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Meeting each other's needs: Collaboration between international students and SMEs

A case study of Ostrobothnia, Finland

School of Technology and Innovations
Master of Science in Economics and Business Administration
Master's thesis in Industrial Management

Vaasa 2021

UNIVERSITY OF VAASA**School of Technology and Innovations**

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Title of the Thesis:	Meeting each other's needs: Collaboration between international students and SMEs	
Degree:	Master of Science in Economics and Business Administration	
Programme:	Industrial Management	
Supervisor:	Ville Tuomi	
Year:	2021	Pages: 86

ABSTRACT:

Networking has been identified as an essential strategy on job search, and, in many cases, international students' weak network ties in Finland place them at a disadvantage in finding employment. On the other hand, small and medium-sized enterprises (SMEs) in the Ostrobothnia region looking to improve their internationalization could benefit from international students' skills and knowledge.

This research aimed to determine how international students can help SMEs in Ostrobothnia meet their internationalization needs. The thesis is a case study following the Resource-Based View (RBV) perspective and applying a cross-sectional mixed-methods approach. Academic literature has used the RBV to explain SMEs' internationalization by considering SMEs' resources and characteristics linked to success when becoming global. The quantitative data was collected through online questionnaires sent to the member SMEs of the Ostrobothnia Chamber of Commerce. Qualitative data was then gathered through semi-structured interviews with selected companies.

Based on the data obtained from the questionnaires and interviews, it can be concluded that SMEs in Ostrobothnia perceive obtaining reliable foreign representation as a major barrier. It can also be stated that there is indeed a willingness from SMEs to collaborate with international students. Nevertheless, this willingness is restricted by the limited economic and time resources from SMEs. Aiming to address this, collaboration models between SMEs and international students should be considered so that SMEs can participate without substantial economic or time investments. Moreover, this study reveals no unique collaboration model but a wide range of possibilities with great potential when certain characteristics are included in the models, namely, Higher Education Institutions (HEIs) involvement, and participation not requiring a significant amount of time economic resources from SMEs.

In general, findings from the empirical study section of this thesis are strongly aligned with the existing literature. This research highlighted several interesting aspects of the entrepreneurial environment of the Ostrobothnia region. Still, further research is needed in order to confirm the collaboration model proposal and to compare the findings with other regions in the country.

KEYWORDS: internationalization, SMEs, international students, collaboration, Ostrobothnia

Acknowledgments

I would like to thank the University of Vaasa for affording me the opportunity to complete my master's studies here. The past two years have been full of enriching experiences and new opportunities. I was lucky enough to meet people from all over the world here, people that taught me so much and gave me so much love.

Thank you to Assistant Professor Ville Tuomi for his dedicated supervision and guidance throughout the whole thesis process. Also, a big thank you to Jari Ratilainen from the West Coast Startup business incubator at MUOVA for the opportunity to contribute to his project with my thesis work; his guidance throughout this work was fundamental.

I would also like to express my sincere gratitude to the Ostrobothnia Chamber of Commerce, especially to Mia Brännbacka, for her valuable support in the empirical study phase of my work. Likewise, special thanks to Charles Zaiontz for providing free access to his Real Statistics Resource Pack Excel Add-in, which allowed me to perform the necessary statistical analysis for this work.

This thesis work would not have been possible without the companies that agreed to participate in the study. Therefore, I wish to thank and acknowledge all those companies that responded to the survey, especially those who participated in the interview session.

Finally, I am forever grateful to my parents for their unconditional love and support; to my partner, Pablo, who was himself working on his thesis but still always had the time to listen and help me with corrections and ideas; and to my friends, those in Vaasa, Mexico, or elsewhere, who sent me their support and best wishes during my thesis project.

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1 Introduction

The introduction part of this thesis aims to provide the reader with a general understanding of the focus and content of the study. The following sub-sections will briefly introduce the background, research questions, methodology, limitations, and structure of the thesis. The research is carried out in cooperation with MUOVA and contributes to developing the West Coast Startup business incubator.

1.1 Background

Networking has been identified as an essential strategy on job search, and, in many cases, international students' weak network ties in Finland place them at a disadvantage in finding employment. On the other hand, small and medium-sized enterprises (SMEs) in the Ostrobothnia region looking to improve their internationalization could benefit from international students' skills and knowledge.

There is a yet unexploited opportunity for collaboration between SMEs and international students in Ostrobothnia. The West Coast Startup incubator can help SMEs and international students in meeting each other's needs. The thesis aims to identify Ostrobothnian SMEs' major challenges related to internationalization and how these can be met by collaborating with international students. The idea for this topic took its current form after a brief discussion with the West Coast Startup's Project Manager.

1.2 Research Questions

The West Coast Startup incubator is interested in knowing whether a niche market exists for a start-up formed by international students that could offer consultation services to SMEs in Ostrobothnia. Being the knowledge of the local language and market, connections, and familiarity with the policies and bureaucratic processes their primary value-

offering strategy. Nevertheless, this interest will not bias the study since any possible collaboration outcome will benefit all parties to some extent: SMEs in Ostrobothnia, the West Coast Startup incubator, and the international students.

Due to the previously mentioned, the main research question is as follows:

How can international students help SMEs in Ostrobothnia meet their internationalization needs?

To answer this research question, the following sub-questions are considered:

1. What are the major challenges of SMEs in Ostrobothnia related to internationalization?
2. How would companies want to collaborate with international students?
3. What is the best possible collaboration model between SMEs and international students?

1.3 Methodology

The thesis is a case study following the Resource-Based View (RBV) perspective (Barney, 1991; Wernerfelt, 1984) and applying a cross-sectional mixed-methods approach. Academic literature has used the RBV to explain SMEs' internationalization (Phillips McDougall et al., 1994) by considering SMEs' resources and characteristics linked to success when becoming global. The quantitative data was collected through online questionnaires sent to the member SMEs of the Ostrobothnia Chamber of Commerce. Qualitative data was then gathered through semi-structured interviews with selected companies. Companies were chosen according to the statistics concerning the companies in the region. At the end of the study's empirical section, a roadmap for a future collaboration model was traced after a thorough analysis of the data collected.

1.4 Limitations

The study is conducted from the SME's perspective, focusing on their major challenges related to internationalization and their willingness and preferences for collaboration with international students. The research limitations of the study include, on the one hand, the fact that input was not collected from the international students' side, and their willingness to participate in the collaboration model is not confirmed. On the other hand, Higher Education Institutions (HEIs) in the region and their possible participation in a future collaboration model are not included in this study.

1.5 Structure of the thesis

The thesis is divided into four chapters: introduction, theoretical framework, empirical study and analysis, and conclusion.

The *first chapter* corresponds to the introduction section. In it, the background of the thesis is explained, as well as the research questions and methodology approach. The limitations of the study are then presented. Next, the thesis's structure is portrayed to provide the reader with an outline of each of the chapters. Finally, the definitions of the main concepts of this work are established.

The *second chapter* focuses on the theoretical framework of the thesis. Internationalization, SMEs, Resource-Based View, international students, and collaboration are topics which this section will cover. The reader will gain a thorough understanding of this work's main concepts and theory. The current environment of SMEs in Ostrobothnia is depicted together with international students' present situation in the region.

In the *third chapter*, the empirical study and analysis are presented. The data collection process is described as well as the data analysis together with the validity and reliability

of the study. The empirical part is carried out by applying a cross-sectional mixed-methods approach. First, quantitative data is gathered through online questionnaires sent to SMEs in Ostrobothnia. Next, the qualitative data is obtained through semi-structured interviews arranged with two selected companies that presented a willingness to participate in further discussion.

Lastly, the *fourth chapter* portrays the conclusion. Aiming to provide the reader with a summary of the study, this final section discusses the key findings and future research areas.

1.6 Definitions

To provide clarity to the reader when navigating the following pages of this thesis, the definitions of the main concepts used throughout the work are presented below.

1.6.1 Internationalization

Despite the far-reaching interest in internationalization, there is still no commonly agreed definition of the concept (Bell & Young, 1998). Also referred to as international growth (Nummela & Saarenketo, 2010), internationalization can be seen as the process of increasing engagement in international markets (Welch & Luostarinen, 1988). Both inward and outward activities are considered part of internationalization (Susman, 2007, p. 281). Even though many firms first internationalize with inward processes (importers, licensees, and franchisees), there is limited research available on this aspect of internationalization (Korhonen et al., 1996). The vast majority of internationalization studies are focused on the outward processes (exporting, licensing, franchising, and foreign direct investment), from these, exporting is the primary mode for internationalization of SMEs (Susman, 2007, p. 281).

In line with the literature and the business environment, this thesis will consider the outward activities of internationalization of SMEs, mainly focusing on the exporting activities. The justification for this focus will be further explained in the following chapter.

1.6.2 SMEs

The literature on SMEs' positive impact on the global economy has been continuously evolving in the past decades. After the publication of Birch's (1981) study "Who creates jobs?", awareness was drawn to the importance of the role of SMEs' in the economy. SMEs are now considered to be the engine of the European economy (European Commission, 2020).

Significant differences exist among definitions of SMEs from international organizations and states. For instance, the United States, Canada, and Japan consider as the first criterion for defining an SME, the sector of economic activity, meaning that a company belonging to a specific sector (e.g., rug manufacturing) with 1,500 employees can be considered an SME (Madani, 2018). In contrast, another company from a different sector (e.g., bakery) cannot have more than 500 employees to be considered an SME (Madani, 2018). On the contrary, the EU's SME policy does not distinguish between subgroups of enterprises (Madani, 2018).

