



DEGREE PROJECT IN INDUSTRIAL ENGINEERING AND  
MANAGEMENT,  
SECOND CYCLE, 30 CREDITS  
*STOCKHOLM, SWEDEN 2017*

# **Knowledge; the key to success abroad**

A small and medium-sized enterprise perspective

**FREDRIK UGGLA STRAHL**

**SARA BORGGREN**



# Knowledge; the key to success abroad

- A small and medium-sized enterprise perspective

by

Fredrik Uggla Strahl  
Sara Borggren

Master of Science Thesis INDEK ME211X  
KTH Industrial Engineering and Management  
Industrial Management  
SE-100 44 STOCKHOLM

# Kunskap; nyckeln till framgång i utlandet

- För små och medelstora företag

Fredrik Uggla Strahl  
Sara Borggren

Examensarbete INDEK ME211X  
KTH Industriell teknik och management  
Industriell ekonomi och organisation  
SE-100 44 STOCKHOLM



**KTH Industrial Engineering  
and Management**

## **Master of Science Thesis INDEK ME211X**

### **Knowledge; the key to success abroad**

**- A small and medium sized enterprise perspective**

**Fredrik Uggla Strahl**

**Sara Borggren**

Approved <b>2017-12-22</b>	Examiner <b>Cali Nuur</b>	Supervisor <b>Mana Farshid</b>
	Commissioner <b>KTH Executive School</b>	Contact person <b>Agneta Rinman</b>

### **Abstract**

This study explores two main research areas. Firstly how small and medium-sized enterprises (SMEs) acquire knowledge, and secondly how they manage knowledge, when starting a wholly owned foreign subsidiary. A pre-study consisting of interviews with a representative firm, an experienced consultant and two Singaporean professors narrowed down the research scope. This led to an empirical study of Swedish information and communications technology (ICT) firms that have started a wholly owned foreign subsidiary in Singapore. Seven firms were selected, where interviews with people in management positions provided empirical data. A theoretical framework extracted from literature assisted in analyzing the gathered data. A refined version of the theoretical framework was in the end produced as a result of the findings.

The findings regarding acquisition of knowledge were that market knowledge was most commonly acquired through external recruitment of personnel, followed by acting on the market. Market analysis on the other hand was rarely used. Finally, technological knowledge was most often recruited internally in the organization.

The findings regarding managing knowledge were that it was mainly shared through informal interaction between people. Documentation was rarely used to store knowledge due to lack of time and resources. Instead firms relied on knowledge being stored in people and low personnel turnover. An unexpected recurring theme in the interviews was the positive impact of culture on the ability to manage knowledge.

### **Key-words**

SME, ICT, knowledge, knowledge acquisition, knowledge management, Singapore, wholly owned foreign subsidiary



KTH Industriell teknik  
och management

## Examensarbete INDEK ME211X

### Kunskap; vägen till framgång i utlandet

- För små och medelstora företag

Fredrik Uggle Strahl

Sara Borggren

Godkänt 2017-12-22	Examinator Cali Nuur	Handledare Mana Farshid
	Uppdragsgivare KTH Executive School	Kontaktperson Agneta Rinman

### Sammanfattning

Denna studie utforskar två huvudområden. Det första är hur små och medelstora företag (SMF) anskaffar kunskap, och det andra hur de förvaltar kunskap, när de startar ett helägt utländskt dotterbolag. En förstudie bestående av intervjuer med ett representativt företag, en erfaren konsult och två singaporianska professorer, avgränsade forskningsområdet. Detta ledde till en empirisk studie med svenska informations- och kommunikationstekniks (IKT)-företag som startat ett helägt utländskt dotterbolag i Singapore. Sju företag valdes ut där personer i företagsledningen intervjuades vilket genererade empirisk data. Ett teoretiskt ramverk skapat utifrån litteraturen assisterade i analysen av den empiriska datan. Det teoretiska ramverket uppdaterades sedan baserat på studiens forskningsresultat.

Forskningsresultaten rörande anskaffning av kunskap visade att marknadskunskap i huvudsak anskaffas genom extern rekrytering av personal, följt av att själv agera på marknaden. Marknadsanalyser används däremot sällan. Slutligen anskaffas teknisk kunskap främst genom intern rekrytering inom den egna organisationen.

Forskningsresultaten rörande förvaltning av kunskap visade att den i huvudsak sprids genom informella möten mellan människor. Dokumentation används sällan på grund av begränsad tid och resurser. Istället förlitar sig företag på att kunskap är förvarad hos personalen och att personalomsättningen är låg. Ett oväntat återkommande tema under intervjuerna var kulturens positiva påverkan på förvaltandet av kunskap.

### Nyckelord

SMF, IKT, kunskap, kunskapsanskaffning, kunskapsförvaltning, Singapore, helägt utländskt dotterbolag

## **Acknowledgements**

We would like to give a special thanks to Bo Casten Carlberg's scholarship fund for providing us with the opportunity to travel to Singapore and conduct this study. The trip was an amazing experience and something we will never forget.

Thanks to Agneta Rinman from KTH Executive School for encouraging us in our endeavours with great enthusiasm. Her guidance and insight in the industry was invaluable.

We would also like to thank our supervisor, Mana Farshid, for helping us stay on track and injecting an academic perspective. She was always available when we most needed it.

A final thank you to all the people we interviewed. Without your cooperation this study would not have been possible.

# Abbreviations

- B2B - Business-to-business
- B2C - Business-to-consumer
- ERP System - Enterprise Resource Planning System
- ICT - Information and communications technology
- NUS - National University of Singapore
- SEA - South-East Asia
- SME - Small and medium-sized enterprise
- WOFS - Wholly owned foreign subsidiary



# Table of contents

<b>1 Introduction</b>	<b>1</b>
1.1 Background	1
1.2 Problem formulation	2
1.3 Purpose of study	2
1.4 Research questions	2
1.5 Delimitations	2
<b>2 Literature study</b>	<b>3</b>
2.1 Swedish ICT SMEs entering the SEA market	3
2.2 Internationalization phases	3
2.3 Knowledge types	4
2.3.1 Technological knowledge	4
2.3.2 Market specific knowledge	4
2.3.3 Internationalization knowledge	4
2.4 Acquisition of knowledge	5
2.4.1 The Uppsala model	5
2.4.2 The Born global firm	6
2.4.3 Huber's model	7
2.5 Network relationships	9
2.6 Knowledge Management	10
2.6.1 Models of knowledge management	10
<b>3 Theoretical framework</b>	<b>13</b>
3.1 Knowledge categories	13
3.2 Acquisition of knowledge	13
3.3 Knowledge management	14
<b>4 Methodology</b>	<b>17</b>
4.1 Research approach	17
4.2 Research process	17
4.3 Pre-study	18
4.4 Literature review	18
4.5 Empirical study	19
4.5.1 Case selection	19
4.5.2 Sampling technique	21
4.5.3 Data collection method	22
4.5.4 Instrument development	23
4.6 Data analysis method	23
4.7 Reliability	23
4.8 Validity	24
<b>5 Results</b>	<b>25</b>
5.1 Internationalization phases of sample firms	25
5.2 Acquisition of knowledge	31
5.2.1 Recruitment of leaders	31
5.2.2 Recruitment of other employees	32
5.2.3 Market analysis	34
5.2.4 Help from third parties	35
5.2.5 Inspiration from other firms	35
5.3 Knowledge Management	35
5.3.1 Documentation	35
5.3.2 Interaction between branches	37
5.3.3 Informal transfer of knowledge within groups	38

5.3.4 Knowledge transfer through meetings . . . . .	39
<b>6 Analysis and discussion</b>	<b>40</b>
6.1 Acquisition of knowledge . . . . .	40
6.1.1 Market specific knowledge . . . . .	40
6.1.2 Technological knowledge . . . . .	41
6.1.3 Internationalization knowledge . . . . .	41
6.2 WOFS in Singapore early or late . . . . .	42
6.2.1 Market specific knowledge . . . . .	42
6.2.2 Technological knowledge . . . . .	42
6.2.3 Internationalization knowledge . . . . .	42
6.3 Knowledge management . . . . .	42
6.3.1 Interaction between branches . . . . .	43
6.3.2 Presentations in between branches . . . . .	43
6.3.3 Recurring strategy meetings . . . . .	43
6.3.4 Interaction within groups . . . . .	44
6.3.5 Interaction between people for specific knowledge . . . . .	44
6.3.6 Lack of documentation . . . . .	44
6.4 The impact of culture . . . . .	44
6.5 Updated theoretical framework . . . . .	45
<b>7 Conclusion, implications and further research</b>	<b>46</b>
7.1 Conclusion . . . . .	46
7.2 Implications . . . . .	46
7.3 Further research . . . . .	47
<b>Appendices</b>	<b>52</b>

## List of Figures

2.1	Depiction of the basic mechanisms of slow internationalization state and change aspects Johanson and Vahlne, 1977.	6
2.2	Knowledge management models.	10
2.3	Alavi and Leidner's creation of knowledge.	11
3.1	Knowledge categories.	13
3.2	Acquisition of knowledge.	14
3.3	Knowledge creation and transfer are represented by the arrows. Knowledge is stored in the orange nodes.	15
3.4	Theoretical framework.	16
4.1	Research process.	17
4.2	Pre-study interviews.	18
4.3	Interviews with Swedish ICT SMEs.	21
5.1	Netcom's internationalization timeline.	25
5.2	Optimty's internationalization timeline.	26
5.3	Westermo's internationalization timeline.	27
5.4	Djenee's internationalization timeline.	28
5.5	Accedo's internationalization timeline.	29
5.6	Monitor ERP System's internationalization timeline.	30
5.7	Polystar's internationalization timeline.	31
6.1	Early or late when starting Singapore WOFS.	42
6.2	Updated theoretical framework.	45
.1	Question guide	52

# 1 Introduction

*The introduction starts with establishing a background of the subject and formulating a problem. The purpose of the study gives rise to two separate research questions that will be explored.*

## 1.1 Background

The world becomes more globalized by the day. While seeming like a recent phenomenon, the globalization process started a long time ago. The Silk road, a trade route connecting Asia and Europe, was established as early as 207 years BC. In 117 AD, the Romans conquered large parts of modern Europe and the Middle East creating a widespread global empire. Today, with few exceptions, the global conquest is complete, but this time in the hands of capitalism and global markets. In 2015 the export of goods and services represented 30 % of the world's total GDP [The World Bank, 2017], displaying the extent to which markets have become globalized. Despite recent indications of increased sentiments of market protectionism, for example with the US leaving TPP, the overall trend is towards even more global markets.

A crucial part of the globalization process is firms entering foreign markets. When expanding operations to foreign markets one of the key elements is to be able to acquire and manage knowledge in order to successfully operate in a foreign environment [Costa et al., 2016]. The knowledge may consist of information regarding alterations in the firm's way of doing business, modification of its products and how to recruitment or training of employees [Lu and Beamish, 2001].

In earlier years, acquiring knowledge was considered being a process of learning through acting on the market. Learning about foreign operations and markets affected the level of involvement of the firm and as the firm's knowledge grew so did its commitment on the market [Andersen, 1993; Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977; Welch and Luostarinen, 1988]. However, in later years globalization reached an even more mature state and the research field broadened. New models emerged to explain the rapidly internationalizing firms. These models do not limit the acquisition of knowledge to consist solely of experience [Andersson and Victor, 2003], but instead they treat alternative ways of obtaining knowledge. The models have in common that they acknowledge the central role of knowledge and learning in a foreign environment [Fletcher and Harris, 2012].

When entering a new market, knowledge can be obtained in the organization in two separate ways. The first way is it entering from outside, also known as an acquisition of knowledge. It can be acquired in multiple ways, through recruitment of personnel, studying other organizations, market analysis and through experiences [Huber, 1991; Pellegrino and McNaughton, 2017; Fletcher and Harris, 2012; Sagsan, 2006].

The second way is it being created within the organization by managing existing knowledge. Information lies both within the business' processes and in its employees [Lu and Beamish, 2001]. In fact, one of the larger problems is that knowledge tends to stay tacit, embedded in one person and hence unavailable for the rest of the organization. If not captured, the organization misses

out on opportunities and decrease its competitiveness by not utilizing the knowledge present within the organization [Nonaka and Takeuchi, 1995]. Despite this, knowledge management in this context has received little attention in previous research.

## 1.2 Problem formulation

In recent years, small and medium-sized enterprises (SMEs) have started to take up a larger share of the global market. They are important players in international trade, constituting a large part of economies worldwide [Kunday and Şengüler, 2015]. For example 99 % of businesses in the EU are SMEs [European Commission, 2017]. The EU definition of an SME is a firm with between 2 and 50 million euro in turnover, and a staff headcount between 10 and 250 [European Commission, 2017]. For SMEs it is crucial to utilize all knowledge possible due to their limited resources. Therefore studying the acquisition and management of knowledge simultaneously ensures all knowledge sources within and outside the organization are exploited.

Furthermore an increasingly digitized world relies on information and communication technology (ICT)-solutions and will continue to do so for a foreseeable future [European Parliament, 2015]. For ICT SMEs knowledge is a crucial asset and acquiring and managing it correctly can lead to a competitive advantage [Fletcher and Harris, 2012; Buckley and Casson, 2016; Caves, 1971; Hymer, 1976; McDougall et al., 1994; Kogut and Zander, 1993]. In this sector the products are often complicated and knowledge demanding. Facing the prospect of entering a foreign market, high control is typically preferred [Anderson and Gatignon, 1986]. The highest level of control can be maintained through starting a wholly owned foreign subsidiary (WOFS). Previous literature has not studied the case of SMEs starting a WOFS with a knowledge perspective.

## 1.3 Purpose of study

The purpose of this study is to explore how SMEs acquire and manage knowledge when starting a wholly owned foreign subsidiary by examining Swedish ICT SMEs that have done so in Singapore.

## 1.4 Research questions

1. *How do SMEs acquire knowledge when starting a wholly owned foreign subsidiary?*
2. *How do SMEs manage knowledge when starting a wholly owned foreign subsidiary?*

## 1.5 Delimitations

- The study does not aim to explore the interaction between acquisition of knowledge and knowledge management, but will rather deal with them separately. Both are introduced to obtain a full understanding of all possibilities to gather knowledge, both inside and outside the organization.
- The focus will not be on how the knowledge is put to use after it has been acquired and managed.

## 2 Literature study

*The literature study starts with presenting the case of our study, Swedish ICT SMEs starting a wholly owned foreign subsidiary in Singapore. It then discusses previous literature on acquisition of knowledge on a foreign market and knowledge management.*

### 2.1 Swedish ICT SMEs entering the SEA market

The South-East Asian (SEA) region is estimated to be a 3 trillion dollar economy and have a population of close to 600 million people by 2020 [Accenture, 2015]. At the same time the middle class will grow in the area while the already existing middle class will move into an even wealthier consumer segment. Partly thanks to this, growth opportunities in the SEA-market are among the strongest in the quickly expanding ICT-sector [European Parliament, 2015]. An increasingly digitized world relies heavily on ICT-solutions, and will continue to do so for a foreseeable future. Despite this, Swedish ICT SMEs haven't reached the SEA-market in large frequencies, while larger Swedish firms have had some success [Government Offices of Sweden, 2015]. The current situation is problematic for Swedish ICT SMEs. They are missing out on opportunities for growth in the region, while at the same time risking to see their fellow international competition capitalize on the presented opportunity.

A SEA submarket which is culturally more similar to Sweden than its peers is the Singaporean market. Being a large metropolitan city state with high diversity and international presence gives it resemblance to western power houses New York or London. According to Nitin Pangarkar Singapore serves as a stepping stone into the SEA market, allowing enterprises to become familiarized with the new environment [personal communication, September 13, 2017]. This holds true for Swedish ICT SMEs as well, facing challenges of interacting in foreign environments. Therefore it is of high importance for Swedish ICT SMEs to explore how to enter the Singaporean market, to in later stages exploit the opportunities of the SEA region, or they will risk to fall behind their competition.

### 2.2 Internationalization phases

Even though the internationalization history of a firm does not seem to be directly connected with it starting a WOFS, it may have an affect. Internationalization is defined as “the process of increasing involvement in international operations” [Welch and Luostarinen, 1988, p.36]. Firms that have a lot of previous experience of acting on foreign markets may have a different approach. This is due to them having had the chance to re-evaluate their strategy. This is of interest since it would in turn affect the ways of acquiring knowledge. Three phases of internationalization are introduced by [Pellegrino and McNaughton, 2017], pre-internationalization, early internationalization and late internationalization.

*Pre-internationalization* starts at the inception of the firm and ends upon the start of doing business in the first international market.

*Early internationalization* starts at this point and ends when the firm for the first time has

significantly modified its internationalization behaviour due to learning.

*Late internationalization* covers the time after this.

## 2.3 Knowledge types

“Knowledge has been defined as a state or fact of knowing, with knowing being a condition of understanding gained through experience or study; the sum or range of what has been perceived discovered or learned” [Alavi and Leidner, 2001, p. 110]. Throughout literature there are distinctions between different types of knowledge. Identifying these distinctions below will simplify the continued exploration of knowledge acquisition and management when starting a WOFS.

