies on freelance workers during busy periods and has developed strong relationships with a range of freelancers. The market for freelancers is large in Peru which allows DSB Mobile to be selective. Figure 9 shows an analysis of drivers in the software industry for supplier power in 2016 and the report was compiled by Marketline.

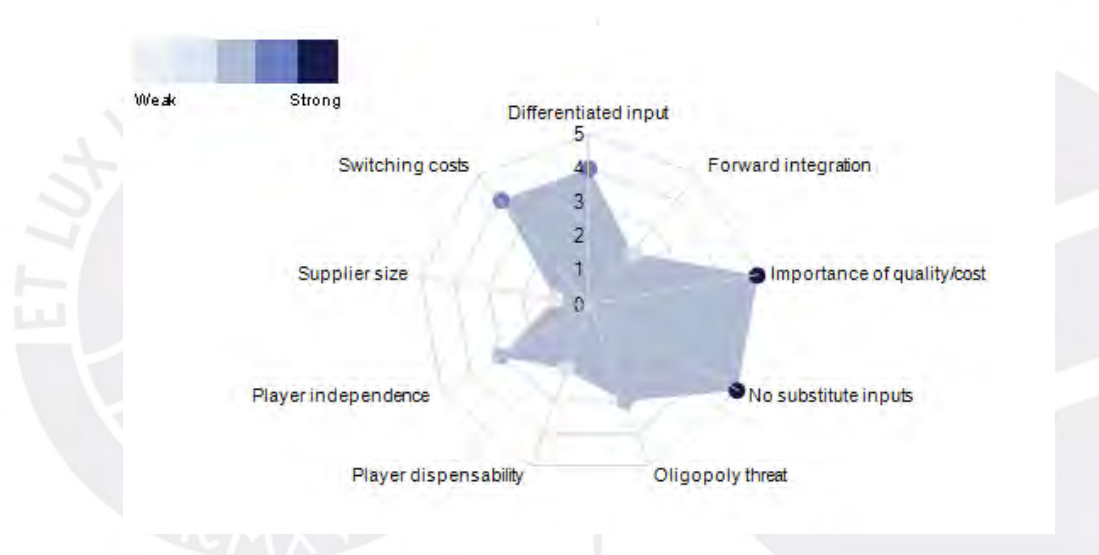


Figure 9. Drivers of supplier power in the global software market, 2016. Data are from “Global Software”, Marketline, 2017.

1.2.2. Buyer Power

The buyer power in Peru provides a challenge to software companies, given that the demand for software factories is high, the buyer can shop around for the best possible price. As a result, the buyer power is high in Peru. Relationship building is important for DSB Mobile, as building strong relationships with customers will help to build loyalty and cause

customers to use DSB Mobile in the future. Figure 10 shows an analysis of drivers for the software industry looking at buyer power in 2016 compiled by Marketline.

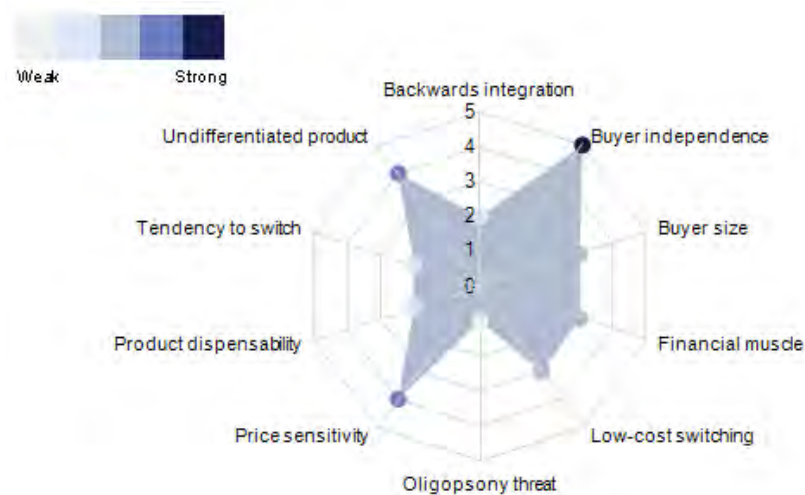


Figure 10. Drivers of buyer power in the global software market, 2016. Data are from “Global Software”, Marketline, 2017.

1.2.3. Competitive Rivalry

The competition in the software industry is very high, in Peru, as there are both national and international companies competing in the sector. A big problem For DSB Mobile is that the prices fluctuate very much in the industry and companies that do not provide high quality solutions can undercut DSB Mobile in pricing strategy. In order to combat this, DSB Mobile has continue to deliver industry leading solutions for its customer base and prospective clients.

DSB Mobile views its main competitors as the medium-sized and large companies that specialize in web and mobile development. This sector includes companies such as: T-SMART, Avantica, Solera, Applovers, Indra, Everis, GMD, Online Studio, and MDP among other. Figure 11 shows an analysis of drivers for the software industry of competitive rivalry in 2016 done by Marketline.

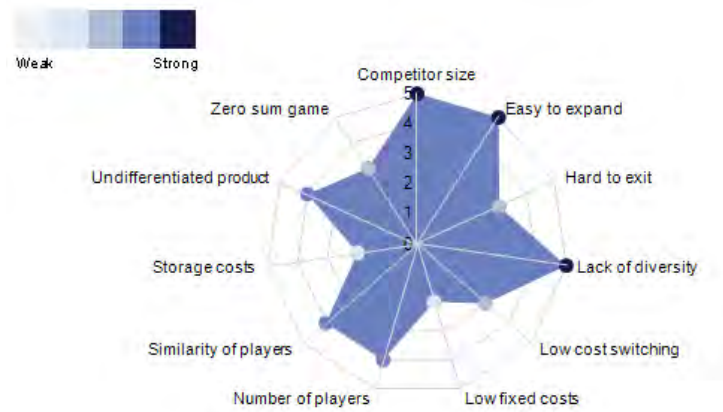


Figure 11. Drivers of degree of rivalry in the global software market, 2016. Data are from “Global Software”, Marketline, 2017.

1.2.4. Threat of Substitution

The major substitution threats in the software industry are the use of pen and paper, and computer programs such as Microsoft Excel. In the case of medium-sized and large companies, that represent the target market for DSB Mobile, this issue is very low because almost all of these companies tend to automatize their processes by using software because of the benefits it provides such as reducing time and cost, and storing information more efficiently. It also minimizes the amount of paperwork needed for storage as all of the information is stored on the cloud. Figure 12 shows an analysis of drivers for the software industry in the threats of substitutes in 2016 done by Marketline.

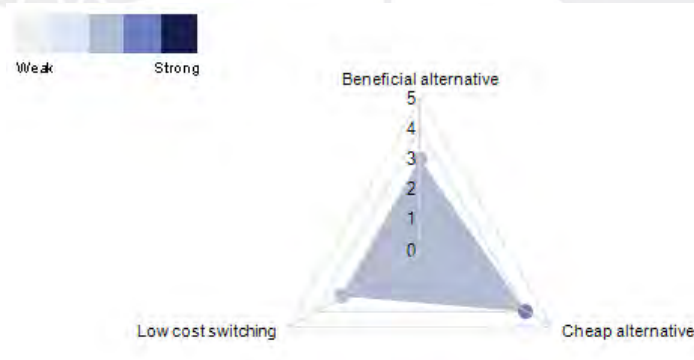


Figure 12. Factors influencing the threat of substitutes in the global software market, 2016. Data are from “Global Software”, Marketline, 2017.

1.2.5. Threat of New Entrants

For the software industry in Peru, there are a limited number of legal barriers that deter a new company from entering the market. As a result, the threat of new entry in Peru is high. The normal process to constitute a company takes roughly two weeks but there are also online resources that facilitate creating a company in only 72 hours. According to Gestion (2014), the steps to create a company online are as follows: (a) register an account in SUNARP, (b) choose a notary's office, (c) choose the kind of company to create, (d) fill in the form with the company's data, (e) get and review the constitutive act, (f) upload the constitutive act with additional information, and (g) legalize the company and accounting books in the notary's office chosen before.

Perhaps one of the biggest barriers to trade is patents. "A small firm threatened with patent litigation has little choice but to settle, because the cost of defending against such a lawsuit (or trying to get the patent invalidated under the recently-created 'post-grant review' process) could easily bankrupt a three-person startup" (Lee, 2011, p.1). Lee argues that patent lawyers who add no value should not be harassing upcoming developers on patent issues as developers are the individuals that create the most useful solutions today.

Ojala & Tyrväinen, (2007) categorize some of the barriers of entry into a new market into a few subsets. Some of these include: organizational related barriers, sales process barriers, and target industry segment related barriers. These are some of the most important sections one needs review to build a strong base for a company to successfully integrate into a new environment. In terms of organizational related barriers, emphasis is based on organizational performance and capabilities. For DSB Mobile a challenge here might be the ability to secure a suitable partner. One way of successfully entering a market is through working with a local company in the desired country. This could be difficult especially if the target market is completely new and the organization has no previous attachments to the

country. Furthermore, finding a local company that would want to work with you might be a problem as they are uncertain of the relationship and if it is worth investing in a foreign firm that they do not know much about.

Secondly, sales process related barriers can cause a significant negative impact on a firm. These are barriers that exist between the firm and its customers. For instance, in the case of DSB Mobile, as it is a Peruvian company, the organizational language is Spanish. Once it establishes offices in North America and Europe, additional resources will have to be used to reach the target market. All software applications will have to be available in more than one language. In terms of human resources, as training might take a long period of time, local recruits would be necessary.

Lastly, there are target industry segment related barriers. Different communities have different ways of processing information and making decisions based on information they are given. Germans for instance are highly analytical and takes more time to make decisions (Doing business in Germany, 2016). Because of this, the purchasing process for Germany is slower, than it is in North America. Slow decision-making process means there is longer evaluation cycles of products. Consequently, this also means that for a foreign firm, they may face higher competition as a “new/foreign company.” Consumers generally feel more comfortable associating with companies that have existed for long periods of time. For newer companies, persuading consumers to try new products might be a difficult task, and if done improperly or too rapidly, it could lead to stationary sales and a company leaving the market entirely. Figure 13 shows an analysis of drivers for the software industry in the threats of new entries in 2016 done by Marketline.

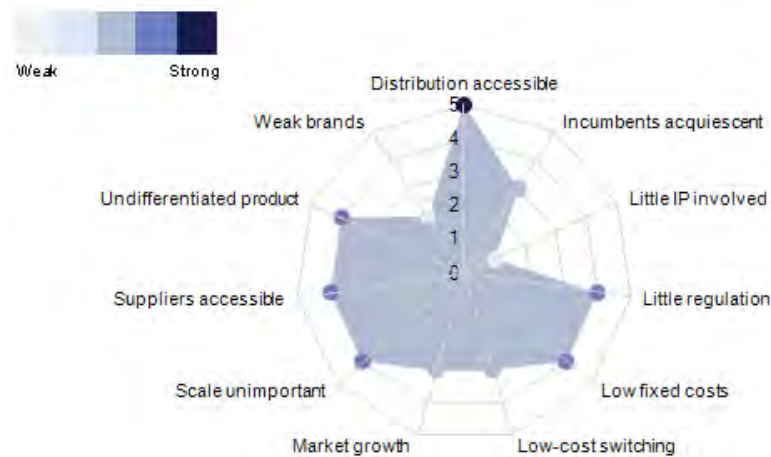


Figure 13. Factors influencing the new entrants in the global software market, 2016. Data are from “Global Software” by Marketline, 2017.

1.3. External Analysis

The external analysis of the software technology industry will be examined through PESTE. This framework develops an understanding opportunities and threats for a company competing in the industry. The elements that will be analyzed include (a) political, (b) economical, (c) social, (d) technological, and (e) environmental.

1.3.1. Political

The Republic of Peru, more commonly known as Peru’s, current president is Pedro Pablo Kuczynski. In terms of the global competitiveness report for 2016-2017, Peru ranks 67 out of 138 countries (Schwab, 2017). It is up two spots from 2015-2016 where it ranked 69. It scores well in macroeconomic environment, financial market development, labor market efficiency, and market size. Areas of improvement include: institutions and infrastructure, innovation, and health and primary education.

Peru has many international trade agreements with countries including, but not limited to, Canada, The United States (US), Chile, Mexico, and the European Union (EU). This serves as a strength for DSB Mobile as the abundance of free trade agreements suggest that it will be easier for DSB Mobile to conduct business in the US and EU, both target markets of

the company. The government continuously evaluates opportunity for new free trade agreements and this will help Peruvian software companies compete on a global scale.

Chan (2004) argues that South American countries, Peru included, are embracing the latest technological innovations with experts, stating that such a move is transforming Latin American countries in a significant manner. Even though most people in Peru still live in rural areas, technology has given room for higher levels of societal inclusion with the government of Peru going a step further and encouraging such innovation in earnest. This is why, with government support, many software companies that offer digital solutions to people across the country have the opportunity to take advantage of such initiatives (Zhimin, Zhongpeng and Jin, 2016). A number of computer software firms are located in Peru with a good number of them interacting with nearly all lines of business such as corporate events, security retail, security of information, and electronic security. Most computer software firms across Peru are specializing in Enterprise Resource Planning (ERP), a form of business process management software that gives room or allows an organization to employ a system of integrated applications in managing the business in addition to automating many back functions that are related to technology, human resources, and other services (Chan, 2004).

1.3.2. Economic

GDP per capita in Peru has increased each year from 2014-2016 and is currently at \$13,000 USD. This ranks near the middle at 120 out of 230 countries. While this number appears to be low, it puts Peru at an advantage in terms of labor pricing when compared to other developed countries. This is because the cost of living is lower in Peru than most developed countries. As a result, Peruvian companies can charge less for labor cost. Furthermore, services make up most the country's GDP at 58.5 % as of 2016 (Central Intelligence Agency, 2017). In 2016, Peru's exports equaled \$36.84 billion USD while imports equaled \$35.11 billion USD (T Central Intelligence Agency, 2017).

When compared to the US dollar (USD), the Peruvian Sol (Sol) has depreciated each year from 2012 to 2016. In 2012, one USD was worth 2.64 Soles. In 2016, one USD was worth 3.363 Soles. For a company looking to export products and services from Peru, this poses an advantage as many large companies use USD as their base currency. As a result, a company that works in Soles will be able to offer labor for less money than a company charging in USD after the exchange rate has been accounted for. A company can use this to their advantage when negotiating contracts with foreign entities.

Not long ago, there were fears of computer software shortage skills in Germany, but that is not the trend as of now. Germany has more than 100 computer software firms with such figures rising daily because the country encourages such stereotypes. According to Shinya and Hiroyuki (2017), Germany is the single largest computer software market in Europe with figures showing that Germany accounts for approximately a quarter of the overall European computer software market by value. Big players such as Oracle, Microsoft, and IBM have entered the German market, but lately, the market is starting to witness an entry of other computer software companies from companies far from Europe and the US that seem to have entered and dominated the German market (Software Industry Profile: Germany, 2012).

Companies such as DSB that are willing to internationalize have an option of setting up their operations in Canada due to many reasons. According to Marketline (2017d), due to skills mismatch, an aging workforce, demand-supply imbalances in addition to other factors, Canada has been termed as a country headed for major technology shortage, especially in the next five years. Currently, Canada is high demand for more than 182,000 computer software expertise such as information systems analysts, web technicians, software engineers, and computer and network operators (Marketline, 2017d). For this reason, it is evident that even

though the computer software industry is developed in Canada, there are impending shortages that need to be urgently addressed.

Computer software industry in the US is one of the most developed across the globe. In 2014 alone, more than 6.5 million people were employed in the technology industry with such figures increasing daily. In the US, computer software and other tech industries continue making a significant contribution to its economy with reports indicating that it accounts for 7.1% of the overall GDP of the US. The US is a country open to a wide range of ideas and this is the reason as to why its computer software industry is among one of the most developed across the globe hiring thousands of people yearly (Bourque, 2017).

1.3.3. Social

Peru has a population of just over 30 million people. Almost one third of the population resides in Lima. The median age in Peru is just under 28 years of age. It ranks 71st in the world with an unemployment rate of 6%, but the unemployment rate of youth aged 15-24 years is almost 9% (Central Intelligence Agency, 2017). This works well for DSB Mobile as the company's goal is to hire freelance workers that they can educate in their processes and pay at a lower cost than someone with a university degree or plenty of industry experience. This is in line with the company's strategy. As DSB plans to exploit cheaper labor as an advantage in potentially entering new markets, the idea for the company is to train new employees to do what they need as it pertains to each project.

According to UNICEF (2013), 77.2% of males and 77.9% of females in Peru were enrolled in secondary education in 2012. In term of attendance, 81.2% of males and 82.1% of females in Peru attended classes regularly. Furthermore, according to Central Intelligence Agency (2017), the Peruvian government spent 3.9% of the country's total GDP on education expenditures in 2015. Finally, the number of engineer and technological professionals

registered in the national directory of investigators and innovators of Peru was only 13,833, with 6,180 of them located in Lima (CONCYTEC, 2017).

1.3.4. Technological

Technological factors are very important to DSB Mobile as they develop mobile and web applications. As technology changes regularly, sometimes multiple times a year. As a result, DSB pays for employees to attend regular training sessions to learn about the new platforms for companies such as Apple and Google. Peru ranks 38th in the world for mobile phone subscriptions per 100 inhabitants at 112 (Central Intelligence Agency, 2017). Peru ranks 39th in the world for percentage of the population with access to the internet at 40.9% (Central Intelligence Agency, 2017). Despite the competition in the industry, both numbers suggest that there are opportunities for DSB Mobile to continue developing mobile and internet applications for their customers.

On the grounds of security, software technology firms have provided business solutions through the installation of computer software that allows companies and other organizations to have full control over all the accesses of visitors and personnel in addition to vehicles that enter company premises. By doing so, companies will be able to have control and much needed information about different aspects such as staff times on arrival and departure, income from unauthorized vehicles or the number of hours lost due to unnecessary visits among others (Chan, 2004).

In terms of the entrepreneur, Intellectual Property helps with the free flow of information by sharing the protected know how critical to the original, patented invention. For example, The United States, that is one of the top countries when it comes to innovation and technology, produces reliable and effective solutions that accelerate quickly to the market place. Such an innovative environment is a key element for success factors for SME's that plan to set up office in the United States. The US has strong intellectual property rights laws

and enforcement (Lee, 2011). This is important as the enforcement of these laws ensure that products are authentic and are of high quality which is what consumers are expecting and therefore eases and comforts the mind of the consumer. This process then leads way to the invention of new products and improvements on existing ones. Without patent protection, investing in innovation is risky and may not pay off. Therefore, incentives like patent protection are given in order to keep innovation moving at a steady pace.

There are also a few factors that influence the chances of entering the software market in Europe. The software industry is a field that is labor intensive and requires highly skilled workers. On the other hand, the field has a low capital requirement in terms of hardware. Furthermore, access to distribution channels in Europe is easier as end users have access to broadband internet, therefore goods (finished product) can spread more rapidly. However, it is important to note that in Europe regulatory requirements are quite strict, and if one is not careful they could be caught up in costly and timely patent and copyright cases. An example of this is when in 2013 Samsung was ordered to pay Apple \$1.05bn in relation to mobile phone software patents as part of a case that began in 2011.

1.3.5. Environmental

Being in the service industry, environmental factors do not have a large influence on DSB Mobile's operations but does affect the companies it develops software for. DSB has a partnership with Samsung that allows the company to experiment with new technologies before they are released to the public. Many electronic companies have focused on creating greener systems that emit less energy, which makes this a beneficial partnership.

While there is no law in the software industry that mandates how much a paper a company can print, software companies have changed their design so that all of their information is stored on the cloud. Not only does this do a better job of organizing than printing paper would, but it is much friendlier on the environment than printing paper. These

initiatives can be marketed as an advantage for companies looking to export to countries with a larger focus on “going green.”

1.3.6. Opportunities and Threats

Table 2 shows a breakdown of opportunities and threats in the software technology industry focused in Peru.

Table 2

Opportunities and Threats for DSB Mobile

Opportunities	Threats
<ul style="list-style-type: none"> • Clients are looking to move from traditional paper tracking to cloud tracking and DSB Mobile has applications for this • The depreciation of the Peruvian Sol allows DSB Mobile to offer lower prices in new markets • High unemployment rate amongst youth suggests DSB Mobile has a talent pool to choose from that they can train the way they wish • The continuous negotiation of free trade agreements will remove tariffs for Peruvian companies looking to compete abroad • Countries are investing in web and mobile applications now more than ever before 	<ul style="list-style-type: none"> • Saturated market with numerous software development firms • Peru viewed negatively in terms of innovation abilities which could deter foreign companies from partnering with DSB Mobile. • Political instability could cause a change in software laws and regulations at a moment's notice

1.4. Internal Analysis

The internal analysis for DSB Mobile will look at the AMOFHIT framework. This framework evaluates a company's strengths and weaknesses using the following criteria: (a) administration, (b) marketing and sales, (c) operations, (d) finance, (e) human resources and organizational structure, and (f) information and technology.

1.4.1. Administration

With regards to administration, each department is responsible for their own administration as it pertains to finance, sales, and operations. Ana Cortez is the Finance Manager and she handles banking for the company as it pertains to each sector. As DSB Mobile operates in different currencies, depending on the customer, she is responsible for managing the money that is earned in each project. Furthermore, the finance department manages the payroll for employees.

1.4.2. Marketing and Sales

Daphne Nano is the Sales Manager at DSB Mobile. The company has a small full-time sales force consisting of three people: Daphne Nano and two full-time reports. The current salesforce at DSB Mobile speaks Spanish fluently but has minimal English-speaking capabilities. Zico Herrera and Daphne Nano manage prospective calls from customers and determine whether the customer demand is feasible. When they decide if the customer is a fit for the company, they work on the details of the project and assign it to the operations team. Nano's direct reports will then handle calls with the customers during the project. The two direct reports are also responsible for answering phone calls and passing on important information to Nano and Herrera.

There is no set marketing department at DSB Mobile. Marketing is handled by the sales department, specifically Daphne Nano. Facebook is the most commonly used form of marketing for DSB Mobile. The social media website is used to showcase the new software applications that DSB Mobile has developed or is in the process of developing. The page currently has over 9,600 likes and over 9,500 follows. The company has a Twitter page as well but it is not nearly as active, nor does it have as many followers as the Facebook page. Much of the marketing for DSB Mobile comes through word-of-mouth of previous customers who recommend the DSB Mobile to other companies.

One of the challenges for the sales department with DSB Mobile is the reliance on a small percentage of customers to deliver the majority of the business. The company has five major customers that make up more than 80% of the business. DSB Mobile has provided these companies with high quality service but the loss of one customer could lead to a dramatic shift in the business. Furthermore, DSB Mobile uses the connections of its major clients to develop new business leads. The loss of a major client would impact how DSB Mobile works to establish new clients.

After viewing the company records, sales in Peru have increased steadily over the past five years (see Table 3). This year, DSB Mobile is forecasting sales to increase by 30% because of the phenomenon *El Niño* and the floods that affected Peru earlier this year. While a reliance on one market can cause a company to prosper when the market performs well, it can cause a company to suffer when the market faces adversity. As a result, it is important to evaluate all options, especially for a company that exports a service as opposed to a good.

Table 3

Value of Sales in Peruvian Soles for DSB Mobile from 2012-2016

Year	Value of Sales	Percentage Increase over Prior Year
2012	400,000	
2013	520,000	30%
2014	1,050,000	102%
2015	1,500,000	43%
2016	2,300,000	53%

Data are from the General Manager and Sales Manager at DSB Mobile, 2017.

1.4.3. Operations

Operations is one of the major strengths and consists of the largest team at DSB Mobile. The team is headed by the Operations Manager, Maria Miranda. She manages a full-time team that consists of three project managers, two technical leaders, two designers and 16 developers. This unit is responsible for developing software that fulfills the needs of current customers while attracting new customers. After speaking with the General Manager, Zico

Herrera, he mentioned that while charging higher prices than competitors, his company is able to offer superior products that stand the test of time.

Most of the technical developers at DSB Mobile have more than five years of working experience in the industry. While employees have left the company over time, DSB Mobile has kept in contact with many former employees in case the workload of the company increases. DSB Mobile has worked with freelancers that were formerly full-time employees to increase to meet the demands of an increased workload.

The operations team is assigned a list of KPI's that they are expected to follow as it pertains to their assigned projects. Below is a list of KPI's that the operations team is expected to adhere to:

- Difference between initial estimation and real rate
- Number of projects completed on time
- Number of projects completed after delay
- Reasons for delay of the project - total portfolio
- Rate of error per project
- Percentage of projects that had to redone because of error
- Profitability per hour of development
- Profitability per project
- Percentage of clients not served
- Amount of time spent on attention to incidents
- Rate of complaints
- Hours scheduled vs effective hours of work unplanned overtime hours

1.4.4. Finances

Finance is managed jointly by Zico Herrera and Ana Cortez, who is the head of the finance department at DSB Mobile. Together, they budget for the number of projects, number

of full-time employees, and the number of freelance workers at DSB Mobile each year. As DSB Mobile is a small to medium sized enterprise (SME), there is not a need for a large finance department at this time. As the firm continues to grow, which can be viewed through the sales numbers over the past several years, the company can look to add more employees to this business unit.

The best way to evaluate the success of a company is to look at the return on equity (ROE). To view DSB Mobile's current situation, the formula for ROE that was used is: $\text{Net Income} \div (\text{Total Assets} - \text{Total Liabilities})$. Table 4 shows DSB Mobile's Net Income, Total Assets and Total Liabilities from 2013 – 2016 in Peruvian Soles as well as ROE.

Table 4

DSB Mobile's Net Income, Total Assets, Total Liabilities and ROE

Year	Net Income	Total Assets	Total Liabilities	ROE
2013	3,180	57,097	11,990	7.05%
2014	77,067	115,118	37,064	98.74%
2015	100,932	247,427	96,702	66.96%
2016	235,366	632,529	312,341	73.51%

Data are from the General Manager and Finance Manager at DSB Mobile, 2017.

The above table shows that DSB Mobile is in a healthy position as it pertains to ROE. The higher the percentage, the healthier a company's position is in the market. From 2014 – 2016 the ROE has been exceptionally high which implies that DSB Mobile is in a strong financial position.

1.4.5. Human Resources and Organizational Structure

Human Resources is another strength at DSB Mobile. The company has been able to attract developers with years of experience in the industry. Furthermore, the company has maintained relationships with employees that have moved on from DSB Mobile if the opportunity arose to hire freelance workers.

DSB Mobile does not have a specific department set aside for Human Resources. Rather, the head of the department, while consulting with Zico Herrera, have come to

decisions jointly regarding hiring decisions. Human Resource Management (HRM) will become even more important as the company has an eye at expanding to new markets. The decision will need to be made as to whether it is necessary to create an HRM department or operate under the current structure.

In terms of reporting, the Operations Manager, Maria Miranda, the Sales Manager, Daphne Nano, and the Finance Manager, Ana Cortez all report directly to the General Manager, Zico Herrera. Daphne Nano manages the two-person salesforce. The Chief Operations Officer, Maria Miranda manages the three project managers. In turn, these project managers oversee the two designers, the two technical leaders, and the sixteen developers.

The organizational structure at DSB Mobile is as follows:

- General Manager: Zico Herrera
- Operations Manager: Maria Miranda
- Sales Manager: Daphne Nano
- Finance Manager: Ana Cortez
- Number of Sales People: two
- Number of Technical Leaders: two
- Number of Project Managers: three
- Number of Designers: two
- Number of Developers: sixteen

1.4.6. Information and Technology

DSB Mobile prides itself on its ability to compete with the leaders in the web development industry. As a result, employees continuously look for ways to innovate and have had the ability to test new software on new Samsung products due to the developed partnership. Furthermore, DSB Mobile is a licensed seller of Samsung products in Peru, which provides them the opportunity to sell Samsung products that come loaded with DSB

software to their customers. This is advantageous for DSB's customers as they can purchase both software and hardware from one customer.

DSB Mobile invests money in external trainings for its employees at least once a year. He has recognized his company's acumen for developing leading software technology applications and is always looking to build on its competitive advantage. The challenge with some of the trainings in Peru is that the workforce at DSB Mobile is more knowledgeable than the trainers in certain issues. They have been able to solve problems that the lecturer has run into while providing the training. As a result, it is essential for DSB Mobile to enroll its employees in trainings that would add value for them and the company.

1.4.7. Strength and Weaknesses

Table 5 provides a list of strengths and weaknesses for DSB Mobile.

Table 5

Strengths and Weaknesses of DSB Mobile

Strengths	Weaknesses
<ul style="list-style-type: none"> • Established relationships with major software purchasers in Peru • Developed relationships with hardware companies such as IBM and Samsung • Strong relationships with freelance workers that can be leveraged when workload rises • Majority of the development team has more than five years of experience • Management has clearly defined KPI's that show employees where priorities lie • Strong communication between departments to ensure that objectives are clearly outlined • Regular attendance at external trainings to ensure that operations team keeps up with trends • Company has successfully increased sales and net income each year since its inception 	<ul style="list-style-type: none"> • Majority of the business is focused on a small percentage of overall customers - top 25% of customers represent almost 70% of entire business • Reliance on current customers to provide references to new customers to expand the business • Company's business is focused on only one market (Peru) and tied to the success of this market • Lack of an administration department causes more work for department heads • No current Human Resources Manager to continuously evaluate talent • Salesforce only speaks Spanish which means language training will be required when expanding abroad

1.5. Conclusions

DSB Mobile has done an excellent job at establishing itself as a major player in the Peruvian market and this will help it to enter a new market. Likewise, it has built its brand image since its inception and has shown a willingness to diversify in order to appeal a larger customer base and this portfolio of clients can be used to market the company to new clients abroad. The sales result and ROE over the last several years have been positive which suggest that DSB Mobile is a financially stable company. Furthermore, DSB Mobile continues to attract new clients through customer referrals do to the leading technology systems it provides.