Despite a global quantitative definition of the concept would be impossible to achieve (Buculescu, 2013), the most accepted criterion among public authorities' definitions is the number of employees (Madani, 2018).

Since the present research is conducted in Finland, an EU country, the definition provided in the EU recommendation 2003/361 will be used as a guideline for the purpose of this study.

The main factors determining whether an enterprise is an SME are:

1. staff headcount
2. either turnover or balance sheet total

Table 1: SME definition (European Commission, 2016).

Company category	Staff headcount	Turnover	or	Balance sheet total
Medium-sized	< 250	≤ € 50 m		≤ € 43 m
Small	< 50	≤ € 10 m		≤ € 10 m
Micro	< 10	≤ € 2 m		≤ € 2 m

These ceilings apply to the figures for individual firms only. A firm that is part of a larger group may need to include staff headcount/turnover/balance sheet data from that group too (European Commission, 2016).

1.6.3 Ostrobothnia

“Ostrobothnia (Swedish: Österbotten; Finnish: Pohjanmaa) is a region in western Finland. It borders the regions of Central Ostrobothnia, South Ostrobothnia, and Satakunta...” (Wikipedia, 2021). The region has a Swedish-speaking majority (51.2%), and as of 2019, a total population of 180,445 (Wikipedia, 2021). The capital of the region is the city of Vaasa (Wikipedia, 2021).

1.6.4 International students

The definition of an international student varies according to its context. The present thesis considers the definition used in the 2016 Centre for International Mobility (CIMO) report as the most adequate for this context and purpose.

Throughout this paper, whenever the concept of international student is used, it is referred to as “students who go to another country to complete a full higher education degree, not just part of it” (CIMO, 2016). In this case, the focus is on international students living in Finland to pursue a higher education degree.

According to CIMO (2016), the majority of these international students study for a bachelor’s degree in a University of Applied Sciences (UAS) or a master’s degree in a ‘traditional’ university. With less than 20% of them studying for a doctorate. There is also the option of studying for a bachelor’s degree in a ‘traditional’ university and a master’s degree in a UAS. Nevertheless, very few study programs are offered in English at these levels, leading to only a few enrolled international students.

2 Theoretical Framework

2.1 Internationalization

The path we have been following for the past decades has been traced by globalization. With governments opting for free-market economic systems, dramatic reductions in commercial barriers, and the establishment of international agreements promoting the trade of goods, services, and investment, globalization affects every aspect of our environment, including our political, economic, and social systems (The Levin Institute, 2020).

Businesses are affected by three forces of globalization (Gjellerup, 2000):

1. The expansion of low-cost technology connecting people and locations. Improved communication technologies and data-processing systems provide firms with information on international opportunities.
2. The increasingly blurred trade barriers and the financial deregulation. Free-trade agreements create a leveled field for firms.
3. The fall of socialism in Russia and Europe and the expansion of Asian markets. These new markets, now open for investment, represent a sea of growth opportunities.

While some might think that large corporations are the most affected by globalization, “the fact is that globalization’s impact on the SME sector is likely to be more profound than on the already highly internationalized large corporate sector” (Gjellerup, 2000). Previously, SMEs operated only within their nation, with most of them restricting their activities to their local region (Pleitner, 1997). Today, many are taking part in global activities as part of their internationalization strategy (Ruzzier et al., 2006).

It is possible to chronologically divide previous research on internationalization into three phases according to each period’s main focus: (1) the internationalization process,

(2) networks in internationalization, and (3) new venture internationalization (Nummela & Saarenketo, 2010).

In the sixties, Carlson (1966) identified internationalization as an incremental learning and decision-making process, an idea that was later further developed by many (Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975; Luostarinen, 1979). Several process models based on Carlson's work were proposed to establish a common view of the process (Nummela & Saarenketo, 2010). Due to the complexity and uniqueness of firms' internationalization process, a common view of the process was never reached, and the so-called stage models were criticized in the following decades (Nummela & Saarenketo, 2010).

In the late eighties, internationalization research shifted its focus from stages to networks (Johanson & Mattsson, 1988). Researchers now proposed that changes in a firm's network position were the main driver of change in the internationalization process (Nummela & Saarenketo, 2010). The importance and influence of network connections in internationalization became the central theme among researchers (Coviello & McAuley, 1999).

It was around that same time when the concept of new venture internationalization arose. The phenomenon, which was first investigated by McDougall (1989), consisted of new firms entering international markets despite their constrained resources. Moreover, as verified by Christensen (1991), the time lag of SMEs' internationalization was shortening considerably in many countries.

From the previous, it can be said that the overall research focus in internationalization changed from the definition of the concept and analyses concerning international activities to the resources needed for internationalization (Ruzzier et al., 2006). Ahokangas (1998) defined internationalization from the resource-based perspective as "the process

of mobilizing, accumulating, and developing resource stocks for international activities,” regardless of the actual international activities themselves (Ruzzier et al., 2006).

Even though internationalization is a multidimensional phenomenon (Korhonen, 1999), as mentioned in the definitions section of this work, this study focuses on SMEs’ outward dimension of internationalization. Several reasons have been stated in the existing literature to explain this focus (Ruzzier et al., 2006). Following, a list of those that, for the purpose of this study, are considered the most important:

- Outward operations have been related with a long-term increase of an organization’s or country’s competitive advantage (Ruzzier et al., 2006).
- Benefits from outward internationalization activities, are also reflected on the firms’ innovation levels, capacity utilization, skill development and general business performance (Morgan & Katsikeas, 1997).
- From the country perspective, outward internationalization has proven to be favorable in terms of productivity performance, employment levels, industrial welfare, and societal prosperity (Ruzzier et al., 2006).
- Increased competition, integration and liberalization in international markets have pushed firms to recognize outward internationalization as an essential component for growth, profitability, and even survival (Ruzzier et al., 2006).
- Knowledge of the operations related to the outward internationalization process has a higher degree of complexity than that for inward internationalization (Ruzzier et al., 2006).

More specifically, firms’ engagement in export operations is key for dispersing their risks among several markets, improving the organization’s standards (technological, quality, and service), increasing revenue for reinvestment and growth, taking advantage of idle operating capacity, and attracting and benefiting both investors and employees by creating a more robust profit base (Czinkota & Ronkainen, 2001; Terpstra & Sarathy, 2000).

Existing research distinguishes among the different internationalization modes (Melén & Nordman, 2009). Direct exporting, exporting via intermediaries, licensing and franchising, strategic alliances/joint ventures, and sales and/or manufacturing subsidiaries (Agndal & Chetty, 2007; Pedersen & Petersen, 1998). Clearly, these modes vary as to the resource commitment they require from the firm (Melén & Nordman, 2009).

2.2 SMEs

Recent economic conditions have propelled the rise of SMEs in the last decades, forming a dynamic and growing sector in today's global economy (Levy & Powell, 2004, p. 19). This phenomenon is present in the more advanced economies, but developing countries are experiencing an unprecedented surge in SMEs as well (Levy & Powell, 2004, p. 19). SMEs are considered the "backbone of Europe's economy," representing 99% of all EU businesses (European Commission, 2016). In Europe, SMEs employ around 100 million people, account for more than half of the total GDP, and play an essential role in creating value in all sectors of the economy (European Commission, 2016).

Governments and policymakers many times consider SMEs as a single group when, in fact, they are heterogeneous with significant differences in size, structure, and objectives (Levy & Powell, 2004, p. 19). As previously described in this work's definition section, SMEs include micro-, small-, and medium-sized enterprises fitting into the staff headcount and turnover or balance sheet total limits (see Table 1).

2.2.1 SMEs in Finland

SMEs in Finland play a significant role in the Finnish economy (Virtanen, 2008, p. 7). In fact, the latest statistics indicate that from 357,000 enterprises operating in Finland, 350,000 correspond to SMEs, representing 98% of the enterprise stock (Statistics Finland,

2016a). From the combined gross value of establishments' output, 51% was produced by SMEs establishments (Statistics Finland, 2016a).

Nevertheless, Finnish SMEs' orientation is still mostly inclined towards the domestic market. According to the latest SME barometer, only 22% of SMEs are exporting or doing business abroad (Suomen Yrittäjät et al., 2020).

SMEs with no interest in expanding internationally are certainly common (Virtanen, 2008, p. 7). Virtanen et al. (2002) studied reasons such as shortage of resources and knowledge, the product not being suitable for export, and the firm finding itself in a position or state where the willingness for internationalization is simply not present. These SMEs are therefore not interested in growing or changing their business (Virtanen, 2008, p. 7).

Since Finland has a relatively small market that is open for international competition, Finnish SMEs are compelled "to improve their competitive advantage and cost efficiency both domestically and internationally" (Virtanen, 2008, p. 7). As per Virtanen (2008, p. 7), companies have gradually developed themselves on a growing number of markets and have steadily consolidated their positions on each one. They, too, have achieved more and more worldwide traction, while suppliers, competitors, distributors, and consumers have gone through the same path (Virtanen, 2008, p. 7).

Especially in industries with fierce competition, the growing reliance on foreign networks affects businesses, particularly SMEs, which are forced to expand in order to cope with increased competition (Virtanen, 2008, p. 8). Larimo and Arola (1998) even dare to claim that internationalization is not only the best but, many times, the only way to assure the future of Finnish SMEs.