### 2.3.1 Technological knowledge

Technological knowledge assists in creating more adapted products for the new market and hence decrease uncertainty [Fletcher and Harris, 2012; Autio et al., 2000]. It simultaneously hinders stagnation in product development on the already existing markets. Technological knowledge is important upon entering a new market since it allows the company to carry the knowledge across borders [Fletcher and Harris, 2012; Buckley and Casson, 2016; Caves, 1971; Hymer, 1976; McDougall et al., 1994; Kogut and Zander, 1993]. Furthermore it allows for opportunities to be recognized resulting in competitive advantage [Fletcher and Harris, 2012; Autio et al., 2000; McDougall et al., 1994; Dhanaraj and Beamish, 2003; Zahra et al., 2000]. An important distinction is that technological knowledge is firm specific and not market specific [Fletcher and Harris, 2012; Zahra et al., 2000].

### 2.3.2 Market specific knowledge

Market specific knowledge includes knowledge of clients, laws, suppliers, investors, whereabouts of office spaces and established personal networks [Welch and Luostarinen, 1988]. [Welch and Luostarinen, 1988] touch on the subject of market knowledge and how acting on a market without it is difficult. Similarly [Johanson and Vahlne, 1977] note that the difficulty lies in identifying opportunities and threats in the specific market. This leads to a competitive disadvantage. However, they point out that the primary way of overcoming a lack of knowledge is through experience [Andersen, 1993].

### 2.3.3 Internationalization knowledge

Internationalization knowledge concerns how to internationalize in different countries as well as developing and executing an internationalization strategy [Fletcher and Harris, 2012; Blomstermo et al., 2004]. Operating on multiple foreign markets will lead to knowledge accumulation in the structures, routines and decision making processes of the firm [Blomstermo et al., 2004]. Furthermore, it will expose them to a variety of institutional, business, technical and cultural actors, making them apt to dealing with these actors in general. Internationalization knowledge will open up possibilities on new markets. It enhances the ability to search for information, identifying and evaluating opportunities, evaluating potential partners as well as easing management of operations [Fletcher and Harris, 2012; Prashantham and Young, 2011; Welch et al., 2008].

## 2.4 Acquisition of knowledge

In section 2.4.1 and 2.4.2, two internationalization models are discussed. Although the internationalization models treat the whole process of internationalization, one of the key components of the models is the acquisition of knowledge. This will therefore provide valuable insight into one of the research areas explored.

### 2.4.1 The Uppsala model

*Here the Uppsala model is introduced to explain how experiential knowledge is built when a firm enters a foreign market.*

In the late 70's and early 80's several internationalization models were developed treating the internationalization of a firm as a gradual process. The process was portrayed as incremental where knowledge gained from entering foreign markets were accumulated and contributed to the company's knowledge base. The knowledge gained at an earlier occasion influenced the coming decisions. Johanson and Wiedersheim-Paul, 1975; Andersen, 1993

The method of acquiring knowledge influences the speed of commitment on a foreign market. Johanson and Wiedersheim-Paul, 1975 found with their case study on four Swedish companies that the typical pattern of internationalization is a gradual increase in foreign activities, advocating slow commitment. This pattern is known as the establishment chain and consists of the following four steps:

#### *Exporting*

As a first step, exporting requires no investment on a foreign market and knowledge of a market can be limited.

#### *Exporting through an agent*

As export increases it becomes natural to enter an arrangement with an intermediary on the foreign market who handles contacts and sales with the foreign clients.

#### *Establishment of own sales organization*

As sales grow, the desire for increased control results in the firm establishing their own sales organization in the new market. This increased level of commitment is possible thanks to an accumulating knowledge of the foreign market.

#### *Manufacturing*

The final step is to initiate manufacturing on the foreign market, marking the final step of full commitment on a foreign market.

Johanson and Wiedersheim-Paul, 1975 worked towards finding a model explaining the establishment chain. They found that the dynamic interplay between knowledge and commitment could work as an explanation of the pattern. Knowledge of a foreign market grows with active time on it, and this in turn increases the commitment on the market since it becomes easier to make wise decisions. This resulted in Figure 2.1 consisting of two state and change aspects. This



is the most recognized internationalization model and is known as the Uppsala model.

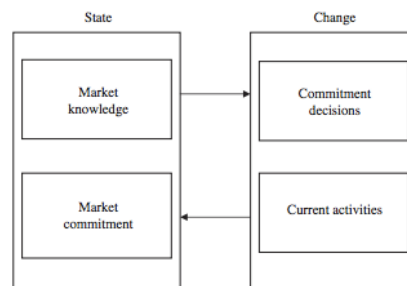


Figure 2.1: Depiction of the basic mechanisms of slow internationalization state and change aspects [Johanson and Vahlne, 1977](#).

The two states refer to the level of committed resources to the foreign market and the knowledge the firm has obtained about the market so far. In regards of knowledge there is both general knowledge and market specific knowledge. General knowledge can be applied when establishing similar operations in similar markets. Specific market knowledge is in its turn applicable when identifying opportunities and threats in that specific market and drives the internationalization forward [Johanson and Vahlne, 1977](#). The change aspects, commitment decisions and current activities, are responsible for the change that occurs in the state aspects.

Many interpretations of the model have been made and [Forsgren 2002](#) writes that the emphasis in the work lies in learning theory, that is driven by a genetic explanation, each state is dependent on the prior. The model's core assumption is the lack of knowledge that works as an obstacle when entering a new market. To overcome this the company can increase their knowledge though active involvement on the market, something he calls learning by doing. Furthermore [Forsgren 2002](#) writes that the assumption that knowledge is dependent on individuals and is poorly transferred to others, causes experiential knowledge to be crucial when acquiring knowledge.

After the creation of the model new studies have emerged supporting the importance of networks when entering new markets. [Johanson and Vahlne 1977](#) recognized that their model needed to be revised in accordance to the new studies. They added relationship-specific knowledge referring to the knowledge acquired through interaction with the firms' counterparts. Interaction can lead to general relationship knowledge, aiding in international relationship development and to develop relationships in alternative situations. Secondly, trust and commitment are viewed as crucial factors. Trust in a counterpart is necessary for knowledge development from the relationship. Also, trust can work as a replacement for market knowledge, trusting a foreign entity to run the business.

#### 2.4.2 The Born global firm

*Here the Born global firm is introduced to explain how knowledge is acquired through recruitment when a firm enters a foreign market.*

After the Uppsala model the world continued to globalize even further, firms started internationalizing faster and acquiring knowledge in new ways, giving rise to critique of the Uppsala model [Andersen, 1993]. This inspired new models accounting for this. The Born global firm is arguably the most referenced among those models.

The definition of a Born global firm varies in literature. [Andersson and Wictor, 2003], also studying Swedish SMEs, choose to define a Born global as a firm which foreign sales make up at least 25 % of total sales within 3 years of its start. They also state it should from its birth seek competitive advantage through accessing resources and sales of output on foreign markets. Some include that it must carry the risks of a small start-up, that it can not be a spin-off from a large company which will help it stay afloat [Gabrielsson et al., 2008]. Typically, the Born global firm is founded by an entrepreneur who sees opportunities arise due to new technological advancements [Andersson and Wictor, 2003]. These technological advancements are utilized by the entrepreneur to design a cutting edge product or a new way of doing business.

A consequence of the fast commitment of Born global firms is the requirement of another way of accumulating knowledge. While the Uppsala model allows for knowledge to grow within the organization over time, relying on experience as the main tool in internationalization, Born globals do not have this option [Andersson and Wictor, 2003]. Born globals therefore rely on acquiring knowledge through recruitment of people with previous knowledge and experience.

Another characteristic of the Born global firm is that it internationalizes at higher speeds. A high speed of internationalization is beneficial for quickly reaching more customers and enjoying the benefits of economies of scale [Hilmersson, 2014]. However, a speedy expansion occurs on a few conditions [Welch and Luostarinen, 1988]. Primarily, it requires financial backing, and for SMEs having available resources for rapid expansion is not a given. Also one might assume appropriate knowledge and networks need to be in place for a rapid expansion to not be too risky. If these conditions are met, the Born global firm's ability to speedy commitment on foreign markets is a considerable advantage.

#### 2.4.3 Huber's model

The role of knowledge have been a central part when exploring firms' internationalization. As discussed earlier, the Uppsala model emphasizes on learning through experiences [Johanson and Vahlne, 1977; Andersen, 1993] while Born Globals often use recruitment as a mean of gaining knowledge [Andersson and Wictor, 2003]. When revising the Uppsala model, [Andersen, 1993] noted that the model does not consider acquisition of knowledge through acquiring firms, mimicking similar firms or through searching. During this time, multiple new models emerged to respond to the critique within the research field. One among those was Huber's model that focused on acquisition of knowledge rather than the internationalization process [Huber, 1991].

[Huber, 1991] identified five separate subprocesses of acquisition of knowledge. These subprocesses regard congenital knowledge, experiential knowledge, vicarious knowledge, grafting knowledge and searching knowledge.

### **Congenital knowledge**

Congenital knowledge concerns the founders' and top managers' prior knowledge and experience [Pellegrino and McNaughton, 2017]. It is reasonable to assume that the previous knowledge, experience and networks of the people in leading position will reduce the perceptual barriers to international activity and will become embedded in a new venture [Loane et al., 2007; Knight and Liesch, 2002]. Although congenital knowledge is of use to any internationalizing firm, it may be of higher importance for those that do so rapidly. Prior international experience on a management level combined with established social networks of these individuals simplifies early internationalization, due to being able to rapidly pursue combinations of key resources internationally [Loane et al., 2007; McDougall et al., 1994].

It is however likely for new ventures in innovative niches that acquisition of knowledge will also be needed, seeing as established networks may not be useful for cutting-edge technology [Loane et al., 2007]. The cutting-edge technology may be too niche at that point in time for network relationships to have previously encountered it.

### **Experiential knowledge**

Experiential knowledge is intuitive, where the consciousness receives new information on what is known without noticing that it happens [Storkerson, 2009]. As the name suggests, experiential knowledge is a cause of learning from one's experiences. Experiential knowledge is oftentimes one of the desired assets when grafting knowledge, but the acquisition of experiential knowledge in this section will not consider this. Instead acquiring experiential knowledge refers to learning from day-to-day operations and current activities in foreign markets [Johanson and Vahlne, 2009]. The transfer of experiential knowledge in the form of for example teaching is a difficult task [Fletcher and Harris, 2012; Eriksson et al., 1997], being of a kind that premier learning by doing.

Experiential knowledge is the cornerstone of the Uppsala model, where it is seen as a slowly growing resource which should inspire further commitment on international markets [Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975; Andersen, 1993].

### **Vicarious knowledge**

Vicarious learning is observing what other organizations do [Pellegrino and McNaughton, 2017], learn from their experiences [Fletcher and Harris, 2012] and letting it influence future actions [Pellegrino and McNaughton, 2017]. Observations can occur through networks, strategic alliances or licensing [Fletcher and Harris, 2012].

In order to overcome uncertainties a firm can observe and imitate firms that are believed to have best practices in the foreign market [Schwens and Kabst, 2009]. "For instance, it has been argued that organizations tend to imitate actions that have been taken by a large number of organizations, because such practices are legitimized, or their success is taken for granted" [Forsgren, 2002, p.264]. Furthermore this reduces the risk when entering a new market until the firm has acquired the wanted level of knowledge themselves [Schwens and Kabst, 2009].

Vicarious learning is not limited to direct observation but may also occur through specialist organizations, for example commercial and government sources. These have in turn observed

and learned through their observations [Fletcher and Harris, 2012]. Furthermore it may occur through networks where individuals and firms use customers, suppliers or competitors as a mean of learning. [Fletcher and Harris, 2012] found that when acquiring internationalization knowledge vicariously the source is more likely government advisors or consultants than contacts through networks.

### Grafting knowledge

Grafting involves acquiring knowledge through recruiting personnel [Fletcher and Harris, 2012; Huber, 1991]. Recruiting can be conducted either internally or externally. Internal recruiting is hiring someone from within the firm while external recruiting refers to recruiting someone outside of the organization. Specific market knowledge can for example be obtained through hiring people from the local market [Fletcher and Harris, 2012].

Since grafting knowledge requires less time than for example acquiring experiential knowledge, it is a central tool for rapidly internationalizing firms [Andersson and Wictor, 2003]. It does however demand a precise and strategically thorough decision on who to recruit.

### Searching knowledge

Companies may use searching as a way of acquiring new information through noticing and exploring information about the external environment [Fletcher and Harris, 2012; Pellegrino and McNaughton, 2017]. This is usually attempted when trying to solve a specific problem or in order to improve the strategic effectiveness of the firm. Sources treating the required market specific knowledge can be found at a variety of places such as chambers of commerce, government outlets, consultancy firms, research firms, trade associations or online [Fletcher and Harris, 2012]. Furthermore firms can choose to conduct market research themselves.

## 2.5 Network relationships

An important factor in acquiring knowledge is through network relationships. The importance of network relationships inspired an update of the Uppsala model [Johanson and Vahlne, 2009] and is recognized as a key to success for Born Globals [Andersson and Wictor, 2003]. Network relationships constitute a huge asset when reducing barriers in grafting knowledge [Loane et al., 2007; Knight and Liesch, 2002] and is a source to obtain vicarious knowledge [Johanson and Vahlne, 2009; Casillas et al., 2010].

A network is the web of relationships with identifiable counterparts that an organization is embedded in [Håkansson and Snehota, 2006]. A key property of a network is the interdependency of different relationships within it, regarding activities, resources and actors. The resources of other parties are accessed through the network and their activities are linked together by it. Also, new opportunities may arise through the connection to networks [Welch and Welch, 1996].

The establishment of a network can however be a time consuming and demanding process, having to overcome knowledge gaps and psychic distance [Welch and Luostarinen, 1988]. Oftentimes the prospective customer feels more comfortable doing business with suppliers from familiar locations. Despite this, gaps can decrease over time with wider experience, more familiarity with

the other firm's culture and increased levels of cooperation.

## 2.6 Knowledge Management

Acquisition of knowledge, that has previously been discussed, treats knowledge that can be accessed through external sources. However firms may also use internal sources in order to obtain knowledge and it is treated in the field known as knowledge management.

"Knowledge management refers to identifying and leveraging the collective knowledge in an organization" [Alavi and Leidner, 2001, p. 113] and it treats the knowledge that is already present in the organization. It's believed that knowledge as a resource can contribute to competitive advantage since it is often of a socially complex nature and therefore difficult to imitate. However competitive advantage is not only dependent on the knowledge but rather the application of it. Knowledge management therefore treats the creation, retrieving, transferring and application of knowledge [Alavi and Leidner, 2001; Becerra et al., 2004; Sağsan, 2006].

Within this research field there are two new dimensions that are central in knowledge management; tacit and explicit knowledge. Tacit knowledge, composed of a cognitive and technical element, originates from experience or involvement in a particular situation. The cognitive element is referring to individuals' mental models such as believes, viewpoints and mental maps while the technical component consists of concrete know-hows and skills that can be applied in a certain situation. Explicit knowledge is articulated and codified either in symbolic form or normal language. [Alavi and Leidner, 2001; Nonaka, 1994]

### 2.6.1 Models of knowledge management

*Below are three models presented that have slightly different view on knowledge management. The models' steps regarding knowledge application are not mentioned since that is not a focus of this study. The categories and subcategories are shown in Figure 2.2.*

Categories	Steps are independent		Steps are dependent
	Alavi and Leidner	Becerra-Fernandez, Gonzalez and Sabherwal	Sağsan
Creation of knowledge	Creating: <ul style="list-style-type: none"> <li>• Socialization</li> <li>• Externalization</li> <li>• Internalization</li> <li>• Combination</li> </ul>	Knowledge discovery: <ul style="list-style-type: none"> <li>• Combination</li> <li>• Socialization</li> </ul>	Knowledge creation: <ul style="list-style-type: none"> <li>• Tacit</li> <li>• Explicit</li> </ul>
Knowledge transfer	Knowledge transfer: <ul style="list-style-type: none"> <li>• Formal</li> <li>• Informal</li> </ul>	Knowledge sharing: <ul style="list-style-type: none"> <li>• Formal</li> <li>• Informal</li> </ul>	Knowledge sharing: <ul style="list-style-type: none"> <li>• Social channels: <ul style="list-style-type: none"> <li>◦ Oral: (formal/ informal)</li> <li>◦ Written</li> <li>◦ Non-verbal</li> </ul> </li> <li>• Technical channels</li> </ul>
Knowledge storage	Knowledge storage/retrieval	Knowledge capture	Knowledge structuring

Figure 2.2: Knowledge management models.

[Alavi and Leidner, 2001] and [Becerra et al., 2004] had similar approaches when exploring knowledge management and they divided it into four main categories. The categories are independent and are not carried out in any particular order.

The first category, by [Alavi and Leidner, 2001], named *creating* involves developing new knowledge or replacing already existing knowledge. The creating stage is characterized by interplay between tacit and explicit knowledge as the knowledge transfers from individuals to groups or from groups to groups. The first category by [Becerra et al., 2004], *knowledge discovery*, uses a similar definition. However they differ in their subcategories of creation. While [Alavi and Leidner, 2001] uses four subcategories known as socialization, externalization, internalization and combination, [Becerra et al., 2004] uses only the two subcategories combination and socialization.