Throughout this chapter, many frameworks have been analyzed, including: Porter's Five Forces, PESTLE for an external analysis and AMOFHIT for an internal analysis. Porter's Five Forces provides DSB Mobile with an idea of what to expect from the competition when entering a new market. This will prove useful throughout the paper as a new market of entry will be determined. The PESTLE and AMOFHIT analysis provided a look at the SWOT analysis for DSB Mobile and showed that the company is performing well and operating from a position of strength. These analyses were essential to determine if entering a new market was the right decision for DSB Mobile if there was another facet of the business to address.

The major challenge for DSB Mobile at the moment is that it only operates in one country with a focus on one market. Due to the financial success, the stability of the company, and the increasingly positive brand recognition, now is the time for DSB Mobile to diversify. The main problem with focusing on one market is that if the market performs unexpectedly poorly, then a company's projections could change drastically. This can be seen in the example of El Niño, the floods that had a significant impact in Lima earlier this year. While companies still require software solutions, the major focus of a lot of businesses is on

repairing work spaces and ensuring that employees were not adversely affected by the flood. DSB Mobile is still expecting a sales increase of roughly 30% for 2017, but this is lower than what was initially projected and the lowest increase over prior year since 2013. By expanding to a new market, DSB Mobile provides itself with the option of mitigating risk if one market suffers from an unexpected event. Potential markets and modes of entry will be discussed later in this thesis.



Chapter II. Key Opportunity

Throughout this chapter, the key opportunity will be analyzed and developed in detail. The criteria are as follows: (a) description, (b) timing and magnitude, (c) location, and (d) ownership.

2.1. Description

After the initial consultation meeting with Zico Herrera, the consultant group set up two further appointments at the DSB Mobile offices to understand the problems and the opportunities pertaining to the company. The opportunity that arose was the company's willingness and ability to expand to a new, international market. At the first meeting at the DSB Mobile offices, it became evident that the company was heavily focused on the Peruvian market, specifically Lima. After observing the company, conducting interviews with Chief Executive Officer Zico Herrera and Sales Manager Daphne Nano, and then completing independent research, the opportunity identified was to expand operations to a new market. The alternatives suggested were to expand business within Lima, expand business outside of Lima but within Peru or expand the business outside of Peru, specifically to a country where Peru has a free trade agreement in place.

2.2. Timing and Magnitude

Given the achievements and the relationships built by DSB Mobile to date, there is no reason to rush into a decision to enter a new market. There needs to be a calculated decision to help determine the exact timing of entry and the method of entry. The most common methods of entry include: exporting, licensing, joint venture, or sole venture (Agarwal & Ramaswami, 1992). Each method has its advantages and disadvantages. Exporting offers the lowest risk but the lowest possible return, while a sole venture comes with the highest risk but the highest possible rate of return (Agarwal & Ramaswami). As DSB Mobile offers a service, the most logical decision for entering a new market is to maintain operations in Peru

but to export its service to a new market. This way, DSB does not need to invest in an entirely new sales force or a new team of developers.

2.3. Location

The location of the opportunity comes from the sales department. The developers have created software to meet the demands of current customers and has allowed DSB Mobile to attract new customers in Peru. While the sales force has successfully managed the current customer base, there is an opportunity for the company to expand beyond Lima and even Peru. Selling a service provides more flexibility to expand operations than selling a good. The reason being that the expertise of the product lies within the technical team and the main barrier to exporting the product is complying with local government rules and regulations as to what is required. DSB does not need to find a source of new materials, nor does it need to find a port of entry as the programs are shared through a database. The only determinant is whether DSB Mobile will need to open a sales office and hire a local sales force in order to have operations within a new market of choice.

After determining to enter a new market, the next question for DSB Mobile is whether the current sales force of three will be able to manage the new customers. If not, the choice will have to be made if DSB Mobile should hire more salespeople in Peru or in the new market of entry. It is logical to hire to a local salesforce in the new country that can respond to questions or concerns immediately but the financial feasibility will be examined later in this paper.

2.4. Ownership

DSB Mobile is a privately-owned company with Zico Herrera as the majority owner. As a result, DSB Mobile can act and react quickly as it does not require the approval of an ownership group or shareholders. This poses a major advantage as the timing of decisions can

be made quickly. Despite the private ownership, it would be unwise for the General Manager to not consult his management team before deciding when and where to enter.

The General Manager has a background in software engineering but has developed sales skills by managing the company as one of three employees at its inception. As a result, he will need to work closely with Daphne Nano, the Sales Manager, to ensure that the current salesforce has training on working in a culturally different market, or hiring a new salesforce in the new market that will understand the cultural intricacies of new clients.

2.5. Conclusions

The key opportunity for DSB Mobile is its ability to expand to an international market. The company has shown an improvement in sales and revenues each year since its inception and has the full support of ownership, which makes now an opportune time to look at a different market. Diversifying from Lima reduces the risk for the company in the case of an unforeseen circumstance affecting business operations. For example, because of El Niño, the floods that affected Peru earlier this year, DSB Mobile is projecting a lower increase in revenues versus prior years, as companies try to recover from the natural causes. If DSB Mobile enters into a new market, it will be better protected if a natural disaster strikes again as they can focus more on the other market.

Chapter III. Literature Review

This section will review key literature to provide information to small to medium sized enterprises (SMEs) looking to internationalize. There is a lot of literature surrounding the expansion of companies into overseas markets, succession planning, and the many barriers these companies will face. To successfully understand the best market entry mode and market expansion practices for DSB Mobile, it is pertinent to fully grasp all aspects that would contribute to the successful launch of their software products into a new market.

The literature used was retrieved from several international databases such as EBSCOhost, ProQuest and JSTOR Emerald. Other documentation found on the internet was also used to provide more information concerning market and industry facts and figures about several prospective markets.

3.1. Literature Mapping

The mapping process allowed for the most important topics to be separated in terms of what was primary and secondary to the issue at hand with DSB Mobile. The central topic addressed in this literature review is “International expansion of a small Peruvian Software Company,” the most important topics which will be addressed are a) Internationalization of SMEs, b) Marketing, c) Market Selection, and d) Industry Analysis. As the thesis pertains to DSB Mobile’s intention to expand into a new market, there literature will be presented on the ecosystem software markets of Peru, The United States, and Germany. Additionally, government and financial support and barriers that these SMEs face in expansion will be addressed to provide a complete picture concerning the internationalization process. Figure 14 shows the literature mapping.

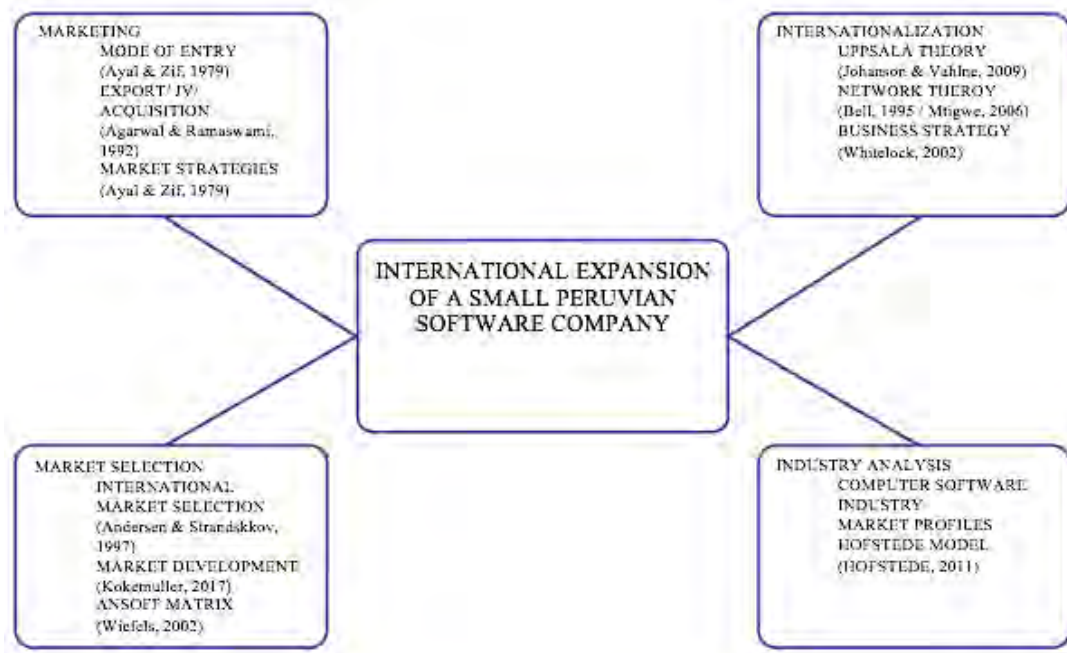


Figure 14. Review of the Literature Map

3.2. Literature Review

The purpose of the literature review is to understand the importance of the main topics mentioned above to the international expansion of companies of all sizes. An extensive literature review of the main topics are as follows: a) Internationalization of SMEs, b) Marketing, c) Market Selection, and d) Industry Analysis. The information found and reviewed will help provide a proper understanding surrounding the internationalization process of SMEs and the factors that will help lead to their success. The findings will help properly situate DSB Mobile in the arena of internationalization, the major factors they will need to take into consideration to be successful, a market that would be the most profitable for them, the possible challenges they will face, and the support they will need in this expansion.

3.2.1. Internationalization of SMEs

The process of companies seeking to go international, commonly known as “internationalization,” has been of great discussion because of the rapid rate of globalization.

When companies make the decision to export their product or service to a new country, it is referred to as internationalization. Internationalization involves a lot of decision making, intricate planning, and establishing strategic processes for implementation. Many factors cause companies to expanding globally. In other words, there are reasons that make organizations choose whether to internationalize and some of them include market seeking, increasing profitability or revenues, a means of growth strategy, and diversifying competition. (Ahi, Baronchelli, Kuivalainen, & Piantoni, 2017).

Companies are then faced with the tough task of not only analyzing the product or service they wish to export, but also how the product or service may need to be adapted to the new market that they are venturing into. "...The internationalization patterns and process of individual firms are quite unique and highly situation specific" (Bell, 1995, p. 61). The process for each firm is specific to their industry and their specialization within the industry but also to the market they will be exporting to and no single internationalization process can be standardized for all companies.

A lot of companies across the globe see the importance and benefits that come with internationalization and subsequently undertake it. A wide customer base, increased profitability, and improved public image are some factors that push even some of the most profitable companies to internationalize. Korsakiene & Tvaronaviciene (2012) used the below model as an example of how going international is an all-encompassing process and consumes a company's entire business (p. 299). Figure 15 shows the internationalization process that companies go through and how each stage is interrelated with each other.

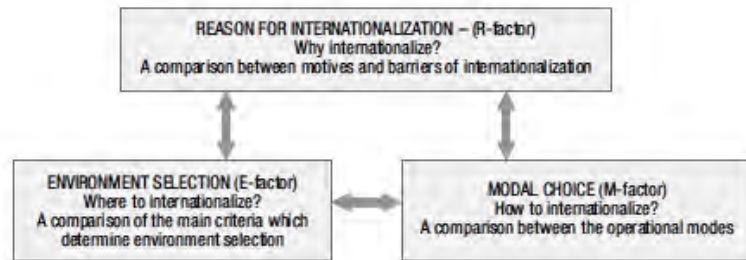


Figure 15. International Process.

Data are from “*The internationalization of SMEs: an integrative approach*” by Korsakienė, R. & Tvaronavičienė., 2012, *Journal of Business Economics and Management*, 13(2), 294-307.

Within the literature of internationalization there have been many theories that have been used to try to explain it and the motives and purpose that push companies to pursue it. These can be seen in the below model. In this section, the later theories will be examined under internationalization, as the three listed under Internationalization theories in Figure 16 have become the most dominant in the literature amongst others

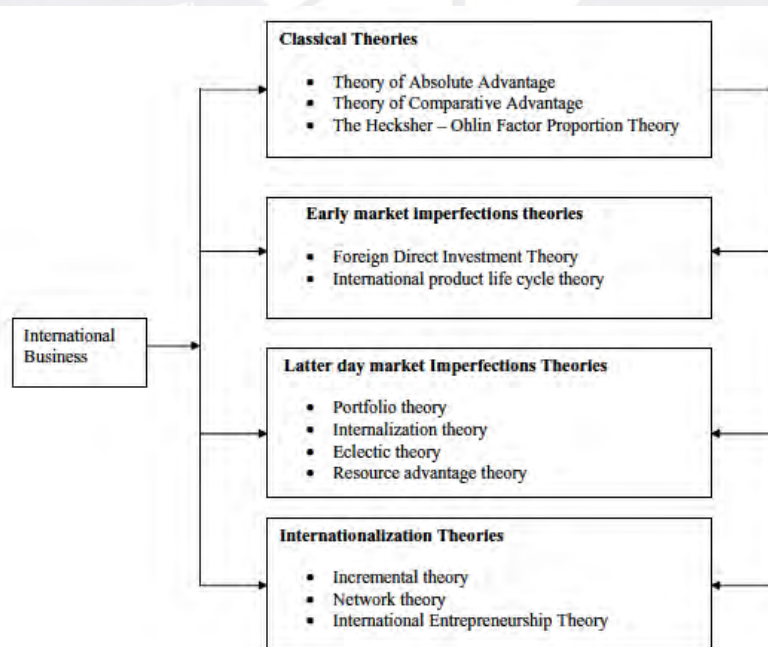


Figure 16. International business.

Data are from “*Theoretical milestones in international business: The journey to international entrepreneurship theory*” by Mtigwe, B., 2006, *Journal of International Entrepreneurship*, 4:5-25, DOI 10.1007/S10843-006-5872-5.

Likewise, Figure 7 shows the various stages of Internationalization described in the article the internationalization of small computer software firms: A further challenge to stage theories by Bell in 1995.

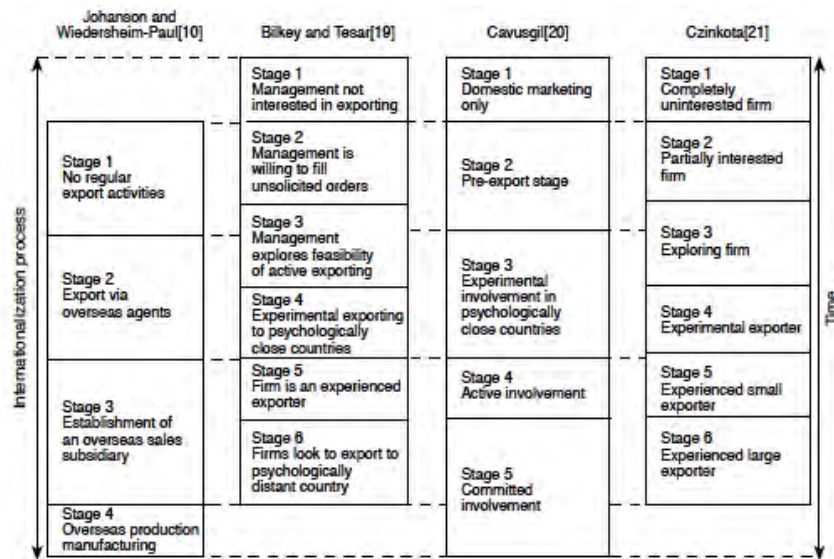


Figure 17. Internationalization.

Data are from "The internationalization of small computer software firms: A further challenge to stage theories" by Bell, J., 1995, *European Journal of Marketing*, 29(8), 60-75.

Some Literature has raised the importance of networking using Network Theories, which suggests the importance of having access to these networks when companies plan to expand into overseas market. "Increasingly small entrepreneurial firms are able to acquire foreign market knowledge, financial, marketing and managerial resources and competitive advantages through collaboration with domestic and foreign network partners" (Mtigwe, 2006, p. 16). These networks place the companies at an advantage because these markets help companies to establish themselves at a faster and easier rate than companies without any access to contacts in the new market. "...Propose network approaches to internationalization. These postulate that interconnected exchange relationships evolve in a dynamic, less structured manner and that increased mutual knowledge and trust lead to greater commitment between international market actors" (Bell,1995, p. 62).

Networks allow for companies to get quicker access to information and can be used as a channel to have their ear to the ground in this foreign market. "Networks can help

businesses gain knowledge about foreign institutions so that they are aware of current rules and regulations. They also provide links to the conduct of business and market intelligence that help them decide when and how to internationalize” (Adham, Entekin, Scott - Ladd & Senik, 2011, p. 261). The Network Theory has been a popular theory that comes up in the literature concerning internationalization and has been a great source of input concerning what small to medium sized companies need to take into consideration when they are looking to expand. “This knowledge about foreign marketplaces not only creates opportunities for the firm to internationalize but also allows firms to formulate strategic plans to accelerate their internationalization process, engage with born global pattern, and ensure survival in the long run” (Adham, Entekin, Scott - Ladd & Senik, 2011. P. 261).

The Uppsala Model of Internationalization is a popular model that is used to explain four steps of internationalization. The four steps of internationalization listed are: exports, exports through sales agent, establishment of a physical presence to interact directly with the market, and would be production in the foreign country. The Uppsala model also states the importance of knowledge and skill in the internationalization process. Additionally, Uppsala acknowledges the importance of networking for companies looking to go international as a great stepping stone. Figure 18 shows the relationship between the knowledge of the market and the actions of firms looking to expand.

The last theory that will be addressed under internationalization, is the Business Strategy Approach which is focused on the variables that companies use to figure out how profitable it is for them to enter a new market. “The business strategy approach considers an evaluation of the market to be a key determinant of entry and selection of market entry method... the business strategy approach suggests that international activity is contingent on a range of variables related both to the specific firm and to the environment within which it operates” (Whitelock, 2002, p. 345).

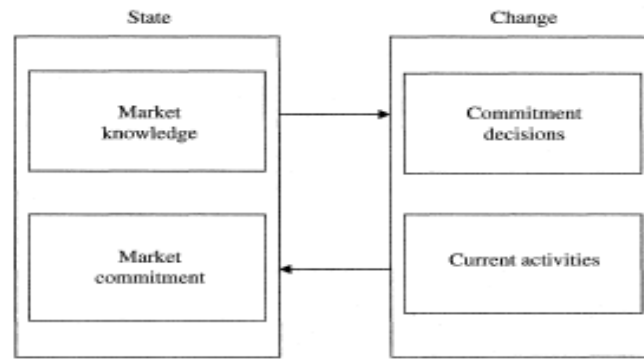


Figure 18. Basic mechanism of internalization.

Data are from “The Uppsala internationalization process model revisited: From liability of Foreignness Liability of Outsidership” by Johanson, J & Vahlne, J.K., 2009, *Journal of International Business Studies*, 40(9), 1411 – 1431.

3.2.2. Marketing - Modes of Entry & Marketing Strategies

Modes of Entry are critical for companies looking to export products or services as this sets the pace for how successful these companies will be, depending on the mode of entry that is chosen. “One of the most critical decisions faced by multinational enterprises (MNEs) intending to undertake foreign direct investment (FDI) is the choice of foreign market entry mode” (Chen & Chang, 2011, p. 439). Modes of Entry range from soft modes to hard modes where companies either decided to have a physical presence in this new market such as sales office or just opt for exporting or licensing. As DSB Mobile is a service firm, Table 6 gives a good example of the different motives for entry that are outside of the main market entry modes. This is essential to narrow down the motive of entry whether it pertains to the client specifically because of an untapped market or to the market because it is growing exponentially.

Table 6

Examples of CF and MS Entries Associated with the Two Types of Service Firms

Motives for Entry	Type of Service Firm	
	Soft-Service Firms	Hard-Service Firms
Client Following	An advertising agency sets up office abroad to serve a domestic client's foreign subsidiary	A software company provides software support to the foreign subsidiary of a domestic client
Market Seeking	A fast-food chain appoints a franchisee in a foreign market to serve the local customers there	An architectural design firm sells blue prints to foreign customers

Data are from: “Choice of Foreign Market Entry Modes by Service Firms: Role of Marketing Knowledge” by Erramilli, K.M., & Rao, C.P.,1990, *MIR: Management International Review*, 30(2).

“Depending on the factors pertaining to transaction specific assets, external and internal uncertainty, and the potential for opportunistic behavior, MNEs choose a specific mode of entry in order to minimize transaction costs” (Chen & Chang, 2011, p. 439). Modes of Entry must all be weighed to make sure they are in line with the company’s long-term and short-term objectives. “Each market entry mode has the following costs: Mode set up costs. A one-off cost incurred when the mode is first used, Recurrent fixed cost associated with mode usage, Recurrent variable cost ... Therefore, a firm internationalizes via the most cost-efficient mode at all times” (Mtigwe, 2006, p. 10).

There are several entry mode options that companies are able to choose from, depending on the degree of involvement the firm plans to have in the new market. Firms, as mentioned earlier, can choose between exporting, licensing, joint venture, or acquisition - these have been the main methods that have been recognized by firms looking to internationalize. It is important to note that different entry modes require different levels of knowledge and resource commitment. Figure 20 shows the different levels of commitment associated with the different entry modes.

Table 1. The characteristics of different entry modes

Entry mode	Constructs		
	Control	Resource commitment	Dissemination risk
Licensing	Low	Low	High
Joint venturing	Medium	Medium	Medium
Wholly owned subsidiary	High	High	Low

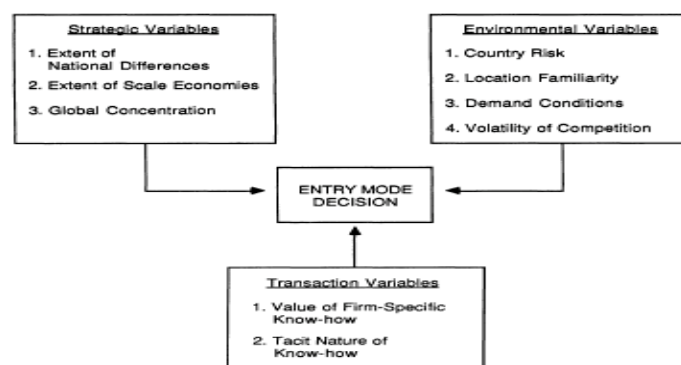


Figure 19. The Characteristics of Different Entry Models.

Data are from “An Eclectic Theory of the Choice of International Entry Mode” by Hill.W, Hwang.P & Kim.C., 1990, *Strategic Management Journal*, 11(2), 120.

Joint ventures for most firms is the most plausible method, as this entry mode sometimes presents a win-win situation since firm's team up with local company in the intended market. A company would benefit from this as they would have access to local knowledge about how the market works and also knowledge on distribution networks. Agarwal & Ramaswami (1992) stated "The Joint Venture mode involves relatively lower investment and hence provides risk, return, and control commensurate to the extent of equity participation of the investing firm" (p. 3). The level of risk that a firm faces has been a primary determinant of chosen entry modes and the joint venture option, which is a lower risk, stands as the reason it is most popular because the risk factor is being shared and not solely bared. The other foreign entry mode that requires a lot of commitment is acquisition. With acquisition, firms buy a local company and completely take over their workforce and this carries a higher risk because of the chance of fight back. On the other hand, acquisition presents an opportunity to instantly enter a new foreign market as a big player and benefit from significant economies of scale. Acquisitions tend to be viewed as riskier because of the higher level of commitment and resources which means if the firm fails it would take a bigger hit. For this reason, a lot of firms tend to lean more towards joint ventures as the risk is shared and is lower.

Equally as important, is the timing of entry into a market which helps to determine market entry mode. Companies need to be able to judge the right time to enter the chosen market in order to effectively launch a product. Timing of entry and choosing a market go hand in hand because it also influences the mode of entry that would be chosen. Gallego, Hidalgo, Acedo, Casillas and Moreno (2009) state "... an earlier timing of entry tends to lead the firm to choose more conservative ways of settling in other countries (exporting) ..." (p. 317). The timing greatly influences the modes that companies would to use to enter a market depending on how fast or slow they will enter the market.

Transaction cost analysis comes into play when choosing the entry mode as companies not only need to weight the best way to enter for their product to be received but also to minimize the cost of entry. “The focus of attention is to minimize transaction costs through the design of efficient contracts of governance mechanisms for supporting economic transactions.” (He, Lin & Wei, 2016, p. 919). The model below shows the factors that companies take into consideration before they decide on their market entry mode with the corresponding company resources that are taken into consideration in the theories listed in between.

Market Strategies are the last sub-topic that will be addressed under internationalization. After companies have chosen the most profitable market and also the entry mode that best suits both them and the market, the next step is the determination of marketing strategies. Marketing strategies are defined as the manner in which companies plan on selling or introducing their product or service into the chosen market. Choosing the right marketing strategy is very important because the strategy chosen has to be highly effective in order to directly reach the intended target market. “The selection of market expansion strategy is influenced by characteristics of the product, characteristics of the market, and decision criteria of the firm” (Ayal & Zif, 1979, p. 88). This involves the careful selection of the right channel, the right pricing, the adapted product and the right promotions. “A strategy of market expansion is characterized not only by the rate of entry into new national markets. Two additional considerations are particular importance for more detailed identification of optional strategies: (1) market segments within national markets and (2) allocation of effort to different markets (and market segments).” (Ayal & Zif, 1979, p. 86).

3.2.3. Market Selection

In the pursuit of internationalization, companies need to strategically select the right market which is carried out in several research phases. Market Selection is the first major

decision that companies have to make. “The selection of an international market affects the entire operational setup of a firm, as it influences the production dispositions as well as financial, organizational, and managerial issues adapted to existing business activities” (Anderson & Strandskov, 1997, p. 66). In order for companies to choose the most strategic market they have to determine a selection process that encompass different criteria to make sure their product is a match as can be seen in Figure 21. The International Market Selection Theory (IMS) attempts to explain how companies go about choosing the market they will work in. “IMS has been defined as the process of establishing criteria for selecting (country) market, investigating market potentials classifying them according to the agreed criteria and selecting which markets should be addressed first and those suitable for later development” (Andersen & Strandskov, 1997, p. 67).

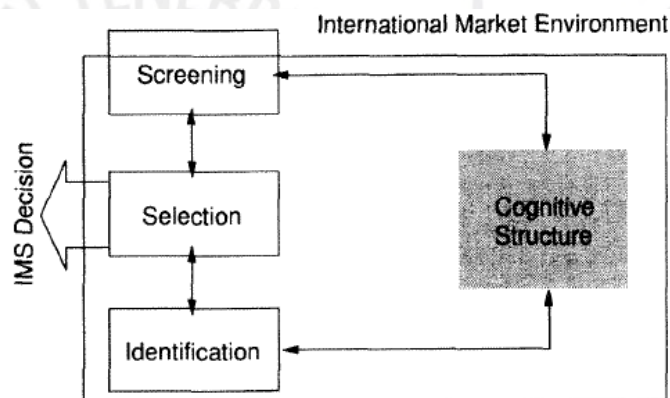


Figure 20. International Market Selection.

Data are from “International Market Selection” by Andersen, J. & Strandskov, J., 1997, *Journal of Global Marketing*, 11:3, 65-84, DOI: 10.1300/J042v11n03_05.

One of the first steps that companies must follow when expanding is identifying markets that bare some resemblance to the markets they currently operate in. “The method of market grouping commences with the firm’s existing business strategy, by selecting the markets which most closely resembles the markets already penetrated” (Andersen & Strandskov, 1997, p. 68). The reason firms chose to use markets that bare a resemblance is

because they already have knowledge of how these markets work and this would allow them to easily penetrate these markets without having to make any major adjustments.

According to Kazlauskaite, Miecinskiene & Stasytyte (2014) as can be seen in Figure 22 there are eight essential steps that will aid companies in their selection of a foreign market. These steps include obtaining knowledge concerning investing and trading in the market in question to a company sending a representative to scope out the market themselves. Carrying out these steps ensures that companies can obtain the most relevant information and a clear picture on the potential markets they are interested in entering but also helps to narrow the choice of market down to the most profitable.