It is not only the external forces that are motivating SMEs to react, but several other factors influence their decision to internationalize as well (Virtanen, 2008, p. 8). For instance, bigger markets with bigger growth opportunities abroad, the vast possibilities

given by new ICT technology, in addition to the firms' managers' high level of education and international experience, translates into a rising enthusiasm in SMEs to grow their businesses internationally (Virtanen, 2008, p. 8).

A good starting point for internationalization is having some type of international influence within the company—namely, the manager's international experience or even that of other employees. Thus, hiring international talent could translate into strong international networks and the beginning of business relationships between countries (Institute for Economic Research in Finland VATT & CIMO, 2014) for SMEs. Unfortunately, as stated by Vehaskari (2010):

For the average Finnish entrepreneur of a small business, the idea of taking on a foreign employee can cause anxiety. They struggle to find answers to questions such as how a foreigner can communicate with colleagues, bosses, and clients – and usually end up avoiding the challenges by hiring a Finn, if possible.

The previous demonstrates the high potential of collaboration between international talent and SMEs currently being wasted.

2.2.2 SMEs in Ostrobothnia

Ostrobothnia is one of the regions that increase the national average in terms of SMEs' impact on the economy. For instance, according to Statistics Finland (2016b), Finland's share of SMEs' establishments among employed persons compared to the total amount is 57%, while this same metric yields a 62% in the Ostrobothnia region. In terms of the share of SMEs' establishments of the region's value-added, the country's average is 46%, while Ostrobothnia stands at 49% (Statistics Finland, 2016b).

The share of SMEs in Ostrobothnia that are exporting or doing business abroad is 21% (national average: 22%) (Suomen Yrittäjät et al., 2020). Even though the impact of the COVID-19 pandemic cannot be ignored, the SME barometer of that same period the year

before exhibits a 24% for both Finland and the Ostrobothnia region (Suomen Yrittäjät et al., 2019). These numbers reflect an opportunity for an increase in the SMEs' internationalization (Virtanen, 2008, p. 7).

2.2.3 SMEs' internationalization challenges

Clearly, the path to internationalization of SMEs is unlikely to be a paved one. On the contrary, SMEs will face a bumpy road when engaging in internationalization activities. By looking into the export barriers firms commonly face, we can develop a solid understanding of SMEs' general internationalization challenges within the different modes of internationalization.

According to Leonidou (2004), exporting barriers "refer to all those constraints that hinder the firm's ability to initiate, to develop, or to sustain business operations in overseas markets." These can be generally classified as internal and external (Leonidou, 2004). Internal barriers are associated with the organization's resources and capabilities and the firm's approach to export activities, while external barriers refer to those derived from both the home and host environment of the firm's operations (Leonidou, 1995). This classification can be drilled down further, with internal barriers divided into functional, informational, and marketing; and external barriers into procedural, governmental, task, and environmental (Leonidou, 2004). Table 2 below portrays Leonidou's (2004) exporting barriers' classification.

Table 2: Classification of Export Barriers (Leonidou, 2004).

Internal	Informational		Limited information to locate/analyze markets Problematic international market data Identifying foreign business opportunities Inability to contact overseas customers	
	Functional		Lack of managerial time to deal with exports Inadequate/untrained personnel for exporting Lack of excess production capacity for exports Shortage of working capital to finance exports	
	Marketing	Product		Developing new products for foreign markets Adapting export product design/style Meeting export product quality standards/specs Meeting export packaging/labeling requirements Offering technical/aftersales service
		Price		Offering satisfactory prices to customers Difficulty in matching competitors' prices Granting credit facilities to foreign customers
		Distribution		Complexity of foreign distribution channels Accessing export distribution channels Obtaining reliable foreign representation Maintaining control over foreign middlemen Difficulty in supplying inventory abroad
		Logistics		Unavailability of warehousing facilities abroad Excessive transportation/insurance costs
	Promotion		Adjusting export promotional activities	
External	Procedural		Unfamiliar exporting procedures/paperwork Problematic communication with overseas customers Slow collection of payments from abroad	
	Governmental		Lack of home government assistance/incentives Unfavorable home rules and regulations	
	Task		Different foreign customer habits/attitudes Keen competition in overseas markets	
	Environmental	Economic		Poor/deteriorating economic conditions abroad Foreign currency exchange risks
		Political-Legal		Political instability in foreign markets Strict foreign rules and regulations High tariff and nontariff barriers
	Sociocultural		Unfamiliar foreign business practices Different sociocultural traits Verbal/nonverbal language differences	

Firms facing these exporting barriers can be categorized as follows (Leonidou, 2004):

1. Nonexporters: are identified as companies that are not currently exporting but have the potential of, who are expressing their subjective view on the barriers.
2. Current exporters: are the businesses currently undertaking export activities, experiencing daily challenges on their involvement in overseas markets.
3. Ex-exporters: are those firms that once exported but no longer do. These firms' export barriers viewpoint can derive from both their perception and their experience.

Studies have revealed that exporting barriers impact these groups of firms very differently, emphasizing the need for a distinct approach from, for example, export promotion programs (Kedia & Chhokar, 1986; Keng & Jiuan, 1989; Tesar & Tarleton, 1982; Yaprak, 1985).

For the most part, internal barriers within the exporting firm's home country are easier to control and manage than the external challenges taking place abroad (Leonidou, 2004; Neupert et al., 2006).

It is worth noting that the impact of exporting barriers is also situation-specific, varying according to the industry context and the firm's organizational and environmental background (Leonidou, 2004). Nevertheless, and despite the influence of these factors, specific barriers have been identified as having "a systematically strong obstructing effect on the export behavior of small firms," namely, "information inefficiencies, price competitiveness, foreign customer habits, and politicoeconomic hurdles" (Leonidou, 2004).

Besides Leonidou, many others have investigated the challenges faced by exporting firms (Neupert et al., 2006). Bilkey (1978) identified the lack of capital, governmental restrictions of the receiving country, insufficient knowledge of foreign sales practices, deficient distribution, or absence of foreign market contacts as common exporting

challenges. Other factors inhibiting exporting include SMEs' constricted resources and managerial skills, lack of language skills, cultural differences, and psychic distance (Fletcher, 2004; Miesenböck, 1988; O'Farrell et al., 1998). By distinguishing between start-up export challenges and challenges related to ongoing export activities, Tesar and Tarelton (1982) found that launching issues concerned identifying opportunities abroad, export documentation, and initiating costs. While ongoing issues included representation, servicing markets abroad, contrasting consumers and standards, assuring payment, and costs. Tesar and Tarelton's (1982) findings were later supported by Albaum (1983) and Bannock (1987). Scharf et al.'s (2001) approach was to focus on a "critical incident" managers faced concerning exporting (Bitner et al., 1985). Results pointed at finding the appropriate intermediary, distribution, product adaptation, and financial challenges as the ones generally confronted by SME exporters. Scharf et al. (2001) also differentiated between initiating challenges and ongoing ones, with the former associated with a lack of experience or knowledge and the latter related to deeper involvement with markets abroad.

2.3 International students

The topic of international student mobility has become of great interest and importance in Finland (Institute for Economic Research in Finland VATT & CIMO, 2014; Yle Uutiset, 2020) and across Europe (Hawthorne, 2018; Ministry of Higher Education and Science, 2018). Concerns related to decreasing birth rates and an aging population are among the reasons why attracting and retaining international students is now seen as an effective way to increase skilled workers in a country (European Commission, 2010).

2.3.1 International students in Finland

It can be said that international students are 'ideal' immigrants (Mathies & Karhunen, 2020; Mosneaga & Winther, 2013) since they are already being trained for the host

country's labor market (Ziguras & Law, 2006), and they do not need to go through the lengthy process of qualification recognition (Robertson, 2013). From the host country's economic point of view, it is essential "that international students who graduate from Finnish HEIs will remain in Finland and become integrated in the society and the labour market" (Institute for Economic Research in Finland VATT & CIMO, 2015). "In addition to impact on the public economy, international students have other economic effects. Students who start working contribute to increasing production in the country and strengthen international networks and business between countries" (Institute for Economic Research in Finland VATT & CIMO, 2014). Besides, many students see studying abroad as a path to immigration, looking to get a job and staying for a longer period or even permanently in the host country (Shumilova, 2017).

There was an exceptionally rapid increase in the number of international students in Finnish HEIs between 2006 and 2011, with the number remaining relatively stable in the following years (Garam, 2017). In autumn 2017, with the introduction of tuition fees for Non-EU/EEA students, the total number of international students in Finland fell by 3% (Garam, 2018). That year, there were 20,362 international students more or less evenly distributed among universities and UAS in Finland, with 10,761 studying in the former and 9,601 in the latter (Garam, 2018). Figure 1 below represents the growth in the total number of international students in HEIs from 2011 to 2017.