Socialization refers to the transformation of tacit knowledge into tacit knowledge through social interaction between the organizations different members [Alavi and Leidner, 2001]. Combination aims to explain the emergence of new explicit knowledge though combining, categorizing and re-categorizing existing explicit knowledge. Internalization refers to creation of tacit knowledge through utilizing explicit knowledge. Externalization on the other hand refers to converting tacit knowledge to explicit knowledge. These are seen in figure 2.3.

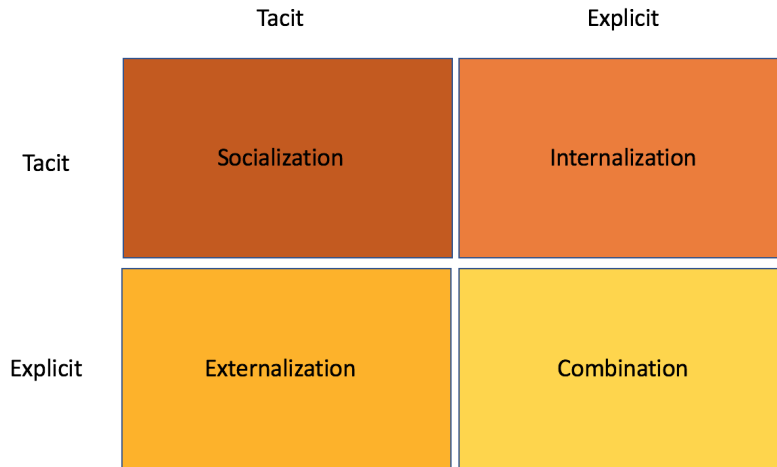


Figure 2.3: Alavi and Leidner's creation of knowledge.

The second category by [Alavi and Leidner, 2001] known as *knowledge storage/retrieval* or *knowledge capture* by [Becerra et al., 2004] refers to the process of retrieving or storing tacit or explicit knowledge from different forms. These different forms can be knowledge that resides in people, knowledge from written documents, information stored in databases or the organization's networks. Storage of knowledge avoids waste of the organization's resources but may also lead to negative effects in the form of decision-making bias [Starbuck and Hedberg, 2001] or through upholding status quo in the organization [Alavi and Leidner, 2001; Argyris and Schön, 1997].

The third category; *knowledge transfer* [Alavi and Leidner, 2001] or *knowledge sharing* [Becerra et al., 2004] is as the names suggest a transfer of knowledge at different levels. The levels include individuals to groups, across groups and groups to the organization [Alavi and Leidner, 2001; Becerra et al., 2004]. The channels to transfer knowledge can be informal or formal [Alavi and Leidner, 2001]. Informal channels such as coffee break conversations or unplanned meetings are effective in a social aspect. Formal channels, such as training sessions, may hinder creativeness. Personal channels, for example apprenticeships, are effective when transferring knowledge in a specific context while impersonal channels are a good way to transfer a more generalized knowledge.

[Sağsan, 2006] has extracted a slightly different model from the literature in the form of a life cycle, with the steps *knowledge creation*, *knowledge sharing*, *knowledge structuring* and *knowledge using*. His model differs in the sense that the steps are not independent but rather sequential. All steps but one, knowledge sharing, are similar to the model of [Alavi and Leidner, 2001]. [Sağsan, 2006] divides knowledge sharing into social channels and technical channels. The social channels are then divided into oral, written and non-verbal communication. Oral communication can consist of formal and informal channels but is mainly characterized by communication between two or more people. Written communication can occur though for example emails, memos and notices on boards that is communicated through written letters or symbols. Non-verbal communication can be body language, emphasis given on specific words or facial expressions. Technical channels can consist of the internet, emails, web-based networks, databases or telephone conversations.

Informal communication channels are more reliable and persuasive in comparison to formal channels [Smith, 2001]. Furthermore, the transfer of tacit to tacit knowledge through informal channels is believed to simplify the transfer of tacit knowledge into explicit. In addition, a one-on-one learning experience, through an informal channel, is seen as a more rewarding and meaningful way of learning and is more effective. However technical channels allow the knowledge to be transferred continuously, correctly, rapidly and timely [Sağsan, 2006].

### 3 Theoretical framework

*The theoretical framework draws from the literature to create a tool for the creation of the interview guide and the categorizing of the analysis and discussion.*

#### 3.1 Knowledge categories

The center of the first two research questions is knowledge. For further analysis, breaking down knowledge in three separate categories will be useful. These categories attempt to encapsulate all areas that are crucial in opening a WOFS, being collectively exhaustive. They are also mutually exclusive, meaning a piece of knowledge can only belong to one of the subsets. The first category is market specific knowledge. [Welch and Luostarinen, 1988] and [Johanson and Vahlne, 1977] touch on the subject of market knowledge, knowledge that is specific to the market, and how acting on a market without it is difficult. Knowledge of clients, laws, suppliers, investors, whereabouts of office spaces and established personal networks are all included in this category. The second category is technological knowledge, knowledge about the product or service offered by the organization [Fletcher and Harris, 2012]. It also includes knowledge about the products offered by the industry as a whole. The last category is internationalization knowledge, considering the general knowledge of acting on a foreign market [Blomstermo et al., 2004], for example having opened a WOFS in another location. The knowledge categories are depicted in Figure 3.1, where they are not overlapping representing their mutual exclusiveness.

*Market specific knowledge*

*Technological knowledge*

*Internationalization knowledge*

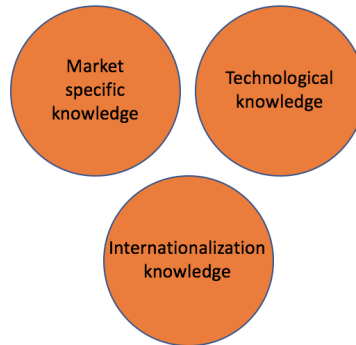


Figure 3.1: Knowledge categories.

#### 3.2 Acquisition of knowledge

A theoretical framework for acquisition of knowledge will be made using five subprocesses by [Huber, 1991]. It is believed that this model covers the different aspects of acquiring knowledge. It treats the older models, such as the Uppsala model's traditional view of experiential knowledge [Johanson and Vahlne, 1977] while also discussing the impact of the new Born Global model's emphasis on its founders and recruitment of staff [Andersson and Wictor, 2003]. Moreover it includes categories that [Andersen, 1993] shed light on when criticizing the Uppsala model, such



as imitation and searching.

The subprocesses will be altered slightly to be more suitable for the specific research topic of this report. Firstly, grafting knowledge will be expanded into two separate parts. Internal grafting is introduced to give the people coming to the WOFS from within the organization their own category, due to their crucial role in starting a WOFS. External grafting is recruitment to WOFS from outside the organization. External and internal grafting therefore represent two very different recruitment strategies and deserve separate categories. Secondly, congenital knowledge is excluded from the theoretical framework since the founders of the firm are rarely involved in the WOFS's day-to-day activities and therefore their knowledge will rarely come to use. Experiential, vicarious and searching knowledge remain the same as in literature. The framework for acquisition of knowledge is depicted in Figure 3.2 where the organization is represented by the outer blue circle.

*Internally grafted knowledge*

*Externally grafted knowledge*

*Experiential knowledge*

*Vicarious knowledge*

*Searching knowledge*

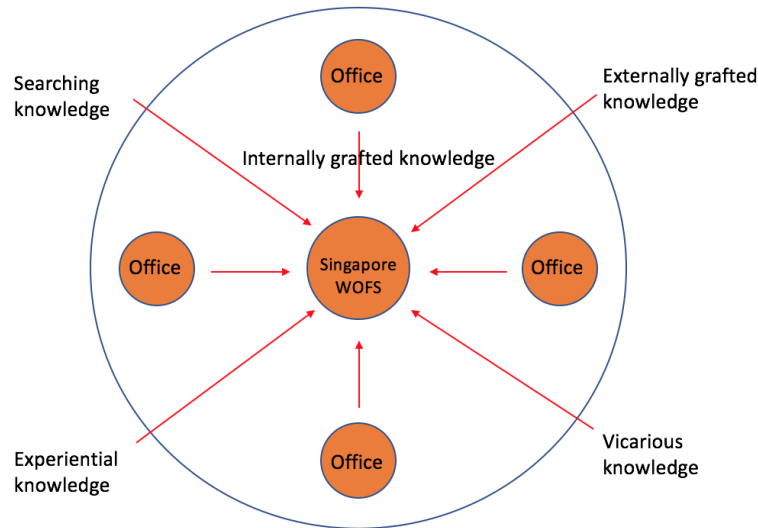


Figure 3.2: Acquisition of knowledge.

### 3.3 Knowledge management

Knowledge management treats the knowledge already present in the organization and not knowledge from external sources. Three main categories from knowledge management will be extracted and explored. The three categories are *creation of knowledge*, *knowledge storage* and *knowledge transfer*. The categories are believed to be independent, similarly to the models by Alavi and Leidner [2001] and Becerra et al. [2004] and will not be a step-by-step process in contrary to the life cycle by Sağsan [2006].

The first category, creation of knowledge, consists of the four subcategories by Alavi and Leidner [2001] : socialization, externalization, internalization and combination. The reason for including all four categories is that they all create knowledge in the firm. Internalization and externalization transfer the knowledge from one state to the other, tacit to explicit and vice versa resulting in a new form of knowledge. Hence they are included in the theoretical framework, contrary to the model by Becerra et al. [2004]. The subcategories for creation of knowledge are represented by the red arrows in Figure 3.3.

The second category, knowledge storage, will be in line with storage/retrieval by Alavi and Leidner [2001] and knowledge capture by Becerra et al. [2004]. It will present where the knowledge is stored. The source may be people, written documents or information in databases. The sources for knowledge storage are represented by the orange circles in Figure 3.3.

Knowledge transfer is the third category. Similarly to the category knowledge transfer Alavi and Leidner [2001] and knowledge sharing by Becerra et al. [2004] this refers to the channel in which the knowledge is transferred. It can be through formal or informal channels. Furthermore the social and technical communication channels by Sağsan [2006] will be considered in order to further structure the framework. Knowledge transfer is represented within the red arrows in Figure 3.3.

The framework for knowledge management is depicted in Figure 3.3 where the organization is represented by the outer blue circle. Knowledge creation and transfer are represented by the arrows and knowledge storage by the orange circles.

*Creation of knowledge: socialization, internalization, externalization, combination*

*Knowledge storage: personnel, databases*

*Knowledge transfer: social communication channel, technical communication channel*

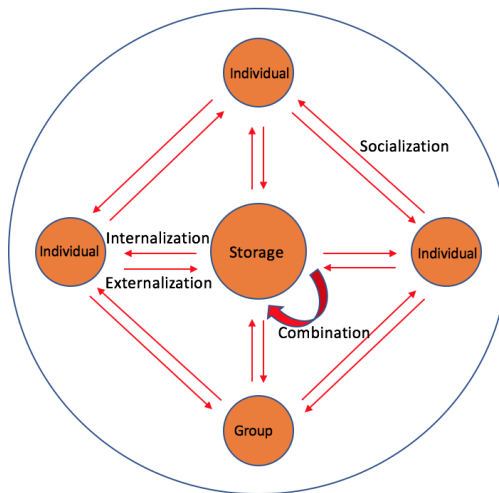


Figure 3.3: Knowledge creation and transfer are represented by the arrows. Knowledge is stored in the orange nodes.

Collecting the knowledge categories, acquisition of knowledge and knowledge management results in the theoretical framework and is depicted in Figure 3.4 below:

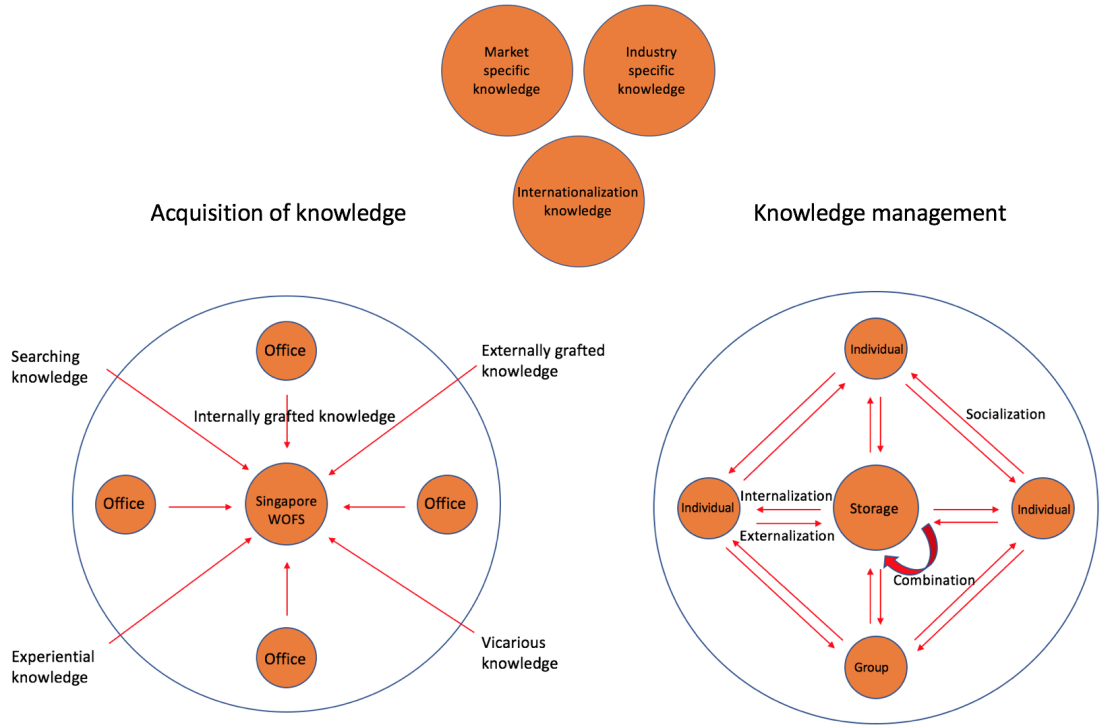


Figure 3.4: Theoretical framework.

## 4 Methodology

*The methodology outlines the process undertaken to construct an empirical study which could help answer the research questions.*

### 4.1 Research approach

The purpose of this study is to explore how SMEs acquire and manage knowledge when starting a wholly owned foreign subsidiary by examining Swedish ICT SMEs that have done so in Singapore.

A deductive research approach is used, where a literature review is carried out with the purpose of identifying a set of theories providing a theoretical framework [Collis and Hussey, 2013]. This provides a foundation for the creation of an interview guide. Empirical data will be collected with this instrument and assist in gaining deeper understanding of the research topic.

The research questions are due to their intricate nature more suitable to understand by collecting qualitative data, data that is more detailed and demands elaboration, which is then analyzed using interpretative methods [Collis and Hussey, 2013]. This better captures the complexity of reality [Creswell, 2014]. This is performed using a case study, a methodology used to explore a phenomenon in its natural setting obtaining in-depth knowledge using a variety of methods [Collis and Hussey, 2013]. This is followed by analysis of the data for themes and issues [Creswell, 2014]. Our case study consists of Swedish ICT SMEs that have entered the Singaporean market, totaling 7 samples. Multiple sources of data are used, interviews and observations. The data collection for observations have not been thorough or done in a methodological way and therefore data triangulation can not be achieved [Collis and Hussey, 2013]. However it serves the purpose of increasing validity by cross-checking the results from the interviews.

### 4.2 Research process

The research process started with a pre-study exploring the research field in order to define the purpose and research questions. It is followed by a deepened literature review. This provides the basis for a theoretical framework, which in turn shapes the interview guide. The empirical study was performed using a case study, with semi-structured interviews utilizing the interview guide. The full process is depicted in Figure 4.1

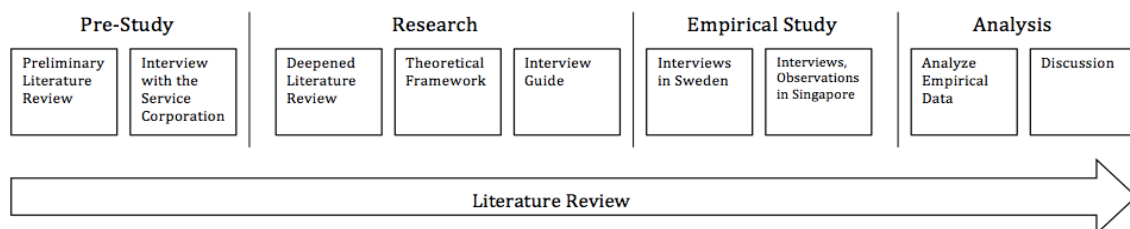


Figure 4.1: Research process.

### 4.3 Pre-study

The pre-study helps to further investigate the research field and narrow down the areas of interest, isolating the purpose of the study as well as the research questions. It consists of a preliminary literature review and unstructured interviews. In line with Collis and Hussey [2013] the preliminary literature review is a critical analysis of the main studies published relevant to SMEs entering foreign markets. This laid the foundation for an interview with the Service Corporation. The Service corporation is an SME offering IT-support B2B2C, allowing their clients to outsource their IT-support. Interviews are also conducted with two NUS professors and a consultant who aided Swedish SMEs to enter the Singaporean market. The aim of the interviews is to broaden the perspective and understanding of our subject. In the case of the NUS professors, an academic perspective is received.