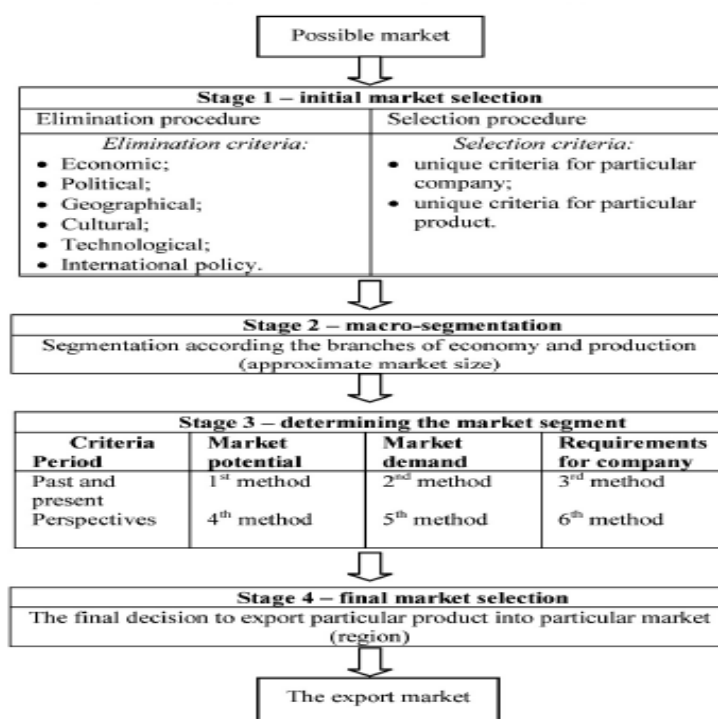


Figure 21. Four-stage model of export market selection.

Data are from “Reasoning for Export Market Selection” by Miecinskiene, A., Stasytyte, V. & Kazlauskaite, J., 2014, *Procedia - Social and Behavioral Sciences*, 110, 1166 - 1175, DOI: 10.1016/J.sbspro.2013.12.963.

At the same time companies obtain insight to understand not only the short-term but the long-term stability of these market and their trends which is very essential in figuring out if this market would be the most profitable for them. Eckman, Hyllegard & Sakarya (2007) argue that “Nature of the market opportunity, firm’s resources and managerial philosophy

affect internationalization in the business strategy approach, and market selection will result from an evaluation of factors like market attractiveness, psychic distance, accessibility and informal barriers” (p. 211). Companies have to take a lot of factors into consideration before they narrow down their market selection and have to ensure that these factors align not only with the product they have to offer but also the company brand.

Market Penetration and Development.

Market penetration is a measure of how successful the sale of a product or service is in a specific market. It is generally calculated by looking at the amount of sales volume compared to the population of a given market. Business managers and marketers measure their success by looking at how far and widespread their products and services have reached. An example to understand market penetration is: a software company like DSB Mobile targets 2,000 corporate customers and manages to sell to about 1,000 of them. This number then represents a market penetration of 50%. Their revenue from these sales represents a market share of 2.2% of the total market for business software. On the other hand, market development is a focus on new markets with existing products.

Oftentimes, business managers will embark on market penetration strategies by adopting various techniques with the main purpose of increasing overall market share. This is normally done by either encouraging consumers of similar products to switch to the company's product or by increasing the amount of the population that can be considered potential customers.

According to Igor Ansoff's product-market matrix, market penetration is one of the four essential classes that every business needs in order to succeed. Figure 23 illustrates the Ansoff Matrix.



Figure 22. Ansoff Matrix.

With Market Penetration DSB Mobile would focus on its existing market by gaining the highest market share. However, in this case, as DSB Mobile is looking to expand, the emphasis would be more on market development as the focus is selling existing products in new markets. Both in Germany and the US, big software companies like Oracle, Microsoft, and IBM have majority of the market share, so it could be more complicated for DSB Mobile to secure a high market share. According to (Kokemuller, 2017) one of the biggest risks that comes with market development is that it requires a large amount of capital investment that is normally attributed to building new locations or expanding new marketing efforts into new territories. If the new opportunity does not pay off, the entire process is then a waste of resources such as money and time. He continues to say that smaller companies venturing into new markets can “wear them thin” if they are not properly prepared.

According to Wiefels, P. (2002), market development strategy can be developed through using the market development strategy checklist (MDSC). The checklist includes:

- The target customer: source of the money influences strategy
- Buyer motivation: consumer reasons to buy product
- The whole product: helps meet demand by solving customer problems & creates motivation
- Partners and allies: helps provide parts of a product that you cannot provide.
- Distribution: vital for the delivering of the product

- Pricing: defining an attractive price for consumers while still creating revenue
- Competition: staying ahead of competitors by offering something different
- Positioning: establishing that your products are better than the competitors

A proper market development strategy requires detailed market and competitor intelligence, a well-researched market, and financial and operational data.

Government Support & Available Financial Support for SMEs

Nowadays, there is great importance placed on the need for financial support to not only provide the startup capital for SMEs, but to also develop and expand these small businesses because of their entrepreneurial nature. SME clusters are increasingly seeking different funding avenues to continue to grow their business and they are increasingly looking towards government funding because of the difficulty they face in getting funding from financial institutions. It is also important to note that governments have begun to recognize the importance of these small to medium-sized businesses and the impacts that they have on the economy.

Governments have begun to recognize the importance of SMEs in the economy, as well as the fact that these SMES contribute to the economy through their employment contribution. Asif Khan, Azam, Hunjra, Jasra & Rehman (2011) have outlined the most critical variables, as can be seen in the diagram in Figure 24, that are needed for the success of SMEs (p. 278). They have outlined the key success factors that must be taken into consideration in every SME. "...the government development expenditure has positive effects on the growth of SMEs, and the effects are both indirect (i.e., public services and infrastructure) and direct (e.g., government - sponsored special credit schemes and training programs for SMEs)" (Tambunan, 2008, p. 163).

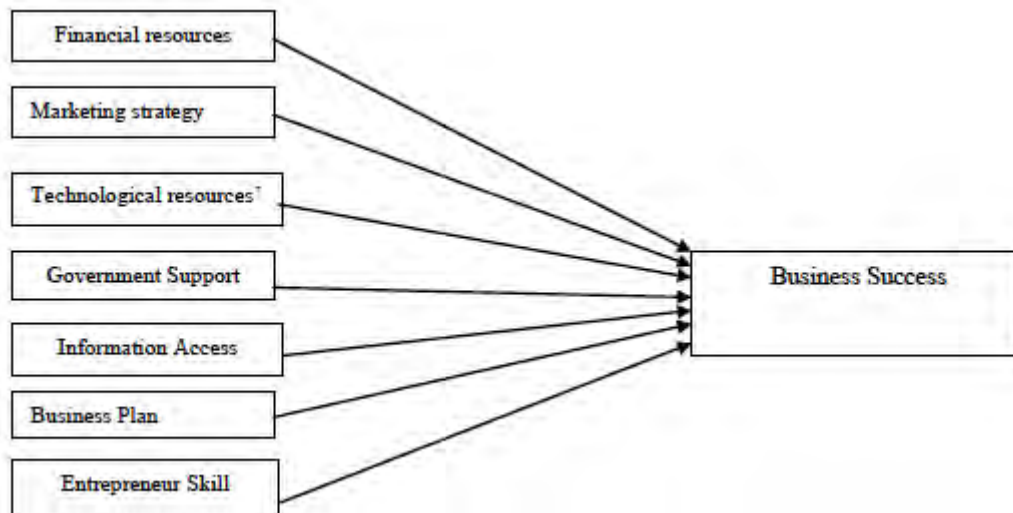


Figure 23. Determinant of Success.

Data are from “Determinants of Business success of Small and Medium Enterprises” by Asif Khan.M, I-Azam.R, Hunjra.I.A, Jasra.M.J & Rehamn.R, 2011, *International Journal of Business and Social Science*, 2(20), 274 – 280.

It is crucial for SMEs to have access to financing as they continue to grow, so they can compete with the big industry players as they tend to make relatively less profit in their first few years and tend to start slower. SMEs need strong government backing, as obtaining lending for these small companies presents a challenge because a lack of a strong credit score. Financial institutions such as banks are reluctant to lend funds to these small businesses, because of the previously mentioned issue, and this is where the role of government needs to come into play to ensure that there is readily available financial support for these small businesses.

The involvement of the government in the sector of these companies make it possible for them to beat their low survival rate where many of them do not make it past their initial years. “.. the government assistance has boosted the employment growth of firms, find that soft financing programs positively affect small firms’ survival and performance, and report a positive impact of assistance on productivity growth” (Klonowski, 2010, p. 299). As can be seen in Figure 25, Klonowski, demonstrates the gaps that these SMEs experience when it comes to need for funding and this helps to demonstrate why government support is crucial

for these SMEs to help reduce the gap that they would be experiencing so as to help them flourish (p. 237).

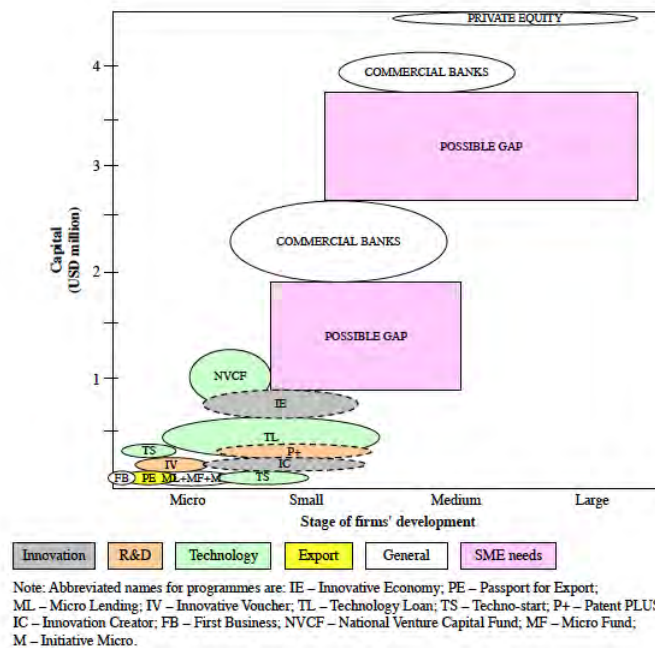


Figure 24. The effectiveness of government-sponsored programmes in supporting the SME sector in Poland.

Data are from “*The effectiveness of government-sponsored programmes in supporting the SME sector in Poland*” by Klonowski.D., 2010, *Post-Communist Economies*, 22(2), 229-245, DOI: 10.1080/14631371003740738.

“Government support programs such as partial credit guarantees (PCGs) or credit lines can be useful, especially if combined with technical assistance for financial institutions to develop new SME lending technologies” (Berg & Fuchs, 2013, p. 4). There is great urgency for government to take an active role in assisting SMEs in their home countries. The rise of entrepreneurs in the last decade has been steady and this has helped to fill innovative gaps that economies have been experiencing. Now, there is more pressure on governments to create these programs as SMEs continue to have trouble getting funds from financial institutions. This will be covered in the last section of the literature review which addresses barriers to internationalization. Aside from getting access to finance, these companies need resources that will lead them to be able to access institutions that would be able to grant them the capital needed. “The enabling environment can in theory reduce the costs of SME

lending, particularly through providing information on prospective borrowers through credit bureaus, ensuring the availability of unique ID...” (Berg & Fuchs, 2013, P. 11).

Cultural Dimensions

When companies decide to expand internationally, it is important for them to take into consideration the role that culture plays. The host country and the home country may have abundant differences in their cultural practices and it is critical that these differences be taken into consideration. Culture plays a major role in not only determining the best market to expand into but also the type of entry mode a company would use. These decisions must be made in line with the host country culture. The success or the failure of a company's expansion can be attributed to the extent to which the firm in question is able to properly acknowledge the cultural dimensions in their new market and the strategies they used to either address the differences or the strategies they used to capitalize off these possible similarities. Geert Hofstede's Cultural Dimensions Model has been a strong benchmark to use to measure and understand the fundamental characteristics of individuals in a country. “How does Hofstede conceptualize national culture? He treats it as implicit; core; systematically casual; territorially unique; and shared” (McSweeney, 2002, P. 91). Hofstede's Cultural Dimensions help explain how a society functions as a whole and this, in turn, gives the foreign company the ability to properly adapt and conform to this new market with a good chance of integration. “He created five dimensions, assigned indexes on each to all nations, and linked the dimensions with demographic, geographic, economic, and political aspects of the society” (Farhangmehr, Shoham & Soares, 2007, P. 280). These dimensions are a great resource for firms looking to export to form a comparison of their home country and their host country. The model highlights the need to not assume every culture is the exact same or that certain practices in one culture can be mirrored in a different culture without repercussions. The six dimensions that Hofstede introduced are Individualism versus

Collectivism, Masculinity versus Femininity, Uncertainty Avoidance Index, Long-Term Orientation versus Short-Term Orientation and Indulgence versus Restraint (Hofstede, 2011, Pg 8). These dimensions help to explain how firms can effectively communicate in a foreign market and avoid having information lost in translation. This has an impact on business negotiations as different cultures have different forms of communication, in terms of verbal and non-verbal forms. Firms need to understand these communication behaviors, the hierarchy complex involved, if they are dealing with a masculine or feminine society in order to understand how to prepare in advance for negotiations and to be prepared during negotiations.

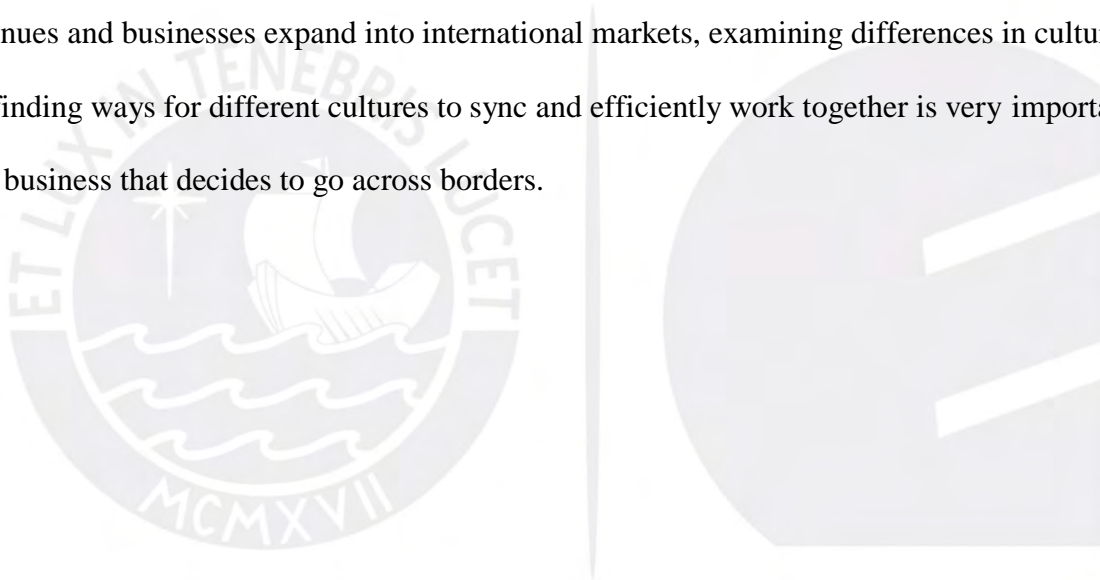
3.3. Conclusions

Internationalization has become one of the most sought after processes that small businesses undertake to grow their firms. This is because, more managers see the benefits of going international, ranging from increasing profits, improved public image, establishing a global brand, and becoming more competitive. However, the process of internationalization comes with several challenges and needs to be approached with a comprehensive plan. It is vital that before any firm takes this big step many options are examined. For instance, an environment selection (where to internationalize) and a model choice (how to internationalize) needs to be appropriately chosen.

Furthermore, the chapter looks at modes of entry as this is an important factor when it comes to internationalization. There are several entry mode options that companies can choose from, depending on the degree of involvement the firm plans to have in the new market. The choices to be made here support companies that wish to have a physical presence in the new market, such as sales office, and companies that opt for exporting or licensing. This is important as resources and efforts used in the multiple scenarios differ substantially

and the benefits to a firm need to be calculated. In addition, a market selection is important to identify the firm's target.

Chapter three describes the Ansoff Matrix, which identifies four different strategies, namely: market penetration, market development, product development, and diversification. However, the focus for the paper is on market development as the focus is selling existing products in new markets. Government support and financial availability are also factors that were looked at in the chapter as government involvement in businesses is almost inevitable while financial availability is a basis for internationalization, and perhaps the biggest determinant of whether a business can afford to expand. Lastly, the chapter touches on the Hofstede framework as a method for looking at cultural dimensions. As globalization continues and businesses expand into international markets, examining differences in cultures and finding ways for different cultures to sync and efficiently work together is very important for a business that decides to go across borders.



Chapter IV. Quantitative and Qualitative Analysis

This Chapter will focus on the analysis of indicators that will be used to help determine the best market for DSB Mobile to enter. These indicators will help determine the top markets that would be most promising for a small Peruvian software development company such as DSB mobile. The six indicators that will be used were derived from a ranking done by the British Software Alliance, namely The IT Industry Competitiveness Index 2011. The significance of these ranking is to give a clearer picture concerning not only the top IT markets but also knowledge concerning growing IT markets. The British Software Alliance study was used because the study was focused specifically on the IT Software Industry in the countries that were ranked. This ensured that the indicators that were used in the study were not only specific to the software industry but of great importance to the software industry when determining potential markets.

“Business Software Alliance (BSA) is a nonprofit trade association created to advance the goals of the software industry and its hardware partners... Headquartered in Washington, DC, BSA is active in more than 80 countries, with dedicated staff in 11 offices around the globe: Brussels, London, Munich, Beijing, Delhi, Jakarta, Kuala Lumpur, Taipei, Tokyo, Singapore, and Sao Paulo” (British Software Alliance, 2011, p. 1).

After the overview of the indicators, the countries then will be ranked in order to find the top five countries that would be most profitable for DSB Mobile to enter. The countries will be ranked using data obtained from the World Bank and The World Factbook.

4.1. Quantitative Analysis - Indicators

Overall Business Category

This indicator is an assessment of the information technology business environment. This gives an understanding of the ease of doing business and the dynamics of the business

process in different markets. Business category is a general overview of the entire business market which involves the political, economic, social, technological, legal and environmental aspects of business in the chosen market. These factors help to give a clear understanding on the process and the procedures that companies looking to invest in a foreign market must do to start a business, maintain their business, or grow their business.

The overall business category helps companies assess the current business environment and how it would affect or impact their core business functions. Under the Overall Business Category, there are other indicators used to properly understand the business environment for the chosen market such as: (a) Foreign Investment Policy, (b) Private Property Protection, (c) Government Regulation, and (d) Freedom to compete.

IT Infrastructure

IT Infrastructure involves the infrastructure that is present in the market in terms of software, hardware, networks, and the facilities that are present for the IT companies to carry out their core activities such as software development, mobile development applications, mobile strategy and digital marketing. Having knowledge of the IT Infrastructure helps to gain knowledge of how developed the market is and it also helps to determine the resources that are currently present and available to interested businesses looking to expand into these markets. IT Infrastructure discusses mobile penetration which helps to measure the proportion of the population that has access to mobile phones and the total number of subscriptions in the total population.

This indicator aligns with the proportion of the population that has access to the internet and gives an idea of the target market that is present. This allows one to measure the level of receptivity within the population for IT companies. The IT Infrastructure Indicator takes into consideration the following sub-factors: (a) IT Investment, (b) PC Ownership, (c) Broadband Penetration, (d) Internet Security, and (e) Mobile Penetration.

Government investment in their information technology industry is very important for companies looking to expand into foreign market because it indicates the growth potential of these markets. With this type of investment, it allows for governments to help make these markets more attractive as it helps the IT industry remain competitive. The more attractive a market is, the more foreign companies will want to invest, which allows improves the amount of highly skilled labor and increases productivity.

Human Capital

Human Capital is an assessment of the knowledge, talents, and technical skills that a population has to offer. Human Capital takes into consideration education levels which helps to understand the capabilities of the population. This helps to measure the productivity of the population and their output which is essential for the IT industry as the IT industry is constantly changing and needs to respond to changes at a moment's notice.

It is important to have knowledge about the human capital in order to properly assess if the market has the skills that are in line with the core business of the company. Human Capital also helps to give an idea of the capacity of the market in terms of their creativity and innovation which is pertinent to IT companies, as innovation is a factor that helps propel IT companies forward. Human Capital consists of other factors including the following: (a) Enrolment in higher education, (b) Enrolment in science, (c) Employment in IT, and (d) Quality of technology skills.

R&D Environment

Research & Development in this sense could be performed by private institutions such as universities or research facilities or they could be funded by government agencies. This environment is pertinent because it helps to foster innovation which is important. This allows companies to stay competitive in their sectors when there is a well-established R&D

environment. At the same time, it also means there is the infrastructure in place such as institutions, networks and databases available for research and development.

Patents play an important role in the R&D environment because knowledge of the number of residents that file for patents helps to explain the competitiveness in this market. Furthermore, a high number of patents being filed indicates a well-established patent filing process and an environment that encourages innovation. Research & Development includes other factors in order to properly understand the entire R&D Environment, such as: (a) Public Sector R&D, (b) Private Sector R&D, (c) Patents, and (d) Royalty and License fees.

Legal Environment

The Legal Environment measures the legal rules that exist in the chosen market. This takes into consideration the laws and procedures that exist when establishing a company or even exporting to a foreign market. The legal aspects give an idea of what is required when setting up a business, such as registering the business and the requirements such as needing a physical office in that country, or the procedure involved when filing for permits. The legal environment takes into consideration the protection laws that exist for these companies, such as strong data protection laws and ensuring that there is protection against cyber-attacks.

The Legal Environment also measures the level of protection and the type of protection that is in place online, which is important as most of their business operations take place in online platforms and using online databases. Under legal environment it is important to consider the following factors: (a) Intellectual property protection, (b) Enforcement of IP rights, (c) Electronic signature, (d) Data privacy and spam, and (e) Cybercrime.

Support for IT Industry Development

Support for the IT Industry comes in many forms. These forms include support from the local government, such as government grants for funding projects or even grants to encourage businesses to set up in this sector. Aside from funds, support would come in the

form of educational programs to help educate these IT companies, tax incentives, and startup packages. Support would also include having the necessary infrastructure in place to be able to advance in the IT Industry.

Support is essential for industry development because it gives an idea of the potential growth of the industry and it also gives an idea of the general direction that the industry is moving. Support for IT industry development includes the following factors: (a) Access to investment capital, (b) E-government strategy, (c) Public Procurement of IT, and (d) Government technology neutrally.

4.2. Qualitative Analysis – Interview with the General Manager of DSB Mobile

On July 21st, our team met up with the General Manager of DSB Mobile to discuss the findings for IT Competitiveness in different countries. The general manager was presented with the results of the rankings from the IT industry competitiveness index which was ranked by the British Software Alliance in 2011. We presented him with the top twenty countries to get feedback on whether DSB Mobile would be open to entering one of these countries. The top fifteen countries included: United States, Finland, Singapore, Sweden, the United Kingdom, Denmark, Canada, Australia, Ireland, The Netherlands, Israel, Switzerland, Taiwan, Norway, and Germany.

Upon assessment, the General Manager mentioned that, although he did have a few friends that worked within the industry he did not have a strong and solid base within these countries. From the list his countries, his choices were Germany, Canada and the United States. On the other hand, he mentioned that depending on the business environment, he was open to entering a country other than the ones he had initially mentioned.

He further expressed his interest in expanding into Latin American countries that were in closer proximity to Peru, if there was a better opportunity to grow the business than in another foreign market. He explained that these countries were appealing for several reasons

such as the attractiveness of the region centers around their evolving economies, capable workforce, convenient time zones, laws and regulations that benefit the IT sector, educational infrastructure that guarantees supply of new resources, and low cost. Within South America, he mentioned four countries - Argentina, Bolivia, Brazil, and Uruguay. Brazil for example offers a lot of possibilities but with the recent hiccup in their economy and the existence of barriers within the software industry, DSB Mobile is not looking to pursue this market now. Argentina and Uruguay both have developed software industries and this is mainly attributed to the quality of their workforce although both already export heavily to The Netherlands and the UK.

Bolivia was of great interest to DSB Mobile. This is mainly attributed to the fact that the internal software market in Bolivia is relatively small but interesting since most companies (large, medium and small) still need to systematize their business processes, production and customer service in order to be more efficient and more competitive. Furthermore, the quantity of graduates in this field is not sufficient for the requirements of software development companies. This provides DSB Mobile with an opportunity to explore this market.

Mexico, although not in South America, was another point of interest for DSB Mobile. The software Industry in Mexico continues to grow with impressive speed the General Manager stated. Some of the reasons for this includes its proximity to the United States and a growing number of investments flowing into the country. According to research that was carried out by Latin American Private Equity and Venture Capital Association, capital investments in Mexico dramatically increased to \$978 million in the first half of 2015 from \$403 million in the first half of 2014. Much of these investments were placed directly into Mexico's rich technology sectors, and this is one of the reasons that has made Mexico one of the fastest growing economies in Latin America. More recently, IBM invested over \$1

Billion into setting up cloud centers in Mexico. The General Manager mentioned that he has contacts at the Chamber of Commerce in Peru, and this contact was willing to connect him to a few software companies established in Mexico. In entering a new market, Joint ventures are normally the easiest way to penetrate a new market, and therefore, a connection like this would be deemed appropriate.

On August 2nd, a second very short meeting took place with Zico Herrera, the General Manager and Giovanni Rubini, an IT Consultant. This meeting was set up for the team to inform the General Manager and his team on the progress of the project and take up any questions and suggestions posed.

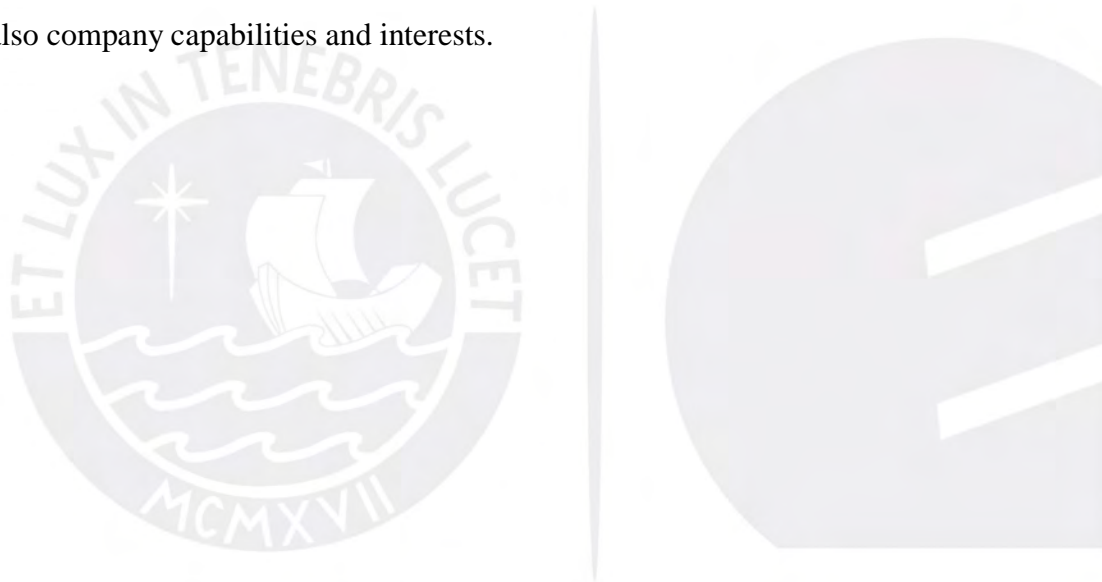
Both, the General Manager and the IT Consultant, expressed their desire to measure certain indicators in potential markets. These indicators included: cost and duration that it takes to close a deal in the chosen markets, the time it takes to see return on investment, size of the markets and how much of the market share they could possibly secure, and what the most popular products and services held the most demand in the market. Furthermore, they wanted to see the legal restrictions and barriers that existed for software companies trying to enter the chosen markets. One of the biggest concerns they had for the United States was the size of the country and how each state was different in terms of laws and market demographics. They wanted to know what specific states were the most attractive. Zico mentioned the need to identify if big software companies such as IBM or Oracle had invested in these markets as this would imply that there was potential growth in these markets and there would be data to support this potential growth. All these concerns were taken down, and team got back to further research.

4.3. Conclusions

Selecting a number of indicators as a measure of picking the most attractive market is vital as these indicators describe some of the most important factors to consider before

penetrating a new market. Entering a new market is a challenging task on its own. It is therefore vital that an in-depth research is done to measure some key success factors and what indicators and steps need to be taken in order to ensure that the most appropriate market is selected. Each company will have different indicators to measure their success level. For DSB Mobile, these indicators were rooted in factors that were specific to the software industry. These indicators included (a) overall business environment, (b) IT infrastructure, (c) human capital, (d) R&D environment, (e) legal environment and (f) support for IT industry development.

Furthermore, a number of meetings and interviews were set up with Zico, the General Manager as it is also important to take into consideration not only industry facts and figures but also company capabilities and interests.



Chapter V. Analysis of the Opportunity

When developing a framework of factors that influence a company's decision to enter a new market, the following factors were identified as important by The Software Alliance: (a) overall business environment, (b) IT infrastructure, (c) human capital, (d) R&D environment, (e) legal environment, and (f) support for IT industry development. Each of these factors has a list of sub-factors that help determine if a country is suitable to enter. The fishbone analysis of the opportunity can be seen below in Figure 26.