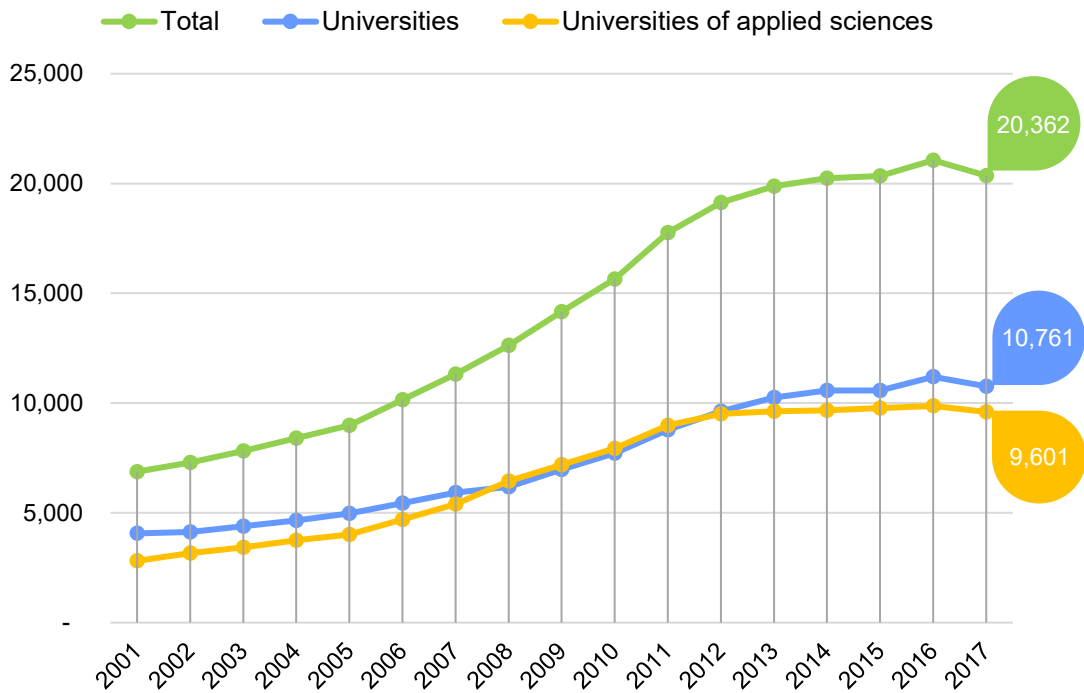


Figure 1: Number of international students in Finnish HEIs (Garam, 2018).

44% of international students study for a Bachelor's degree at a UAS, 32% for a Master's degree at a university, and 18% for a doctoral degree (see Figure 2) (Garam, 2018). Of all higher education students in Finland, 7.1% are international students, surpassing the Organization for Economic Co-operation and Development (OECD) countries' average (OECD, 2017). They account for 7% of Bachelor's students at UASs, 12% of Master's students at universities, and 20% of doctoral students (Garam, 2018).

Level of Education

- Bachelor's degree (UAS)
- Master's degree (university)
- Doctorate
- Bachelor's degree (university)
- Master's degree (UAS)

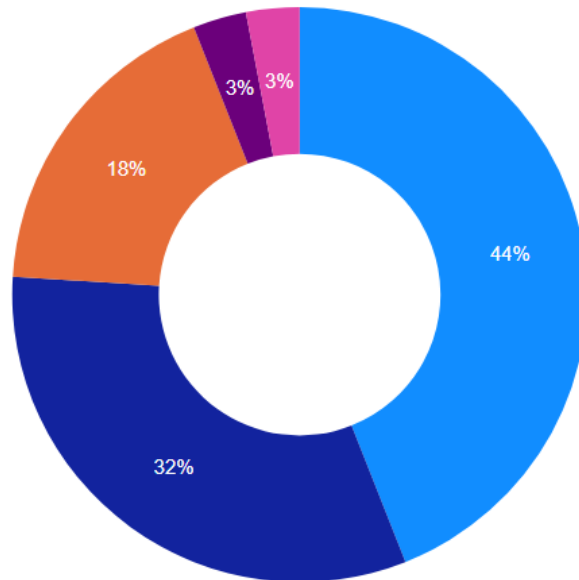


Figure 2: International students in HEIs by level of education (Garam, 2018).

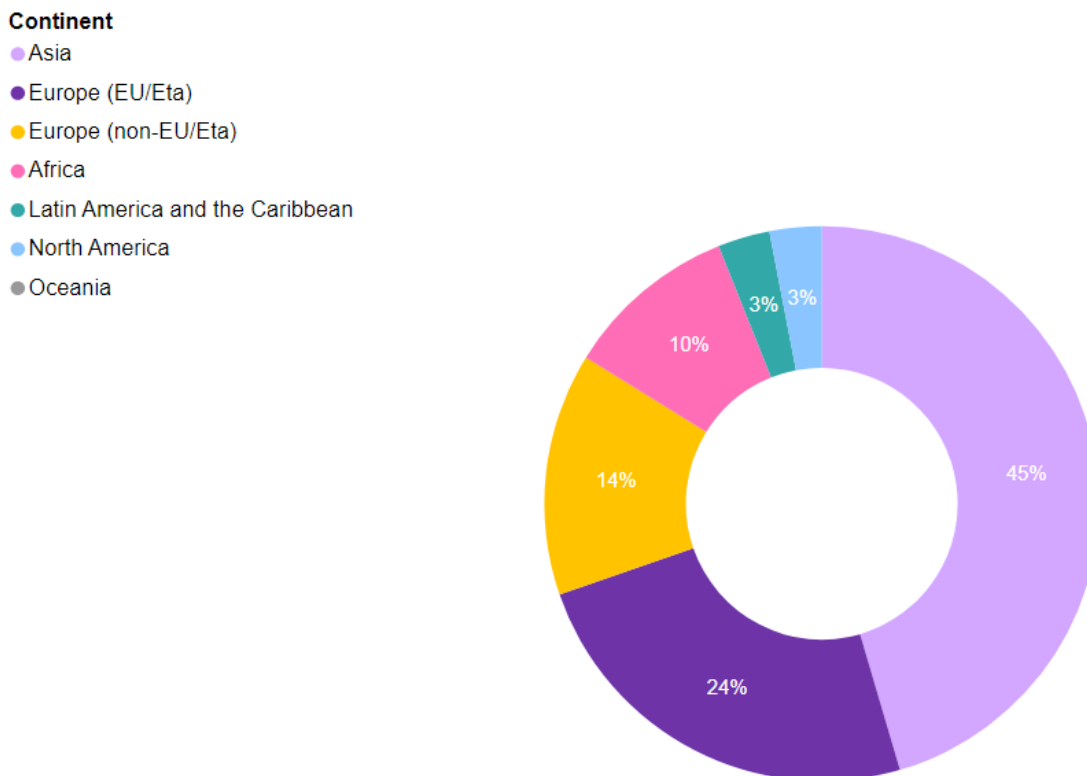


Figure 3: International students in HEIs by continent (Garam, 2018).

Three-quarters of international students in Finland come from non-EU/EEA countries (see Figure 3) (Garam, 2018). Most of them coming from Russia, Vietnam, China, and Nepal. In particular, the number of Vietnamese students has significantly increased in the past years; a slight increase has also been identified in the number of students from Nepal and Russia, while the number of Chinese students has decreased (Garam, 2018). Figure 4 below shows the most common nationalities among international students in 2016.

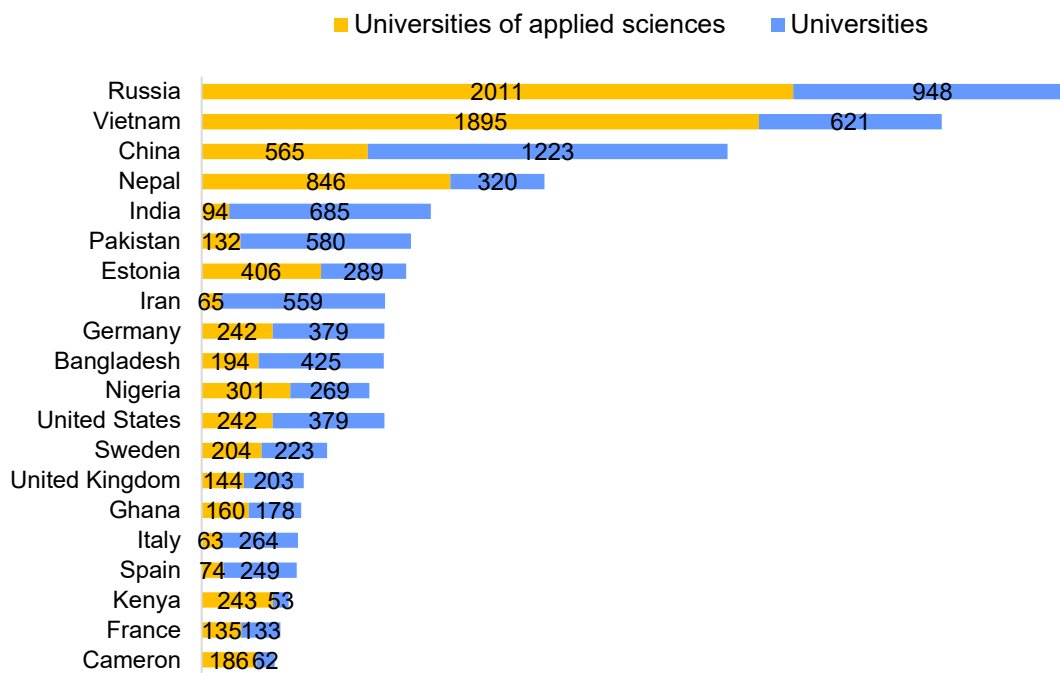


Figure 4: Most common nationalities among international students (Garam, 2017).

The stay rate after graduation of international students in Finland is relatively high if compared to similar calculations of other EU countries (Mathies & Karhunen, 2020). According to Statistics Finland, the situation of international students who graduated in Finland in 2011 was as follows, a year after graduation: 46% employed in Finland, 18% living in Finland for other reasons, 6% continued studying, and 31% left the country. Nevertheless, the statistics fail to provide relevant information regarding, for example, if the job positions the graduates hold correspond to their level of education or otherwise (Institute for Economic Research in Finland VATT & CIMO, 2014).