The interviews are unstructured with open-ended questions to explore the interviewee's answers more in-depth Collis and Hussey [2013]. The process of open discovery is the strength of this kind of interview, allowing the subject to talk freely about the topic. The interviews serve to finding relevant problem areas and potential objectives of the study. In particular, the interview with Nitin Pangarkar [personal communication, September 13, 2017] sparked a change in how the problem was viewed where technological knowledge was taken into consideration. From the interview it became clear that in the ICT-solution industry, market specific knowledge is more coherent throughout the world due to high degrees of product standardization and therefore does not require acquisition of knowledge to the same extent. Therefore market specific knowledge and technological knowledge were taken into consideration.

Interviewee	Background	Date and duration	Form
Nitin Pangarkar	Academic director at NUS and co-author of many relevant papers, among other "Internationalization and Performance of Small and Medium Sized Enterprises, 2008"	35:52, 13/11/17	Face to face
Alexander Capri	Visiting Senior Fellow with research interests in the ASEAN Economic Community among other	23:59, 13/11/17	Face to face
Sandra Appelqvist	Co-founder of Apples and Spears, a consultant firm assisting Swedish SMEs in their entrance on the Singaporean market	1:09:16, 09/11/17	Face to face

Figure 4.2: Pre-study interviews.

### 4.4 Literature review

The literature review is a critical evaluation of the body of knowledge, meant to guide the research as well as show that the relevant literature has been located and analyzed Collis and Hussey [2013]. Initially, the literature review inspired a theoretical framework which in turn resulted in an interview guide. Furthermore it is structured thematically in order to guide the method of analysis Collis and Hussey [2013]. The literature review is continuously made throughout the research process, allowing our continuous findings to steer which relevant literature to further explore. Hence, the process is of an iterative nature.

The examined literature consists of articles published in scientific journals. The key articles are published in International Business Studies, International Business Review and Palgrave Macmillan Journals. The articles are found using data bases, most frequently Science Direct, JStor and Research Gate. Google Scholar and KTH Online Library functioned as gateways to find these data bases.

The pre-study assisted in finding the relevant search words. The search words included "SEA", "ASEAN", "market analysis", "Singapore", "foreign markets", "SME", "Singaporean market", "entry models", "market entry strategy", "network relationships", "knowledge management", "WOFS", "knowledge acquisition", "internationalization" and were put in different orders and combinations. The relevant articles were sorted into an excel document where the following information was extracted; title, year, author, journal, main message, contribution to our study and link.

Besides the literature, consulting reports gave insight into possibilities of the SEA market and are found on Google. Books were used primarily for providing theoretical rigor to the methodology and these were found in the KTH Library.

To ensure the quality of the work the sources have carefully been examined. The trustworthiness of the information found has been based on the author's credibility as well as the year the work was published. For the consulting reports, authors affiliated with larger banks, consulting firms or large institutions have been believed to be credible. Furthermore it has been recognized that information necessary for a market analysis can be outdated rapidly since new political situations may alter the economic projections. The year of publication has therefore been taken into consideration to reflect the latest projections and to ensure the appropriateness of the information. The articles were deemed credible on three basis. Firstly, if they were frequently referenced by their peers. Secondly, if their methodology seemed credible. Lastly, if they have been published in a well-respected journal.

## 4.5 Empirical study

### 4.5.1 Case selection

Only one case will be made in this study and this one is chosen due to its interesting possibilities. The case will be limited to Swedish ICT SMEs that have started a WOFS in Singapore. Furthermore they exclusively deal in B2B. The Singaporean market is an access point to a growing middle class in the SEA-region [Accenture, 2015](#), where ICT-solutions are in higher demand by the day. Swedish firms are leading in this field and can seek to exploit this growing market.

#### *Small and medium-sized enterprises*

The research questions focus on SMEs' starts of WOFS in Singapore and the case therefore will be of SMEs. The criteria is that the company is an SME or was an SME at the entry of the Singaporean market. An SME is defined by the standards set by the [European Commission 2017](#), as an enterprise with a headcount between 10 and 250 and revenue ranging from 2 million

to 50 million euro. The sample companies will be included if they were SMEs at the time of entering the Singaporean market.

#### *Wholly owned foreign subsidiary*

A wholly owned foreign subsidiary is to enter a market through an equity foreign direct investment with full ownership [Gunnarsson, 2011].

#### *Singaporean market*

The Singaporean market is chosen because of a broader industry interest in the growing SEA region, making our study more useful to the potential readers. The South East Asian (SEA) region is estimated to be a 3 trillion dollar economy and have a population of close to 600 million people by 2020. At the same time the middle class will grow in the area while the already existing middle class will move into an even wealthier consumer segment. [Accenture, 2015]

Singapore is a business friendly market with low tax rates and few obstacles to set up a business and a large number of companies have therefore chosen to place their SEA headquarter in Singapore [Pangarkar, personal communication, September 13, 2017]. Furthermore being a large metropolitan city state with high diversity and international presence, it is given resemblance to western power houses New York or London. It offers a testing ground for companies to see if they can operate efficiently and effectively, and if it does they can venture out to the rest of Asia [Pangarkar, personal communication, September 13, 2017]. In addition it has great flight connections to the rest of the region. It could in other words be used as a springboard into the SEA-region.

#### *Information and Communications Technology*

A definition of Information and Communication Technology (ICT) is as follows “a subject that deals with electronic computers and computer software to convert, store, protect, process, transmit and retrieve information” [Atlantic, 2007, p. 669].

The growth in the SEA market and the increase in middle class results in a quickly expanding ICT-sector [European Parliament, 2015] and was therefore chosen. An increasingly digitized world relies heavily on ICT-solutions, and will continue to do so for a foreseeable future. Sweden is recognized as one of the most advanced ICT-markets in the world [Solowianiuk, 2014]. In fact, they are the second largest tech hub per capita after Silicon Valley [Business Sweden, 2017]. Sweden’s leading position in ICT in combination with the increasing SEA market demand creates great opportunities for Swedish ICT SMEs.

#### *Swedish origin*

Swedish enterprises were chosen due to them being more accessible from a geographical perspective and also prominent in the ICT-sector. To be considered a Swedish enterprise in our study, one must have first incorporated the business in Sweden.

#### 4.5.2 Sampling technique

The sample is selected using a list issued by the Embassy of Sweden in Singapore, listing Swedish related companies in Singapore. Every company on the list is compared with the boundaries of our case, and selected if they fulfilled all criteria. They have to be within our definition of an SME, our definition of a Swedish enterprise, they had to offer ICT-solutions and finally have offices in both Sweden and Singapore. This creates our sampling frame, which is the population from which the sample can be drawn (Collis and Hussey, 2013). Out of the 230 firms on the list, 19 fit in the sampling frame. All these enterprises are contacted by email or phone, asking for an interview with a person or people who have insight into the internationalization process and the entrance into the Singaporean market. 7 enterprises agreed to meet for interviews. The resulting sample that is selected consists of the enterprises who responded positively, which results in a biased subset of the population. This is known as convenience sampling which is non-random. In this sampling method members of the population are selected based on certain criteria such as willingness to participate, geographical convenience, easy accessibility or availability at a certain time (Farrokhi and Mahmoudi-Hamidabad, 2012). Furthermore, the sample can be subject to survival bias since interviews have only been conducted with firms that have successfully opened a WOFS in Singapore.

Company name	Product offer	Interviewee	Title	Date and duration	Form
Accedo	Delivering digital platforms to video service providers, such as CNN and HBO	Michael Lantz	CEO	43:55, 09/10/17	Face to face
		Chris Hampartsoumian	Regional Director - South East Asia	56:32, 08/11/17	Face to face
Djenee	A digital concierge service, offering all kinds of services to their customers	Pär Helgesson	Founder and CEO	46:21, 17/11/17	Face to face
Monitor ERP Systems	Delivering ERP Systems to manufacturing SMEs	Johan Holmsten	Marketing and sales manager	1:02:30, 10/10/17	Skype interview
		Daniel Häggmark and Kalle Persson	Managing Director /Consultant	01:27:56, 10/11/17	Face to face
Netcom	IT-consultant firm in web development.	Conny Karlsson	CEO of Singapore office	57:13, 17/10/17	Face to face
Optimity Software	Software optimizing production chain for manufacturing firms	Niklas Andersson	Managing Director Optimity Asia	48:10, 08/11/17	Face to face
Polystar	Delivering software to telecommunication firms allowing tracking and analysis of big data	Jan Öhman	CIO	52:07, 20/11/17	Face to face
Westermo	Manufacture and market products for industrial data communication and network solutions in challenging environment	Kenneth Isacsson	VP of sales	41:01, 14/11/17	Face to face

Figure 4.3: Interviews with Swedish ICT SMEs.



### 4.5.3 Data collection method

#### Semi-structured interviews

Semi-structured interviews are conducted to increase the flexibility of the interviews. In a semi-structured interview some of the questions are prepared however additional questions can be asked in order to obtain more information about the topic at hand [Collis and Hussey, 2013]. These interviews are organized around themes decided beforehand, usually kept in an interview guide [Blomkvist and Hallin, 2014]. The benefit of this type of interview is it encourages exploration of a topic, however the ability to compare different interviews suffers [Collis and Hussey, 2013]. To enhance comparability, the interview guide in this paper has predetermined questions which are covered during every interview, however the order in which they are asked varies depending on the flow of the conversation. In semi-structured interviews it is often difficult to keep track of the questions and answers [Collis and Hussey, 2013]. To avoid this problem all interviews are recorded with the permission of the interviewee. All interviews except one were face-to-face, which is preferable since the questions are of a complex nature [Collis and Hussey, 2013]. The interview that wasn't preformed face-to-face was conducted through Skype. According to [Symonds et al., 2016] Skype-interviews can't replace face-to-face interviews partly due to limitation in accessing non-verbal cues. However they work well as a viable alternative for qualitative researchers. [Symonds et al., 2016].

Interviews are conducted in both Sweden and in Singapore. The Singapore interviews created insight and understanding about entering the Singaporean market. This was in a way that could not have been achieved from Sweden since the most active personnel in the process were still present in Singapore. In the case of Monitor ERP System and Accedo, an interview was made in each country with two different people. The focus of the interviews in Sweden was then more on the internationalization process in large while the Singapore interviews focused on the entrance into Singapore. In total 9 interviews were made as a part of the case study.

The interviewees in the study were all in a managing position in their companies. This is beneficial because the interviewees have had similar roles in the internationalization process and therefore have a more uniform perspective. This will result in a better analysis and a more coherent conclusion. In addition, interviewees in a management position would have had a greater level of involvement in the internationalization process and especially the entrance of the Singaporean market. However, including perspectives from other employees could have given an even broader understanding of the situation.

The majority of the face-to-face interviews took place in the offices of the firm in question, allowing for observations to be made in the workplace. This was especially useful in Singapore, where we were introduced to employees, getting a sense of their attitudes. Also visiting the shared work-spaces of high-technology firms gave greater insight into the firm's ability to network in this environment. Furthermore it helped to sense the firm's culture. The data collection for the observations have not been thorough or done in a methodological way, so they will only serve to increase validity by cross-checking the results from the interviews.

#### 4.5.4 Instrument development

The instrument for data-collection, the interview guide, is created with a few ideas in mind. The questions are short, non-leading and only one question is asked at a time [Collis and Hussey, 2013]. Furthermore the questions are open-ended, allowing the respondents to answer with their own words. This is more suitable for qualitative research. The questions in the beginning of the guide are more general, asking about the company's operations and the year of foundation and then gradually becoming more specific, known as funneling [Collis and Hussey, 2013]. In a similar way the questions start of easier and impersonal and gradually turns more challenging allowing the interviewee to become more comfortable.

The instrument for data-collection, the interview guide, is divided into categories of inquiry with the aid of the theoretical framework seen in Figure 3.2 and Figure 3.3. The categories aim to shine light on the start of a WOFS in Singapore to answer the research questions in this context. The first category refers to the three internationalization phases where the aim is to determine which internationalization phase the company was in when entering the Singaporean market. This helps to answer the first part of the first research question treating the acquisition of knowledge. Secondly, the last category treats the management of knowledge.

#### 4.6 Data analysis method

Qualitative data creates a large amount of information that needs to be managed and controlled. In order to do so the analysis consists of a few steps. The first step is to convert the interviews into a written record that can be divided into categories. In order to carry this through the recordings are used and transcribed. Furthermore these were referenced with information containing the interviewee, place and duration. The following step consisted of coding the data. The data is coded under unique subcategories to the main categories from the theoretical framework. These codes are then grouped into small categories according to patterns or themes that emerge.

#### 4.7 Reliability

For results to be considered reliable, a repeat study should obtain the same results as the original study [Collis and Hussey, 2013]. For qualitative studies however, even under a positivist paradigm, the idea of repeatability is loosened up. The focus rather rests on establishing protocols and procedures to assure the authenticity of the study [Collis and Hussey, 2013]. In this report, the empirical data is gathered through a series of interviews, representing a qualitative mean of collecting data. Therefore, to ensure reliability, questions asked in the interviews were formulated in advance with the assistance of a rigid framework. The only deviations from the interview questions were follow-up questions, to further explore the answers of the interviewee. Although a necessary deviation to obtain the empirical data of interest, it makes the study impossible to replicate. Still all interviews were taped and transcribed staying true to the spirit of establishing protocols. The study therefore has a high degree of reliability, but can not achieve repeatability.

## 4.8 Validity

A valid study is one which research findings accurately reflect the studied phenomena [Collis and Hussey, 2013]. High validity ensures that the measures used in the study really measure what they are supposed to measure [Collis and Hussey, 2013]. In this study it is critical that the interviews have managed to extract the information necessary to answer the research questions. Since some of the questions in the interviews are close variations of the research questions, validity should not be lacking. However, one could argue that the questions are not formulated in a way where the desired information is successfully extracted and therefore the study lacks validity. Judging on the high quality of the received answers in the study and their resemblance to ideas in other reports, high validity is likely.

## 5 Results

*The results first outline the internationalization processes of the firms. This is done to put the start of the WOFS in relation to the firm's maturity of internationalization at the time. It then explores the empirical data gathered from the interviews regarding acquisition of knowledge and knowledge management at the WOFS.*

### 5.1 Internationalization phases of sample firms

When considering companies' internationalization timelines these are according to a single person's recollection. Hence they are subject to minor errors. However the significance lies in identifying what phase Singapore was entered upon and slight alterations have minor effects on the overall phases. The phases are outlined due to a possibility that the maturity of internationalization affects the way knowledge is acquired.

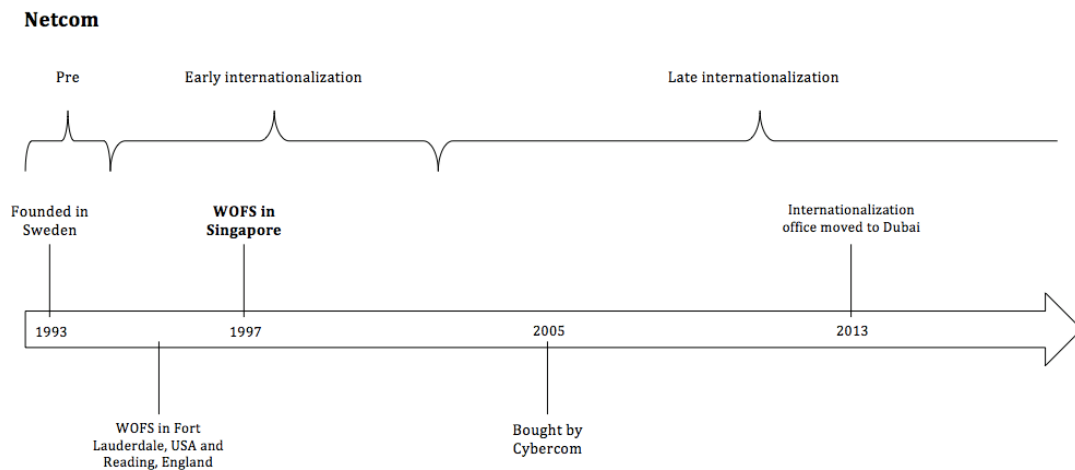


Figure 5.1: Netcom's internationalization timeline.