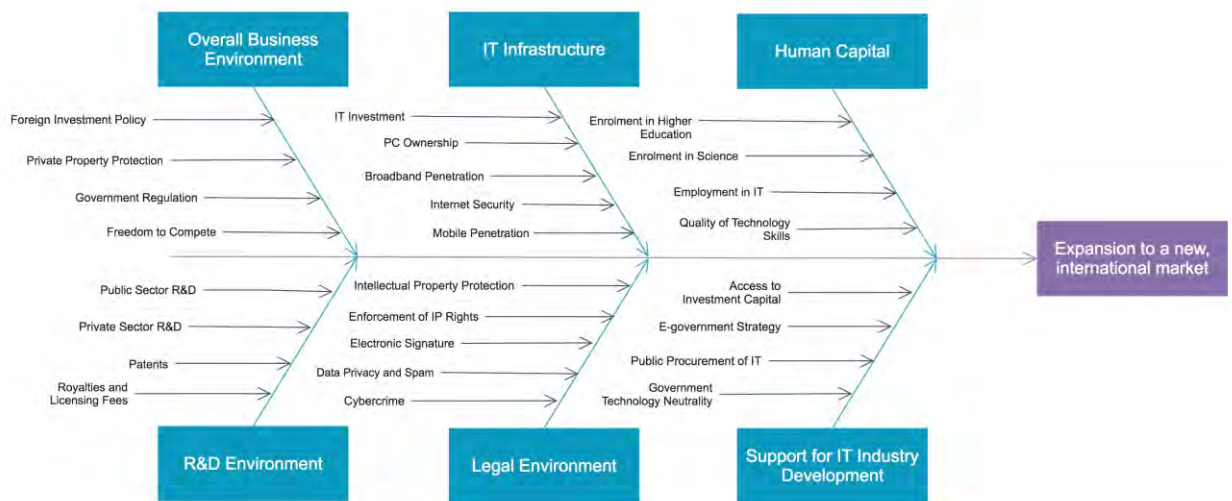


Figure 25. Breakdown of the Opportunity.

5.1. Identified Reasons for International Expansion

After consulting with Zico Herrera and Daphne Nano, the idea to expand internationally was approached. The reasons identified being that (a) DSB Mobile had successfully grown sales over the past four years and is projecting growth of 30% in 2017, (b) the increasing brand recognition within Peru, and (c) the opportunity to limit risk by diversifying. In order to determine the best countries to enter, the study from The Software Alliance using the main factors and sub-factors that should be considered will be examined in the next section of this chapter.

Firstly, DSB Mobile has been successful over the past five years in Peru which is demonstrated by its strong sales results which can be seen in chapter two. The company has been able to increase sales from 400,000 Peruvian Sol in 2012 to 2,300,000 Peruvian Sol in 2016. Each year the company has increased the value of sales exponentially. This implies that DSB Mobile has been able to attract new projects and has delivered quality results on its existing projects.

Secondly, DSB Mobile has done well to increase brand recognition with customers and partners. The company has built a list of 32 full-time customers within Peru of various sizes. Furthermore, the exclusive partnership agreement with Samsung allows DSB Mobile to sell Samsung products and test new software on these Samsung devices. The partnership with IBM allows DSB Mobile to experiment with artificial intelligence. Both agreements show that DSB Mobile is recognized player in the software development industry, which is why the company has secured deals with world renowned partners.

Finally, the opportunity to expand internationally should be undertaken to minimize risk. While DSB Mobile has been successful in the local market, it is an opportune time to diversify as the company has the full support of the executive team. Furthermore, Peru was affected by the floods of El Niño this year and the company projects that this will reduce the number of sales as the country aims to fully recover this year. This is an example of why it is important to diversify and target other markets. The business will have a better chance of recovering if it has interests in other markets so these markets mitigate the issues occurring at home.

Factors to be Considered when Seeking Expansion:

Below, the six factors and 26 sub-factors from the British Software Alliance study will be examined in detail.

Factor 1: Overall Business Environment

The four sub-factors for Overall Business Environment are: (a) foreign investment policy, (b) private property protection, (c) government regulation, and (d) freedom to compete. The Overall Business Environment's calculated weight in this study is 10% (The Software Alliance, 2011).

Sub-Factor 1: Foreign Investment Policy

This sub-factor refers to the government's and the private sector's overall reception to foreign investment, foreign policy, the risk of expropriation, and investment protection (The Software Alliance, 2011). This is an important factor as it determines if a foreign entity can compete with a domestic entity. For example, if government support is low for foreign investment, it will be challenging for an international entity to compete. This company could face issues such as higher taxes, the risk of losing the business to the state, or a lack of opportunities to invest. A country with a high score in this sub-factor represents a positive opportunity.

Sub-Factor 2: Private Property Protection

This sub-factor refers to the level of that property rights protected and that rules are enforced (The Software Alliance, 2011). This is viewed as the most important sub-factor in this section. For a company like DSB Mobile, this is essential to the success of a company. For example, if a country does not enforce property protection laws at all, then any company can copy another company's ideas without the fear of prosecution. DSB Mobile provides mobile and web development software and if the company's rights are not protected, it would be very hard for the company to successfully compete.

Sub-Factor 3: Government Regulation

This sub-factor refers to the amount of government regulation that is enforced when setting up a private business (The Software Alliance, 2011). In some countries, there are

many governmental obstacles that either delay the setup of a new business or prevent to the setup all together. It is essential that a company is aware of what the government requires so that the paperwork and licensing can be prepared beforehand. Country's that require the setup of an office would be less appealing than countries that allow DSB Mobile to export their services.

Sub-Factor 4: Freedom to Compete

This sub-indicator refers to the ability of existing businesses to compete in domestic markets (The Software Alliance, 2011). If there are many barriers then it is more challenging for a company like DSB Mobile to compete in a market when compared to a free market that enables companies to compete based on ability.

Factor 2: IT Infrastructure

The five sub-factors for IT Infrastructure are: (a) IT investment, (b) PC ownership, (c) broadband penetration, (d) internet security, and (e) mobile penetration. The IT Infrastructure's calculated weight in this study is 20% (The Software Alliance, 2011).

Sub-factor 1: IT Investment

This sub-factor refers to the markets spending on hardware, software, and IT services and is measured in US dollars (The Software Alliance, 2011). This is an important factor to consider as it offers insight into the spending capability of the market for information technology. For a company that develops mobile and web software, this metric is useful for determining whether to invest in a new market.

Sub-factor 2: PC Ownership

This sub-factor measures the number of desktop and laptop computers per 100 people (The Software Alliance, 2011). This sub-factor is also important specifically to DSB Mobile as software development applications are a main component of the business. The more

computers in the market, the more opportunity there is to sell a company's services. The focus for DSB Mobile in this instance is on businesses versus consumers.

Sub-factor 3: Broadband Penetration

This sub-factor measures the number of broadband connections per 100 people (The Software Alliance, 2011). Internet is an important factor for software development companies as the applications are generally only effective if there is a strong internet connection. As a result, this carries a heavy weight, similar to PC ownership.

Sub-factor 4: Internet Security

This sub-factor refers to the number of secure internet servers per 100,000 people (The Software Alliance, 2011). The level of internet security will have a positive effect on a company like DSB Mobile. The more secure the server, the more effective the software development applications will be.

Sub-factor 5: Mobile Penetration

This sub-factor is measured using the number of mobile phone subscriptions per 100 people (The Software Alliance, 2011). Similar to the number of computers owned, a major focus of DSB Mobile's business is mobile development applications. The higher the number of phone subscriptions, the more business that DSB Mobile could potentially attract.

Factor 3: Human Capital

The four sub-factors for Human Capital are: (a) enrolment in higher education, (b) enrolment in science, (c) employment in IT, and (d) quality of technology skills. The Human Capital's calculated weight in this study is 20% (The Software Alliance, 2011).

Sub-factor 1: Enrolment in Higher Education

This sub-factor is measured as the total number of students in higher education as a percentage of gross-university population (The Software Alliance, 2011). This helps a company determine if they have access to skilled labour in the market entry of choice.

Generally, it is more cost effective to hire employees in the new market of choice instead of relocating employees to a new country. It also provides a company like DSB Mobile with a larger talent pool to choose from.

Sub-factor 2: Enrolment in Science

This sub-factor is measured as the level of enrolment in tertiary-level science programs (The Software Alliance, 2011). This factor is important for a company like DSB Mobile as many of its employees have experience in the fields of sciences or engineering making the higher number of enrolment more appealing.

Sub-factor 3: Employment in IT

This sub-factor measures the number of people employed in the technology sector (The Software Alliance, 2011). This is important as it shows the number of people with experience in the industry and the more people with industry experience will appeal more to a company like DSB Mobile as it also provides the company with a larger talent pool to choose from.

Sub-factor 4: Quality of Technology Skills

This sub-factor measures the ability of the education system to train technologists with business skills including project management, customer-facing application and web development (The Software Alliance, 2011). While the performance of engineers and scientists in developing web and mobile applications is important, the ability to use business skills provides added value to DSB Mobile. It gives the employees in the sector skills that they can use in a leadership capacity later in their careers.

Factor 4: R&D Environment

The four sub-factors for R&D environment are: (a) public sector R&D, (b) private sector R&D, (c) patents, and (d) royalty and licence fees. The R&D Environment's calculated weight in this study is 25% (The Software Alliance, 2011).

Sub-factor 1: Public Sector R&D

This sub-factor measures the gross government expenditure on R&D in US dollars in terms purchasing power parity per capita (The Software Alliance, 2011). This shows a country's government support for technological advancement and indicates to a company the level to which the government supports R&D. A government that is willing to invest in this sector poses an advantage for a company in the web and mobile development sector.

Sub-factor 2: Private Sector R&D

This sub-factor measures the gross private sector's expenditure on R&D in US dollars in terms of purchasing power parity (The Software Alliance, 2011). This shows the willingness of independent companies to invest in R&D. This is very important as hardware is continuously changing and software needs to be updated to match. A company will be more effective if it invests in R&D to keep up with competition.

Sub-factor 3: Patents

This sub-factor measures the number of new domestic IT patent applications filed by residents each year as a percentage of total patent applications (The Software Alliance, 2011). The number of patent applications suggests a high level of research and a high level of protection for companies' rights. If there was an unwillingness to protect a company's intellectual property, people would be less likely to file patent applications.

Sub-factor 4: Royalty and Licence Fees

This sub-factor measures the receipts from royalty and licence fees in US dollars per 100 people (The Software Alliance, 2011). It shows how a company can make money from developing effective software solutions and selling the licencing rights to other companies. The more money that a company can make from licencing royalties, the more appealing a country is to conduct business in.

Factor 5: Legal Environment

The five sub-factors of the Legal Environment are: (a) intellectual property protection, (b) enforcement of IP rights, (c) electronic signature, (d) data privacy and spam, and (e) cybercrime. The overall Legal Environment's calculated weight in this study is 10% (The Software Alliance, 2011).

Sub-factor 1: Intellectual Property Protection

This sub-factor measures the comprehensiveness, transparency of IP legislation, and adherence to treaties (The Software Alliance, 2011). Countries with strict laws are more appealing for established It companies as it is harder for companies looking to enter to emulate the work that these established companies have done. It is more advantageous for companies looking to enter a new market if the competitive data is readily available and easy to mimic.

Sub-factor 2: Enforcement of IP Rights

This sub-factor measures the enforcement of IP legislation by government authorities and courts. (The Software Alliance, 2011). Intellectual property protection is essential and it is crucial for government to enforce protection laws to ensure that companies receive credit for developed applications. If treaties and legislation were not adhered to, anyone could reap the benefits of another party's creation.

Sub-factor 3: Electronic Signature

This sub-factor measures the status of electronic signature legislation (The Software Alliance, 2011). The significance of this legislation means that it is easier to sign contracts if the government recognizes an electronic signature as legally binding. It makes it easier for a web development or mobile development to conduct business in other countries if an electronic signature is deemed enforceable versus having to mail documentation or travel to

the site to sign smaller contracts that otherwise would not need a person from the company to be present.

Sub-factor 4: Data Privacy and Spam

This sub-factor measures the status of data privacy and anti-spam laws (The Software Alliance, 2011). It measures the ability to which a company can have its data protected while measuring how much commercial information that a company can legally send to its customers. As a result, it effectively protects both the company and the customer.

Sub-factor 5: Cybercrime

This sub-factor measures the status of cybercrime laws (The Software Alliance, 2011). If cybercrime laws are strong within a country then companies and individuals will be more likely to respect the rights of other companies. Countries with strong laws that discourage cybercrimes and are harsh on violators are more appealing for companies looking to pursue international expansion as it deters others from engaging in illegal activities.

Factor 6: Support for IT Industry Development

The four sub-factors of Support for IT Industry Development are: (a) access to investment capital, (b) e-government strategy, (c) public procurement of IT, and (d) government technology neutrality. The overall Support for IT Industry Development's calculated weight in this study is 15% (The Software Alliance, 2011).

Sub-factor 1: Access to Investment Capital

This sub-factor measures the access to medium-term finance for investment from domestic and foreign sources (The Software Alliance, 2011). The level of investment that DSB Mobile can attain is appealing to the company. If the company has access to more investment options, whether it is need it or not, it makes a country a better option to penetrate. The level of funding allows a company like DSB Mobile to invest more into the business.

Sub-factor 2: E-government Strategy

This sub-factor measures the existence of a coherent national government strategy to achieve e-government objectives improving efficiency of public service delivery and back-office operations (The Software Alliance, 2011). This shows the commitment level of government to improve electronic practices within the country. A committed government would be more appealing to a web and software development company.

Sub-factor 3: Public Procurement of IT

This sub-factor measures the government spending on IT hardware, software, and services and is measured in US dollars per capita (The Software Alliance, 2011). An increase in government spending supports IT companies and would therefore make it more appealing for foreign companies to invest. These foreign companies would benefit through an increase in government spending as it would give these companies access to newer information and technology.

Sub-factor 4: Government Technology Neutrality

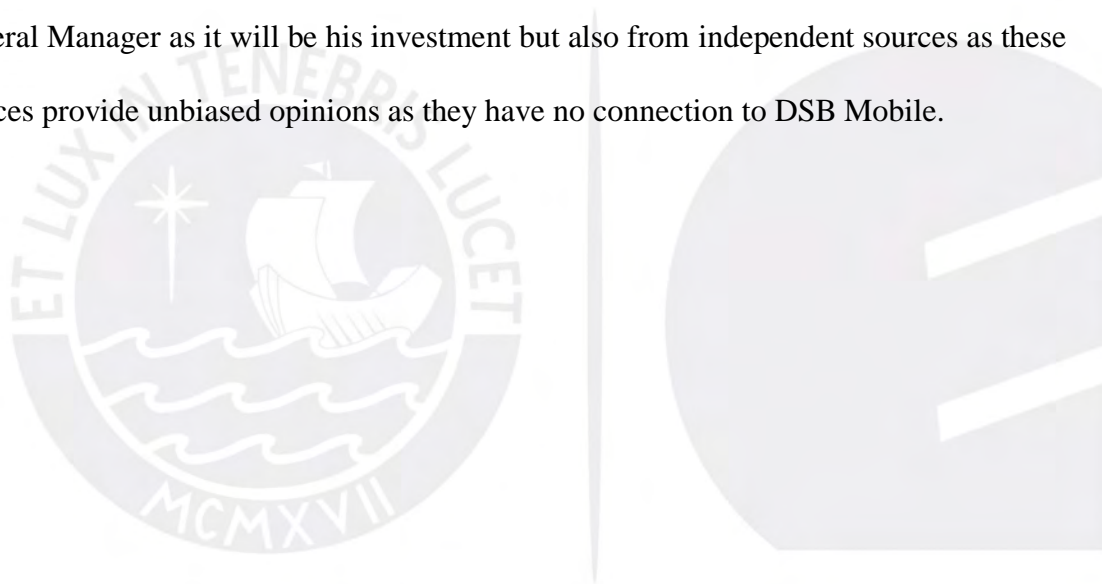
This sub-factor measures the existence of even-handed public policy stance on technology or sector development which supports an absence of preferential treatment by government for certain technologies or sector (The Software Alliance, 2011). A government that does not show preferential treatment to certain sectors is beneficial for DSB Mobile. The reason being that allegiance within the government could change to a different technology sector at any point which would cause investment to change. As a result, it would be better for DSB Mobile if the government invested heavily in technology but unbiasedly with regards to the sector.

5.2. Conclusions

The above six factors and 26 sub-factors provide guidance to DSB Mobile as the company looks to enter a new market. It shows factors that a reputable agency such as the

British Software Alliance finds important for technology companies evaluating new markets. The list of factors is comprehensive and therefore provides different elements that should a company should consider and with different weights which shows which factors are the most important. Another reason that this survey is effective is that it compiles data from numerous different sources. For example, data is collected from organizations such as The World Bank, The United Nations, The Economist, and various national governments.

While this information provides useful quantitative factors, it is important to include qualitative research to compliment the data entries. For example, interviews with the General Manager, the Sales Manger, and other independent sources can provide further insight into why a market would be appealing or not. It is important to gather information from the General Manager as it will be his investment but also from independent sources as these sources provide unbiased opinions as they have no connection to DSB Mobile.



Chapter VI. Assessed Solution Alternatives

This section will review the alternatives to capitalize on the opportunity, as well as the assessment of the alternatives. The first part is associated with the selection criteria used, as well as the basis of the analysis. Then, the second part is associated with the use of that selection criteria into the list of countries obtained with the post-filters applied to them. This will provide a list of alternatives that will be in accordance with the solution of the DSB Mobile case.

6.1. Alternatives to Capitalize on the Opportunity

The use of the British Software Alliance report is the first part of this analysis. However, the results shown there are associated with data reconciled in 2011, which reduces the current validity in a rapidly changing industry like the software industry. Therefore, in the current analysis, the first step is to choose the top 15 countries from the IT Competitiveness Index report and re-rank them by using data from the Global Economy Rankings and World Economic Forum Rankings to show the up to date rankings. Figure 27 shows the ranking of the top 20 countries from the IT Competitiveness Index report.

After selecting the list of the top 15 countries, with updated data and positions, the next step is to choose the countries best suited for international expansion. After interviewing the General Manager at DSB Mobile, it became evident that the company had interest in other countries such as the US, Germany, and Mexico. For this reason, after the countries were re-ranked according to the most recent data, the three best countries from the ranking were taken into consideration and were added to the other three countries proposed by the General Manager. After applying the filter, a deep analysis for each chosen country was developed in order to understand the business environment in each, to help make the best decision for DSB Mobile.

Index Top 20 in 2011

Country	Score	2011 rank	Rank change vs 2009
 United States	80.5	1	-
 Finland	72.0	2	-
 Singapore	69.8	3	+6
 Sweden	69.4	4	-1
 United Kingdom	68.1	5	+1
 Denmark	67.9	6	+2
 Canada	67.6	7	-3
 Australia	67.5	8	-1
 Ireland	67.5	8	+3
 Netherlands	65.8	10	-5
 Israel	65.8	10	+3
 Switzerland	65.4	12	+2
 Taiwan	64.4	13	+2
 Norway	64.3	14	-4
 Germany	64.1	15	+5
 Japan	63.4	16	-4
 Austria	61.4	17	+5
 New Zealand	61.3	18	+1
 South Korea	60.8	19	-3
 Hong Kong	60.8	19	+2

Figure 26. Index Top 20 in 2011. Data are from “Key Findings” by The British Software Alliance Website, 2011 (<http://globalindex11.bsa.org/key-findings/>).

6.2. Assessment of Alternatives

As was described previously, to calculate the new ranking for the year 2017, rankings were found using the aforementioned indicators for the Top 15 countries in line with the British Software Alliance - IT Competitiveness report. First and foremost, new rankings were found for each country from data sources such as the World Bank, Global Economy & The Global Innovation index to be able to have recent and relevant rankings. The result of each country’s new indicators can be seen below in Table 7.

After collecting the data for the countries chosen in the present analysis, a ranking per each factor was done. These new rankings per factor are used later as the source of the final indicator. Table 8 shows the ranking of countries per indicator. When the new rankings were updated, each indicator was assigned a respective weight. To make sure that the weights were

in line with 2011 IT Competitiveness report, the new indicators for 2017 were assigned the exact same weights as the ones that the report used in 2011, as can be seen below.

- Overall Business Environment 10%
- IT Infrastructure 20%
- Human Capital 20%
- R&D Environment 25%
- Legal Environment 10%
- Global Innovation Index 15%

Table 7

Country Rankings: Data Recollected for the Year 2016

Country	Business Environment (0-89)	IT infrastructure (mob subscript. Per 100 people)	Human Capital (85 as highest)	R&D Environment (0-4.29)	Legal Environment (Regulator quality)-2.34-2.26	Support for IT environment - Global Innovation (67.7 highest)
United States	75	117.59	78.86	2.73	1.3	61.4
Finland	73	135.45	85.86	3.17	1.83	58.5
Singapore	88	146.53	80.94	2.19	2.26	58.7
Sweden	72	130.38	83.29	3.16	1.81	63.8
United Kingdom	76	124.13	80.04	1.7	1.86	60.9
Denmark	75	128.34	82.47	3.08	1.73	58.7
Canada	78	82.98	81.95	1.61	1.71	53.7
Australia	80	132.8	80.08	2.2	1.8	51.8
Ireland	77	103.71	80.79	1.52	1.81	58.1
Netherlands	75	123.54	82.18	1.97	1.77	63.4
Israel	71	133.47	78.99	4.11	1.27	53.9
Switzerland	81	136.47	84.61	2.97	1.76	67.7
Norway	71	111.12	84.64	1.71	1.63	53.1
Germany	74	116.71	81.55	2.87	1.67	58.4

To rank the countries per indicator, each indicator value for the respective country was multiplied according to the specific weight that was assigned to the indicator. This was done for all the indicators per country and then added to give a final overall IT

Competitiveness Index score. The final overall score was then used to determine the new rankings of the countries.

Table 8

Country Rankings: Ranking of Countries per Indicator by the Year 2016

Country	Business Environment	IT infrastructure	Human Capital	R&D Environment	Legal Environment	Global Innovation Index
United States	7	10	14	7	13	4
Finland	9	3	1	2	3	8
Singapore	1	1	9	9	1	7
Sweden	10	6	4	3	4	2
United Kingdom	6	8	12	12	2	5
Denmark	7	7	5	4	9	6
Canada	4	14	7	13	10	12
Australia	3	5	11	8	6	14
Ireland	5	13	10	14	5	10
Netherlands	7	9	6	10	7	3
Israel	11	4	13	1	14	11
Switzerland	2	2	3	5	8	1
Taiwan	7	15	15	15	15	15
Norway	11	12	2	11	12	13
Germany	8	11	8	6	11	9

The world of business has drastically changed over the past few years due to the introduction and subsequent spread of the internet. The latter has enabled companies and firms to enjoy massive growth in countries that were previously inaccessible. We now look at several countries and how they compete within the software industry.

Table 9 shows the ranking of 15 countries and their performance in relation to the IT software industry. The table, which is a development from the IT industry competitiveness index includes the six main indicators evaluated before. The indicators look at the overall business environment, IT infrastructure, human capital, R&D environment, legal environment, and the global innovation index.

Table 9

Country Rankings: Ranking of Countries per Indicator by the Year 2016

Country	Total Score	Overall Index Score
Switzerland	3.4	1
Finland	3.7	2
Sweden	4.45	3
Singapore	5.5	4
Denmark	5.9	5
Netherlands	7.35	6
Israel	7.8	7
Australia	8.2	8
Germany	8.55	9
United Kingdom	8.55	10
United States	9.15	11
Norway	9.8	12
Ireland	10.6	13
Canada	10.65	14
Taiwan	14.2	15

When a company considers internationalizing, it is vital that a thorough assessment of countries is undertaken to determine the best possible market to enter. Looking at this ranking, the top three countries were Switzerland, Finland, and Sweden. These countries have generally been some of the top performing countries over the years and this is mainly attributed to their high ranking on the human development index. They have some of the best education and health systems and this has attributed to their wealth and development.

6.2.1. Switzerland

Switzerland ranks as the number one country given that it ranked in the top five of each of the factors, except in the case of legal environment where it ranked as number eight. Switzerland shows a large potential in the global innovation index, which is one of the main pillars of the software industry. The business environment and the IT infrastructure developed in the country are attractive points to look at too, obtaining the second place in both categories. In addition, Switzerland ranked third in the human capital category and the

labor costs per hour in IT services are between \$37.9 in the case of moderate quality to \$54.6 in the case of high-quality (Pronskyi, 2017).

Moreover, given that Switzerland is part of Central and Western Europe, which is the part of Europe with the highest cost in the software industry, it would be beneficial for DSB Mobile to enter other big markets with similar costs per hour in the region such as Austria, Belgium, France, Germany, or The Netherlands. Figure 28 shows the average price of IT services in Central and Western Europe.

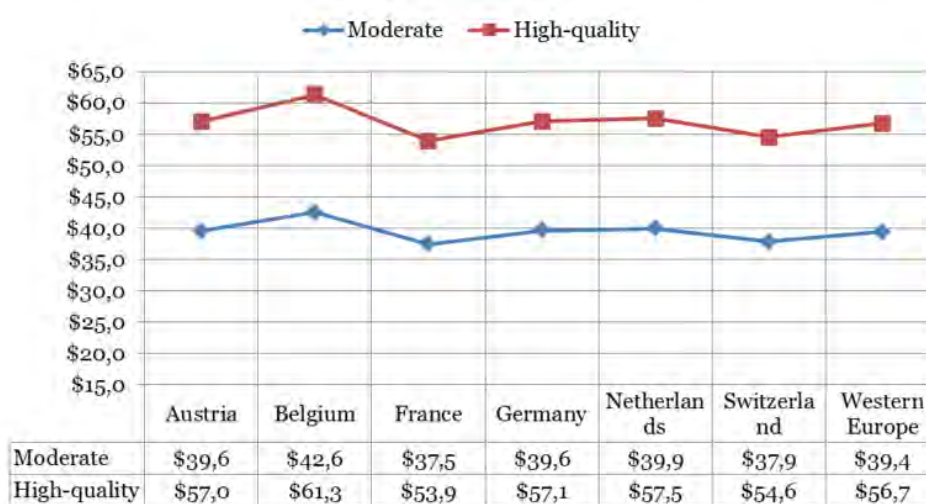
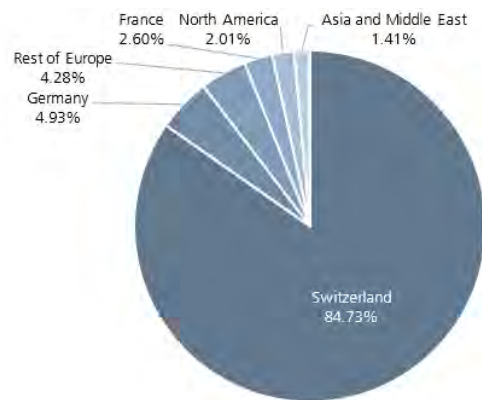


Figure 27. Prices for IT Services in Central and Western Europe. Data are from “The Cost for IT Services in Europe: Market Research” by Pronskyi, V., 2016 (<https://yalantis.com/blog/cost-services-europe-market-research/>).

Furthermore, Switzerland is one European nation that has a robust financial and industrial sector, has an advantageous geographic location in Central Europe, and the country has always been in a position of neutrality and is associated with peace. According to the Swiss Software Industry Survey that was conducted in 2015, Switzerland has a highly profitable software sector. The prospect of growth within the industry is broadly positive. The average revenue growth for software companies stands at 12%. These prospects are attributed to high expenditure on research and development. On average Swiss software companies spend roughly 14% of their revenues on future-oriented investments (Huber & Hurni, 2015). This is further illustrated on the results as Switzerland ranks number five when it comes to

investment on research and development. An interesting fact about this industry is that Switzerland has a low degree of internationalization. Only about 16% of the revenues from the Swiss software industry comes from countries outside Switzerland; and almost half of that revenue comes from one country – Germany. The division is showed in Figure 29. The Swiss Software Industry is not very concentrated. The largest 20% of the companies in the sample are responsible for around 80% of the industry revenue.



Source: SSIS 2015

N = 79

Figure 28. Internationalization of Manufacturers of Standard Software. Data are from “ICTswitzerland – Swiss Software Industry Survey” by Huber, T., & Hurni, T., 2015 (<http://ictswitzerland.ch/en/publikationen/swiss-s>).

On the other hand, Switzerland is known to be a “loyal partner.” Most Swiss software companies enter into multi-year partnerships with large platform providers such as Oracle, SAP, and Microsoft (Huber & Hurni, 2015). Most of the partnerships are over 10 years old. In this case, for a company like DSB Mobile it could prove challenging to secure partnerships in Switzerland. In terms of the business environment, according to the World Bank, it takes about 10 days to set up a business in Switzerland. Additionally, there is domestic credit provided by financial institutions which accounts for about 177% of the GDP (World Bank Data, 2016). Investment on Human capital is also emphasized in the Swiss nation. Software developers represent the largest number of employees in Swiss software companies,

accounting for roughly 42% of the workforce. Education and knowledge are important resources in Switzerland.

In order to do business in Switzerland, meetings have to be done by appointment and not spontaneously. The team should arrive at least five minutes early and be sure to telephone if they think they will be late. Arriving 15–20 minutes ahead of time will impress the Swiss. This is especially true in the German-speaking areas, where arriving even five minutes late for a business or social engagement can be a grave offence. Although French- and Italian-speaking areas tend to be slightly more relaxed about time, punctuality is well appreciated. Generally speaking, the German and French Swiss are conceptual, analytical thinkers; the Italian Swiss tend to think associatively. The German and French Swiss have a tendency to use universal rules to solve problems, while the Italian Swiss usually prefer to become personally involved in each situation. Also, the German and French Swiss rely on empirical evidence and other objective facts for verification, while Italian Swiss depend more on subjective feelings (Krentzel, 2014).