According to (Shumilova et al., 2012), the main obstacles for international students in finding a satisfying job after graduation are the lack of fluent Finnish/Swedish skills, the lack of the right networks, and the lack of work experience (internships). It is surprising for many international students the importance of social ties when it comes to starting a career in Finland. According to Alho (2020), the employment paths of international

students in Finland heavily rely on ties based on bridging social capital –immigrants’ contacts to the majority population– even for those self-employed.

2.3.2 International students in Ostrobothnia

There are eight different colleges and universities in the Ostrobothnia region (Studentum.fi, 2021). Every year, the province welcomes numerous exchange students and international degree students. The capital of the region, Vaasa, is, in proportion, the biggest university city in Finland hosting around 12,000 university students (Welcome Office & National Institute for Health and Welfare, 2021). Some of the HEIs in Vaasa offer degree programs in English. In the academic year 2020-2021, roughly 700 international students studied for a degree in Vaasa (Novia University of Applied Sciences, 2020), plus around 90 international students who graduate each year from Centria University of Applied Sciences located in Kokkola and Pietarsaari (Centria University of Applied Sciences, 2021).

Official data on the nationalities of international students in the Ostrobothnia region is not available, neither is the distribution between universities and UASs. Yet, it could be assumed from the data available at the national level (Garam, 2017, 2018) since most likely the international student population in Ostrobothnia is an accurate and representative sample of the international student population in Finland.

2.4 Collaboration and knowledge transfer

Companies are able to successfully enter international markets on their own (Virtanen, 2008). As Ohmae (1989) suggests, “...you can do everything yourself – with enough time, money and luck”. The previous implies that cooperation is one of the fastest, safest, and most beneficial paths to internationalization (Virtanen, 2008). SMEs’ limited resources

have given birth to various collaboration modes within a firm's environment (Virtanen, 2008).

Even though knowledge transfer has been identified as a vital process for international success and sustainable competitive advantage (Kogut & Zander, 1992; Marina et al., 2020), our understanding of SMEs' methods remains underdeveloped (Durst et al., 2015; Marina et al., 2020). Global mobility of staff facilitates knowledge transfer in multinational companies (MNCs) (Reiche, 2012), yet knowledge transfer in SMEs is insufficiently understood (Marina et al., 2020). It has been proved that SMEs have deep needs for external and inter-organizational knowledge transfer (Chen et al., 2006) as it is of great importance for SMEs' internationalization (Wright et al., 2007). The fact that global mobility is not within reach for many SMEs must not be ignored since firms in an early internationalization stage rarely have the motivation, capability, or resources to transfer employees abroad (Marina et al., 2020). According to Child and Rodrigues (2007), "having the help of a trusted local person with the appropriate tacit knowledge and/or informal contacts within the foreign system can considerably facilitate the conduct of business there."

Finnish SMEs, more specifically, SMEs in the Ostrobothnia region that are unable to send their staff abroad to promote knowledge transfer due to resource constraints, could then evaluate the option of collaborating with international talent –specifically international students– to pump knowledge of specific markets into the company.

2.5 Resource-Based View

By proposing the resource-based view of the firm, Barney (1991) aimed to fill a gap in the existing literature on sources of sustained competitive advantage for firms. The resource-based model examines the implications of the following two assumptions to analyze the sources of sustained competitive advantage: (1) "firms within an industry (or group) may be heterogeneous with respect to the strategic resources they control," and

(2) “these resources may not be perfectly mobile across firms, and thus heterogeneity can be long lasting” (Barney, 1991).

As defined by (Daft, 1986), *firm resources* are those controlled by a firm and allow the company to devise and execute strategies that enhance its efficiency and effectiveness, including all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. These resources can be divided into physical capital resources (Williamson, 1975), human capital resources (Becker, 1964), and organizational capital resources (Tomer, 1987). The physical capital resources relate to the technology used in a firm, for instance, the firm’s plant and equipment, its location, and access to materials (Barney, 1991). The human capital resources involve the training, experience, reasoning, intelligence, relationships, and insights of both individual managers and employees of the firm (Barney, 1991). Finally, the organizational capital resources encompass the firm’s structure, its planning, controlling, and coordinating systems, along with informal relations between groups within the firm and between the firm and its environment (Barney, 1991).

It is considered that a firm has a *competitive advantage* when a value creating strategy is being implemented uniquely by the firm and not by any current or potential competitors simultaneously (Barney, 1991). When a firm “is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors *and* when these other firms are unable to duplicate the benefits of this strategy” the firm is considered to have a *sustained competitive advantage* (Barney, 1991).

Figure 5 below summarizes Barney’s (1991) resource-based view framework.

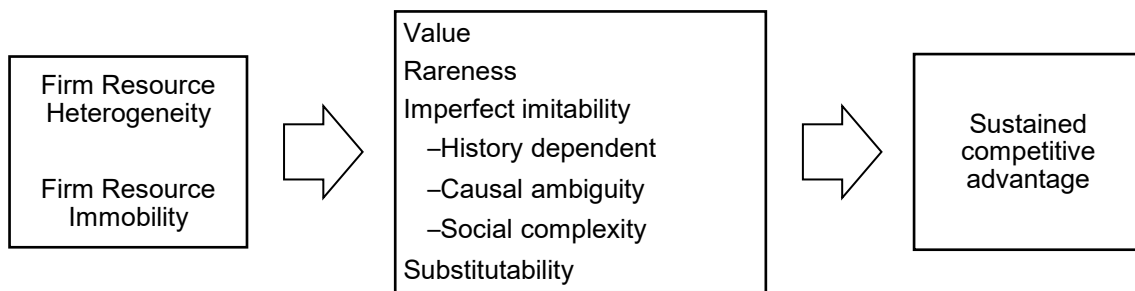


Figure 5: Resource-based view framework (Barney, 1991).

The resource-based perspective on internationalization focuses on sustainable and hard-to-imitate attributes of a firm as the fundamental drivers of the sustainable competitive advantage needed for internationalization (Ruzzier et al., 2006). The capability of a firm to secure profitable market positions is depending on its ability to achieve and maintain an advantageous position regarding pertinent resources significant to the firm (Conner, 1991). The importance of intangible knowledge resources as providers of competitive advantage is recognized in the resource-based models (Ruzzier et al., 2006). These address not only the possession of resources, but the dynamic skills for organizational learning for the purpose of developing new resources as well (Ruzzier et al., 2006). The previous has led to a better understanding of the firms' diversification strategies (Montgomery & Wernerfelt, 1988), including internationalization (Ruzzier et al., 2006).

Previous research provides only a handful of resource-based studies of SMEs' internationalization (Ahokangas, 1998; Hurry, 1994, as cited in Ahokangas, 1998; Luo, 2000; Rautkyla, 1991, as cited in Ahokangas, 1998; Roth, 1995). From the models proposed in these studies, the one by Ahokangas (1998) is regarded as the most promising one (Ruzzier et al., 2006). The model combines both the strategic and network perspectives of small firms' resource development and strategic internationalization behavior (Ruzzier et al., 2006). Ahokangas' (1998) model assumes that SMEs depend on the development capability of essential internal and external resources, which are possible to

adjust inside the firm and between firms and their environments (Ruzzier et al., 2006). This resource adjustment can be analyzed on two dimensions: (1) “where do the resources reside, i.e., what is their source – are they internal or external to the firm”, and (2) “does the development of resources take place in a firm-oriented manner (inward orientation) or in a network-oriented manner (outward orientation)?” (Ruzzier et al., 2006).

It is proposed in this work that knowledge from the international students’ home country markets as well as contacts and networks can become a new resource for SMEs looking to strengthen their sustainable competitive advantage in order to expand to new markets abroad or improve their internationalization activities.

3 Empirical Study and Analysis

The selected method for the empirical study was a cross-sectional survey. In a research context, surveys generally refer to collecting standardized information from a specific population or sample, commonly through questionnaires or interviews (Robson, 1993). The cross-sectional survey method “...collects data to make inferences about a population of interest (universe) at one point in time” (Lavrakas, 2008).

The data collection process includes both an online questionnaire and a series of semi-structured interviews for increased reliability of the study. The resulting data is discussed and analyzed. After the analysis, a collaboration model proposal is presented based on the data obtained from the empirical study.

To confirm the validity of the proposed collaboration model, the validity of the data collection process is evaluated in Table 3 below. Validity and reliability of the questionnaire data is illustrated in Table 4 in section 3.1 Questionnaires, and that of the semi-structured interviews is illustrated in Table 10 in section 3.2 Semi-structured Interviews.

Table 3: Data validation.

Data	Type of data	Analysis	Comments
Questionnaire	Quantitative	Correlation measures and descriptive statistics	Sample size n=36 from a total population of N=299
Semi-structured Interviews	Qualitative	Interviews were recorded and responses were analyzed.	Two companies participated in the interviews. Both interviewees were CEOs.

3.1 Questionnaires

The online questionnaire consisted of 21 questions, with the main section consisting of 39 Likert scale items related to internationalization challenges (refer to appendix 1 for the complete questionnaire).