Netcom started out as an internal IT-consultant to Millicom, a part of the Kinnevik group, focused on telecom in 1993 in Sweden. Soon after the start offices were opened in Fort Lauderdale in the US and Reading in England. The Florida office was started in an effort to serve their South American clients from a shorter distance. Netcom's pre-internationalization phase therefore ended at a rather early time when the first client on a foreign market was obtained. Netcom soon followed Millicom, a mobile phone operator in expanding markets, into the SEA market to assist them with technological consulting. Netcom opened their Singapore office in 1997 to maintain the projects in this area. Somewhere between 1997 and 2005, early internationalization turns to late internationalization, due to the firm having vast international experience all over the world. In 2005 Netcom were acquired by Cybercom. Cybercom's goal for the acquisition of Netcom was to obtain forty consultants in Netcom's Stockholm office, but ended up with the Singapore office as well. This perfectly illustrates the occasional randomness of firms' internationalization, as Cybercom's entry in Singapore was a result of a strategical decision regarding something completely different. [Netcom]

Conny Karlsson was a Netcom consultant and was put in charge of the Singapore WOFS at a similar time as Cybercom's acquisition of Netcom in 2005. In the following three years the demand for Netcom's services sky rocketed and as a result the number of employees in the Singapore WOFS increased from three to one hundred. In 2013, the international office moved from Singapore to Dubai due to it being closer to the client base at the time. [Netcom]

### Optimity

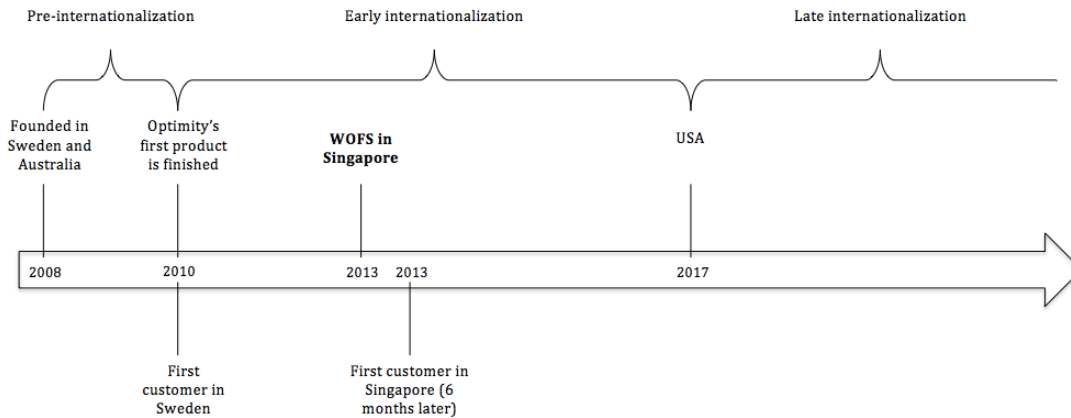


Figure 5.2: Optimity's internationalization timeline.

Optimity's business model is offering Enterprise Resource Planning (ERP) Systems which allow the client to optimize their supply chain. They are particularly focused on demand planning. Optimity was founded simultaneously in Sweden and Australia in 2008, and the product was developed in Australia by the Swedish founders. The product Optimity Demand and Supply was released in 2010. The first client deals were settled in Australia and Sweden simultaneously in 2010. Due to Optimity being incorporated in both Australia and Sweden it made it a tricky to decide on the pre-internationalization phase of the firm, since acquiring Australian and Swedish customers would not necessarily mean having international clients. However, the end to the pre-internationalization is put at this point due to Optimity having to serve clients in more than one location. [Optimity]

The next market that was entered was in Singapore in 2013. Niklas Andersson, the leader of the Singapore office, had before the start of the WOFS in Singapore worked at Intensia, a world leader in ERP Systems. Niklas had worked in the region for 15 years with this system and had established plenty of contacts from his previous employment. He was also joined by a colleague from the Swedish office who would know Optimity more in detail. The last step in the internationalization process is the establishment of a WOFS in the US in 2017. Due to this being the second new foreign market where a WOFS is established, together with 10 years of experience on acting on foreign markets, the late internationalization phase is set to start then. [Optimity]

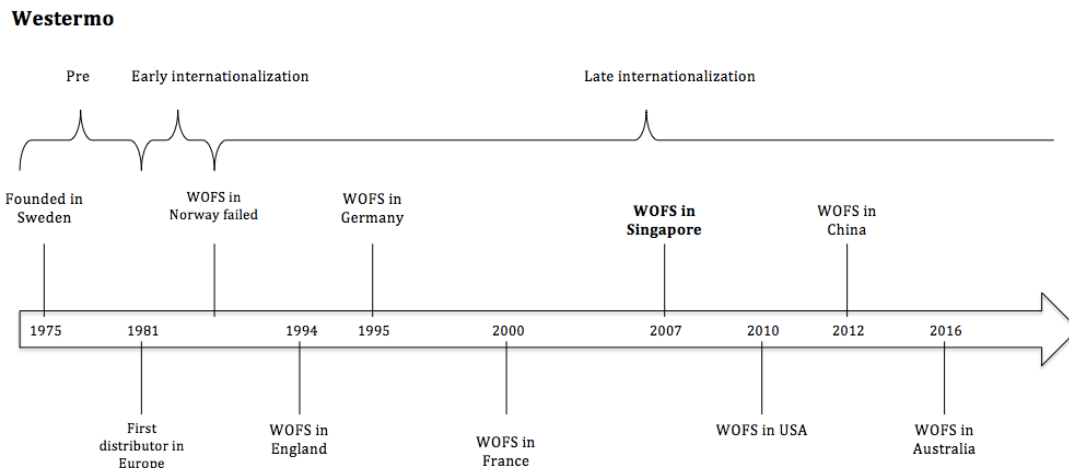


Figure 5.3: Westermo's internationalization timeline.

Westermo was founded in Sweden in 1975. They manufacture and market products for industrial data communication and network solutions, in particular in difficult environments demanding robust networks. The company was a spin-off from ABB and the founder, Tore Andersson, had previously been an employee at ABB. He saw a need for data communication solutions that could work at longer distances and as a result ABB was Westermo's largest customer for the first couple of years. [Westermo]

The pre-internationalization phase ended in 1981 when they received their first distributor in Europe. Entering their early internationalization phase, the firm continued their internationalization journey by finding multiple distributors within Europe as well as a few in Asia and the US. The first attempt to open a WOFS was in Norway, after already having worked with distributors there. Kenneth Isacsson had realized that Westermo succeed better when opening their own WOFS compared to using distributors. Often distributors have multiple products in their portfolio, resulting in a lack of focus on Westermo's products. The attempt was ultimately a failure, but marked a shift in strategy which would follow Westermo in their future internationalization, ending their early internationalization phase. They would from this point initially rely on distributors on a new market, but would eventually start their own WOFS. In 1994 Westermo conducted their second attempt at opening a WOFS, this time in England. Kenneth Isacsson, the founder of this office, convinced Westermo's owner that this was necessary due to an ineffective relationship with the current distributor. Potential had however been spotted in one of the distributor's employees, who earned a key position in Westermo's efforts in England. [Westermo]

The following year, 1995, Kenneth Isacsson opened his second WOFS located in Germany. He spent the following five years in Germany until the opening of the WOFS in France in 2000. England, Germany and France were the three first larger establishments conducted by Westermo. In all cases the relationships with the distributors were not desirable. In Germany a change from one distributor to another lead to a non-functional relationship. Kenneth Isacsson saw the potential in the market and requested to start up a WOFS in Germany. In France, Westermo had previously had a successful relationship with a distributor. However an acquisition of the

distributor lead to a shift in product focus and Westermo's product was not prioritized anymore, resulting in lower sales. [Westermo]

The Singapore office was opened in 2007, once again by Kenneth Isacson. Similarly to the case in England, the distributor was not achieving the level of success that was desired, however there was one employee that did do a noticeably good job and was later recruited. The internationalization continued with the opening of a WOFS in the US in 2010. Later in 2012, WOFSs in China and Australia were established. [Westermo]

### Djenee

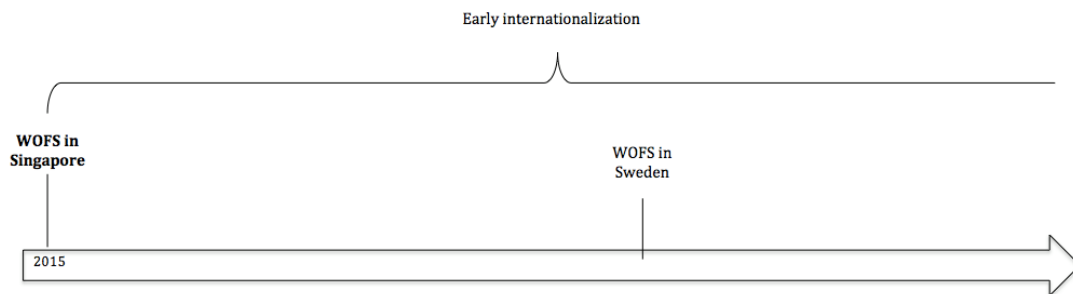


Figure 5.4: Djenee's internationalization timeline.

Djenee was founded in 2015. Djenee's business model is to deliver on any legal and practically possible service their client demands. Their clients can ask for Djenee to pick up flowers, deliver packages or make reservations at a nice restaurant. People who want to work for Djenee can register as Djenee-runners and perform some of these services. Djenee is unique in that they established business in Singapore before they did so in Sweden, and therefore are considered to lack a pre-internationalization phase. The Singaporean market was deemed a perfect starting point seeing as the culture of outsourcing personal services is more established in their culture. It is not uncommon to have a maid at home for example. Due to recently starting as a business, Djenee has yet to start their internationalization broadly. Pär Helgesson, the founder of the firm, envisions an internationalization of exponential nature, where people are lifted out from international WOFSs to start other WOFSs. [Djenee]

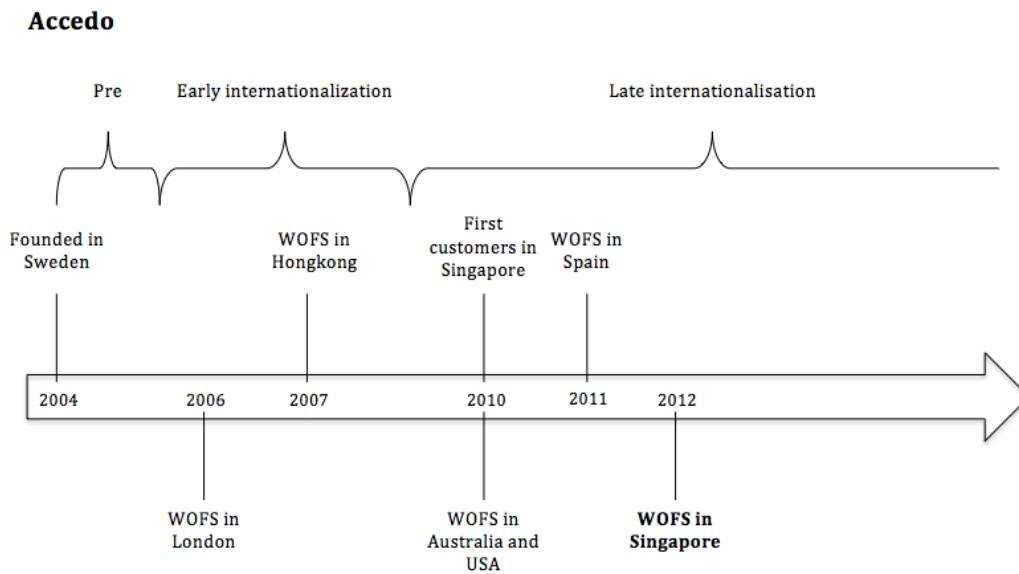


Figure 5.5: Accedo's internationalization timeline.

Accedo delivers software services to companies who launch video services, for example HBO. The company was founded in 2004 and the first product was finished in 2006. Accedo started with a global focus and their ambition was to quickly expand on the international market. Michael Lantz, the founder, moved in 2006 to London in order to carry through the international expansion from there. It was a strategic move where the aim was not necessary to find customers in England but rather have easier access to additional markets. This point marked the beginning of their early internationalization phase. [Accedo]

The second WOFS was opened in Hong Kong in 2007. Accedo had an opportunity to work with PCCW, one of Hong Kong's largest telecom operators. The customer required local presence and it followed that a WOFS was established. The office did not only result in local presence but also an opportunity to reach other customers in the region. [Accedo]

After establishing the Hong Kong office a strategic change was made, marking the late internationalization phase. The strategy presupposed that before setting up a WOFS on a foreign market a customer should already be existent on the market and Accedo should have a minimum of three leads. [Accedo]

Accedo's internationalization continued by opening WOFSs in both Australia and the US in 2010. In 2011 a WOFS was established in Spain with the purpose to work as a bridge head to Latin America. They had earlier made an attempt to enter Latin America but quickly realized that obstacles, like culture, made it hard. Therefore for the past 6 years relations have been built up with Latin America. [Accedo]

Accedo received their first customer in Singapore in 2010 after already having a few customers in the region. Singapore was believed to have great potential since it was seen as a regional



hub for media companies. Opening the office was Chris Hampartsoumian, who had previously worked in the region and therefore had preexisting contacts. [Accedo]

### Monitor ERP System

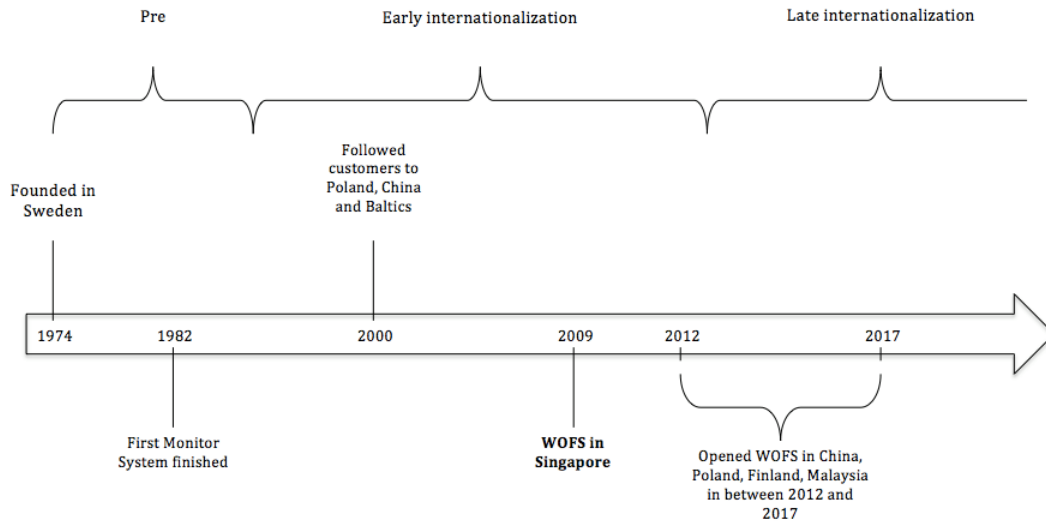


Figure 5.6: Monitor ERP System's internationalization timeline.

Monitor ERP System was founded 1974 in Hudiksvall in Sweden. The founder, Åke Persson, started out as a manufacturing consultant, assisting in optimizing manufacturing processes. With the advancement of computer technology, he saw the possibility to expand his product offering. In 1982, the first Monitor ERP System had been created, tracking all manufacturing processes from sales orders, orders to suppliers to machine planning. During the coming years, they served Swedish clients, eventually establishing as number one on the Swedish market in ERP Systems aimed at manufacturers. [Monitor ERP System]

In the early 2000s, Monitor ERP System's clients captured opportunities of moving production overseas to reduce costs, commonly to the Baltics, Poland and China. Following their clients to these new locations, Monitor ERP System had formally left the pre-internationalization phase and entered their early internationalization phase. Upon entering these new markets, they saw opportunities to find new clients on these markets. WOFSs or deals with partners or resellers were set up on these markets. A couple of years later, in 2009, a large client wanted to start a plant in Singapore and they wanted Monitor ERP System's software to track manufacturing. This resulted in the largest deal in Monitor ERP System's history. Three employees were stationed in the newly opened WOFS in Singapore, Daniel Häggmark included, solely to serve this client while starting their new plant. After the project's finalization two years later, opportunities for clients arose in Malaysia. Daniel Häggmark eventually started a WOFS in Penang in Malaysia to serve these clients. Today, Penang is the main office serving clients in the whole SEA-region, while the Singapore WOFS still remains mainly for tax-purposes. In between 2012 and 2017 offices were started in China, Poland, Finland and Malaysia and considering twelve years of international experience as well as having started WOFS in both Singapore and Malaysia, late internationalization is assessed to have started. [Monitor ERP System]

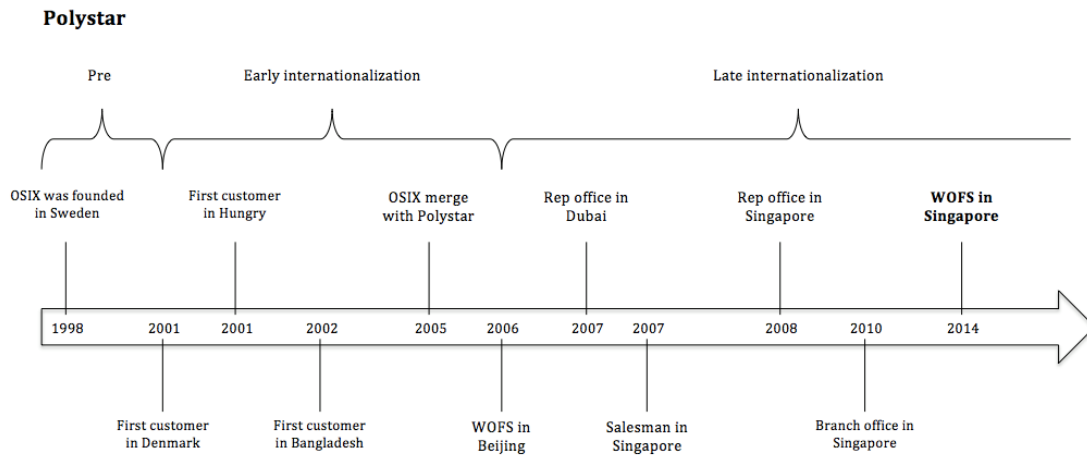


Figure 5.7: Polystar’s internationalization timeline.