According to Itim International (2017), a Hofstede analysis of Switzerland shows that the country sits in the lower rankings of power distance with 34 points, meaning that inequalities amongst people are minimized. Switzerland scores 68 in individualism and collectivism, suggesting it is an individualistic society where the employee relationship is a contract based on mutual advantage, hiring and promotion decisions are supposed to be based on merit only, and management focuses on managing individuals. Likewise, a score of 70 on masculinity and femininity classifies Switzerland as a masculine country where people live in order to work, managers are expected to be decisive, and the emphasis is on equity, competition and performance.

In addition, Itim International (2017) gives Switzerland a score of 58 in uncertainty avoidance. This is good for DSB Mobile because it means that the country has an emotional

need for rules, believes that time is money, people have an inner urge to be busy and work hard, precision and punctuality are the norm, and decisions are taken after careful analysis of all available information. A score of 74 in long-term orientation classifies it as pragmatic where people believe that truth depends very much on situation, context and time; as well as present a strong propensity to save and invest; and thriftiness and perseverance in achieving results. Finally, a score of 66 in indulgence shows that this country possesses a positive attitude and has a tendency towards optimism. Figure 30 shows the Hofstede analysis of Switzerland in comparison with Peru.

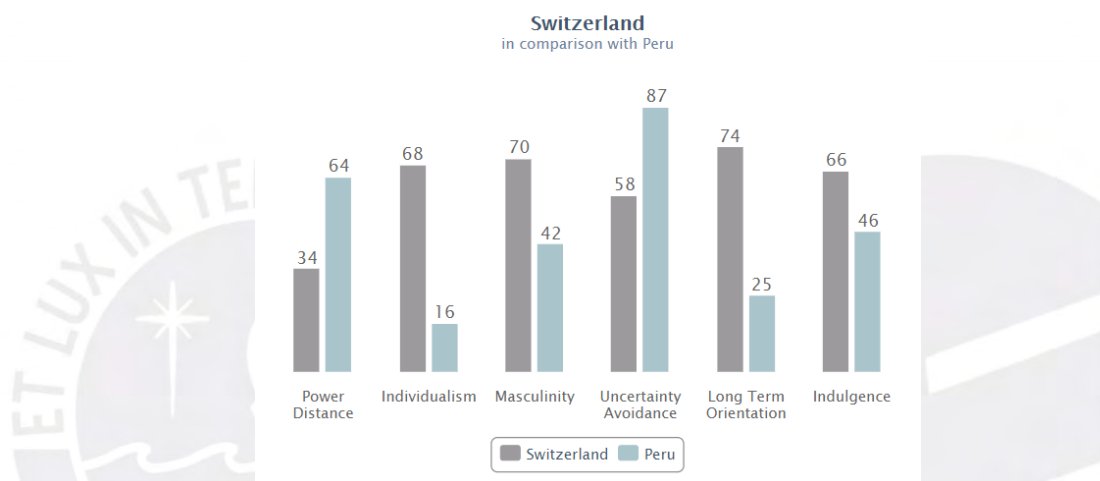


Figure 29. Hofstede analysis of Switzerland in comparison with Peru. Data are from “What about Switzerland” by Itim International, 2010 (<https://geert-hofstede.com/switzerland.html>).

According to The World Bank (2017), the procedures needed to start a business in Switzerland is centred on six steps with an expected time of 10 days. This procedure includes the following steps: (a) Place the paid-in capital in an escrow account with a bank, (b) Draft the articles of association in the presence of a notary public, (c) File the deed certifying the articles of association to the local commercial register to obtain a legal entity, (d) Pay stamp tax at post office or bank after receiving an assessment by mail, (e) Register for VAT, and (f) Enroll employees in the social insurance system (federal and cantonal authorities).

6.2.2. Finland

Finland was ranked as the second most appealing country in the software industry in the 2016. It demonstrates good qualifications in human resources and in the research and development environment, which could provide DSB Mobile with professional collaborators to choose from. On the other hand, the business environment and the innovation index are not as attractive in Finland, in comparison with the other countries. It ranked ninth in business environment and eighth in the innovation index. This could make it difficult to manage the operations there. In addition, the average price per hour in IT Services is attractive at \$38.80 per hour in the moderate performance and \$55.9 in the high quality. Figure 31 shows the list of Scandinavian countries and their average price per hour in IT Services.

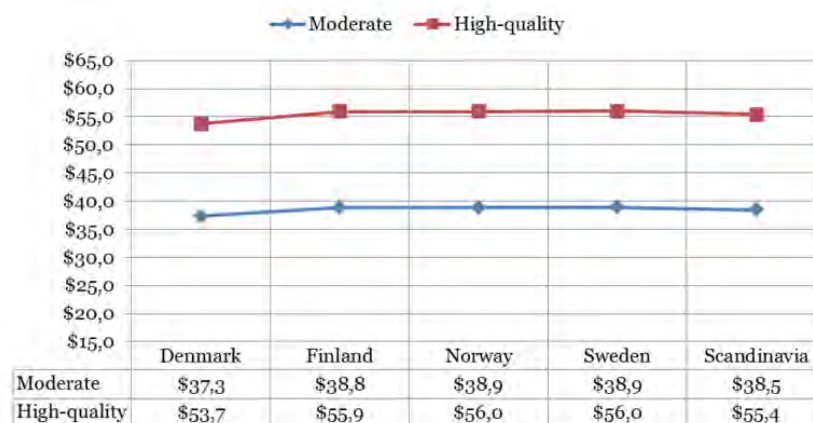


Figure 30. Prices for IT Services in Scandinavia.

Data are from “The Cost for IT Services in Europe: Market Research” by Pronskyi, V., 2016 (<https://yalantis.com/blog/cost-services-europe-market-research/>).

Moreover, to start a business in Finland, The World Bank (2017) describes a procedure of three steps with an expected time of 14 days. This procedure includes the following: (a) Deposit the paid-in share capital in a bank; pay the registration fee and get a receipt, (b) Submit a single start-up notification form to the NBPR (National Board of Patents and Registration) and the Tax Administration, and (c) File at a private insurer for pension insurance, accident insurance, and medical insurance of employees.

Regarding the business culture in Finland, Finnish people are viewed as modest, honest, and reliable. They place great value on words and mean what they say. Finnish frankness may seem a bit daunting but their way of communicating is upfront and uncomplicated, which is rather refreshing. In addition, Finns have a great love for their beautiful natural environment, so acting as a corporately socially responsible company is a plus. Finns endeavor to make productive use of their time. They follow timetables and other plans faithfully and expect the same of others. Being late is not an option, because it is considered to be very rude. Business attire is stylish and conservative in Finland. Men wear business suits and women should choose skirt suits, trouser suits, or dresses. For dinner, dress formally if no other dress code is given (Passport to Trade, 2014). With a population of 600,000 people in Helsinki, 83% of residents speak Finnish as their native language, while 6% speak Swedish and 11% speak other language.

According to Itim International (2017), a Hofstede analysis of Finland shows that the country has a score of 33 points in power distance, meaning that inequalities amongst people should be minimized. Finland scores 63 in individualism and collectivism, suggesting it is an individualist society where the employee relationship is a contract based on mutual advantage, hiring and promotion decisions are supposed to be based on merit only, and management focuses on the management of individuals. A score of 26 points in masculinity and femininity in this country classifies it as a feminine country where people work to live, managers strive for consensus, people value equality, solidarity and quality in their working lives, conflicts are normally resolved by compromise and negotiation, incentives such as free time and flexibility are favored, an effective manager is a supportive one, and decision making is achieved through involvement.

In addition, Itim International (2017) gives Finland a score of 59 in uncertainty avoidance, which is good for DSB Mobile because it means that the country has an emotional

need for, believes in the concept that time is money, people have an inner urge to be busy and work hard, precision and punctuality are the norm, and decisions are taken after careful analysis of all available information. A score of 38 in long-term orientation classifies it as normative where people has a strong concern with establishing the absolute truth, they are normative in their thinking, and they focus on achieving quick results. Finally, a score of 57 in indulgence shows that the people possess a positive attitude and are optimistic. Figure 32 shows the Hofstede analysis of Finland in comparison with Peru.

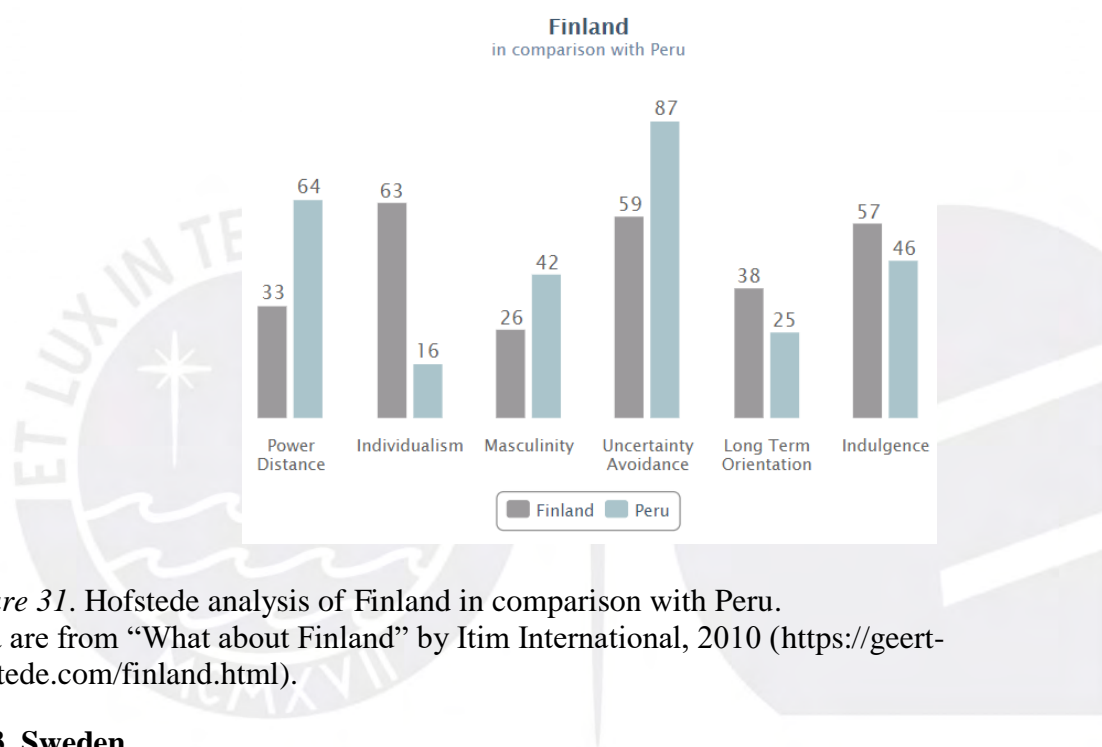


Figure 31. Hofstede analysis of Finland in comparison with Peru. Data are from “What about Finland” by Itim International, 2010 (<https://geert-hofstede.com/finland.html>).

6.2.3. Sweden

Sweden is a country with big potential in innovation. They rank second in the category and rank third place in the overall index. The innovation index measures the degree to which countries have an infrastructure that boosts a creative environment and encourages an innovative setting, as well as actual output. In Sweden, strong output is demonstrated in many new published research and technical papers, and registered patents while on the other hand Sweden is also seen to have a good input basis, with a stable political climate and high-quality education.

On the other hand, the business environment is not as attractive according to the ranking but looks good when looking at internal aspects like tax policies and possible revenues in the software industry. According to Pronskyi (2017), the labor cost per hour in IT services is between \$38.90 in the case of moderate to \$56 in the case of high-quality, and this is one of the reasons why Sweden places fourth in the human capital indicator. Entering Sweden, would help DSB Mobile to enter to in the Scandinavia region, which is the second smallest IT region on the continent after the Baltics, and which is also the most expensive in terms of IT outsourcing and consulting services (Pronskyi, 2017).

Sweden as one of the Nordic countries has always been a country that has ranked as one of the top countries globally in software development over the years and continues to improve. One of the reasons for this is its ability and capacities in human capital. Sweden makes big annual investments in research and education and is well-known globally for its high level of quality education. More recently there has been development in information and communications technology, where Sweden is one of the leading countries in the world. Software products and IT services earn about 32% of the turnover in the IT sector and the growth of software products and IT services has been very strong. The Software and IT services has visibly more companies than in any other sector in the IT industry.

In terms of the business environment in Sweden, the World Bank states that it takes about seven days to start a business (World Bank Data, 2016). This is three days less than Switzerland. Generally, Sweden offers a number of investment incentives and an overall favorable financial and business environment. For instance, in Sweden there is no import duties, personal property tax, or sales tax. This alone offers incentives to small businesses. The steps to start a business in Sweden are as follows: (a) Obtain a written statement from a Swedish bank certifying that the total cash amount to be paid for shares has been deposited in an account, (b) Submit the application to the Swedish Companies Registration Office and

obtain the registration certificate, and (c) Register with the Swedish Tax Agency. (The World Bank, 2017).

Sweden is one of the world's leading countries in corporate social responsibility (CSR). Issues such as climate change, gender rights, human rights, and anti-corruption are all considered when doing business. In Sweden, as in Finland and Denmark, punctuality is very important both when doing business and arriving at social engagements. Swedish people are quite talkative, at least when compared to their eastern neighbors. The Swedes on average know the English language well so it should be easy to communicate in English when doing business in the country. It is important to remember, that verbal agreements are binding in Sweden. Spoken words are taken seriously and Swedes expect you to acknowledge this (Passport to Trade, 2014).

According to Itim International (2017), a Hofstede analysis of Sweden shows that the country has a score of 33 points in power distance, meaning that inequalities amongst people should be minimized. Giving Sweden a score of 71 in individualism and collectivism, it is considered an individualistic society where the employee relationship is a contract based on mutual advantage, hiring and promotion decisions are supposed to be based on merit only, and management is the management of individuals. Likewise, a score of 5 points in masculinity and femininity classify it as a feminine country where people work to live, managers strive for consensus, people value equality, solidarity and quality in their working lives, conflicts are normally resolved by compromise and negotiation incentives such as free time and flexibility are favored, an effective manager is a supportive one, and decision making is achieved through involvement. Furthermore, Swedes are known for their long discussions until consensus has been reached and the whole culture is based around '*lagom*', which means not too much, not too little, not too noticeable, everything in moderation.

In addition, Itim International (2017) gives Sweden a score of 29 in uncertainty avoidance meaning there should be no more rules than necessary and if rules are ambiguous or do not work, they should be abandoned or changed. Schedules are flexible, hard work is undertaken when necessary but not for its own sake, but precision and punctuality do not come naturally. A score of 53 in long-term orientation does not express a clear preference in this dimension. Finally, a score of 78 in indulgence shows that this country possesses a positive attitude and people tend to be optimistic. Figure 33 shows the Hofstede analysis of Sweden in comparison with Peru.

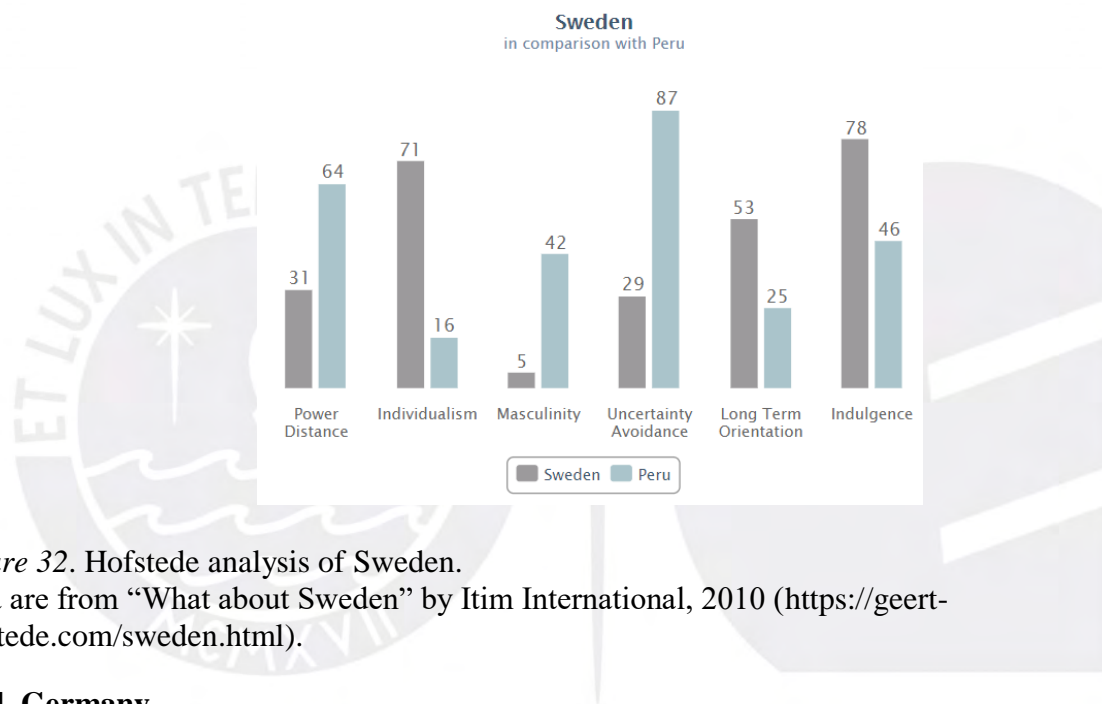


Figure 32. Hofstede analysis of Sweden. Data are from “What about Sweden” by Itim International, 2010 (<https://geert-hofstede.com/sweden.html>).

6.2.4. Germany

Germany in 2011 ranked 15th, but in the recalculation Germany moved up to number nine as of 2016. This indicates that Germany has improved significantly globally as a market for IT, it is now in the Top 10 countries in terms of competitiveness. As a business environment, Germany ranks eighth which puts it in the middle in terms of how easy it is to open a business, the level of government regulation and the amount of healthy competition. IT Infrastructure ranks at 11 which shows it has improved slightly and now has much more

mobile penetration in terms of the number of people that have access to mobile phones which also leads to the fact that there is now wider access to the internet.

Human capital in Germany ranks eighth which shows that their high levels of skilled labour, high levels of education and high labour productivity output. In research & development, Germany ranked sixth which shows that high-level institutions such as research facilities and universities that exist in Germany have helped it stay innovative in the IT market. The legal environment ranked 11th because there are more rigid regulations that need to be followed, Germany is very high on security and data privacy and this is one of the major requirements for foreign IT companies coming into Germany.

In 2021, the German software market forecasts to have a value of \$21,877.5 million, an increase of 7.4% since 2016. The compound annual growth rate of the market in the period 2016–21 is predicted to be 1.4% (Marketline, 2017b). Table 10 shows the German software market value forecast.

Table 10

German Software Market Value Forecast 2016–21

Year	\$ Million	€ Million	% Growth
2016	20,370.9	18,414.3	-0.9%
2017	20,385.2	18,427.2	0.1%
2018	20,576.9	18,600.5	0.9%
2019	20,914.4	18,905.6	1.6%
2020	21,391.7	19,337.0	2.3%
2021	21,877.5	19,776.2	2.3%
2016-21			1.4%

Adapted from “Software Industry Profile: Germany” by Marketline, 2017.

According to the Organization of Economic Cooperation and Development (n.d.), Germany has one of the top standards for higher education. University students in Germany in the fields of technology, sciences and engineering are the second highest number in OECD as they account for about 31%. It is also because of the high education standards that Germany has a highly capable labor force. More than 80% of the German population has a

degree in an academic field. This provides the population and specialized industries with a well-trained and skilled workforce. As companies grow, they tend to invest in capable human resources, therefore, for optimal performance and effectivity an educated workforce is vital. DSB would profit from this as it is a small enterprise looking to grow and with the right team on its side this can be achieved.

In terms of Transparency and Openness in German markets, the government has created an environment that allows for both local and foreign companies to thrive (Troillet & Santos 2016). Investments, ease of establishing a company and other incentives are just one way of creating an open market in Germany where a company like DSB would benefit. In addition to this, it is known that Germany has an advanced economy and developed legal and political frameworks that attract investors from all industries.

The process to establish a company in Germany consists of nine steps with an expected completion time of 10.5 days. The steps required are the following: (a) Check company's name at the local chamber of industry and commerce, (b) Notarize the Articles of Association and Memorandum of Association, (c) Deposit minimum capital into a bank, (d) File the Articles of Association through the notary public at the local Commercial Register, (e) Notify the local Office of Business and Standards of the establishment of the company, (f) Register with the Professional Association of the relevant trade, (g) Notify the local Labor Office of the establishment of the company, (h) Register employees for health and social insurance, and (i) Mail out the documentation to the Tax Office.

To close a deal with German people, it should be noted that Germans like to plan ahead. It is best to book meetings at least two to three weeks in advance. Punctuality is very important, with even a delay of a few minutes potentially causing offence, as lateness is perceived as a lack of respect for other people's time. If you feel you may be running even slightly late, it's best to call ahead and explain the situation. On entering a room, you should

greet the most senior business associate first, then others present, before waiting to be told where to sit. Expect meetings to stick to a set agenda and to be formal and functional with little or no time for small talk. As decisions will be made based on facts, rather than personality, presentations should be detailed and scientific, with information also provided in writing. Proposals will usually be analyzed thoroughly and decisions are usually made slowly and methodically. Sudden changes in business proposals or transactions are to be avoided, even if they might improve the outcome, as surprises can lead to unwelcome uncertainty. To close a deal in Germany, it is important not to rush proceedings by applying pressure. Patience is key and once decisions are made they are rarely overturned (Tidey, 2017).

According to Itim International (2017), a Hofstede analysis of Germany shows that the country has a score of 35 points in power distance which means Germans have a direct and participative communication and meeting style, control is disliked, and leadership is challenged to show expertise and best accepted when it is based on it. Germany's score of 67 in individualism and collectivism means it is considered an individualist society where the employee relationship is a contract based on mutual advantage, hiring and promotion decisions are supposed to be based on merit only, and management is the management of individuals. Likewise, a score of 66 points in masculinity and femininity classifies it as a masculine country where people live in order to work, managers are expected to be decisive, and the emphasis is on equity, competition and performance.

In addition, Itim International (2017) gives Germany a score of 65 in uncertainty avoidance, showing a strong preference for deductive rather than inductive approaches, be it in thinking, presenting or planning: the systematic overview has to be given in order to proceed. A score of 74 in long-term orientation classifies it as pragmatic where people believe that truth depends very much on situation, context and time; as well as present a strong propensity to save and invest; and thriftiness and perseverance in achieving results.

Finally, a score of 40 in indulgence shows that this country tends to lean towards cynicism and pessimism, does not put much emphasis on leisure time, and controls the gratification of their desires. Figure 34 shows the Hofstede analysis of Germany in comparison with Peru.

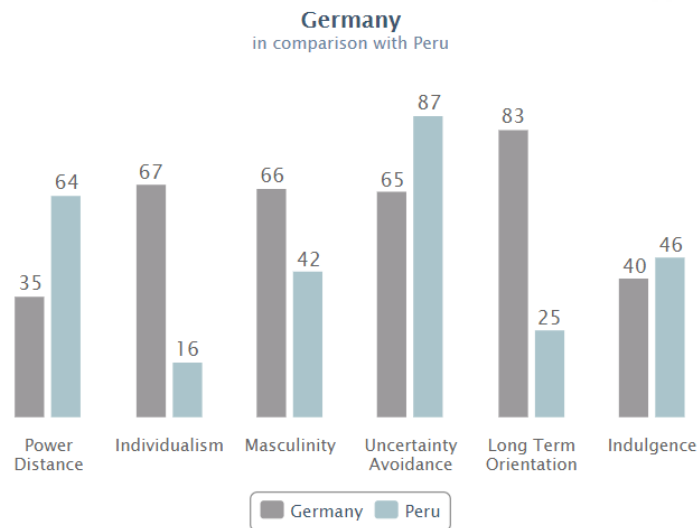


Figure 33. Hofstede analysis of Germany in comparison with Peru. Data are from “What about Germany” by Itim International, 2010 (<https://geert-hofstede.com/germany.html>).

6.2.5. Mexico

Mexico, although not part of the ranked countries, is a point of interest as DSB mobile is tentatively looking into exploring this market to broaden its presence in the Americas. Although also part of Latin America, Mexico falls under North America and is a possible connection to the rest of the North America. Mexico is known as the technology center of Latin America. With its close proximity to the United States, Mexico shares similar business values with the United States that have raised its technology sector as a formidable global entity. On the other hand, the difference of prices in the IT services between Mexico and USA is notorious, with an amount of roughly \$11 per hour, which in a big software project, could generate a big difference for the quantity of hours needed. Figure 35 shows the average prices per hour of America, including Mexico and USA.

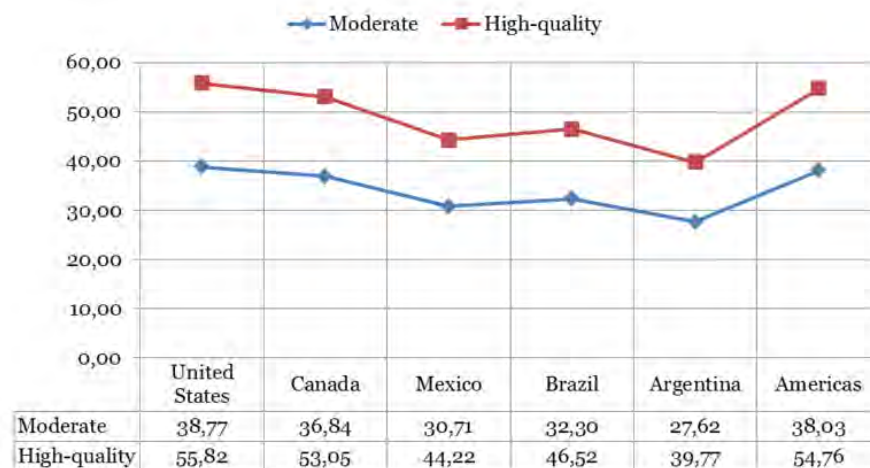


Figure 34. Prices for IT Services in America.

Data are from “The Cost for IT Services in the World: Market Research” by Pronskyi, V., 2016 (https://yalantis.com/blog/the_cost_for_it_services_in_the_world_market_research/).

According to research that was carried out by the Latin American Private Equity and Venture Capital Association, capital investments in Mexico dramatically increased to \$978 million in the first half of 2015 from \$403 million in the first half of 2014. Much of these investments were placed directly in Mexico’s rich technology sectors, and this is one of the reasons that has made Mexico one of the fastest growing countries in Latin America. Furthermore, Mexico has also benefited from large American companies like IBM who recently announced a \$1.2 billion investment in cloud centers in the country (Lopez, 2016). SME’s with big projects in the software industry, like DSB Mobile in Latin America, are sure to be motivated to set up office in the country.

Looking at the overview of the software industry in Mexico, the Mexican software market had total revenues of \$4.2bn in 2016, representing a compound annual growth rate (CAGR) of 3.8% between 2012 and 2016. Furthermore, the market is forecast to decelerate, with an anticipated CAGR of 3.4% for the five-year period 2016 - 2021, which is expected to drive the market to a value of \$5.0bn by the end of 2021 (Marketline, 2017c). This is further shown in the Table 11 below.

Table 11

Market Value Forecast for Mexico

Year	\$ Million	MXN Million	€ Million	% Growth
2016	42,480.0	79,384.0	3,841.0	-0.6%
2017	4,286.0	80,093.0	3,875.3	0.9%
2018	4,384.9	81,941.9	3,964.7	2.3%
2019	4,543.6	84,906.9	4,108.2	3.6%
2020	4,768.6	89,112.6	4,311.7	5.0%
2021	5,030.5	94,005.6	4,548.4	5.5%
2016-21				3.4%

Adapted from “Software Industry Profile: Mexico” by Marketline, 2017.

In 2016, the software infrastructure segment was the most lucrative segment with total revenues of \$2.3bn which is equivalent to 54.8% of the market’s overall value. This is further illustrated in the Figure 36.

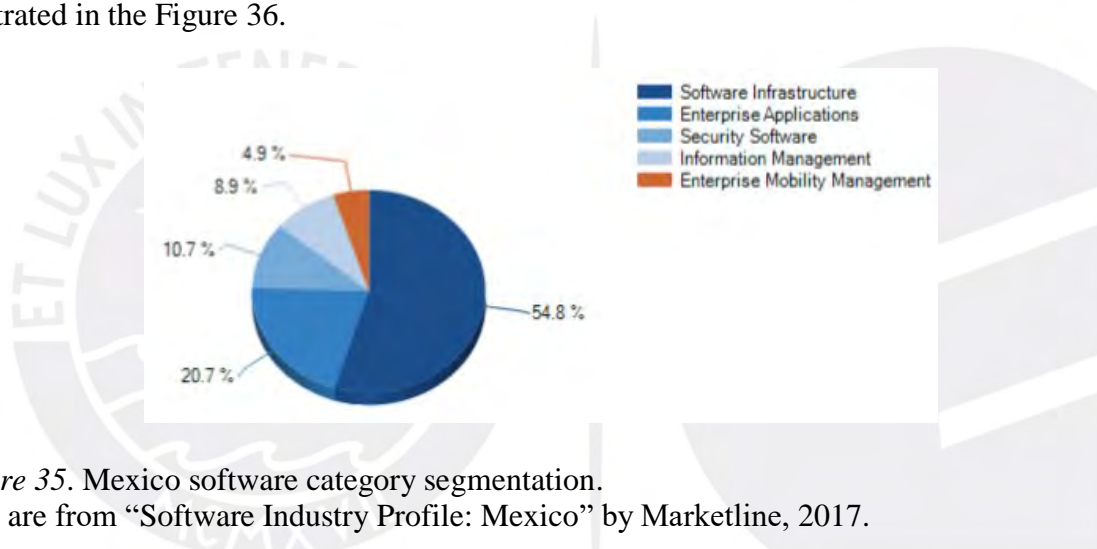


Figure 35. Mexico software category segmentation. Data are from “Software Industry Profile: Mexico” by Marketline, 2017.