In a Likert scale (Likert, 1932) participants are asked to show their level of agreement (from strongly disagree to strongly agree) with a set of statements (items) offered for a real or hypothetical situation under study (Joshi et al., 2015). In current practice, most Likert-type scales contain either five or seven response categories (Bearden et al., 2011). Early investigations tended to agree that reliability is optimized with seven response categories (Colman et al., 1997; Symonds, 1924). Nevertheless, a five-point Likert scale was chosen as the preferred option for this study since literature suggests that this type of scale is suitable when a researcher looks for an increased response rate and quality (Babakus & Mangold, 1992; Devlin et al., 1993; Hayes, 1992). Few researchers have even reported higher reliabilities for five-point scales (Jenkins & Taber, 1977; Lissitz & Green, 1975; McKelvie, 1978; Remmers & Ewart, 1941), and findings also indicate that a five-point scale is more appropriate for surveys conducted in Europe (Prentice et al., 1998).

To achieve the best possible response rate, the researcher performed a pilot test beforehand (Fink, 2009, p. 6). The first draft of the online questionnaire was sent to the West Coast Startup incubator's Project Manager for pre-testing. The questionnaire was then modified according to the comments received. The second draft of the questionnaire was then sent to the thesis supervisor for pre-testing. It was then confirmed that the questionnaire's overall design, structure, and wording were appropriate and resulted in a smooth answering experience. The final version of the online questionnaire was then ready to be deployed.

Several other measures for improving the response rate (Fink, 2009, p. 63) were considered. For instance, respondents were informed about how the survey data was being

treated as confidential and anonymous. Moreover, after the first email was sent, two additional reminders were sent to non-responders in the following week.

The online questionnaire was sent to all companies that met the defining criteria of the study population. The definition of the study population included the following criteria:

1. *First criterion:* Firms should be located in the region of Ostrobothnia.
2. *Second criterion:* Firms should meet the staff headcount and turnover requirements to account for SMEs (see section 1.6.2 SMEs).
3. *Third criterion:* Firms should have a contact email available on their official website or elsewhere on the web. Alternatively, a contact form on the official website could be used if no contact email were available.
4. *Fourth criterion:* Firms should have the potential to expand internationally, which means that the company's product or service can be adapted to international markets. Details on the companies excluded from the study are provided in the following paragraphs.

The process of obtaining the participating firms' contact details was as follows. First, an Excel file was obtained with the names and available websites of the SMEs members of the Ostrobothnia Chamber of Commerce (Ostrobothnia Chamber of Commerce, n.d.). Since the Ostrobothnia Chamber of Commerce has members from both Ostrobothnia and Central Ostrobothnia regions, a filter was applied to exclude those located in Central Ostrobothnia, the first list of 654 companies was obtained. Then, each firm's website was checked to confirm compliance with the four defining criteria.

The following were the reasons for exclusion and the corresponding number of companies excluded from this study for each of them; companies that are part of a bigger group (79), construction and maintenance firms (55), accounting firms (39), companies with no information available in the web (32), real estate and property management firms (23), local electricity companies (13), banks (12), franchises (9), legal services firms (9),

publicly-owned firms (9), car dealers and car service companies (7), restaurants (7), ferries and ports (6), hotels (6), architectural firms (5), waste management companies (5), local newspapers and magazines (4), pharmacies (4), cleaning services (3), clinics and general and dental health services (3), educational institutions (3), insurance firms (3), retirement and pension services (3), golf course (2), non-profit companies (2), photography studios (2), private security companies (2), sports teams (2), audit firms (1), gas stations (1), importing firms (1), parking lots (1), taxi service firms (1), and theaters (1).

The remaining companies were contacted via email or contact form (N=299). When retrieving the companies' emails from the web, a personal email was selected whenever available, namely, the CEO or Managing Director; otherwise, the general company email was used. A link to the online questionnaire was sent together with general information about the study and contact emails of both the responsible researcher and thesis supervisor. After several attempts with different sending email accounts, the questionnaire could not reach a total of 16 companies due to hosting service rejections (commonly known as bounces). Presumably, the questionnaire was successfully delivered to the rest (283) of the companies.

As suggested by Dillman et al. (2014), in order to improve the response rate of the questionnaire, multiple contact modes were used. As described before, the questionnaire was sent to the companies' emails, from which 32 responses were received. Additionally, the questionnaire was shared by the researcher through LinkedIn, from which 5 responses were received. A total of 36 usable questionnaires were received (n=36). Accounting for an effective response rate of 13%.

With the help of an online sample size calculator (Calculator.net, 2021) and considering the most conservative estimate for population proportion (50%) (*Sample Size Considerations*, 2021), a margin of error of 15.34% was obtained for a 95% confidence level for the questionnaire. Even though this margin of error exceeds the typical limit of 10%

(Dillman et al., 2014), it is the sample's quality and not the size that is important (Toepoel, 2016).

In this case, the sample's quality is assessed by measuring the reliability of the Likert scale section of the questionnaire. By means of a Cronbach's alpha test (Cronbach, 1951), the internal consistency of the main section of the questionnaire was obtained. The data was transferred to an Excel sheet, and the Real Statistics Resource Pack Excel Add-In (*Real Statistics Using Excel*, n.d.) was used to perform the test. Cronbach's alpha is expressed as a number between 0 and 1 (Tavakol & Dennick, 2011) with the acceptable values ranging from 0.70 to 0.95 (Bland & Altman, 1997; DeVellis, 2016; Nunnally & Bernstein, 1994). The Cronbach's alpha value obtained was 0.93, yielding an "excellent" internal consistency level (refer to appendix 2 for data and calculations). Table 4 below summarizes the validity and reliability of the questionnaire.

Table 4: Questionnaire data validity and reliability (Calculator.net, 2021; Glen, 2021).

Statistical constraints and margin of error		Likert scale section reliability	
		Cronbach's alpha	Internal consistency
Confidence Level	95%	$\alpha \geq 0.9$	Excellent
Sample Size	36	$0.9 > \alpha \geq 0.8$	Good
Population Proportion	50%	$0.8 > \alpha \geq 0.7$	Acceptable
Population Size	299	$0.7 > \alpha \geq 0.6$	Questionable
Margin of error	15.34%	$0.6 > \alpha \geq 0.5$	Poor
		$0.5 > \alpha$	Unacceptable

3.1.1 Results and Analysis

Respondents of the questionnaire were asked to provide their first name, company name, and job title. The first name was used only to provide a more personalized survey

experience. The company name was used to identify any duplicate answers and for an accurate follow-up of non-responders.

The job title held by the respondents confirms the fact that each of them had sufficient knowledge about the company and supported their suitability to answer the questionnaire. Table 5 below represents the job title frequency among respondents.

Table 5: Job title frequency among respondents.

Job Title	Number of Respondents
CEO or Managing Director	24
Administrative Manager/Officer	2
CTO or Technology Manager	2
Founder/Owner	1
Chief economist	1
COO	1
Export manager	1
HR-Specialist	1
Project manager	1
Head of Development	1
VP Sales	1
Total	36

Most of the companies employ less than 50 staff, with only 5 of the respondent companies employing 50 or more. Figure 6 below represents the proportion of the number of employees categories among companies.

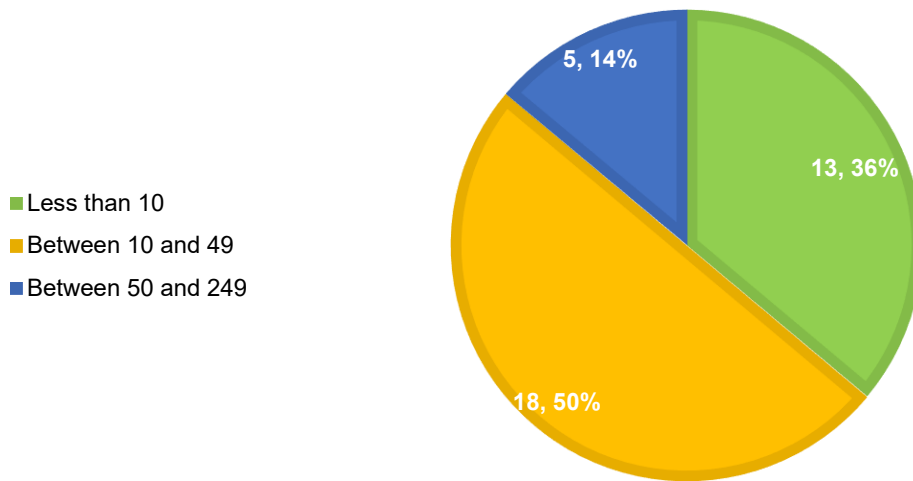


Figure 6: Companies by number of employees' categories.

Similarly, most of the companies' turnover is less than €10 million, with only 5 companies reporting a turnover between €10 and €50 million. Figure 7 below represents the proportion of turnover categories among companies.

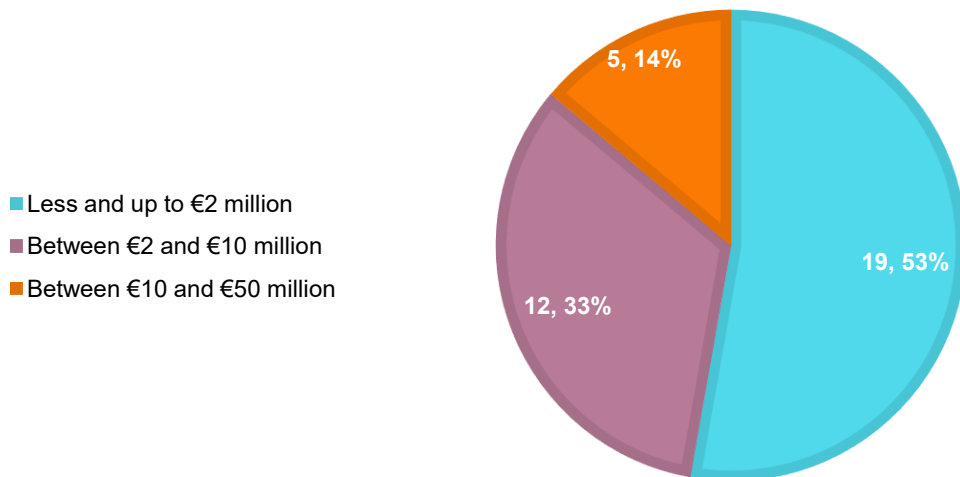


Figure 7: Companies by turnover categories.