In 1998 OSIX was founded, at that time they created their own software products. They had an international focus since start and in January 1999 they won their first international customer in Denmark, marking the end of their pre-internationalization phase. Short after, they expanded outside of Scandinavia and delivered to a customer in Hungary. It did not take long until they reached outside of Europe and in 2002 they had business in Bangladesh. [Polystar]

In 2005 OSIX merged with Polystar and became the company it is today. Polystar offers software to track data in telecom in order to optimize network performance. The new company’s first move towards an even more internationalized company was creating a WOFS in Beijing. At this point in time a strategy change is apparent as the company moved from serving customers abroad to opening a WOFS. Hence Polystar entered their late internationalization phase. [Polystar]

The years that followed were highlighted by presence in Asia. In 2007, Polystar opened a rep office in Dubai and the same year an employee was sent to work with sales in Singapore. In 2008 yet another rep office was started, this time in Singapore. It turned into a branch office in 2010 and finally in 2014 a WOFS was created in Singapore. Over time the operations in Singapore has gone from solely being sales to also covering delivery and support. Today the office consists of 11 employees, among them an employee who previously worked at Ericsson. He was also the founder of the WOFS. [Polystar]

## 5.2 Acquisition of knowledge

### 5.2.1 Recruitment of leaders

In the majority of the cases the leader of the Singaporean WOFS were found through internal recruitment. Kenneth Isacson at Westermo, a loyal employee for many years, had developed a rigorous knowledge about the products, its technology and its sale cycle. Prior to his time in Singapore, travelling on Westermo’s behalf and starting 3 WOFSs in Europe, he had plenty of internationalization experience. He had developed an eagerness for doing business and was one

of Westermo's strong forces for further internationalization. Similarly, Pär Helgesson at Djenee, had since the 90's worked in the Asian region. He had previously worked with translation of sites to Japanese as well as operated in China and Hong Kong. His past experiences had also taught him the vast plurality of cultures both within and between countries in the relatively geographically small SEA-region. Furthermore he had developed an understanding for the SEA market's opportunities.

Compared to Kenneth Isacsson and Pär Helgesson, Daniel Häggmark at Monitor ERP System and Conny Karlsson at Netcom started the Singaporean WOFS at an earlier stage in their careers. Daniel Häggmark had prior to his move worked with support at Monitor ERP System for 3 years. The opportunity to join the project in Singapore came as a surprise and he moved there with two senior employees. Conny Karlsson had previously worked as a consultant for Netcom and had insight into the business. His previous experience in Brazil, Germany, Spain and Portugal lead to an understanding of the requirements when working on international consulting projects. In addition he finished an MBA at Stockholm School of Economics a year prior to the move to Singapore, explicitly aiming for a position with greater responsibilities. It resulted in him receiving the position of CEO at the WOFS in Singapore.

Accedo, Optimity and Polystar all turned to external sources in order to find a leader for their Singaporean WOFS. Chris Hampartsoumian at Accedo had previous experience of the market after working in Singapore for three years. He knew roughly the company incorporation process in Singapore as well as had insight into the Philippine, Indonesian and Malaysian market. He had also come to the conclusion that Singapore worked as a good place to service the rest of the SEA-region from. Furthermore he brought already established networks in the form of customers to the company. Similarly, Polystars' recruitment of a leader of their WOFS required a trade off between technological specific knowledge and networks. They believed that their new employee, who previously worked at Ericsson, would be able to contribute with contacts. Even though he had not previously worked within the industry, his network was deemed more useful than someone with a lot of industry experience. In Optimity's case, Niklas Andersson, a former expert in the field, had worked for one of Optimity's competitors, Intensia, who's ERP system was ranked among the top five in the world. His experiences when working on projects in Malaysia, Thailand, Japan, Indonesia and India as well as living in Singapore for the last years contributed to a favourable understanding of the market. For example when cold-calling potential clients, there is a difference to how it is done in Sweden. In Sweden a less formal invitation for a coffee is a viable option. In Singapore however, suggesting formal meetings are more likely to result in a meeting taking place. Furthermore Niklas's already established network provided Optimity with four customers, which of course is a valuable resource when entering a new market.

### **5.2.2 Recruitment of other employees**

Having started the Singapore WOFS, for most of the firms there was a need to recruit employees. The strategy adopted depended on the demands of the firms. In Accedo's case there was a need to find more software developers who could match the increasing demand from an increasing customer base in the region. Finding this particular competence turned out to be no challenge

for Accedo, receiving about a thousand applications over a course of two months for a javascript developer position posted on LinkedIn. Chris Hampartsoumian believed that being a Swedish firm was a competitive advantage when recruiting, having a reputation of strong innovation, not only in software development. The attraction as an employer was furthered thanks to the brand being strong, sitting in a good location and having multinational customers. Software development is not as niche of a competence as some of the other firms are looking for. When picking from all of these applications, one of the preferred criteria was students who had studied in Singapore on a scholarship originating in another country in the region. Singapore tactically offers select students from the region scholarships due to academic excellence in an attempt to attract competent people to the country. A condition of these scholarships is that the receiver has to stay and work in Singapore a few years after graduation. In these scholarship receivers Chris Hampartsoumian saw extremely competent people who were chained to Singapore, eliminating the possibility of leaving the firm prematurely due to offers outside of the country. Another benefit of this recruitment strategy, except for tying highly competent individuals to the firm, was obtaining their knowledge of their home country in the region. Accedo serves clients in all of SEA and occasionally the employees' knowledge of their home country is of great value, being familiar with the established clients in those markets.

For Netcom, the rapid growth of client demands in the SEA-region made recruitments of new people to enter the projects a necessity. The task was not easy, given a niche requirement on the new employees. Firstly, they had to have the right technological skills. Secondly, they had to be flexible to work in projects all over the world, often in places that are considered less attractive such as Tchad, Rwanda, Senegal, Sierra Leone and Vietnam. To be able to find the high number of people fitting this demanding description, the scope of search for candidates was large. Recruitment was done all over the world; the Philippines, Malaysia, the Middle East and Latin America. A positive reaction of the successful recruitments which was not anticipated was the help from the employees to find new candidates. The newly employed came to appreciate Netcom as an employer quickly, treating them well in comparison to competitors who pushed down salaries and who did not treat them as equals. Due to this appreciation for their new employer, they wanted to give the opportunity to join the firm to their friends and family. For Netcom, the continued recruitment of personnel therefore was simplified once the first few people had been found. Another interesting strategical decision for Netcom was to always try and include at least a couple of locals in each large project in a distant part of the world. For example if a project was taking place in Tanzania including 30 people, at least 4-5 people would be recruited locally. For administrative positions recruitment was done locally from Singapore.

At times recruitment happens with the assistance of one's established network. Niklas Andersson at Optimity knew personally the third person who was recruited to the office from his previous employer Intensia. They had worked together for 15 years and knew each other well. Today Optimity has three employees in Singapore and they work close to each other, increasing the necessity for recruiting someone who is more familiar. Westermo adapted the same method to find their salesman, with him being known to the leader of the office, Ernest, and working with a competitor. Westermo also realized that although their product demands a specific kind of knowledge, it would not be a sustainable strategy to internally recruit people from other offices. Moving people from inside the organization is very expensive, higher salaries are required, maybe

there is a need to fund housing. Recruitment for other positions were made through employment websites.

For Djenee, it was of great importance that their recruits had local knowledge and local access, meaning established networks. This would simplify their own work as well as being a resource for the company. Seeing as Djenee being a company offering services on demand, recruitment were made from players on the market delivering similar offers. They recruited from Uber, connecting willing drivers to passengers, much like Djenee will connect willing helpers to people in need of a service. Otherwise Djenee turned to “Silicon Valley”-firms for recruitment to acquire highly skilled software developers from an innovative environment. Another desired characteristic of their employees was experience of internationalization. Djenee has a grand vision of expanding quickly globally and therefore sees this kind of experience as an invaluable resource. They know that when internationalizing, it is incredibly common to run into problems, and the more mistakes that can be avoided, the more time and money is saved.

### **5.2.3 Market analysis**

Jan Öhman at Polystar, despite recognizing the benefits of conducting market analysis, did not do so before entering Singapore. He commented on the value it might have when establishing business on similar markets. At the same time he questioned the overall effects it had on the decision making in the end. An SME, such as Polystar, works with limited resources in the form of time and money. He believed that it is more valuable to evaluate if the potential market has the desired business opportunities, through being active on the market and gradually learning as the company advances their efforts. Similarly, Polystar’s sales channels were not a result of a market analysis but rather an evaluation of the opportunities that arose.

Kenneth Isacson at Westermo has a similar view. It is particularly hard for SMEs to conduct market research since they do not have the same amount of resources as larger firms. The choice of market to enter is more dependent on the known actors and the company’s network. Kenneth Isacson used reasoning rather than a market analysis when determining the potential of the SEA market. For example he argued that Indonesia being 300 million people, compared to Denmark’s 5 million people, showed in its numbers the difference in market potential. The potential in the rest of the region is also high for the same reason, being home to a huge population. Furthermore Kenneth recognized large investments on the region’s infrastructure as another positive factor.

Neither Optimity nor Monitor ERP System made an effort in conducting market analysis. In Optimity’s case the entry of the Singaporean market was seen as a natural consequence of the company’s network. Johan Holmsten at Monitor ERP System knew from personal experience that it is more beneficial to more rapidly become active on the market rather than conducting market research since they are often incomplete, time demanding and costly.

The exception is Netcom. When broadening their customer base they found new customers in a variety of geographical areas through already existing market reports or by analyzing the markets themselves. However this approach was only used in a few occasions.

#### **5.2.4 Help from third parties**

Finding help from “consultants” is another way of acquiring knowledge, in particular knowledge about the new market. Chris Hampartsoumian at Accedo found a third party which both had the knowledge of how to incorporate a business and act as a local director. This agent was found online and was perceived as trustworthy. Furthermore it was a cheaper option than for example using the services of Business Sweden. The role of local director was later transferred to Chris Hampartsoumian himself once his employment pass was sponsored by Accedo. These kind of third party agents exist in the region providing this exact service for foreign firms that need to get around the regulations and laws of Singapore related to incorporating a business. Although Chris Hampartsoumian did not choose to use Business Sweden’s services he did praise them as a competent partner in these circumstances. His interactions with them were always positive, he received valuable advice and he felt they looked out for the firm’s best interests. He stated that for other firms that do not have the same experience on the market as himself and find a third party agent themselves, Business Sweden is a good option. Business Sweden also offers access to shared work spaces, making it possible to hire a space rather than making a larger investment in an initial phase of establishment. Once again thanks to his knowledge about Singapore, Chris Hampartsoumian ended up instead finding a work space in The Working Capitol, a coworking space with primarily ICT-startups.

#### **5.2.5 Inspiration from other firms**

Using other firms as inspiration when internationalizing or starting a WOFS is a path to acquiring knowledge. The strategy was mostly apparent in Djeneer’s case, where ideas were gathered from multiple selected sources. First of all, Djeneer knew that their core business idea is to deliver on clients’ wishes for services. They therefore went to a service intensive industry, the hotel business, and benchmarked their services against Four Seasons. Uber was used as a source of inspiration to better understand the connection of people willing to provide a service, their Djeneer runners, with people wanting a service. Uber connects willing drivers to clients who need taxi service. On top of all this, Djeneer also leveraged IKEA’s internationalization strategy to plan their own internationalization. IKEA’s strategy when opening a new warehouse, is to lift people from an existing warehouse to spread knowledge and experience to their new site. This should reduce cost and time on making similar mistakes over and over again.

### **5.3 Knowledge Management**

#### **5.3.1 Documentation**

A way of ensuring that knowledge is kept within the organization and provides an opportunity for it to be transferred is through documentation. When considering documentation, treating market knowledge or knowledge about internationalization, this has rarely been done. However all sample firms perform some kind of effort in documenting knowledge about their specific products or processes.

At Djeneer, services are the core components in the company’s business model. Pär Helgesson has noticed the importance in modelling the workflow and freezing the processes through the use of documentation. In this way Djeneer is able to keep the knowledge available for all parts

of the organization. Furthermore it enables comparison of older and newer processes in order to optimize input and output, resulting in an improved process. Djenee constantly works with the documentation of knowledge and updates their process three times a day. However Pär Helgesson also discusses the difficulties that lie in keeping the excitement up when working in this way. People do not think it is appealing to document so excessively and he stresses that it is vital for the employees to understand its importance. This is due to its built in transfer of insights and knowledge.

Similarly to Djenee, Accedo work actively with documentation and have a global platform, a wiki, where all their projects are stored. The platform contains a large amount of information, accessible for every part of the organization regardless of geographical location. One example where this was useful was when one developer worked on a chromecast related issue and found a similar project on Accedo's wiki. He could then email the software developer to ask about guidance and assistance. Working in such a manner enabled development, leveraging what had been done in the rest of the organization in order to create new opportunities.

Furthermore when Accedo built their pipeline they documented the process through using a software program called Salesforce. A pipeline is the sales process that is moving from potential customer, to prospects, to leads and finally to a sales opportunity. The documentation is aiming to drive productivity, consistency and to increase the availability of information in the whole organization. Furthermore Accedo mainly use Google's services to store their code, documents and projects. Once again it is accessible from everywhere and employees' working spaces are not limited to the offices but they are able to work from anywhere in the world.

Niklas at Optimity emphasizes the difficulty for fast growing companies to document their knowledge, and that their low personnel turnover works as an alternative. In Optimity's case, several of the employees are shareholders keeping a personal interest in the company, explaining the fact that employees have stayed for a longer time. When considering the documentation of their products, larger efforts have been made. This may be a consequence of requirements of creating user manuals and when working on product development.

Jan Öhman, at Polystar, describes the company as non-document oriented but do recognize that knowledge is captured, even if done so in a more untraditional way. One example is in the shift from a branch office to a rep office, when their finance and legal departments needed to be involved. The knowledge was then stored in different "islands" in the organization. However no large effort has been made in order to spread and share that knowledge between the different islands. A possible solution is that the same people carry out the same type of processes resulting in that the knowledge lies within the employees themselves rather than being digitally stored.

Monitor ERP System documents knowledge learned during customer projects. Through their internal support system they are able to view all support question that have previously been asked. The same system is used all over the world, enabling them to serve Swedish customers from anywhere and vice versa.

Netcom, did not document anything containing the internationalization process or the market

in general. However documentation exists in the form of project plans and audits. Comparing old and new documentation could make improvements in the projects and often a standardized document was used in order to make this possible.

Westermo, together with the majority of the sample, lack a strategy for documenting knowledge. However customer contacts and key accounts are stored electronically and success stories can be read on the company's website. As an alternative, Westermo works towards high transparency in the company in order for everyone to share and create knowledge between each other. It is believed that it can reduce the damage when someone chooses to leave the company.

### **5.3.2 Interaction between branches**

A way of managing knowledge is through informal interactions between people. Knowledge can in this way reach more people and in a best case scenario be refined. In an organization, plenty of knowledge is stored in specific branches in different parts of the world. Some sample firms attempt to spread this knowledge through letting individuals visiting other branches in the world. Chris Hampartsoumian at Accedo viewed every visitor from other branches as an opportunity to increase the knowledge of the employees. He made sure to introduce the visitors to the employees and encouraged interactions between them. This attitude of Chris's was part of a larger idea of connecting the Singapore branch to the rest of the organization. Not only for knowledge to enter from the rest of the organization, but also to make the other branches aware of his office's advances and importance. He believed that when explaining the opportunities of the SEA market, asking for something or suggesting hiring more people to his office, it would help if they had managed to make their presence known. This was partly achieved through Chris's encouragement of visitors, but also through social media. When something interesting happened in the Singapore WOFS, being visited by COO Martin Sebelius or by the authors of this paper, pictures were taken and posted to Accedo's blog.

Another idea behind Chris Hampartsoumian's strategy of sharing experiences between branches is him placing high importance on culture. He believed drawing from different cultures could result in larger benefits for the WOFS, making employees feel safe and secure. If they are happy they will work hard which in turn will ensure customer satisfaction. First of all, Chris selected to have the firm's work space in a coworking space called "The Working Capitol", predominantly populated by start-ups. A culture of start-up and technological innovation would therefore surround the employees and permeate the firm's day-to-day activities. Furthermore, he incorporated his own personal culture, by talking to the employees about the industry, the office and his experiences of working in the technology industry all over the world. A Hong Kong culture was included through frequent visits from that branch. Swedish culture was brought in through letting Martin Sebelius make a presentation about the origins of Accedo and about Sweden. Chris believed his conscious efforts regarding culture had paid off, seeing as most people who start ends up staying.

Kenneth Isacson at Westermo viewed sending his employees to other branches as part of his management philosophy. He sends people to Sweden with high frequency, lets them participate in technology meetings and allows them to visit fairs. They visit Sweden just to get a look at



the office and meet people. He believes this allows them to get a more accurate feel of what the firm actually does. He wants the employees to realize how business is done and how people interact in the firm. He believes company culture is an extremely important factor to succeed with his Singapore WOFS. The more times they visit, the more accurate is the understanding of what the firm actually is like. These visits are not only about learning about the company and to establish relationships with people, Kenneth also believes they are a tool to spread the work culture of the firm.