The process to start a business in Mexico consists in eight steps with an expected time of eight and a half days. The steps are the following: (a) Obtain the authorization of using the company name online, (b) Notary prepares the deed and parties sign it at the notary public, (c) File the deed of incorporation with the Public Registry of Commerce, (d) Obtain Tax Registry Number (RFC) at the Tax Administration System, (e) Register with the Mexican Social Security Institute, (f) Register with the local tax administration for payroll tax, (g) Notify the local government online of the opening of a mercantile establishment, and (h) Register with the National Business Information Registry.

According to Itim International (2017), Hofstede analysis of Mexico shows that the country has a score of 81 points in power distance, which classifies it as a hierarchical society. This means it reflects inherent inequalities, centralization is popular, subordinates expect to be told what to do, and the ideal boss is a benevolent autocrat. A score of 30 on individualism and collectivism means it is considered a collectivistic society where the society fosters strong relationships where everyone takes responsibility for fellow members of their group, as well as offence leads to shame and loss of face, employer and employee relationships are perceived in moral terms, hiring and promotion decisions take account of the employee's in-group, management focuses on the management of groups. Likewise, a score of 69 points in masculinity and femininity classifies it as a masculine country where people live to work, managers are expected to be decisive, and the emphasis is on equity, competition, and performance.

In addition, Itim International (2017) gives Germany a score of 82 in uncertainty avoidance, meaning there is an emotional need for rules, time is money, people have an inner urge to be busy and work hard, precision and punctuality are the norm, innovation may be resisted, and security is an important element in individual motivation. A score of 24 in long-term orientation classifies it as normative where people have a strong concern with establishing the absolute truth, they are normative in their thinking, and focus on achieving quick results. Finally, a very high score of 97 in indulgence exhibits a willingness to realize their impulses and desires with regards to enjoying life and having fun, as well as possessing a positive attitude and being optimistic. Figure 37 shows Hofstede's analysis of Mexico in comparison with Peru.

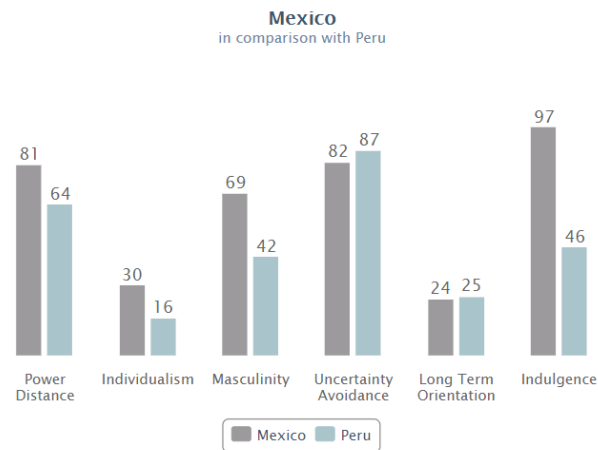


Figure 36. Hofstede analysis of Mexico in comparison with Peru. Data are from “What about Mexico” by Itim International, 2010 (<https://geert-hofstede.com/mexico.html>).

6.2.6. United States of America

In the recalculation of the indicators to observe the top countries to expand into, it can be seen that the United States is now ranked as number 11. The US scored 75 out of 89 for overall Business environment, meaning that it presents a very secure environment for doing business. Politically and economically there is stability to allow for safe and secure running of businesses. There is enough healthy government regulation to ensure that not anyone competitor is able to monopolize the market and there is enough healthy competition that allows for the environment to not only stay competitive but to also create grounds for innovation.

Out of the top 20 countries, the US ranked the lowest in Human Capital at 78.86 out of a possible 100, demonstrating that they did not have as highly a skilled labour force and educational levels were not as high as most of the Nordic countries who are known to invest a lot of money into their education systems to help their population stay competitive in IT. The US IT Infrastructure now ranks at number 10 showing that it does have a solid infrastructure system and networks for IT companies. With the size of the population in the US, this presents a huge market in terms of mobile phone subscriptions, user access to mobile

applications and their access to the internet. The research and development environment in the US ranked at 2.73 out of 4.29, which placed the United States in the middle in terms of both public and private spending on Research & Development.

For the legal environment aspect, the US ranked at 13 implying that it may not be so easy or it may be a lengthy process to setup a business as a foreign company because of many requirements that may extend the process. It is important to note that the US is always updating their endeavors to fight cybercrime and protect intellectual property. Lastly, for the Global Innovation Index, the US ranked number four. This could be attributed to the amount of money that the government invests in trying to keep their industries innovative over the years.

When doing business in United States, it is useful to remember that the dominant style of communication in US business culture is friendly and to the point. You are expected to express yourself politely, but clearly, and it is assumed that you will ask directly if there is something you do not know or understand. Be prepared to be generous with your compliments, though, and to word criticism carefully. When you meet your future employers, co-workers, or business contacts for the first time, it is obviously time for introductions. A firm handshake and friendly smile are appropriate in a corporate setting, regardless of the other person's gender, age, or seniority in the company. The dress code would vary according to the sector and the company that you are doing business with (InterNations, 2017).

In 2021, the North American software market is forecasted to have a value of \$138.2 billion, an increase of 12.9% since 2016. The compound annual growth rate of the market in the period 2016–21 is predicted to be 2.5%. (Marketline, 2016). Table 12 shows the North America software market value forecast made by Marketline for the years 2016 to 2021 in terms of value expressed in \$ billion and percentage growth per year.

Table 12

North America Software Market Value Forecast: \$ billion, 2016–21

Year	\$ billion	% Growth
2016	122.4	-0.3%
2017	123.4	0.8%
2018	125.6	1.8%
2019	128.9	2.6%
2020	133.0	3.2%
2021	138.2	3.9%
2016- 21		2.5%

Adapted from “Software Industry Profile: North America” by Marketline, 2017.

According to Itim International (2017), a Hofstede analysis of United States shows that the country has a score of 40 points in power distance and a very high score of 91 in individualism what shows the following characteristics: (a) Both managers and employees expect to be consulted and information is shared frequently, (b) Americans are accustomed to doing business or interacting with people they don't know well, (c) Americans are not shy about approaching their prospective counterparts in order to obtain or seek information, (d) In the business world, employees are expected to be self-reliant and display initiative, (e) Hiring, promotion and decisions are based on merit or evidence of what one has done or can do, and (f) Communication is informal, direct and participative to a degree. Likewise, a score of 62 points in masculinity classifies it as a masculine country where people live to work, managers are expected to be decisive, and the emphasis is on equity, competition and performance.

In addition, Itim International (2017) gives the United States a score of 46 in uncertainty avoidance, meaning that there is a fair degree of acceptance for new ideas, innovative products and a willingness to try something new or different, whether it pertains to technology or business practices, as well as they tend to be more tolerant of ideas or opinions from anyone allowing the freedom of expression. A score of 26 in long-term orientation

classifies it as normative where people have a strong concern with establishing the absolute truth, they are normative in their thinking, and focus on achieving quick results. Finally, a score of 68 in indulgence shows that this country possesses a positive attitude and tends to be optimistic. Figure 38 shows the Hofstede analysis of United States in comparison with Peru.

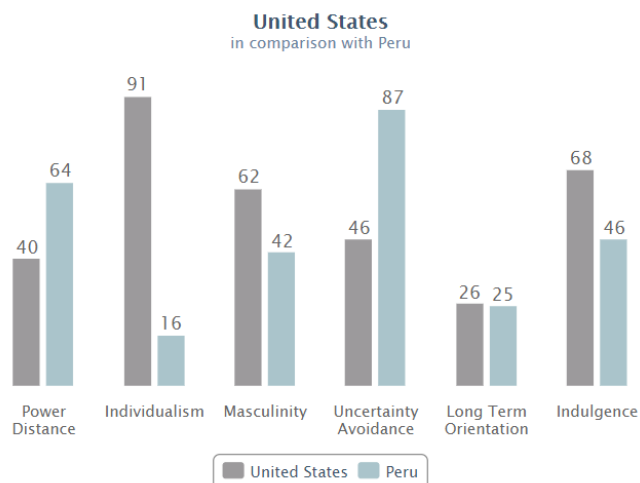


Figure 37. Hofstede analysis of United States in comparison with Peru. Data are from “What about United States” by Itim International, 2010 (<https://geert-hofstede.com/united-states.html>).

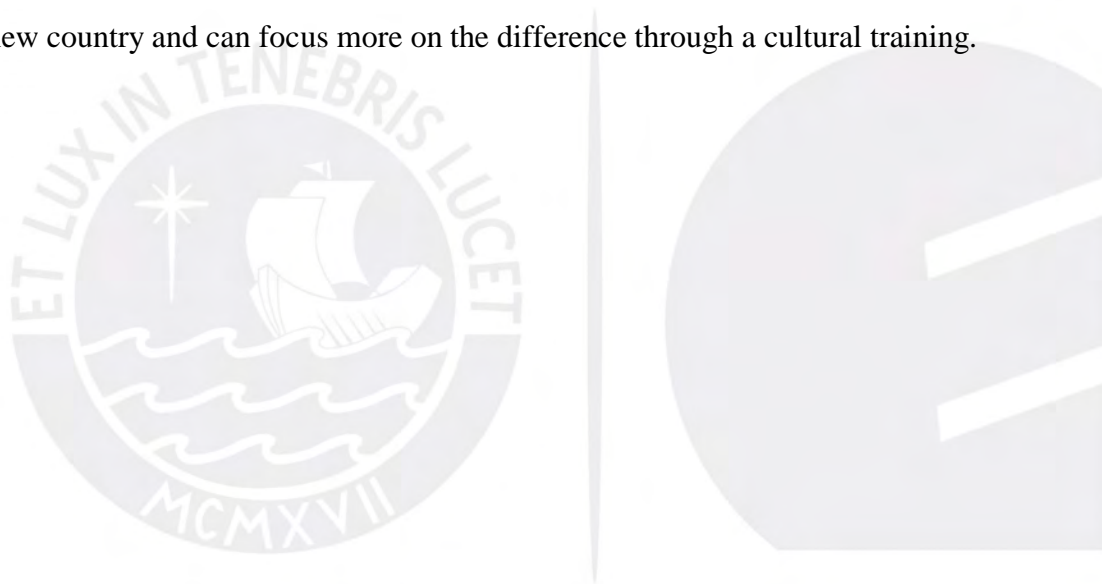
6.3. Conclusions

Using the IT Competitiveness Report conducted by the British Software Alliance provides DSB Mobile with a reduced scope of countries to penetrate. This report took into consideration 66 countries from different continents including Europe, The Americas, Asia, Africa, and Oceania. When the scope was reduced to the 20 most appealing countries to do business in, in the IT sector, Europe dominated the list. North America, Asia, and Oceania had smaller representation, while Africa and South America had no countries on the list at all.

The above data provides compelling evidence as to why Switzerland, Finland, Sweden, Germany, the US, and Mexico are compelling markets to target for DSB Mobile. The data provided shows the value of each market as well as the forecasted growth for several markets. While the initial hope of DSB Mobile’s General Manager was to enter either Germany, the US, or Mexico, the study conducted by the British Software Alliance suggests

that Switzerland, Finland and Sweden are better options to their high scores in the factors used in the study. It is important to use this study as the basis of the decision as it was conducted by industry professionals and covers a comprehensive list of factors and sub-factors.

For a company looking to expand internationally, it is important to study cultural dimensions of the new country. For a company to assume that citizens of a new country behave the same way as the local country would be very short sighted. This is why Geert Hofstede's framework is an important part of this chapter. That being said, the main decision to enter a market should be based on growth and financial opportunity. Hofstede's framework provides supplemental feedback that allows a company to see how its country differs from the new country and can focus more on the difference through a cultural training.



Chapter VII. Proposed Solution

As the previous analysis revealed, the market in Europe is very interesting and provides a good option for DSB Mobile as it looks to expand its business. DSB Mobile's original thought was to enter Germany, which is one of the best countries ranked based on the price average for IT Services but the IT Global competitiveness study demonstrates that Switzerland would be the better option to start operations in the European Market. Likewise, the proposed solution would include the expansion plan for DSB Mobile in Europe for the following five years, as well as entering the North American market.

Considering the analysis of the different markets such as the European market and North America market, there are 2 lines proposed for DSB Mobile to be developed at the same time. The first one is associated with the European market, given that this one is the most promising in terms of business and return. This one involves entering the market by creating a company in Switzerland and then expanding inside Europe. Likewise, Switzerland had an ICT market value of €25.1 billion for the year 2015 (European IT Observatory, 2016). Even though Finland and Sweden are ranked second and third place overall, an additional analysis based on the small difference in IT cost per service, the geographical distance, and the language similarities between Switzerland and Germany, make Germany the second country to enter in the European Market. In addition, Germany has a big potential in terms of software market size, because it is valued \$20,370.9 million (Marketline, 2017b). The next countries to enter are Finland with a software and IT service industry valued in €8.7 billion by the year 2014 (Luoma, 2015) and Sweden with a software market size of \$2.2 billion for the year 2013 (Marketline, 2014).

In the second line, taking into consideration the expectations of DSB Mobile to enter the North American market, it is attractive and could be very profitable, given that the United States of America has a huge market share in comparison with the rest of the countries. Their

software market value was about \$109.3 billion by the year 2016, which represented roughly 32.6% of the global market value (Marketline, 2017a). This is why entry to this continent should be done by targeting first the USA and then Mexico which had a software market value of \$4,248.9 million (Marketline, 2017c). Figure 39 illustrates the proposed line for the start of expansion of DSB Mobile into the world.

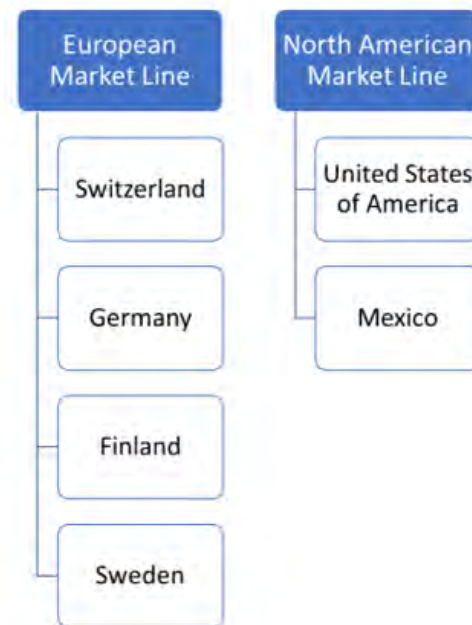


Figure 38. Proposed Solution for DSB Mobile.

When expanding operations into a new country, an analysis is needed. In the case of Switzerland, Bechtel (2008) describes Zurich as the most attractive region for conducting business in all of Europe thanks to its low taxes, ability to foster innovation, and good accessibility. Therefore, the city to enter first in Switzerland should be Zurich. In the case of Germany and according to Desmarais (2016), Berlin is the most profitable city to establish a company looking to have a presence or to expand in Europe. The facts that support this idea are as follows (a) Berlin is the fastest growing startup ecosystem in the world, (b) The city's culture is infused with creativity, openness, and transformation, (c) Investment is growing, (d) There is a constant influx of people, (e) The cost of living is cheaper in comparison with other cities in Germany, and (f) The economy is stable. Moreover, in terms of choosing a city

to start operations in Finland, DSB Mobile has to look at the capital city - Helsinki. Helsingistä (2017) mentions that Helsinki is an important hub of business and culture. In addition, Helsinki is the administrative center of the country given that it is the capital and where the Parliament of Finland and the ministers are located. Finally, in the case of Sweden, Business Sweden (2017) says that after Silicon Valley, Stockholm is the second most prolific technological hub globally. Profitable and well-known Swedish companies include Spotify, King, Truecaller, Klarna and Mojang. Adding brands such as IKEA, Volvo, H&M, and Ericsson to the list makes it clear why Forbes has listed Sweden among the top five best countries to do business in.

In the case of the North American line and according to USA Corporate Services Inc (2017), Delaware is the best state to incorporate a startup. Some of the benefits of conducting business in Delaware could be seen in the Court of Chancery and its Business Legal System, given that this court only hears business decisions, and its judges have extensive knowledge of Delaware business laws. This can be compared to states where the judges are elected or politically appointed, and they may have no business knowledge or experience at all. In addition, one of the most attractive benefits of Delaware is the tax savings benefits from using a Delaware Corporation or Delaware LLC. Those tax saving benefits are as follows: (a) No state income tax for Delaware companies to operate out of state, (b) No business license required for Delaware corporations not operating in Delaware, (c) No inheritance tax on stock held by non-residents of Delaware, (d) No state sales tax on intangible personal property, and (e) Shares of stock owned by non-resident aliens are not subject to Delaware taxes. Finally, the ease and quickness of creating a company in Delaware has a standard of 24 hours after processing the document. Likewise, according to Teach Beacon (2017), the best cities in The United States to run a sales division in the software industry are Seattle, Washington; Austin,

Texas; Raleigh and Durham, North Carolina; Denver and Boulder, Colorado; and Phoenix, Arizona.

According to Virgin (2017), Mexico City is considered as one of the world's best start-up hubs. In the main benefits of doing business there is the very sociable way of doing business, a vibrant economy, and good employees and partners are not hard to come by. On the other hand, the drawbacks are a legal system which is at times tricky to navigate, while the lack of adherence to time presents a challenge for those unfamiliar with the country or culture.

After successfully entering Switzerland in year one, the idea is to enter Germany the following year in year two. The German sales force will be managed by the IT Consultant in Switzerland, as this person will be fluent in German, and Switzerland currently works closely with Germany in the software industry. In fact, 61.3% of Switzerland's exports in this industry are sent to Germany (Hurni, Huber & Dibbern, 2016). Even though DSB Mobile will continue with operations in Peru, having an IT Consultant with an office in Switzerland will provide the perception that the software is Swiss.

In year four, provided the ventures to Switzerland and Germany have been successful as measured by reaching goals and targets set aside by DSB Mobile, the idea is to expand operations to Finland as Finland ranks number two on the list of countries in the British Software Alliance study. The European office will remain in Switzerland but an IT Consultant will be hired to managed the Swedish market, with the major focus being Helsinki. In year six, provided the first expansions have been successful as measured by reaching projections and targets agreed upon by DSB Mobile, the idea is to hire another sales consultant in Stockholm to focus on the Swedish market. Sweden ranks number three on the list of appealing markets in the survey done by the British Software Alliance.

Chapter VIII. Implementation Plan and Key Success Factors

This chapter describes the activities associated with the implementation plan proposed for DSB Mobile in order to expand to a new country, as well as the implementation of the Gantt chart that shows the estimated time to achieve the goal of entering into the markets described in the previous chapter. Finally, the key success factors, including enablers and risks that are required to execute the proposed implementation plan are described in full detail.

8.1. Activities

The presented proposal is a six-year implementation plan to be followed by DSB Mobile to enter into the European market as well as the North American market. This is why, this section is divided into two market lines that represent both markets. The first one involves entering Europe in the following countries: (a) Switzerland, (b) Germany, (c) Finland, and (d) Sweden. The second one involves entering the North American market through The United States of America and then Mexico.

8.1.1. European Market Line

The first step is to establish a company in Switzerland. Given that working in a different environment could imply cross-cultural issues, the executive manager of DSB Mobile must take a cross-cultural training course, with a focus on Swiss culture. This course can be taken online, but would be more beneficial if it was taken in Switzerland. The training from this course would provide the executive manager the ability to gain not only an in-depth understanding of the culture and work ethic of the Swiss population, but would also provide the manager with an opportunity to understand the most effective ways to communicate with people from a variety of cultural backgrounds and nationalities. Table 13 shows the procedures necessary to create a company in Switzerland as well as the associated costs.

Table 13

Procedures to Create a Company in Switzerland

Procedure	Time	Associated Cost
Place the paid-in capital in an escrow account with a bank	1 day	200 CHF
Draft the articles of association in the presence of a notary public	3 days	0.1% of capital (minimum CHF 500 and maximum CHF 5,000) + CHF 20 per signature
File the deed certifying the articles of association to the local commercial register to obtain a legal entity	3 days	CHF 600+ 0.02% of capital exceeding CHF 200,000 up to a maximum of CHF 10,000
Pay stamp tax at post office or bank after receiving an assessment by mail	1 day	no charge
Register for VAT	1 day, within 30 days after being subject to VAT	no charge
Enroll employees in the social insurance system (federal and cantonal authorities)	1 day	no charge

Adapted from "Time required to start a business" by World Data Bank, 2016.

To better manage operations in Switzerland, it is advised to hire a local IT Consultant who will perform the duties of a project consultant for DSB Mobile. This includes the sales process and the supervision of projects while interacting with clients and the Peruvian Project Manager responsible for creating the software application. Hiring a Swiss national IT Consultant plays an important role and dependence in DSB Mobile's integration into local markets given that many people in Switzerland speak English, French and German, which will allow DSB Mobile to communicate with non-English speaking clients. Proficiency in Spanish would be a plus for the Swiss IT Consultant especially when communicating with DSB Mobile managers back in Peru as Spanish is the lingua franca of the company. Likewise, this person should have strong experience as an IT Consultant or as a Sales Manager in the Swiss software sector, as well as his or her own portfolio of clients. This portfolio of client will be useful for DSB Mobile given that it could be used as the first target market. Table 14 shows the list of requirements proposed for an IT consultant according to PayScale.

Table 14

IT Consultant Description Proposed by PayScale

IT Consultant Description
Most employers require that candidates have a bachelor's degree in information technology, computer science, or other relevant fields.
IT consultants may be required to have various computer-related certifications.
They must be flexible since many organizations' computer systems run 24/7.
They may have rotating shifts.
They meet clients to determine their IT requirements.
They must be able to travel to customer sites.
They must have excellent presentation skills.
They must keep themselves up to date with various software and hardware technology.
They are often required to take additional computer classes and go to workshops and conferences.
They must be able to work in a team environment.
They may be required to train and coach new or more junior IT consultants.

Adapted from "Information Technology (IT) Consultant Salary" by PayScale, 2017 ([http://www.payscale.com/research/US/Job=Information_Technology_\(IT\)_Consultant/Salary](http://www.payscale.com/research/US/Job=Information_Technology_(IT)_Consultant/Salary)).

The Swiss IT Consultant would then undergo intensive training in Peru with DSB Mobile for two weeks for him or her to understand the processes of DSB Mobile, as well as the different solutions that the company can offer to their clients. After gaining a firm understanding of the Peruvian environment, the Swiss IT Consultant would be required to develop a benchmarking report describing the similarities and differences in user design between both countries, and possible functionalities to the current applications that would make them attractive for the foreign market based on a competitor analysis, among other factors. This report should also include a profile analysis of Swiss clients that he or her has worked with, as well as analyze the opportunities with his or her own portfolio of clients. This report will then be sent to the Operations Manager in Peru for further analysis. Figure 40 shows the IT Consultant salary study made by PayScale for Finland, where the estimated price is CHF 95,609 per year.

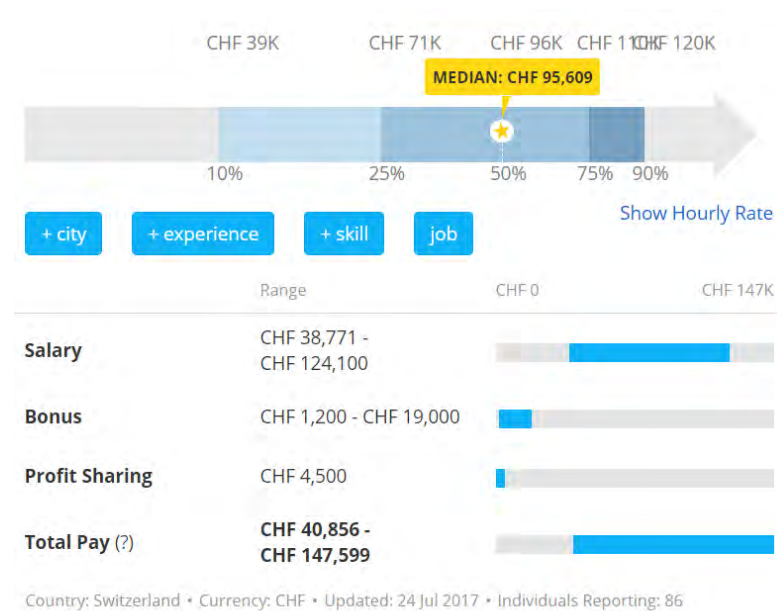


Figure 39. IT Consultant Salary for Switzerland.

Data are from “Information Technology (IT) Consultant Salary (Switzerland)” by PayScale Human Capital, 2017

([http://www.payscale.com/research/CH/Job=Information_Technology_\(IT\)_Consultant/Salary](http://www.payscale.com/research/CH/Job=Information_Technology_(IT)_Consultant/Salary)).

The Operations Manager in Peru must make sure the report made by the Swiss IT Consultant is completely understood to be able to manage the development projects according to the guidelines of the Swiss sector. Furthermore, the Operations Manager must propose an improvement plan for the current applications and receive a cross-cultural training in order to learn how to manage relations with Swiss clients. The Operations Manager and the Swiss IT Consultant should then provide a cross-cultural training session for the Project Managers that will work with Swiss clients. The General Manager, also based in Peru, should clearly define a group of goals, commonly referred to as KPIs per month, per quarter, and per year that must be achieved by the Swiss IT Consultant. These goals should be SMART, an acronym that means: specific, measurable, attainable, realistic, and time-based.

After DSB Mobile has established itself in Switzerland, the Swiss IT Consultant will be in charge of the German market. This will happen in year two, considering that DSB Mobile will move into the Swiss market in year one. Given the proximity of both countries

and that there is no language barrier, it would be a logical step for this person to manage the new country. It also would allow him or her to have a bigger range of potential clients. The Swiss IT Consultant should develop a benchmarking report for Germany, similar to the previous one for Switzerland, so that the Operations Manager can review it and make an improvement plan associated to this market. Figure 41 shows the IT consultant salary study made by PayScale for Germany where the median price is €53,351 per year.

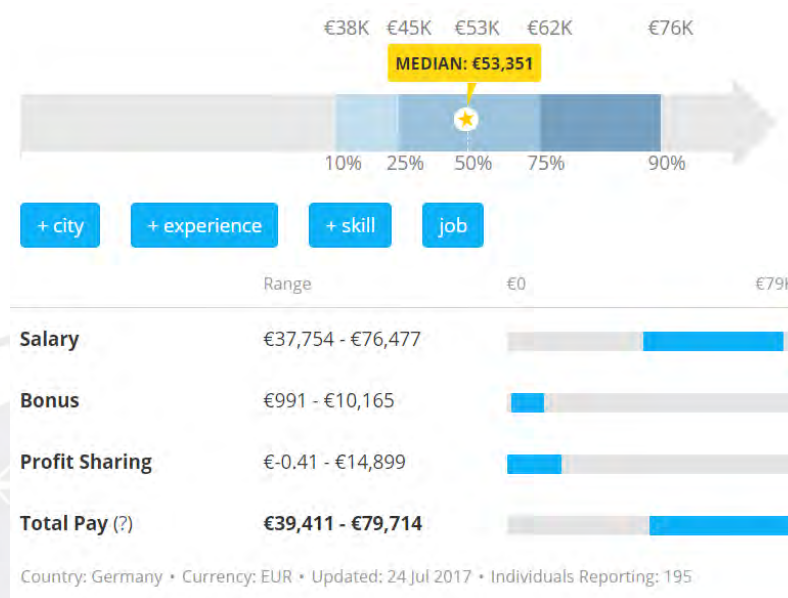


Figure 40. IT Consultant Salary for Germany. Data are from “Information Technology (IT) Consultant Salary (Germany)” by PayScale Human Capital, 2017 ([http://www.payscale.com/research/DE/Job=Information_Technology_\(IT\)_Consultant/Salary](http://www.payscale.com/research/DE/Job=Information_Technology_(IT)_Consultant/Salary)).

In year four, DSB mobile should expand its operations into a new market in Finland, if goals and targets are achieved in Switzerland and Germany as previously set by the management team at DSB Mobile. A new Finish IT Consultant would then be needed for this market. Therefore, DSB Mobile should hire a Finish IT Consultant who would manage the sales department in Finland. The requirements for this new collaborator will be the same as the requirements of the Swiss IT Consultant, excluding the language requirements. The languages requirements should be English, Finnish, and Swedish. A background in Spanish would be beneficial. DSB Mobile would need to repeat the activities of training and

benchmarking report for the Finnish IT Consultant, and then the Operations Manager from Peru will be responsible for developing an improvement plan with the new consultant. Figure 42 shows the IT consultant salary study made by PayScale where the median salary is €51,984 per year.