Researchers often rely on coefficients or measures of association when looking to determine the strength of the relationship between two variables (Khamis, 2008). A number (often between -1 and $+1$ or between 0 and 1) is used to determine the relationship (Khamis, 2008).

To determine whether an association exists between the number of employees and turnover in a company, Kendall's Tau non-parametric measure was obtained. The measure is appropriate in this case since both variables are ordinal (Khamis, 2008). The Real Statistics Resource Pack Excel Add-In was used to obtain the measure. The measure obtained ($\tau_b=0.684$) represents a strong positive association (Taylor, 1990) between the number of employees and turnover in a company.

The year of establishment and a company's engagement in internationalization activities do not carry a strong association. Since one of the variables is continuous (year) and the other one nominal (company's engagement in internationalization activities), a point-biserial correlation coefficient measure was appropriate (Khamis, 2008). In this case, Excel's CORREL function was used. The value obtained ($r_{pb}=0.215$) represents a weak association between the variables (Taylor, 1990).

Similarly, and in alignment with the literature (McDougall, 1989), neither the number of employees nor a company's turnover holds a strong association with a company's engagement in internationalization activities. A rank-biserial correlation coefficient was obtained for both pairs of variables. In this case, the rank-biserial correlation coefficient was the appropriate measure since in both pairs of variables, one is ordinal (number of employees/turnover) and the other one nominal (company's engagement in internationalization activities) (Khamis, 2008). Again, Excel's CORREL function was used. The value obtained in both cases ($r_{rb}=-0.046$ and $r_{rb}=0.138$) represents a weak, almost non-existent association between the variables (Taylor, 1990).

Table 6 below summarizes the correlation measures explained in the previous paragraphs and the conclusions drawn from them.

Table 6: Correlation measures summary.

Variables	Measure	Correlation	Conclusion
Number of Employees Turnover	Kendall's Tau Range: -1,+1	$T_b=0.684$ Strong	A strong positive association exists between the number of employees and turnover in a company.
Year of Establishment Internationalization	Point-Biserial Correlation Coefficient Range: -1,+1	$r_{pb}=0.215$ Weak	The year of establishment does not have a significant effect on whether a company is currently engaged in internationalization activities or not.
Employees Internationalization	Rank-Biserial Correlation Coefficient Range: -1,+1	$r_{rb}=-0.046$ Weak	The number of employees does not have a significant effect on whether a company is currently engaged in internationalization activities or not.
Turnover Internationalization	Rank-Biserial Correlation Coefficient Range: -1,+1	$r_{rb}=0.138$ Weak	The turnover of a company does not have a significant effect on whether a company is currently engaged in internationalization activities or not.

Among the respondents, 55% were engaged in internationalization activities ($n=20$) and 45% were not ($n=16$). Figure 8 below represents the proportion of the companies' responses.

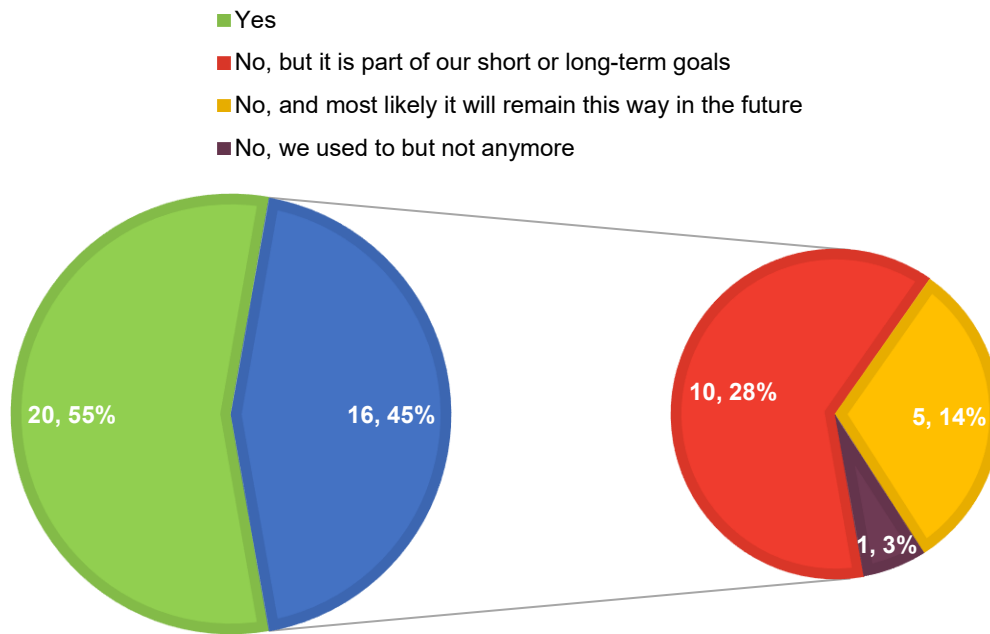


Figure 8: Is your company currently engaged with any type of internationalization activity?

As seen in Figure 8 above, most of the companies currently not engaged with internationalization activities consider them part of their short or long-term goals ($n=10$). Nevertheless, and in alignment with Virtanen's (2008) findings, companies with no interest in expanding internationally are certainly common ($n=5$).

The most common types of activities among the companies currently engaged in some type of internationalization activity ($n=20$) are presented in Figure 9 below.

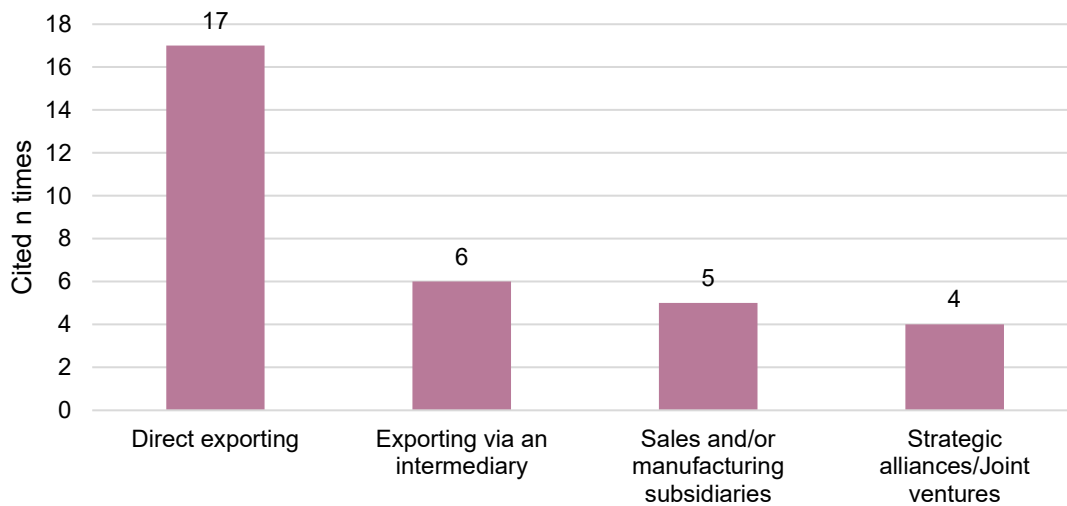


Figure 9: Type of internationalization activities respondents are currently performing. The y-axis indicates the number of times an answer was selected. Respondents were allowed to choose more than one answer.

It can be said that the most common type of internationalization activity among SMEs in Ostrobothnia is exporting. With direct exporting and exporting via an intermediary accounting for more than 70% of the total answers. Most likely, exporting is the most popular internationalization activity among SMEs due to the benefits that come along with it, as identified by Czinkota and Ronkainen (2001) and Terpstra and Sarathy (2000).

The time lag of SMEs' internationalization was analyzed among the exporting companies (n=18). Table 7 below includes the data together with descriptive statistics of the time lag between year of establishment and year of start of exports.

Table 7: SMEs' time lag between year of establishment and year of start of exports.

Year of Establishment	Year of start of exports	Time lag	Descriptive Statistics	
1968	2010	42		
1987	1992	5		
1992	1992	0		
1993	2000	7		
1993	2005	12		
1994	1994	0		
1996	1996	0		
1998	1998	0		
2002	2003	1		
2003	2003	0		
2003	2003	0		
2005	2008	3		
2010	2016	6		
2012	2014	2		
2012	2012	0		
2015	2015	0		
2018	2018	0		
2020	2020	0		
				<i>Time lag</i>
			Mean	4.333333
			Standard Error	2.352859
			Median	0
			Mode	0
			Standard Deviation	9.982337
			Range	42
			Maximum	42
			Minimum	0
			Count (n)	18
			Outliers	42

The data above confirms Christensen's (1991) findings, which reports that the time lag of SMEs' internationalization is shortening considerably. Despite an outlier of 42 years, the time lag mean from establishment to start of exports is only 4.33, with a median and mode of 0. The number of companies that initiated exports in the same year of establishment (n=10) is surprisingly high.