Jan Öhman at Polystar also realizes the importance of a strong connection with its Singapore WOFS to simplify communication and in that way transfer knowledge. To ensure this strong connection, Polystar chose to send some people from their own office to work at the Singapore WOFS. In that way, the Singapore WOFS already has an internal network with the home office in Stockholm. They will always know who to contact, whatever help they need. Jan sees a considerable risk if a strong connection does not exist between the branches, saying that isolation in a new international office otherwise is a non-desirable likelihood. At Monitor ERP System communication between the Singapore WOFS and the Swedish office occurred on both a formal and informal basis. Daniel Häggmark had a daily connection with international manager Johan Holmsten through different media, but not in planned fashion. This kind of causal interaction is simplified due to both being Swedish, but also through having established a previous personal relationship at the firm back in Sweden.

### **5.3.3 Informal transfer of knowledge within groups**

Another form of spreading knowledge informally is through interaction between individuals within the Singapore WOFS. Netcom's Singapore WOFS went through a process of intensive recruitment within the first years after the arrival of Conny Karlsson. Personnel with the desired qualifications were recruited, but at times specific competence was rare within the organization. In those cases, the person or people who possessed this knowledge participated in multiple projects simultaneously where their knowledge was demanded. Except for being a strategy for maximizing the use of specific competence, this allowed for many people in the organization to interact with the knowledgeable person, increasing the chance for the knowledge to be transferred within the organization.

Netcom, recruiting people from all over the world, faced the challenge of integrating cultures within the organization and between people. Workshops were held where the employees talked about their country's work culture and how people greeted each other. Decision making processes were also under discussion, where it is common elsewhere that the highest ranking person in an office has executive deciding power. In Sweden the decision making is typically more consensus based, where a decision is made when the vast majority of people are in agreement. These cultural activities meant to increase understanding between people and simplify communication and in extent their capability of transferring knowledge. Efforts were also made to spread a Swedish work culture to unify the organization under one common culture and to reap from some of its benefits. The importance of transparency was a key component that was spread. A classical example where transparency is non-existing is in India, where being too open with things going wrong could lead to being fired. Instead it is necessary to keep problems to oneself

until one hopefully has managed to solve them. Conny Karlsson realized the problems with this attitude, since not telling about small problems could turn them into large problems. Through making team leaders constantly asking the employees for transparency and then showing it did not result in bad consequences, the new work honesty was adapted rather quickly. After some time the virtue of transparency spread between employees themselves and had established as a part of the company culture.

A similar idea to Netcom putting people with specific competence in multiple groups to transfer knowledge in the organization was done by the firms that elected to put a person in charge of their Singapore WOFS who had previous experience of the industry. For Westermo, Kenneth Isacsson was put in charge of the WOFS in Singapore after having acquired vast amounts of knowledge during his previous years in the firm, partly through starting WOFS in other countries. The recruitments were after this mainly from the SEA-region and relied heavily on Kenneth to transfer his knowledge. The same is true for Accedo where Chris on his own guides a team of often newly graduated students in their journey at Accedo. Also at Netcom, Conny Karlsson with plenty of experience from working as a consultant in previous projects all over the world, tried his best to transfer his knowledge and insights to a rapidly growing workforce.

#### **5.3.4 Knowledge transfer through meetings**

A more formal way of sharing knowledge is through reoccurring meetings, where knowledge most often is documented in order to revise the information at a later stage.

Monthly meetings are held between Johan Holmsten and Daniel Häggmark where the discussions cover new customers, ongoing projects, market activities and personnel. Furthermore sales targets are set up as well as plans and activities in order to reach them. Accedo also has meetings with the Singapore WOFS and the rest of the Asia-Pacific region every third month. Information is shared in order to understand the ongoing projects and customers at the different locations. It creates an opportunity to learn from each other's experiences. Furthermore Michael Lantz described how Accedo once a year evaluates and documents the strategy that is currently in place. It enables them to go back and look at previous years' strategies. Netcom conduct meetings semi-annually discussing the recruitment strategy. This to see if any adjustments need to be made or if lessons have been learned from the previous meeting.

## 6 Analysis and discussion

*The analysis and discussion categorizes the information in the results section according to the theoretical framework.*

### 6.1 Acquisition of knowledge

The information below treats the firms' acquisition of knowledge and hence the first research question. It has been answered using the categories from the theoretical framework in Figure 3.1 and Figure 3.2.

#### 6.1.1 Market specific knowledge

A common way to acquire market specific knowledge is through external grafting for the leading position of the WOFS, often from a competitor [Accedo; Optimity; Polystar]. The leader of the Accedo office, Chris Hampartsoumian, had experience working with a competitor for three years before being recruited [Accedo]. He brought experience of acting on the market as well as contacts with the few key players on this niche market. His knowledge lead to quick establishment on the market together with an inflow of new clients. The same situation occurred when Niklas Andersson was recruited after having five years work experience at Intensia in the SEA-region [Optimity], also resulting in four clients following him to his new firm. Polystar recruited their leader of the office from Ericsson, where a trade off between market specific knowledge, in this case contacts, and technological knowledge was made [Polystar]. The person in question had multiple valuable contacts that Polystar wanted to access, while his competency of the product was not as advanced. Westermo recruited one employee from the distributor in order to access market specific knowledge while also guaranteeing a degree of technological knowledge. For Netcom external grafting of foreign labour from the region resulted in accessing their personal network relationships of friends and family to considerably simplify further recruitment.

Market specific knowledge is in some cases acquired ahead of establishing a WOFS by serving clients on the market or managing relationships with distributors [Westermo; Accedo; Polystar]. This gradual commitment on a foreign market is in line with the Uppsala model, where one in small steps increase presence in order to let market specific knowledge grow with time [Johanson and Wiedersheim-Paul, 1975], also known as experiential knowledge [Huber, 1991]. Westermo continually relied on distributors on all foreign markets, the SEA-region included, before establishing their own WOFS. Even though valuable knowledge was acquired this way, it was not deemed enough to establish the WOFS [Westermo; Accedo; Polystar]. External grafting of personnel with the explicit purpose of acquiring market specific knowledge was done as a complementary issue. A case where market specific knowledge is obsolete is when piggy-backing with a large client is done and no ambition to reach new clients exists, which was the case for Monitor ERP System.

Market analysis is not a form of knowledge acquisition that is commonly used among the sample cases. Speed is premiered in the case of a small investment, seeing deep analysis as time consuming [Polystar; Monitor ERP System], and costly [Monitor ERP System]. Also due to resources being smaller for SMEs, market analysis is considered a less effective way than simply trying in

small scale [Westermo]. Sometimes prior research of the market is not deemed necessary or not prioritized due to already having established a customer base on the market [Monitor ERP System; Westermo; Netcom]. Otherwise the leader's knowledge of the market works as a substitute [Accedo]. In the few cases where searching was applied the research was not conducted by the firm themselves but rather by a consultancy firm [Accedo].

Although a conscious effort was not made to search for this knowledge, a general understanding of the possibilities of the market is sometimes in possession. The Singaporean market is perceived by its founder as a market ready for the kind of services offered [Djenee], being familiar with having assistants and service people. Even a realization of the potential in the scale of the regional market, seeing the Danish population being 5 million people while the Indonesian market is 300 million people, is a prior idea of the market [Westermo].

### **6.1.2 Technological knowledge**

The leaders of the offices all had previous technological experience from working in the industry. This was in most cases accomplished by internal grafting [Westermo; Monitor ERP System; Netcom]. The knowledge of the product offered is high, having experience within the organization. This is considered a huge advantage in this industry since the products are typically advanced and specific to the company, demanding time to understand the product. It is also considered a resource effective strategy, internally recruiting close to perfect technological knowledge at the leading position while externally grafting for other positions [Westermo]. Due to size and limited resources of an SME, relying on internal grafting by sending multiple expats is not a viable strategy [Westermo]. However, in an effort to also access market specific knowledge, the other cases elected to externally graft knowledge to the leading position [Accedo; Optimity; Polystar]. Still they came from a similar industry and therefore had some level of technological knowledge.

The possibility to graft technological knowledge externally is dependent on the firm's product portfolio and the task of the employees. In the case of Westermo, the product is highly technical, knowledge unique and firm specific. Finding viable candidates is therefore a challenge and requires considerable effort. On the contrary, in Accedo's case, only a general software development competence was desired resulting in plenty of applications.

### **6.1.3 Internationalization knowledge**

Acquiring internationalization knowledge has in general lower priority than acquiring market specific and technological knowledge. Still, in some cases it is considered a resource effective strategy. For Westermo, Kenneth Isacsson was responsible for opening offices in England, Germany, France, Spain and China before establishing the WOFS in Singapore [Westermo]. This gave him considerable experience establishing WOFSs in general, easing the effort in Singapore. Similarly Pär Helgesson had vast experience from acting on foreign markets such as China and Hong Kong, but from his previous work.

In the case of Djenee, the planned internationalization strategy was influenced by IKEA's strategy, therefore accessing vicarious knowledge as guidance and inspiration. The idea is to exponentially grow internationally and continuously moving personnel with internationalization

experience to the new branches being established. For Djenee it is also considered a desired quality to have internationalization experience when recruiting, making an effort in externally grafting this knowledge as well. In all other cases however, this quality was not a priority.

## 6.2 WOFS in Singapore early or late

Above in Figure 5.1 to 5.7 there are graphs showing the internationalization of the sample firms. The sample firms started their WOFS in Singapore either in their early or late internationalization phase. Grouping the sample firms into these two categories allows for further analysis of whether there is a difference between the groups.

Early	Late
Djenee Monitor ERP System Netcom Optimity	Accedo Polystar Westermo

Figure 6.1: Early or late when starting Singapore WOFS.

### 6.2.1 Market specific knowledge

For both groups, the most common way of acquiring market specific knowledge is through external grafting. However, the two groups vary in one aspect. The sample firms that are in the late group utilized experiential knowledge as a source in all cases, while none did in the early group. The experiential knowledge was acquired either through relationships with distributors [Westermo] or through relationships with clients in Singapore [Accedo; Polystar]. The reason for this divide is not obvious, but perhaps the firms in the late group have enough internationalization experience to have realized the benefits of a gradual commitment on a foreign market. The firms in the early group could on the other hand be more inclined to through themselves head first into a market due to lack of experience. Finally, the late group has an example where searching is a way of acquiring knowledge [Accedo].

### 6.2.2 Technological knowledge

The two groups, early and late, did not differ when acquiring technological knowledge. In this category the single method used was grafting, both internally and externally. Furthermore internal and external grafting were used equally as much in the two groups.

### 6.2.3 Internationalization knowledge

The experiential internationalization knowledge differs for the late and early group, with the late group for obvious reasons having more experience. Except for that, no apparent difference can be found between late and early firms in how they acquire knowledge.

## 6.3 Knowledge management

Knowledge management deals with creating, preserving and sharing knowledge in the organization. Acquisition of knowledge views all knowledge entering the WOFS as an acquisition,

including knowledge entering from within the organization from other branches as internal grafting. In this section however, knowledge management considers all knowledge accessible in the organization as a whole, in all its branches. In order to answer the second research question the theoretical framework in Figure 3.3 is used as guidance.

### **6.3.1 Interaction between branches**

A common way to transfer knowledge within the organization is by people from different branches visiting each other [Accedo; Polystar; Westermo]. This is an example of tacit to tacit knowledge transfer, socialization. This was accomplished both by sending people from the Singapore WOFS to the Swedish office and receiving visitors from branches all over the world. Sending people to Sweden was purposely done to better understand the origin and culture of the firm, as well as meeting the people one has interacted with by digital media. Hence transfer of knowledge is through informal social communication channels and opens up for one-on-one learning. The knowledge is stored in people. This is considered to be more rewarding and a preferred way of learning for the people involved. However, this way of transferring knowledge is beneficial due to simplifying the conversion of tacit knowledge to explicit knowledge, due to making the information more refined and reliable. This would decrease the risk of losing out on knowledge due to personnel loss.

### **6.3.2 Presentations in between branches**

Another way among the samples to share knowledge within the organization is through presentations between different branches [Accedo]. A person with particular insight into their own branch makes a presentation at another branch to spread understanding about the branch's activities and people. The presentations are made using prepared material, typically a PowerPoint, and represent an example of explicit to tacit knowledge transfer, also known as internalization. The PowerPoint creates a technical communication channel which has an advantage in being structured and delivers knowledge rapidly and timely. It is also stored digitally, making it accessible and less vulnerable to personnel losses.

### **6.3.3 Recurring strategy meetings**

A more formal way of preserving knowledge is also carried out by some of the samples through strategy meetings. In a more planned and structured setting new knowledge and a change of strategy are discussed. These meetings occur with regular time intervals, Optimity did them quarterly, Netcom semi-annually and Accedo annually. The knowledge creation is here performed in two steps, first tacit to tacit, socialization, between the participants of the meeting, and then tacit to explicit, externalization, when documenting the conclusions. The transfer of knowledge therefore occurs through a social communication channel in the cases where the participants are at the same location while the meeting categorizes as a technological communication channel if occurring through Skype. In both cases the participants use oral communication and is therefore stored in the personnel but the knowledge is also transferred into a digital document.

#### **6.3.4 Interaction within groups**

Another strategy for transferring tacit knowledge is by purposefully placing a person with a specific and rare knowledge in multiple project groups in order to allow for the knowledge to spread [Netcom]. This is an example of tacit to tacit knowledge creation, socialization, and represents a one-on-one learning experience. It is more rewarding, a better learning experience and more suitable for complicated knowledge.

#### **6.3.5 Interaction between people for specific knowledge**

Referring back to acquisition of knowledge, grafting occurs to obtain industry and market specific knowledge [Accedo; Netcom; Optimity; Polystar; Westermo]. In many cases market specific knowledge as well as technological knowledge is limited to one person. It is beneficial for this knowledge to reach more people within the WOFS. The knowledge is then transferred within the WOFS through socialization and hence social communication channels. The oral one-on-one communication is once again preferable when transferring tacit knowledge.

#### **6.3.6 Lack of documentation**

Despite examples of situations where some samples have documented knowledge, such as strategy [Optimity; Netcom; Accedo], success stories [Westermo] and having an internal wiki [Accedo], in general documentation is not a priority. The documentation taking place is almost exclusively of technological knowledge. Documentation is seen as a desired activity, but lack of time and resources of an SME force other priorities [Polystar; Optimity]. Instead multiple samples rely on low personnel turnover to keep knowledge in the organization [Optimity; Polystar; Netcom; Monitor ERP System]. Sometimes also relying on the same people doing the same tasks in the organization [Polystar].

In the few cases where documentation is carried through this is through tacit to explicit knowledge, externalization, and in use is either a social or technical communication channel where the knowledge is digitalized.

### **6.4 The impact of culture**

A recurring unplanned subject that entered the interviews was the importance of culture. Mixing cultures is seen as a tool to tie the WOFS closer to the global corporation as well as to Singapore itself [Accedo; Westermo]. Chris, the leader of Accedo's Singapore WOFS, made an effort to incorporate company culture, Singapore culture, his personal culture as well as the culture of offices from the rest of the world in a giant blend. He viewed this as a strategy to simplify communication and increase understanding of other offices, as well as a way of maximizing knowledge sharing within the office.

For Netcom the benefits of adopting a Swedish work culture was recognized. The rapid expansion of the Singapore WOFS from 3 employees to 100 within the first three years of the arrival of the CEO of the office, Conny Karlsson, made this a challenge but was deemed necessary. Work place-values such as lack of a hierarchy, transparency and initiative taking were important to transfer to the new employees. In order to spread the culture within the team, presentations

were made. Furthermore, Conny found that culture spread in the organization between the employees, as soon as they noticed the truth to the idea of no repercussion for being transparent.

The effects culture has on knowledge management have previously been explored in literature. An example is [Shao et al. \[2012\]](#) who found that organizational culture affects the way knowledge is transferred in the firm. In particular they found that a more open culture has a positive effect on the tacit knowledge sharing and therefore in the end on the success of the firm. Furthermore [Ahmady et al. \[2016\]](#) found that in order to create and transfer knowledge, the culture was required to encourage employees to cooperate and to share information. However, if the culture was experienced to be advocating individualism, this caused people to withhold information.

## 6.5 Updated theoretical framework

The theoretical framework is updated based on the findings in the analysis and discussion. When considering acquisition of knowledge some categories for acquiring knowledge are more commonly used than others. The thickness of the arrows represents the frequency of the subprocess used. Figure 6.2 shows that external and internal grafting are the most common ways of acquiring knowledge, followed by experiential knowledge. Vicarious knowledge and searching are the least common alternatives to use. In the part of the theoretical framework treating knowledge management, an outer blue circle has been added. It represents the organizational culture which permeates every category in knowledge management. Furthermore the thickness of the arrows represents the frequency of the creation of knowledge categories, with socialization being the most frequent one.