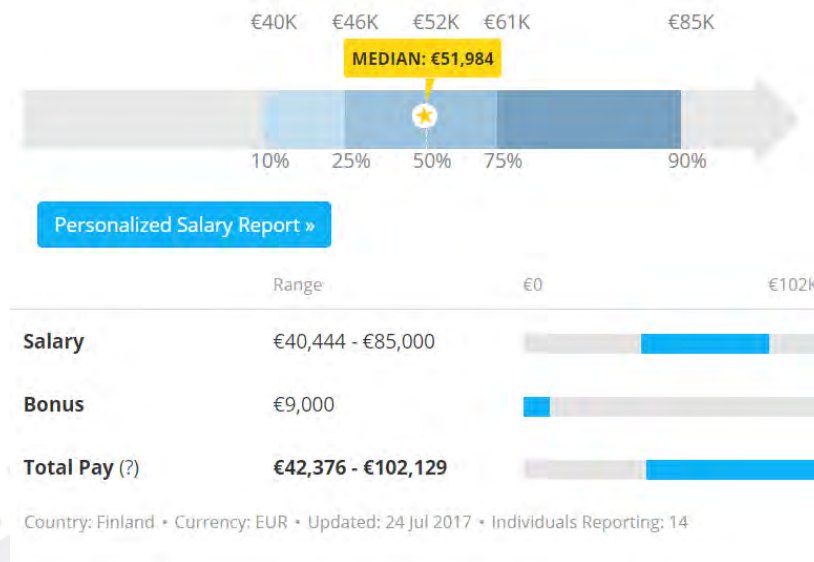


Figure 41. IT Consultant Salary for Finland.

Data are from “Information Technology (IT) Consultant Salary (Finland)” by PayScale Human Capital, 2017

([http://www.payscale.com/research/FI/Job=Information_Technology_\(IT\)_Consultant/Salary](http://www.payscale.com/research/FI/Job=Information_Technology_(IT)_Consultant/Salary)).

In year six, DSB Mobile would then expand to a new country, with it being Sweden. Again, this is if operations are running smoothly in Switzerland, Germany and Finland and then sales targets and objectives are being fulfilled. In this case, the company would hire an additional IT Consultant for this country, with the same requirements as the previous ones, but with the languages requirements of Swedish and English. He or she will then review the activities of training and benchmarking report, like the Finnish IT Consultant, and then the Operations Manager will work with this new employee on developing an improvement plan. Figure 43 shows the IT Consultant salary study made by PayScale where the median salary is \$51,255 USD per year.

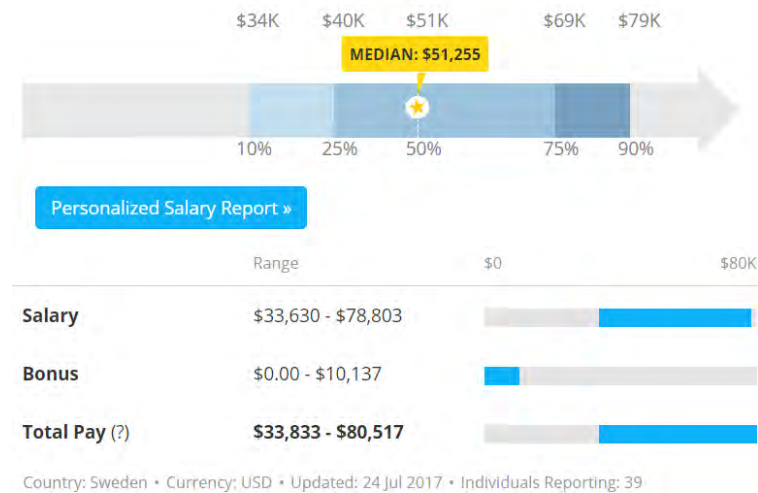


Figure 42. IT Consultant Salary for Sweden.

Data are from “Information Technology (IT) Consultant Salary (Sweden)” by PayScale Human Capital, 2017

([http://www.payscale.com/research/SE/Job=Information_Technology_\(IT\)_Consultant/Salary](http://www.payscale.com/research/SE/Job=Information_Technology_(IT)_Consultant/Salary)).

8.1.2. North American Market Line

Provided operations are moving smoothly in Switzerland and Germany, the US would be a good option to run parallel with expansion into Finland in year four, or as an alternative to Finland. International expansion to the North American market is a highly profitable option for DSB Mobile when taking into consideration the US represents roughly 31.5% of the software market (Marketline, 2017). In this case, the first step will be to establish a company in the United States of America, specifically in the state of Delaware, where the tax policies would allow the company to reduce costs. Then, the following step is to hire an IT Consultant from the US. This IT Consultant must have experience in the American software sector, as well as his or her own portfolio of clients. The US IT Consultant would be brought to Peru for cultural training. He or she would learn the sale process of DSB Mobile, as well as the different solutions that the company can offer its clients. This person could then build a sales plan that is in line with the company policies and the US market. Figure 44 shows the salary demands for an IT Consultant in the US with the median salary equaling \$76,088 USD per year.

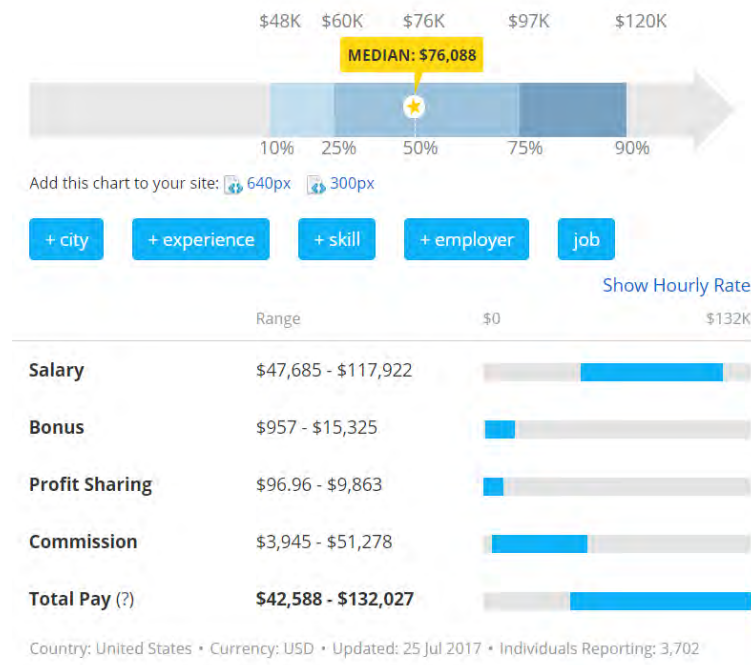


Figure 43. IT Consultant Salary for USA.

Data are from “Information Technology (IT) Consultant Salary (United States)” by PayScale Human Capital, 2017 ([http://www.payscale.com/research/US/Job=Information_Technology_\(IT\)_Consultant/Salary](http://www.payscale.com/research/US/Job=Information_Technology_(IT)_Consultant/Salary)).

After understanding the Peruvian environment, the American IT Consultant will then develop a benchmarking report describing the possible differences between the American requirements and the Peruvian requirements in terms of the software industry. This report will include a profile analysis of the American clients in terms of culture, as well as analyze the opportunities with his or her own portfolio of clients. This report will be developed for the whole team, but specifically for the Operations Manager, as well as the Project Managers that would be responsible for building solutions for the American clients.

In year six, DSB Mobile should enter the Mexican market, provided operations are running smoothly and sales targets are being achieved in all other countries. For this reason, a Mexican IT Consultant will be hired. Then he or she must pass the same process as the American IT Consultant in terms of training and developing a comprehensive report for the Operations Manager. Figure 45 shows the salary demands for an IT Consultant in Mexico with the median salary equaling MXN 300,000 per year.

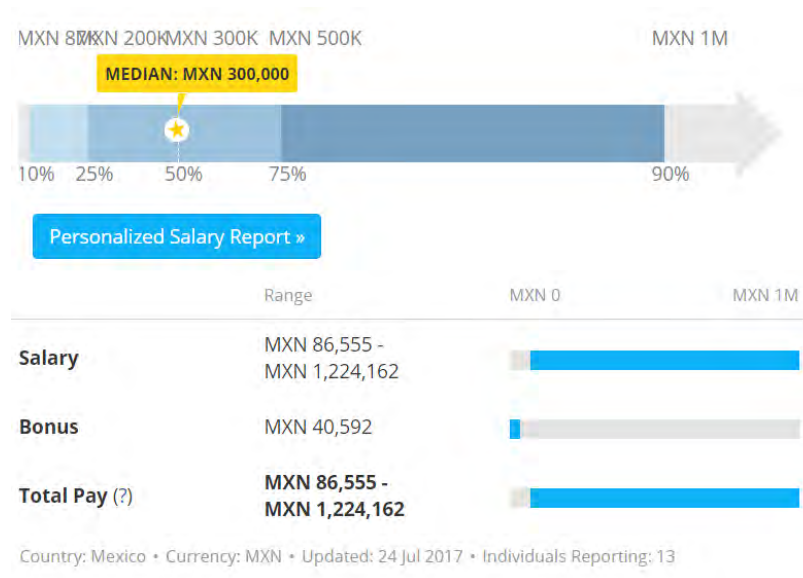


Figure 44. IT Consultant Salary for Mexico.

Data are from “Information Technology (IT) Consultant Salary (Mexico)” by PayScale Human Capital, 2017

([http://www.payscale.com/research/MX/Job=Information_Technology_\(IT\)_Consultant/Salary](http://www.payscale.com/research/MX/Job=Information_Technology_(IT)_Consultant/Salary)).

8.2. Implementation of Gantt Chart

The present Gantt chart takes into consideration the activities described in the previous section, as well as the resources that will oversee each activity and the duration of each one. Likewise, the resources who will be involved in order to allow the successful execution of the plan are the following: (a) General Manager, (b) Operations Manager, (c) Sales Manager, (d) Swiss IT Consultant, (e) German IT Consultant, (f) Finnish IT Consultant, (g) American IT Consultant, (h) Swedish IT Consultant, (i) Mexican IT Consultant, and (j) An external company in charge of providing the cross-cultural training. In addition, the times required for starting operations in the foreign countries are the following: (a) 70 days to start operations in Switzerland, (b) 56 days to starts operation in The United States of America, and (c) 49 days to starts operations in each one of the other countries included in the scope of the expansion plan. Figure 46 shows the implementation Gantt chart including the activities, resources in charge of each one, and the duration.

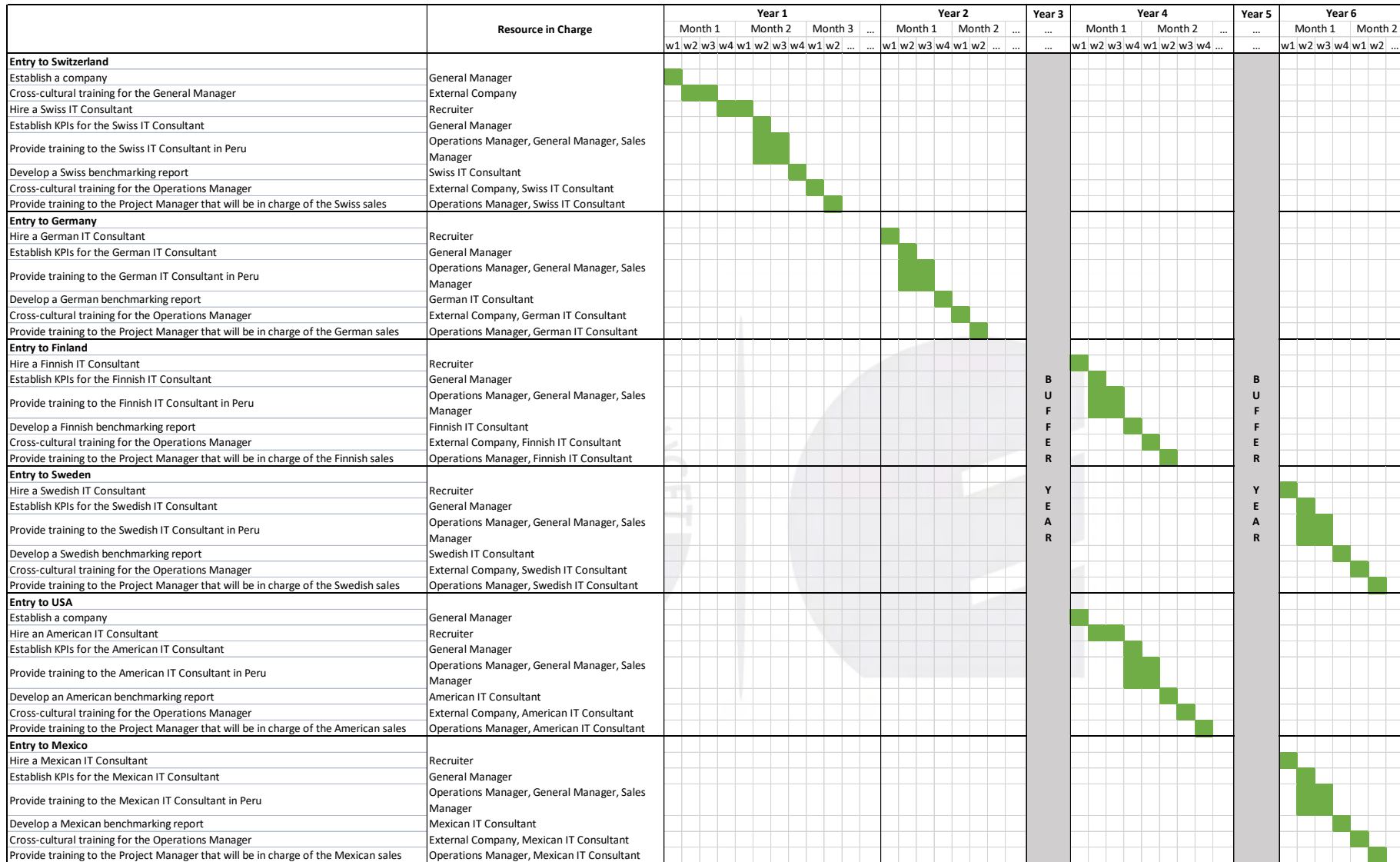


Figure 45. Implementation Gantt Chart of the Proposed Solution.

8.3. Key Success Factors

In order for DSB Mobile to be successful in its international expansion, the company must be prepared to exploit the key enablers while mitigating risk. While enablers and risks are fluid and can change, the five most important enablers and the five most important risks will now be analyzed in detail.

8.3.1. Enablers:

For DSB Mobile to remain successful in its endeavours abroad, a list of key enablers was determined to be essential to the company. The five enablers are as follows: (a) maintaining appropriate levels of financing, (b) ensuring appropriate levels of human capital, (c) maintaining a competitive portfolio, (d) ensuring that KPI's are appropriate for each market, and (e) establishing an appropriate organizational structure for the new market.

Maintaining appropriate levels of financing are essential to the company because a lack of liquidity will prevent DSB Mobile from being competitive. DSB Mobile has successfully increased sales and net income per annum, and General Manager Zico Herrera has demonstrated a commitment to financing the project. However, once the budget has been presented, Zico will have to decide if he can realistically finance the new market himself or if he will have to look for an outside source of investment. The outside forms of investment include a bank loan or seeking a new business partner.

Ensuring appropriate levels of human capital are key to the business so that DSB Mobile can meet its high service levels. DSB Mobile currently has enough developers to sustain the Peruvian market, as well as a new market, but these levels will have to be monitored frequently, especially at the onset. For example, if business is booming in Peru and Switzerland at the same time, DSB Mobile must ensure that he has an appropriate number of full-time workers and a constant availability of freelancers to satisfy demand. The first year

abroad will provide a good indicator as to whether DSB Mobile will need to employ more full-time staff.

A competitive portfolio will be a key to success for DSB Mobile. The company has shown a willingness to adapt to new market demands and customer needs and has built a strong customer base in Peru as a result. However, the Swiss market will provide a new challenge as DSB Mobile will quickly have to learn what Swiss software companies are looking for as it relates to web and mobile management software. DSB Mobile will have to keep lines of communications open regularly to ensure that it is meeting demands if it wants to be a major player in the Swiss market.

Establishing an appropriate set of KPIs for each market will be the next step. DSB Mobile already has an appropriate set of KPIs for its operations team in Peru but will need to ensure the new IT Consultant in Switzerland has clear directions as to what he or she must achieve each year. For example, the IT Consultant's bonus payments should be related to the number of new customers and the amount of revenue generated in year one. If the IT Consultant over delivers on the targets, then he or she should be compensated more. Adversely, if the IT Consultant underachieves, he or she must be compensated a less amount.

DSB Mobile must develop an appropriate organizational structure where each member clearly knows their role and who they report to. This has been successfully implemented in Peru and will need to remain the same in Switzerland. The idea is to initially hire a IT Consultant in Switzerland that will live there full-time and be responsible for gaining new customers. This person will report to Zico Herrera directly but must also work closely with the operations team to ensure that the company's customers are satisfied with the work. After the company builds a stronger presence in Switzerland, the idea is to hire Account Managers that would manage the European customers while the IT Consultant

would then shift his or her focus to managing the team of Account Managers. Table 15 shows a list of key enablers and how to ensure them.

Table 15

A List of Key Enablers and How to Ensure Them

Enabler	How to Ensure it
Appropriate levels of financing.	Secure outside investment on ensure that appropriate budgeting has bene planned.
Internal human capital.	Confirm that freelancers will be able to work when needed.
Competitive portfolio.	Certify the quality of their projects with third parties and international IT Consultants.
Ensuring that KPI's are aligned between existing and new market.	Deep analysis between countries to identify key differences and priorities between Peru and the new market (SMART objectives).
Establishing an appropriate organizational structure in the new market.	Ensuring roles are identified and clients know line managers and team members.

8.3.2. Risks

On top of capitalizing on key enablers, DSB Mobile will have to manage risk in order to be successful in their new markets. The five key risks identified are: (a) stakeholders do not agree with the idea to enter the new market, (b) a lack of budget to enter the new market, (c) unanticipated environmental or social factors preventing conducting business with ease, (d) lack of patent and copyright protection, and (e) managing cultural differences between the Peruvian and Swiss teams.

After deciding on Switzerland as the market of choice, it is important for DSB Mobile to communicate exactly what will happen moving forward. In many cases, employees dislike change and the easiest way to combat this issue is to ensure that everyone is well informed. The ultimate decision will be up to Zico but it will be beneficial to ensure that everyone knows how their roles will be affected by expansion.

Financing is a risk that could hit the company upon expansion. While the operations will remain in Peru, the costs of doing business could differ in Switzerland when compared to Peru. It is important for Zico to train with the new IT Consultant so better prepare budgets for meetings and entertainment of clients. In the initial stages, budgets will have to be reviewed frequently to ensure that the spends align with the percentage of the business that each market generates.

Switzerland is one of the most stable countries in the world as it pertains to the political and economic landscapes. The idea that laws will change that adversely affect business is one that holds no merit but is always important to prepare for. It is important for DSB Mobile to prepare a plan in case that market conditions changes in Europe. Switzerland is not a member of the European Union which makes it easier for DSB Mobile to focus on one country versus appealing to a block of many nations.

Switzerland ranks highly in patent and copyright protection which means that DSB Mobile will be able to protect its assets. It also means that it will be harder for the company to gain information from the industry as other software and mobile device management and web development software will be protected by this. DSB Mobile has developed industry leading applications that should translate to success in a new market, provided the right amount of time and effort is out into learning the new customers.

The most important risk to manage for DSB Mobile is the cultural difference between the Peruvian and the Swiss teams. This will mostly affect the Swiss sales team and the Peruvian operations team as they will collaborate closely on all projects for the Swiss markets. It is important for DSB Mobile to invest in cultural trainings for all employees to better understand what motivates the team and helps them perform at their best and to mitigate this risk. It is also advisable to fly to the new IT Consultant to Peru so that he or she can meet the operations team and can learn about the members. While some cultural

misunderstandings are inevitable, DSB Mobile will need to limit these to ensure that all employees remain happy and achieve their goals to help the company remain successful.

Table 16 shows a list of risks and how to avoid them.

Table 16

A List of Key Risks and How to Avoid Them

Risk	How to Avoid it
Stakeholders decide not to enter the proposed countries.	Ensure the stakeholders are aligned ahead of time, reinforce the benefits of working in the countries analyzed to ensure cohesion.
Problems with budget to enter in a new country.	Verify that the initial budget has not changed throughout the process and that all investors are aligned.
Unanticipated environmental or social impacts in one of the markets.	Backup of projects in the cloud, ensure workforce can do remote work, invest in multiple markets in case of natural disasters.
Company's licenses and patent rights are not protected.	Protect the developments as much as possible, use of confidentiality agreements with developers and clients.
Cultural differences between Peruvian workforce and the new market.	Propose cross-cultural courses as introductory training to allow current and future workforce to work with other cultures. Provide cross-cultural training to all new recruits.

8.4. Conclusions

The above implementation plan provides guidance to DSB Mobile as it looks to expand international operations. While the list of countries and expansion opportunities is vast, DSB Mobile will be able to manage it because of the limited amount of capital required by the company and due to its strong brand recognition in Peru. The important success factor for DSB Mobile is hiring an IT Consultant in Switzerland, Finland, Sweden, the US, and Mexico that has solid industry experience and a strong portfolio of clients.

While the implementation plan is intensive, it is essential for DSB Mobile to ensure that operations are running smoothly in each country before expanding. For example, the

company must make sure that the IT Consultants are achieving their KPIs to ensure that the company is reaching sales objectives. Furthermore, DSB Mobile needs to be sure that the operations team can handle demand. If the operations team is overwhelmed, the decision for the General Manager will either be to hire new full-time workers or slow expansion to focus on the aforementioned markets.

The list of enablers and risks that are essential to DSB Mobile conclude this chapter. There are five identified enables and five risks that will be essential for DSB Mobile to manage ahead of entering the new market. However, some of these risks could appear during expansion so it is essential for DSB Mobile to prepare in advance with the above advice to be ready to mitigate any issues.



Chapter IX. Expected Outcomes

After DSB Mobile has successfully implemented its market penetration plan for the Swiss Market, there are a number of expected outcomes that the company should observe. According to the Swiss State Secretariat of Economic Affairs website, GDP growth for Switzerland is expected to increase to 1.9% in 2018. This signifies that the Swiss economy is growing and would also be good for a small business such as DSB Mobile that is looking to expand. The Software Industry in Switzerland is expected to grow at a rate of 11.78% which also projects major growth and signifies that there is imminent growth in the coming years in Switzerland. This is another sign that there is opportunity in the market for DSB Mobile to establish themselves. The Swiss government has been very active in the software industry in terms of providing investment and funding for R&D which implies that Switzerland has human capital that is highly educated and innovative but also that technology is continuously updated. The analysis of the implementation process has made it possible to outline several factors that can be measured both short-term and long-term to measure the success of these plans. The main short-term expected outcomes include successful acquisition of an IT Consultant with a strong customer base.

9.1. Qualitative Expected Outcomes

Secured Highly Qualified IT Consultant (Immediate Outcome)

A highly qualified and well-trained IT consultant is vital in order to ensure that DSB Mobile has immediate access to a significant customer base. This would be helpful as it would also provide necessary means to be able to close deals faster. Furthermore, the presence of an able IT consultant will serve as a networking tool as they should be able to secure market information that may be of use in conducting appropriate market research as to how to secure a wider market share.

Established effective Communication between Peru and Foreign Office (Immediate Outcome)

Effective communication between the foreign IT Consultant and Peru Office should be established as it ensures that DSB Mobile is delivering the appropriate product to the client and addressing all their needs. Furthermore, if communication is done successfully between the offices, information is portrayed and delivered faster and more efficiently therefore achieving cohesiveness. Good communication skills help ensure that there are less barriers due to language and cultural differences as would be the case with DSB mobile. Effective communication causes productivity to increase, errors to decrease and operations to run smoother.

Establish Efficient Operations (Immediate Outcome)

Establishing effective operations means that DSB should be able to deliver products and services to their consumers in the most cost-effective manner possible while still maintaining high quality of products, services, and support. It is expected that once this is established, sales quotas will be met, and there will be no backlog of work to be done as there will be enough human capital secured.

Projects Secured (Short-Term)

Through the IT Consultant, DSB Mobile is expected to secure projects through his or her contacts. These projects secured would vary in complexity according to the different needs of the clients. The number of projects secured in the short-term would also be a measurement of how well DSB Mobile is functioning in the market. The IT Consultant will be given a quota that he or she needs to meet in terms of sales numbers and these figures will be based off the cost analysis that is explained in Section 9.2 of this chapter as well as the KPIs set aside by DSB Mobile.

Establish Brand Recognition (Long-Term)

Brand recognition is normally measured through the use of surveys and online website traffic. In today's over saturated marketplace, it's very easy for businesses to go unnoticed. One of the most effective methods of ensuring a business is not one forgotten is to enhance the business's overall brand recognition within the target market. Currently, DSB Mobile's brand recognition is high in Peru as it has 32 clients of various sizes and industries. In this case, DSB Mobile will be using an IT Consultant as the main contact for conducting business in Switzerland. It is also further expected that after a number reports have been made after conducting market analysis by the Sales Managers in the individual countries as mentioned in the previous chapter, information on market orientation will be developed. With this information, a proper draw up of consumer preferences and habits will be collected and therefore key success factors will be easy to establish. Once this is done, DSB Mobile is going to be able to use these key success factors to further secure brand recognition within the selected target markets.

Build Market Share (Long-Term)

DSB Mobile will have to be fully functional in the Swiss market for about two years, in order for it to properly measure the market share that it has. Market share measurement will be based on the total revenue that DSB Mobile has acquired over the years and would be divided by the industry total sales over a fiscal year. It has been decided that the market share would be calculated at the end of the second year as this would have given DSB Mobile ample time to integrate into the market and be able to develop strategies that would help it overcome barriers and strengthen their position in the market. Additionally, it would allow for a comparison to be made between year one and year two to see if there is any growth or the extent of this growth but furthermore it would allow for strategies to be developed. Every

subsequent year, market share will be calculated to determine if DSB Mobile is gaining or losing share in Switzerland.

Transfer of Knowledge & Technology (Long-Term)

Switzerland is known to have a highly innovative software sector and the government is actively involved in funding for research and development initiatives. Europe as a whole remains very competitive and this will allow DSB Mobile the opportunity to gain through knowledge and technology transfer. Knowledge transfer will be in the form of skills and upgrades to its software development products that they will be offering, DSB Mobile will also be able to learn how to improve its software development processes to be able to deliver product in a shorter time span or be preview to information through this international expansion on how to create more advanced software products. DSB Mobile will also acquire skills that it can use to retrain their Software Developers in order to ensure that the company's human capital is at the same functioning capacity as the European market. The IT Consultant in Switzerland will also have access to the software sector networks which will help to keep DSB Mobile up to date with updates in the software sector in terms of markets, finances and further development.

9.2. Quantitative Expected Outcomes

A cost analysis was calculated to find the break-even point that DSB will have to attain for several markets. This cost analysis helps DSB Mobile to understand the number of projects that will be needed to realize profits per year. The cost analysis took into consideration the cost of the IT Consultant in the different markets, the fees that will be paid to the software developers in Peru and also the median amount that will be charged per project. The IT Consultant salaries were obtained from PayScale which is a website that is used to determine salaries for different occupations. It is also important to note that the IT Consultant salary which is referred to as "Employee charges - foreign country" includes the

bonus that will be paid to the IT Consultant when they are able to meet the assigned sales quota. The General Manager of DSB Mobile, Zico Herrera, confirmed for one project to be carried out there is a software developer that works full time and an analyst that works part time for every project, this would amount to 240 work hours for both employees for a monthly project. In order to calculate the potential charge per project, the highest and lowest charges for projects in the specific country were found using PayScale, these two amounts were added then divided by two to come up with what can be charged per project in each country. Taxes that needed to be paid were also factored into these calculations. It must be noted that some projects may take more than a month to complete and others can take up to six months.

Using this data, the breakeven point in terms of number of projects that need to be completed was calculated. Table 17 below shows the cost analysis done for North America and the number of projects that need to be secured and completed in each country for DSB Mobile to break even.

The North American Market Line was also calculated as DSB Mobile expressed interest in this market. The United States is a huge market for software development and software products with a lot of big companies established there. In order for DSB Mobile to breakeven in the US market, the IT Consultant would have to secure nine projects. The lowest DSB mobile can charge per hour in the US market is \$38.77 and the highest would be \$55.82 which calculates to an average of \$47.29, which is the recommended billing price per project for DSB Mobile. In comparison with Mexico, DSB Mobile would only need to secure three projects. The recommended price per hour that DSB Mobile can charge would be \$37.46, this amount is derived from the lowest per hour charge of \$30.71 and highest per hour charge of \$44.22. As low as this number maybe it is important to note that the business environment in Mexico is not as competitive or as innovative as in Switzerland and will not

present the same opportunities such as knowledge and technology transfer that Switzerland can offer. The software sector in Mexico is greatly lacking in terms of IT infrastructure, they have a weak Research & Development environment and no significant support for IT Development and Networks.

Table 17

The Breakeven Points for Markets in North America

	6	12	18	24	30
USA					
Time spent (per project)	240 hours	240 hours	240 hours	240 hours	240 hours
Employee charges - Peru (per project)	\$2,300	\$2,300	\$2,300	\$2,300	\$2,300
Employee charges - foreign country (per year)	\$76,088	\$76,088	\$76,088	\$76,088	\$76,088
Revenues (per project)	\$11,350	\$11,350	\$11,350	\$11,350	\$11,350
Total profit	-\$21,790.40	\$32,507.20	\$86,804.80	\$141,102.40	\$195,400.00
Total profit after tax (tax rate of 15%, 34%, 39%)	-\$21,790.40	\$27,631.12	\$57,291.17	\$86,072.46	\$119,194.00
Mexico					
Time spent (per project)	240 hours	240 hours	240 hours	240 hours	240 hours
Employee charges - Peru (per project)	\$2,300	\$2,300	\$2,300	\$2,300	\$2,300
Employee charges - foreign country (per year)	\$16,700	\$16,700	\$16,700	\$16,700	\$16,700
Revenues (per project)	\$8,990	\$8,990	\$8,990	\$8,990	\$8,990
Total profit	\$23,442.40	\$63,584.80	\$103,727.20	\$143,869.60	\$184,012.00
Total profit after tax (tax rate of 15%, 25%, 39%)	\$22,270.28	\$47,688.60	\$63,273.59	\$87,760.46	\$112,247.32

The breakdown of the costs, revenues, and profits for DSB Mobile in Europe can be seen below. The employee costs in Peru stay constant, as do the charges per project but the number of completed projects has a positive impact on revenue. The countries viewed in Europe include Switzerland, Germany, Finland, and Sweden. Table 18 below shows the breakdown in detail. As per the European Market line it can be seen that in Switzerland, DSB Mobile will have to successfully complete 12 projects in a year for them to break even and start making profit.

Table 18

The Breakeven Points for Markets in Europe

	6	12	18	24	30
Switzerland					
Time spent (per project)	240 hours	240 hours	240 hours	240 hours	240 hours
Employee charges - Peru (per project)	\$2,300	\$2,300	\$2,300	\$2,300	\$2,300
Employee charges - foreign country (per year)	\$98,477	\$98,477	\$98,477	\$98,477	\$98,477
Revenues (per project)	\$11,100	\$11,100	\$11,100	\$11,100	\$11,100
	-				
	\$45,677.2				
Total profit before tax	7	\$7,122.73	\$59,922.73	\$112,722.73	\$165,522.73
	-				
Total profit after tax (tax rate of 30%)	\$45,677.2	\$4,985.91	\$41,945.91	\$78,905.91	\$115,865.91
	7				
Germany					
Time spent (per project)	240 hours	240 hours	240 hours	240 hours	240 hours
Employee charges - Peru (per project)	\$2,300	\$2,300	\$2,300	\$2,300	\$2,300
Employee charges - foreign country (per year)	\$63,000	\$63,000	\$63,000	\$63,000	\$63,000
Revenues (per project)	\$11,604	\$11,604	\$11,604	\$11,604	\$11,604
Total profit	-\$7,176.00	\$48,648.00	\$104,472.00	\$160,296.00	\$216,120.00
Total profit after tax (tax rate of 30%)	-\$7,176.00	\$34,053.60	\$73,130.40	\$112,207.20	\$151,284.00
Finland					
Time spent (per project)	240 hours	240 hours	240 hours	240 hours	240 hours
Employee charges - Peru (per project)	\$2,300	\$2,300	\$2,300	\$2,300	\$2,300
Employee charges - foreign country (per year)	\$61,500	\$61,500	\$61,500	\$61,500	\$61,500
Revenues (per project)	\$11,364	\$11,364	\$11,364	\$11,364	\$11,364
Total profit	-\$7,116.00	\$47,268.00	\$101,652.00	\$156,036.00	\$210,420.00
Total profit after tax (tax rate of 30%)	-\$7,116.00	\$33,087.60	\$71,156.40	\$109,225.20	\$147,294.00
Sweden					
Time spent (per project)	240 hours	240 hours	240 hours	240 hours	240 hours
Employee charges - Peru (per project)	\$2,300	\$2,300	\$2,300	\$2,300	\$2,300
Employee charges - foreign country (per year)	\$61,500	\$61,500	\$61,500	\$61,500	\$61,500
Revenues (per project)	\$11,388	\$11,388	\$11,388	\$11,388	\$11,388
Total profit	-\$6,972.00	\$47,556.00	\$102,084.00	\$156,612.00	\$211,140.00
Total profit after tax (tax rate of 30%)	-\$6,972.00	\$33,289.20	\$71,458.80	\$109,628.40	\$147,798.00

Data from PayScale was used to determine how much DSB could charge in the Swiss market per hour of work, for a low complexity project DSB Mobile can charge \$39.6 per hour and for a high complexity job they could charge \$57.1 which leads to a calculated average amount of \$48.35 per hour. In Germany, DSB Mobile would have to complete seven projects in a year to break even, the calculated amount they could charge per hour was determined to be \$47.35 which was the average found from the lowest billing rate of \$38.8 per hour and highest billed at \$55.9. Finland, similar to Germany, breakeven point was found to be the completion of seven projects. DSB Mobile would be able to bill their customers \$47.35 an hour per project. In Sweden, the breakeven would also be seven projects with a recommended billing rate of \$47.45 per hour, which was the average found from the lowest charge per hour of \$38.9 and highest charge per hour of \$56.

Additionally, it has been noted that quality per projects will improve over time and projects will be of higher quality in terms of technology and user design. Keeping this in mind, a further analysis was made to calculate the suggested price per hour for each country for the respective years that DSB Mobile will enter these markets. Additionally, based on these suggested billing rates, a breakdown of profit for in each country in each year of operation was also calculated. Table 19 shows the different prices that can be charged from years one to six.

Table 19

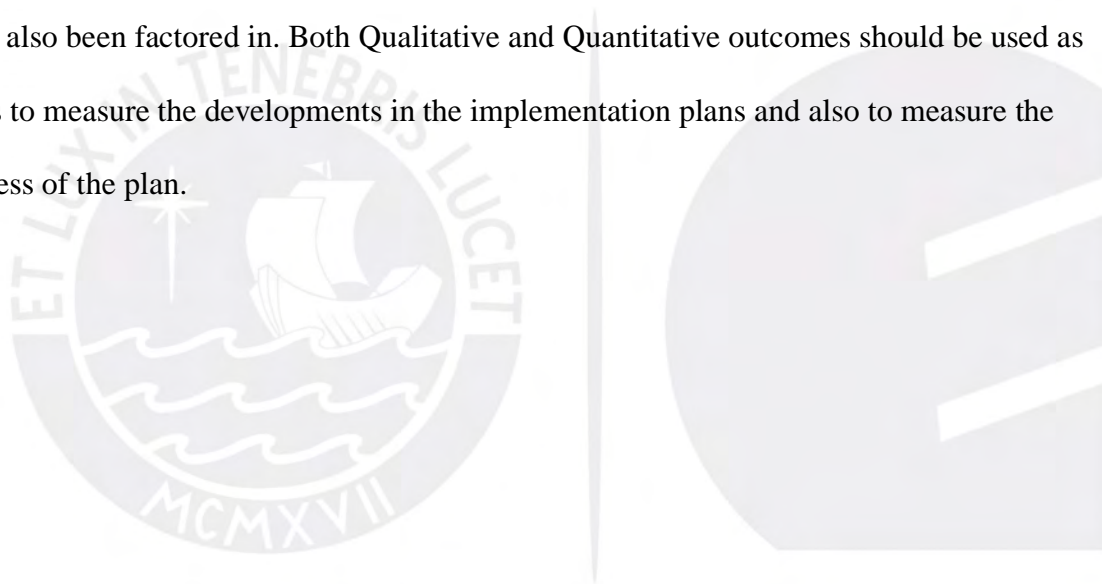
Prices per country according to the year of entrance

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Switzerland	\$46.25	\$47.92	\$49.59	\$51.26	\$52.93	\$54.60
Germany		\$50.10	\$51.85	\$53.60	\$55.35	\$57.10
Finland				\$52.48	\$54.19	\$55.90
USA				\$52.41	\$54.12	\$55.82
Sweden						\$55.90
Mexico						\$44.22

9.3. Conclusions

This chapter analyzes three immediate outcomes, one short-term outcome, and three long-term outcomes. The expected outcomes are dependent on a high level of commitment from DSB Mobile in this implementation plan. In realizing the immediate outcomes, it would lay the foundation for the short and long-term outcomes to be achieved.

The Quantitative outcome is used as a reference point for DSB Mobile in determining not only their budget but also the sales that need to be achieved in each market that they would go into. This would be a good benchmark for the company and should be updated before entry into each market. In the Qualitative analysis, recommended billing rates per hour have also been suggested for each country and taxes that DSB Mobile would have to pay have also been factored in. Both Qualitative and Quantitative outcomes should be used as basis to measure the developments in the implementation plans and also to measure the success of the plan.



Chapter X. Conclusions & Recommendations

10.1. Conclusions

The purpose of this report was to select the appropriate market for DSB mobile to penetrate. After thorough research, six indicators were selected, which were used in a study by the British Software Alliance as key factors that need to be examined before starting a software company. Next, the performance of several countries was measured based on their performance under these indicators, namely: the overall business environment, IT infrastructure, human capital, R&D environment, support for IT development, and the legal environment. The report then took the best performing countries and further analyzed them, to narrow it down to the best options for DSB Mobile to penetrate.

To come to a country selection, both a quantitative and a qualitative analysis were needed to determine the best country. Using the indicators mentioned above, a thorough quantitative analysis was conducted. However, to supplement the numbers, facts, interests and capabilities of DSB Mobile, a number of interviews were conducted with Zico Herrera, the General Manager of DSB Mobile just to gain insights on company interests and to understand capabilities. Looking at the top countries from the study, it is evident that using both qualitative and quantitative analysis is vital. The top six countries that were selected as alternatives in chapter six for further analysis included Switzerland, Finland, Sweden, Germany, the United States, and Mexico. The first three were selected using the quantitative information that was found, while the other three were selected using the qualitative information obtained from Zico.

Furthermore, Switzerland was determined as the best fit for DSB Mobile based on a number of facts. Switzerland was ranked in the top three positions in innovation, having the most stable business environment, strong IT infrastructure, and human capital. In terms of the business environment, Switzerland was ranked number two. This is important as a stable business environment is one of the biggest motivators for companies to enter a specific

market. In terms of IT infrastructure, Switzerland ranked number two. For an IT software company like DSB Mobile, this is one of the most important factors for evaluation as it dictates the stability and growth factors of the overall industry of operation. These are all factors that contribute to why Switzerland is the most suitable market for DSB Mobile. Lastly, Switzerland ranked number three in human capital. Human capital for most companies is important as it measures the quality of the labour force and education levels. Switzerland is one of the top performing countries in terms of education and has access to highly capable talent. This factor extremely important for companies looking to expand operations to Switzerland. Lastly, according to the Swiss State Secretariat of Economic Affairs website the Software Industry in Switzerland is expected to grow at a rate of 11.78%. This alone indicates that the industry is booming and for firms like DSB Mobile, it presents great opportunity and reason to establish themselves in this fertile environment.

10.2. Recommendations

The following recommendations, if effectively applied by the managerial team, are crucial to DSB Mobile's internationalization endeavors. Many small businesses fail to consider vital factors when exploring international expansion opportunities that are key to the success of operations and activities during the process. Each organization that looks to expand is going to have different measurements of success and this is tailored to a company's specific situation. In case of DSB Mobile, the following recommendations are suitable for a company in its position.

Technology Investment

Technology has had a huge impact in the Growth of SME's. The world is driven by technology and to remain competitive firms need to aggressively invest in the latest technology, especially in the software industry. DSB Mobile is advised to continue seeking seminars and programs that are focused on technology advancement in the software

development Industry. Additionally, employees will need to undergo continuous training to keep up with the changes and upgrades in technology.

Secure Loans/Investments

Internationalization is a step SME's take to grow their businesses and gain reputation globally. However, to accomplish this, one of the biggest drawbacks of internationalization is that it needs a large amount of capital and, consequently, securing financial aid is one of the most challenging tasks firms face. However, to successfully establish a global brand capital is perhaps the biggest factor.

With DSB Mobile, as it is a small company, securing investment from investors or securing a loan would facilitate reaching its goal of internationalizing. Setting up an office abroad, paying for legal services and contracts, marketing development, human capital are all costs that would need to be accounted for.

Secure Partnerships/Joint Venture

As mentioned in the Literature Review in chapter three, joint ventures are deemed one of the safest modes of entry because the risk is shared evenly between the two companies involved. It is advisable for DSB Mobile to seek possible partnerships with other software development companies, which would allow it to gain easier access to target markets. With joint ventures, DSB Mobile will be introduced to the networks that already exist for IT companies, they would gain first-hand knowledge about the market, the labour force that is available, the technology, but most importantly, the data that exists for firms to work and succeed in these markets. DSB Mobile would also enjoy the benefits of pooling resources and gaining market expertise, which leads to the next recommendation about diversification.

Diversification

Diversification is a strategy that involves entry into a new market or industry where the business does not currently operate, while also creating a new product for that new

market. Diversification of products is one marketing strategy that firms use to secure market share and grow their businesses. Currently, DSB Mobile works mainly with web and mobile applications. Several Peruvian computer software firms interact with all lines of business such as corporate events, security retail, security of information, and electronic security. Many computer software firms across Peru specialize in enterprise resource planning (ERP), a form of business process management software that gives room or allows an organization to employ a system of integrated applications in managing the business. In addition it automates many back functions that are related to technology, human resources, and services. If DSB Mobile can gain access to a number other services, this would grow its competitive advantage and help it secure bigger market share.

Government Contracts

DSB Mobile is advised to seek bigger projects, such as securing a government contract. The company is already known in Peru through as it has secured partnerships and service deals with large companies including Claro, IBM, Samsung, & Entel and should leverage these deals to market the company to government entities in Switzerland. These contracts will help to build brand recognition, which in turn will help DSB Mobile be more receptive in foreign markets. Having the government as a client would help increase DSB Mobile's value and will make it not only more attractive to other companies that are looking for software development services, but also will increase the company's chances of winning contracts. DSB Mobile can leverage these contracts to network and establish contacts within the government that will allow it access to other valuable resources such as information, data, and first-hand access to other potential clients.

Bonuses

It is recommended that DSB factors in bonuses in the foreign IT Consultant salary. Providing bonus payments help small businesses secure loyalty and retain employees as it

rewards employees for their contributions to the company. Furthermore, bonuses motivate employees to raise their performance to meet business goals. Sales quotas will be set at the beginning of a month, quarter, and year, and once achieved or exceeded, the consultant will be paid a bonus as determined by the General Manager. Bonuses are provided to ensure that hired consultants are motivated to reach and attain goals. In this way, both IT Consultants and DSB Mobile profit. Bonuses can serve as an important tool for small businesses, which have a smaller number of employees and less access to financial capital, as is the case for DSB Mobile.



References

- Acedo, J.F., Casillas, C.J., Gallego, A.M., Hidalgo, R.E., & Moreno, M.A. (2009) The relationship between timing of entry into a foreign market, entry mode decision and market selection. *Time & Society* 118 (2), 306-331.
- Adham, A.K., Entrekin, L., Scott - Ladd, B., & Senik, C.Z. (2011). Networking and internationalization of SMEs in emerging economies. *Journal of International Entrepreneurship* 9, 259-281.
- Agarwal, S., & Ramaswami, S. (1992). Choice of Foreign Market Entry Mode: Impact of Ownership, Location and Internalization Factors. *Journal of International Business Studies* 23(1), 1-27.
- Ahi, A., Baronchelli, G., Kuivalainen, O., & Piantoni, M. (2017). International Market Entry: How Do Small and Medium-Sized Enterprises Make Decisions? *Journal of International Marketing* 25(1), 1-21.
- Andersen, J. & Strandkov, J. (1997) International Market Selection. *Journal of Global Marketing* 11(3), 65-84.
- Asif Khan, M., I-Azam, R., Hunjra, I.A., Jasra, M.J., & Rehamn, R. (2011). Determinants of Business success of Small and Medium Enterprises. *International Journal of Business and Social Science* 2(20), 274-280.
- Ayal, I. & Zif, J. (1979). Market Expansion Strategies in Multinational Marketing. *Jehiel Journal of Marketing*, Vol 43, 84-94.
- Bechtel, D. (2008). Zurich best for doing business in Europe. Retrieved from:
<http://www.swissinfo.ch/eng/zurich-best-for-doing-business-in-europe/1011090>.
- Berg, G. & Fuchs, M. (2013). Bank Financing of SMEs in Five Sub- Saharan African Countries: The Role of Competition, Innovation, and the Government. *Policy Research Working Paper*; No WPS 6563. Washington, DC: World Bank.

- Bell, J. (1995). The internationalization of small computer software firms: A further challenge to "stage" theories". *European Journal of Marketing* 29 (8), 60-75.
- Berger, N.F. & Udell, F.G. (2006). A More complete conceptual framework about SME Finance. *Journal of Banking & Finance* 30(11), 2945-2966.
- Bourque, R. J. (2017). Get on the technology curve. *New Hampshire Business Review*, 39 (8), 14.
- Business Sweden (2017). Why invest in Sweden. Retrieved from: <http://www.business-sweden.se/en/Invest/Why-Sweden>.
- Central Intelligence Agency. (2017). *The World Factbook - Peru*. Retrieved from Central Intelligence Agency: <https://www.cia.gov/library/publications/the-world-factbook/geos/pe.html>.
- Chan, A. (2004). Coding free software, coding Free states: Free software legislation and the politics of code in Peru. *Anthropological Quarterly* 77 (3), 531-545.
- Chen, M-Y., & Chang, J-Y., (2011). The choice of foreign market entry mode: An Analysis of the dynamic profit model. *Economic Modelling* 28, 439-450.
- Chorev, S., & Anderson, A. (2006). Success in Israeli high-tech start-ups; Critical factors and process. *Technovation* 26(2), 162-174.
- CONCYTEC. (2017). Directorio Nacional de Investigadores e Innovadores. Retrieved from: <http://geo.concytec.gob.pe>.
- Cooper, R. (1994). New Products. *International Marketing Review* 11(1), 60-76.
- Cooper, A., Gimeno-Gascon, F., & Woo, C. (1994). Initial human and financial capital as predictors of new venture performance. *Journal of Business Venturing* 9(5), 371-395.
- Desjardins, J. (2015). *USA vs. Canada: Which Country is the Most Innovative?.* *Visual Capitalist*. Doing business in Germany | Today Translations.
- DSB Mobile. (2017). About us. Retrieved from: <http://dsbmobile.com/en/about/>

- Erramilli, K.M., & Rao, C.P. (1990). Choice of Foreign Market Entry Modes by Service Firms: Role of Marketing Knowledge. *MIR: Management International Review* 30(2), 135-150.
- European IT Observatory. (2016). ICT Market Switzerland (in EUR and CHF). Retrieved from: <https://www.eito.com>.
- Farhanmehr, M, Shoham, A & Soares, A.M. (2007). Hofstede's dimensions of culture in International Marketing Studies. *Journal of Business Research*, 60. 227 - 284.
- Gestion (2014). *Siete Pasos para constituir una empresa en 72 horas*. Retrieved from <http://gestion.pe/empleo-management/siete-pasos-constituir-empresa-72-horas-2099622>.
- Helsingistä, T. (2017). Information about Helsinki. Retrieved from: <http://www.infopankki.fi/en/helsinki/information-about-helsinki>.
- Hill, W., Hwang, P., & Kim, C. (1990) An Eclectic Theory of the Choice of International Entry Mode. *Strategic Management Journal* 11(2), 120.
- Henricks, M. (2016). Franchising and Business Growth Go Hand-in-Hand. *Inc* 38 (7), P. 188-194.
- He. X., Lin. Z., & Wei. Y., (2016). International market selection and export performance: a transaction cost analysis. *European Journal of Marketing* 50 (5), 916-941.
- Hofstede, G. (2011). Dimensionalizing Cultures: The Hofstede Model in Context. *Online Readings in Psychology and Culture* 2(1).
- Huber, T., & Hurni, T. (2015). ICTswitzerland – Swiss Software Industry Survey. [Ictswitzerland.ch](http://ictswitzerland.ch). Retrieved 22 July 2017, from <http://ictswitzerland.ch/en/publikationen/swiss-software-industry-survey/>.
- Hurni, T., Huber, T., & Dibbern, J. (2016, November). Swiss Software Industry Survey 2016. Retrieved from

http://www.iwi.unibe.ch/unibe/portal/fak_wiso/a_bwl/inst_wi/content/e69847/e191913/e498109/SSIS2016ReportHQ_ger.pdf.

InterNations. (2017). US Business Culture. Retrieved from: <https://www.internations.org/usa-expats/guide/16271-jobs-business/us-business-culture-16263>.

IT Industry Competitiveness Index 2011. (2011). The British Software Alliance. Retrieved from <http://globalindex11.bsa.org/methodology/>.

Johanson, J., & Vahlne, J.K. (2009). The Uppsala internationalization process model revisited: From liability of Foreignness Liability of Outsidership. *Journal of International Business Studies* 40(9), P. 1411-1431.

Kokemuller, N. (2017). *Market Development vs. Market Penetration*.

Korsakienė, R., & Tvaronavičienė, M. (2012). The internationalization of SMEs: an integrative approach. *Journal of Business Economics and Management* 13(2), 294-307.

Klonowski, D. (2010). The effectiveness of government-sponsored programmes in supporting the SME sector in Poland. *Post-Communist Economies* 22(2), 229-245.

Krentzel, E. (2014). Doing Business in Switzerland: Swiss business culture. Retrieved from: https://www.expatica.com/ch/employment/Doing-business-in-Switzerland-Swiss-business-culture_101552.html.

Lee, T. (2011). *Software Patents and Barriers to Trade*. *Forbes.com*. Retrieved 7 July 2017, from <https://www.forbes.com/sites/timothylee/2011/12/22/software-patents-and-barriers-to-entry/#3963019522ee>.

Lopez, S. (2016). *Tech Industry: Mexico Is More Than a Vacation Getaway*. *Tiempodev.com*. Retrieved 22 July 2017, from <http://www.tiempodev.com/corporateblog/tech-industry-mexico-is-more-than-a-vacation-getaway>.

- Luoma, E. (2015). ICT and software business in Europe and Finland. Retrieved from:
<https://mycourses.aalto.fi/pluginfile.php/42750/course/section/17352/ICT%20Market%20Europe%20and%20Finland.pdf>.
- Marketline. (2014). Software Industry Profile: Software in Sweden.
- Marketline. (2016). Software Industry Profile: Software in the United States
- Marketline. (2017a). Global Software Industry Profile.
- Marketline. (2017b). Software Industry Profile: Software in Germany.
- Marketline. (2017c). Software Industry Profile: Software in Mexico.
- Marketline. (2017c). Software Industry Profile: Software in Canada.
- McSweeney, B. (2002). Hofstede's model of national cultural differences and their consequences: A triumph of faith – a failure of analysis. *Human Relations* 55 (1), 89-118.
- Miecinskiene, A., Stasytyte, V., & Kazlauskaite, J. (2014). Reasoning for Export Market Selection. *Procedia - Social and Behavioral Sciences* 110, P. 1166-1175.
- Mtigwe, B. (2006). Theoretical milestones in international business: The journey to international entrepreneurship theory. *Journal of International Entrepreneurship* 4(1), 5-25.
- Ojala, A., & Tyrväinen, P. (2007). Entry barriers of small and medium-sized software firms in the Japanese market. *Thunderbird International Business Review* 49(6), 689-705.
- Passport to Trade. (2014). International Business Culture and Business Etiquette. Retrieved from: <http://businessculture.org/>.
- PayScale (2017). Information Technology (IT) Consultant Salary. Retrieved from:
[http://www.payscale.com/research/US/Job=Information_Technology_\(IT\)_Consultant/Salary](http://www.payscale.com/research/US/Job=Information_Technology_(IT)_Consultant/Salary).

- Powell, K. (2014). Profitability and Speed of Foreign Market Entry. *Management International Review (MIR)*, Vol 54 (1), 31-45.
- Popescu, A. (2016). *Is Mexico the next Silicon Valley? Tech boom takes root in Guadalajara.* *Washington Post*. Retrieved 20 July 2017, from https://www.washingtonpost.com/business/is-mexico-the-next-silicon-valley-tech-boom-takes-root-in-guadalajara/2016/05/13/61249f36-072e-11e6-bdcb-0133da18418d_story.html?utm_term=.46f723c55e3a.
- Pronsky, V. (2017). The Cost for IT Services in Europe: Market Research. Retrieved from: <https://yalantis.com/blog/cost-services-europe-market-research/>.
- Pronsky, V. (2017). The Price for IT Services in Europe: Market Research. Retrieved from: https://yalantis.com/blog/the_cost_for_it_services_in_the_world_market_research/.
- Sakarya, S., Eckman, M., & Hyllegard, K., (2007). Market selection for international expansion: Assessing opportunities in emerging markets. *International Marketing Review* 24(2), 208-238.
- Schwab, K. (2017). *The Global Competitiveness Report*. Retrieved from World Economic Forum: http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf.
- Shinya, S., & Hiroyuki, O. (2017). Determinants of Academic Startups' Orientation toward International Business Expansion. *Administrative Sciences (2076-3387)* 7 (1), 1-20.
- Software & IT Services Industry Spotlight | SelectUSA.gov.* (2017). *Selectusa.gov*. Retrieved 6 July 2017, from <https://www.selectusa.gov/software-and-information-technology-services-industry-united-states>.
- Swiss Economic Forecasts.* Retrieved from The Swiss State Secretariat for Economic Affairs Website.
- Tambunan, T. (2008). SME development, economic growth, and government intervention

- in a developing country: The Indonesian entry. *Journal of International Entrepreneurship* 6, 147-167.
- Teach Beacon (2017). Can't afford Silicon Valley? 10 great US cities for software engineers. Retrieved from: <https://techbeacon.com/10-best-cities-for-software-engineers>
- The World Bank (2017). Starting a Business. Retrieved from: <http://www.doingbusiness.org/data/exploretopics/starting-a-business>.
- Tidey, E. (2017). How to close a deal in Germany. Retrieved from: <http://www.kwintessential.co.uk/blog/news/how-to-close-a-deal-in-germany/>.
- Troillet, H., & Santos, I. (2016). The German Software Market (Publication No. 20827). Berlin: Germany Trade and Invest.
- UNICEF. (2013). Peru Statistics. Retrieved from: https://www.unicef.org/infobycountry/peru_statistics.html
- USA Corporate Services Inc (2017). Why incorporate in Delaware?. Retrieved from: <https://yalantis.com/blog/cost-services-europe-market-research/>.
- Virgin. (2017). The world's best start-up hubs: Mexico City, Mexico. Retrieved from: <https://www.virgin.com/entrepreneur/the-worlds-best-start-up-hubs-mexico-city-mexico>.
- Ward, C. L., & Lowe, S. K. (2017). Cultural Impact of International Financial Reporting Standards on the comparability of financial statements. *International Journal of Business, Accounting, & Finance* 11(1), 46-56.
- Whitelock, J. (2002). Theories of Internationalization and their impact on market entry. *International Marketing Review* 19(4), 342-347.
- Wiefels, P. (2002). The Chasm Companion. New York: HarperBusiness, P. 109-115.
- What Is The Ansoff Matrix?. (2012). *Financial Director*, 27.

World Bank Data. (2016). Databank.worldbank.org. Retrieved 21 July 2017, from http://databank.worldbank.org/data/Views/Reports/ReportWidgetCustom.aspx?Report_Name=CountryProfile&Id=b450fd57&tbar=y&dd=y&inf=n&zm=n&country=CHE.

Zhimin, G., Zhongpeng, C., & Jin, T. (2016). Empirical Study of the Role of Government Support and Success Factors in Industry-University-Institute Cooperation. *Chinese Education & Society* 49(3), 166-181.



Appendix A: Interview with DSB General Manager

Team 5: Hi Zico, we were looking at some studies about how to rank countries in the Software Industry and we found a ranking made by the British Software Alliance in 2011. The top 15 of the ranking includes the USA, Finland, Singapore, Sweden, United Kingdom, Denmark, Canada, Australia, Ireland, Netherlands, Israel, Switzerland, Taiwan, Norway, and Germany. What do you think about these countries in terms of their strength in the industry?

DSB General manager: We have a few friends that work within the industry, but according within those listed countries, we only had experience in the US, Germany and Switzerland.

Team 5: What do you think about expand the operations of DSB Mobile into the South American market?

DSB General Manager: It would be ok if there is an opportunity better than in another foreign markets of Europe or North America.

Team 5: What countries do you think would be of your interest in the South American Market?

DSB General Manager: In the South American Market Argentina, Bolivia, Brazil and Uruguay would be interesting markets.

Team 5: What about the countries included in the ranking, which ones do you think should be taken into consideration?

DSB General Manager: DSB Mobile has interest in enter into Mexico, United States and Germany for the previous working experience. Also, because there are contacts there that can help to grow the network of DSB Mobile.