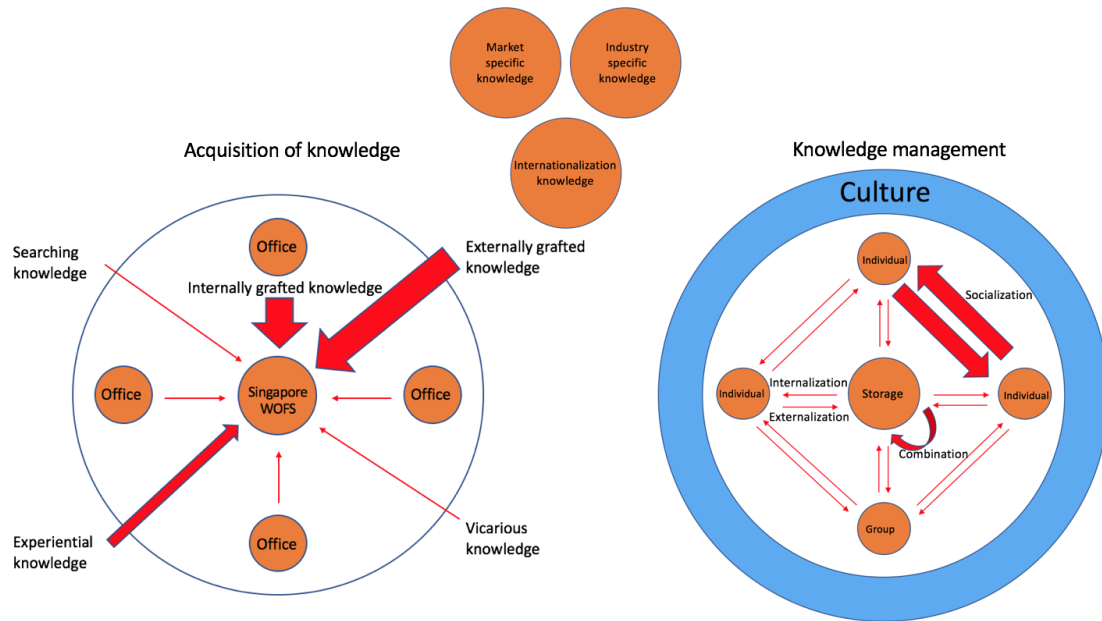


Figure 6.2: Updated theoretical framework.



## 7 Conclusion, implications and further research

*This chapter aims to summarize the findings, to discuss the implication of the research as well as recommend areas of interest for future research.*

### 7.1 Conclusion

#### *1. How is knowledge acquired when starting a wholly owned foreign subsidiary?*

- The most common way of acquiring market specific knowledge is through external grafting from a competitor.
- The second most common way of acquiring market specific knowledge is through gaining experiential knowledge through learning by doing. All firms who start the WOFS in a late internationalization phase utilizes experiential knowledge, while none do so when starting it in an early internalization phase.
- Market analysis is not used in large extent to gain market specific knowledge, since it is deemed resource demanding and can not be afforded.
- Technological knowledge is in most cases acquired through internal recruitment since the products typically are unique and specific to the firm.
- Acquisition of internationalization knowledge has lower priority than market specific and technological knowledge.

#### *2. How is knowledge managed when starting a wholly owned foreign subsidiary?*

- Knowledge is mainly created through socialization, a transfer of tacit to tacit knowledge.
- Socialization usually occurs through informal social communication channels. This is done through interaction between branches, within groups or between people. A frequent formal communication channel is formal meetings.
- Knowledge is primarily stored in people. Firms rely on low personnel turnover to not lose this knowledge.
- Documentation is rarely used to store knowledge, mainly due to lack of time and resources.
- Culture has an impact when managing knowledge, both within the WOFS and between branches.

### 7.2 Implications

The implications of this study are multifaceted. Firstly, ICT SMEs looking to start a WOFS will be encouraged to take this step in an earlier stage. They will see previous examples who discredit the value of extensive and expensive market research, instead proposing experiential learning and to dare to make a leap. Furthermore, they will realize the importance of market specific knowledge when starting their WOFS, increasing the likelihood of them recruiting this knowledge to succeed in their struggles. They might also attempt to create, transfer and store knowledge in a systematic way knowing how its value is reaffirmed in this study. Still they will

be aware that while most in this study recognized the importance of documentation, they could not spare the time to do so.

From an academic perspective, this study has further explored how knowledge is acquired and managed for firms starting a WOFS. The study was deductive and the purpose was never to attempt to generalize the results. Literature was only used as a tool to provide a framework through which the results were interpreted. Still, the conclusions from this study will further the efforts to shine light on this research area and widen the understanding of the subject.

### **7.3 Further research**

The importance of culture for the sample firms in their starting of a WOFS was often emphasized. A continued effort on mending and promoting culture simplified work within the WOFS itself, optimizing the work climate and values of the employees. Mixing cultures also served as a method to tie the WOFS closer to other branches of the firm in different parts of the world. For further research, exploring closer the impact of culture for the acquisition and management of knowledge of ICT SMEs starting a WOFS would be of great interest. For example, studying if dedicated attempts to integrate cultures within the firm results in more fluency in the transfer of knowledge between employees of various nationalities. Or perhaps if introducing parts of a culture from a sister branch within the firm would breach the large distance and spark a higher degree of knowledge acquisition from this branch.

## References

- Accenture (2015). ASEAN's limited time offer: One hundred million new consumers to win and a \$770 billion reason to move now. [https://www.accenture.com/t20150523T033705\\_\\_w\\_/us-en/\\_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Dualpub\\_9/Accenture-ASEAN-Consumer-Research-CPG.pdf](https://www.accenture.com/t20150523T033705__w_/us-en/_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Dualpub_9/Accenture-ASEAN-Consumer-Research-CPG.pdf) Online; accessed 18 December 2017.
- Ahmady, G. A., Nikooravesh, A., and Mehrpour, M. (2016). Effect of organizational culture on knowledge management based on denison model. *Procedia-Social and Behavioral Sciences*, 230:387–395.
- Alavi, M. and Leidner, D. E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS quarterly*, pages 107–136.
- Andersen, O. (1993). On the internationalization process of firms: A critical analysis. *Journal of international business studies*, 24(2):209–231.
- Anderson, E. and Gatignon, H. (1986). Modes of foreign entry: A transaction cost analysis and propositions. *Journal of international business studies*, 17(3):1–26.
- Andersson, S. and Wictor, I. (2003). Innovative internationalisation in new firms: born globals—the swedish case. *Journal of International Entrepreneurship*, 1(3):249–275.
- Argyris, C. and Schön, D. A. (1997). Organizational learning: A theory of action perspective. *Reis*, (77/78):345–348.
- Atlantic (2007). *Encyclopaedia of Information Technology*. Atlantic Publishers and Distributors.
- Autio, E., Sapienza, H. J., and Almeida, J. G. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of management journal*, 43(5):909–924.
- Becerra, I., Gonzalez, A., and Sabherwal, R. (2004). Knowledge management: Challenges, solutions, and technologies.
- Blomkvist, P. and Hallin, A. (2014). *Metod för teknologer. Examensarbete enligt 4-fasmodellen*. Studentlitteratur.
- Blomstermo, A., Eriksson, K., Lindstrand, A., and Sharma, D. D. (2004). The perceived usefulness of network experiential knowledge in the internationalizing firm. *Journal of International Management*, 10(3):355–373.
- Buckley, P. J. and Casson, M. (2016). *The future of the multinational enterprise*. Springer.
- Business Sweden (2017). ICT & tech opportunities in Sweden. <https://www.business-sweden.se/en/Invest/industries/ICT/> Online; accessed 18 December 2017.
- Casillas, J. C., Acedo, F. J., and Barbero, J. L. (2010). Learning, unlearning and internationalisation: Evidence from the pre-export phase. *International Journal of Information Management*, 30(2):162–173.

- Caves, R. E. (1971). International corporations: The industrial economics of foreign investment. *Economica*, 38(149):1–27.
- Collis, J. and Hussey, R. (2013). *Business research: A practical guide for undergraduate and postgraduate students*. Palgrave macmillan.
- Costa, E., Soares, A. L., and de Sousa, J. P. (2016). Information, knowledge and collaboration management in the internationalisation of smes: a systematic literature review. *International Journal of Information Management*, 36(4):557–569.
- Creswell, J. W. (2014). *Research Design*. Thousand Oaks.
- Dhanaraj, C. and Beamish, P. W. (2003). A resource-based approach to the study of export performance. *Journal of small business management*, 41(3):242–261.
- Eriksson, K., Johanson, J., Majkgard, A., and Sharma, D. D. (1997). Experiential knowledge and cost in the internationalization process. *Journal of international business studies*, pages 337–360.
- European Commission (2017). What is an SME? [http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition\\_sv](http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_sv). Online; accessed 18 December 2017.
- European Parliament (2015). ICT in the developing world. [http://www.europarl.europa.eu/RegData/etudes/STUD/2015/563482/EPRS\\_STU%282015%29563482\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/563482/EPRS_STU%282015%29563482_EN.pdf). Online; accessed 18 December 2017.
- Farrokhi, F. and Mahmoudi-Hamidabad, A. (2012). Rethinking convenience sampling: Defining quality criteria. *Theory and practice in language studies*, 2(4):784.
- Fletcher, M. and Harris, S. (2012). Knowledge acquisition for the internationalization of the smaller firm: Content and sources. *International Business Review*, 21(4):631–647.
- Forsgren, M. (2002). The concept of learning in the uppsala internationalization process model: a critical review. *International business review*, 11(3):257–277.
- Gabrielsson, M., Kirpalani, V. M., Dimitratos, P., Solberg, C. A., and Zucchella, A. (2008). Born globals: Propositions to help advance the theory. *International Business Review*, 17(4):385–401.
- Government Offices of Sweden (2015). Worrying that Swedish exports are losing market shares. <http://www.government.se/opinion-pieces/2015/02/worrying-that-swedish-exports-are-losing-market-shares/>. Online; accessed 18 December 2017.
- Gunnarsson, A. (2011). The selection of entry modes when penetrating a foreign market: A research study on the education institutes choice of entry mode.
- Håkansson, H. and Snehota, I. (2006). No business is an island: The network concept of business strategy. *Scandinavian Journal of Management*, 22(3):256–270.
- Hilmersson, M. (2014). Small and medium-sized enterprise internationalisation strategy and performance in times of market turbulence. *International Small Business Journal*, 32(4):386–400.

- Huber, G. P. (1991). Organizational learning: The contributing processes and the literatures. *Organization science*, 2(1):88–115.
- Hymer, S. H. (1976). The international operation of national firms: a study of foreign direct investment. *Cambridge: Massachusetts Institute of Technology Press Google Scholar*.
- Johanson, J. and Vahlne, J.-E. (1977). The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments. *Journal of international business studies*, pages 23–32.
- Johanson, J. and Vahlne, J.-E. (2009). The uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of international business studies*, 40(9):1411–1431.
- Johanson, J. and Wiedersheim-Paul, F. (1975). The internationalization of the firm—four swedish cases. *Journal of management studies*, 12(3):305–323.
- Knight, G. A. and Liesch, P. W. (2002). Information internalisation in internationalising the firm. *Journal of Business Research*, 55(12):981–995.
- Kogut, B. and Zander, U. (1993). Knowledge of the firm and the evolutionary theory of the multinational corporation. *Journal of international business studies*, 24(4):625–645.
- Kunday, Ö. and Şengüler, E. P. (2015). A study on factors affecting the internationalization process of small and medium enterprises (smes). *Procedia-Social and Behavioral Sciences*, 195:972–981.
- Loane, S., Bell, J. D., and McNaughton, R. (2007). A cross-national study on the impact of management teams on the rapid internationalization of small firms. *Journal of World Business*, 42(4):489–504.
- Lu, J. W. and Beamish, P. W. (2001). The internationalization and performance of smes. *Strategic management journal*, 22(6-7):565–586.
- McDougall, P. P., Shane, S., and Oviatt, B. M. (1994). Explaining the formation of international new ventures: The limits of theories from international business research. *Journal of business venturing*, 9(6):469–487.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization science*, 5(1):14–37.
- Nonaka, I. and Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford university press.
- Pellegrino, J. M. and McNaughton, R. B. (2017). Beyond learning by experience: The use of alternative learning processes by incrementally and rapidly internationalizing smes. *International Business Review*.
- Prashantham, S. and Young, S. (2011). Post-entry speed of international new ventures. *Entrepreneurship Theory and Practice*, 35(2):275–292.

- Sağsan, M. (2006). A new life cycle model for processing of knowledge management. In *2nd International Congress of Business, Management and Economics*, pages 15–18.
- Schwens, C. and Kabst, R. (2009). How early opposed to late internationalizers learn: Experience of others and paradigms of interpretation. *International Business Review*, 18(5):509–522.
- Shao, Z., Feng, Y., and Liu, L. (2012). The mediating effect of organizational culture and knowledge sharing on transformational leadership and enterprise resource planning systems success: An empirical study in china. *Computers in Human Behavior*, 28(6):2400–2413.
- Smith, E. A. (2001). The role of tacit and explicit knowledge in the workplace. *Journal of knowledge Management*, 5(4):311–321.
- Solowianiuk, E. (2014). The ICT sector in Sweden.
- Starbuck, W. H. and Hedberg, B. (2001). How organizations learn from success and failure.
- Storkerson, P. (2009). Experiential knowledge, knowing and thinking. In *Experiential Knowledge, Method & Methodology: International Conference*.
- Symonds, V., Symonds, P., and Brown, D. H. (2016). Skype as a tool for qualitative research interviews. *Sociological Research Online*, 21(2).
- The World Bank (2017). Exports of goods and services % of GDP. <https://data.worldbank.org/indicator/NE.EXP.GNFS.ZS>. Online; accessed 18 December 2017.
- Welch, D. E. and Welch, L. S. (1996). The internationalization process and networks: a strategic management perspective. *Journal of international marketing*, pages 11–28.
- Welch, L. S., Benito, G. R., and Petersen, B. (2008). *Foreign operation methods: Theory, analysis, strategy*. Edward Elgar Publishing.
- Welch, L. S. and Luostarinen, R. (1988). Internationalization: Evolution of a concept. *Journal of general management*, 14(2):34–55.
- Zahra, S. A., Ireland, R. D., and Hitt, M. A. (2000). International expansion by new venture firms: International diversity, mode of market entry, technological learning, and performance. *Academy of Management journal*, 43(5):925–950.

# Appendices

Internationalisation phase	Concept	Subcategory	Definition	Operational definition	Reference
Pre-internationalisation	Pre-internationalisation		Pre-internationalisation starts when the company is founded Pre-internationalisation ends when the first international market is entered	When was the company founded? When was the first international market entered?	Pellegrino and McNaughton, 2016
				How much resources were available before entering the first international market?	
	Acquisition of knowledge	Congenital learning	Acquiring knowledge available at the organisations birth, such as from the founders	What previous knowledge did you have? What other knowledge did other members of management have?	
		Experiential knowledge	Learning from their experience or by doing	Was the product sold on the home market before entering an international market? How long?	
		Vicarious knowledge	Acquiring knowledge through observing what other organisations do	Did you look at other similar companies, that had done what you wanted to do, before entering the market?	(Pellegrino and McNaughton, 2016) (Huber, 1991) (Johansson and Wiedersheim-Paul, 1975) (Johansson and Vahlne, 1977)
		Grafting knowledge	Adding on individuals or organisations who possessed knowledge required by the organisation	Were people recruited with knowledge about the international market?	
				Did you acquire another organisation to relieve knowledge about the market?	
		Searching knowledge	Searching information about the external environment	Did you research the market before entering?	
Early internationalisation	Finding boundaries of phase		Early internationalisation begins after the pre-internationalisation phase ends and ends when internationalisation strategy changes	When did the strategy change?	Pellegrino and McNaughton, 2016
				What did you learn from entering previous markets?	
				Did you change the way you entered a market?	
				Which was the first market entered? Second market? Third? (And do on)	
				Ask questions about acquisition of knowledge again.	
Late internationalisation				Ask questions about acquisition of knowledge again.	
Entering Singapore	Entry mode		The choice of entering a market in regards of control and resource commitment	When did you enter the Singaporean market?	
				How did you enter the Singaporean market?	
				What was the purpose of entering Singaporean market?	
				Ask questions about acquisition of knowledge again.	
	Network relationships		A network is a web of relationships with identifiable counterparts that an organization is embedded in	What previous contacts did you have in Singapore? Who were they? (Customers, distributors, investors, knowledgeable individuals)	Håkansson and Snehota, 2006
				How did the contacts affect the entrance on the Singaporean market?	
				How did the contacts affect the selection of the Singaporean market?	
				How did the contacts contribute with knowledge of the market?	
	Knowledge management	Creation	The interplay between tacit and explicit knowledge as knowledge is transferred from individuals to groups		
		Socialization	Transformation of tacit knowledge into new tacit knowledge	Is knowledge passed on by active participation in other people's work?	
		Combination	New explicit knowledge through combining, categorizing and recategorizing	Is knowledge added to the documentation compared to older documented knowledge?	(Alavi and Leidner, 2001) (Becerra-Fernandez, Gonzalez and Sabherwal, 2004) (Sagsan, 2015)
		Internalization	Creation of tacit knowledge through explicit knowledge	Did you research the market through for example market analysis before entering the market?	
		Externalization	Converting tacit knowledge to explicit knowledge	Do you document existing knowledge in the organization?	

Figure .1: Question guide