The export share of total sales was analyzed among the exporting companies (n=18). Table 8 below includes the data together with descriptive statistics.

Table 8: SMEs' export share: export sales / total sales.

Export share	Descriptive Statistics	
0.01		
0.04		
0.1		<i>Export share</i>
0.1	Mean	0.467778
0.15	Standard Error	0.074226
0.27	Median	0.45
0.3	Mode	0.1
0.4	Standard Deviation	0.314915
0.4	Range	0.94
0.5	Maximum	0.95
0.6	Minimum	0.01
0.6	Count (n)	18
0.7	Outliers	None
0.75		
0.8		
0.85		
0.9		
0.95		

The most common export markets (World Bank, n.d.) among the companies currently engaged in some type of internationalization activity are presented in Figure 10 below.

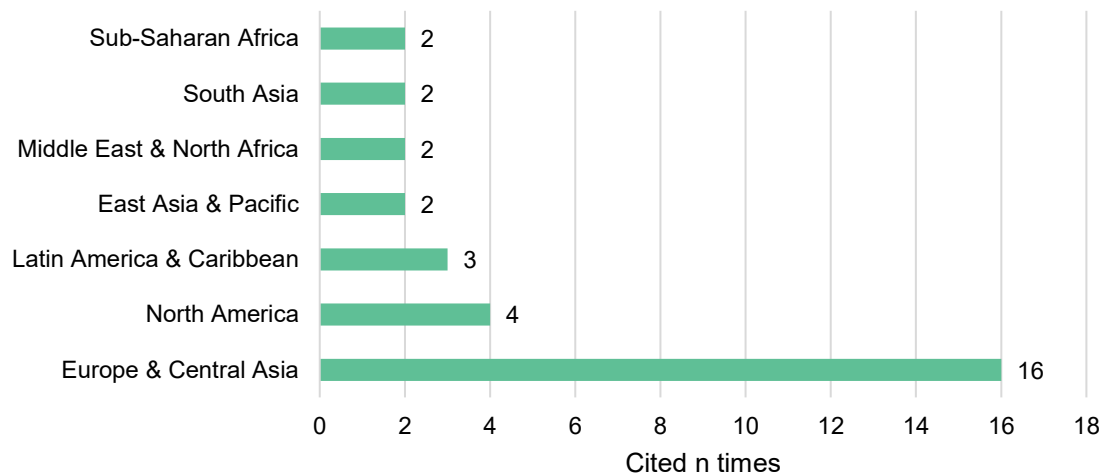


Figure 10: Main export markets. The y-axis indicates the number of times an answer was selected. Respondents were allowed to choose more than one answer.

It can be said that Ostrobothnian SMEs' main export market is Europe & Central Asia since more than half of the total answers correspond to this option. These numbers suggest that even for current exporters SMEs, there is great potential for collaboration with international students to enter new markets, specifically non-European markets.

The main reasons for SMEs not engaging in internationalization activities (n=16) are presented in Figure 11 below.

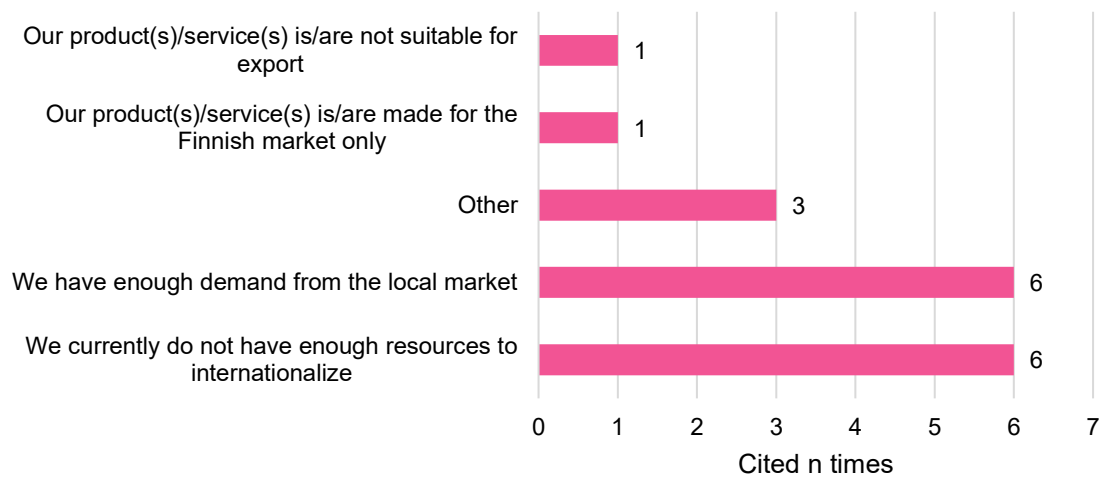


Figure 11: SMEs' reasons for not expanding internationally. The x-axis indicates the number of times an answer was selected. Respondents were allowed to choose more than one answer.

The data above shows that, in general, matters related to the product or service itself are not stopping companies from expanding internationally. Instead, the firms' perception of enough demand from the local market and the lack of resources to internationalize are the main reasons for SMEs not internationalizing. Respondents selecting "Other" mentioned the following reasons:

- Our products reach other markets around the world through our clients.

- Too early for us, but hopefully soon.
- Corona has slowed down the traveling.

All respondents participated in the internationalization challenges section of the questionnaire (n=36) consisting of 39 Likert scale items based on Leonidou's (2004) export barriers (see Table 2). Those SMEs that were currently not engaged with any type of export activities were asked to think of why their company is not exporting right now.

As per Jamieson (2004), since Likert scales fall within the ordinal level of measurement, one should employ the median or mode to measure central tendency.

To understand to what extent the respondents' attitude towards internationalization challenges aligns with the existing literature, a Venn Diagram was built (see Figure 12 below). The left-hand side of the diagram includes those internationalization challenges that obtained a median equal or greater to 4 in the descriptive analysis of the Likert scale section of the questionnaire but are not mentioned in the literature as having a "systematically strong obstructing effect on the export behavior of small firms" (Leonidou, 2004). The intersection of the diagram includes those challenges that both scored high in the questionnaire and are mentioned in the existing literature. Finally, the right-hand side of the diagram includes those challenges identified in the literature which did not score high in the questionnaire.

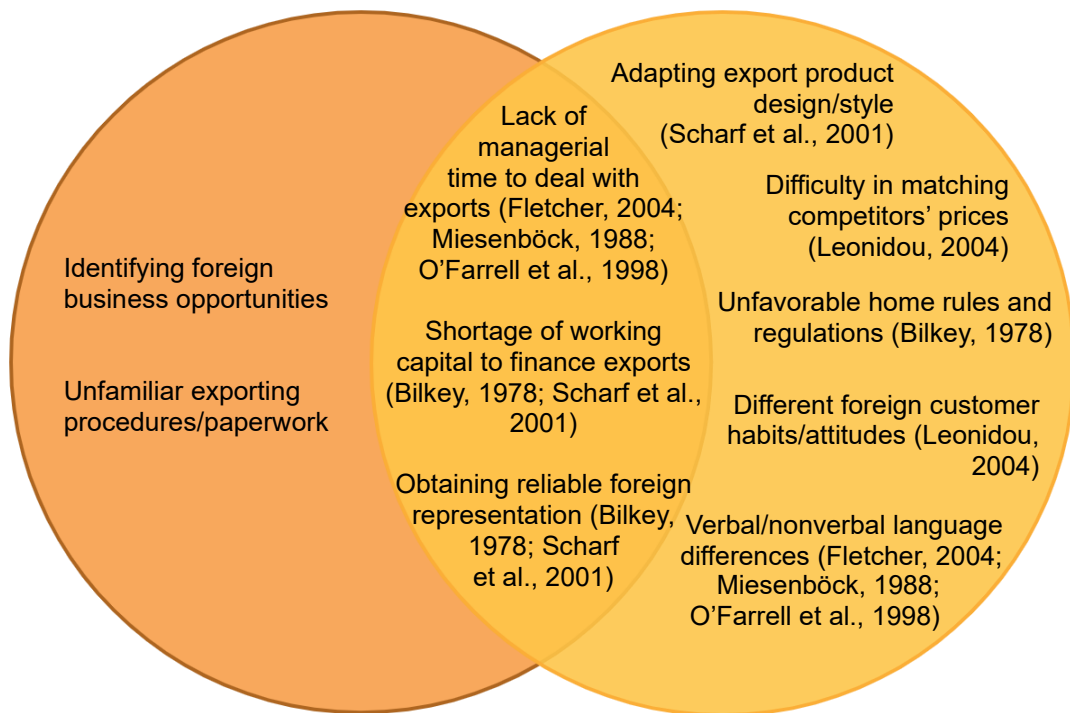


Figure 12: Venn Diagram. Export challenges. Questionnaire vs. literature.

The literature also distinguishes between initiating export challenges and ongoing ones (Albaum, 1983; Bannock, 1987; Scharf et al., 2001; Tesar & Tarleton, 1982). The data from the Likert scale section of the questionnaire was also analyzed from this perspective. Responses from exporters (n=18) and non-exporters (n=18) were differentiated and compared against the literature. Similarly, as before, Venn Diagrams were used to present the findings. Figure 13 corresponds to the analysis of exporters respondents and Figure 14 to that of non-exporters.

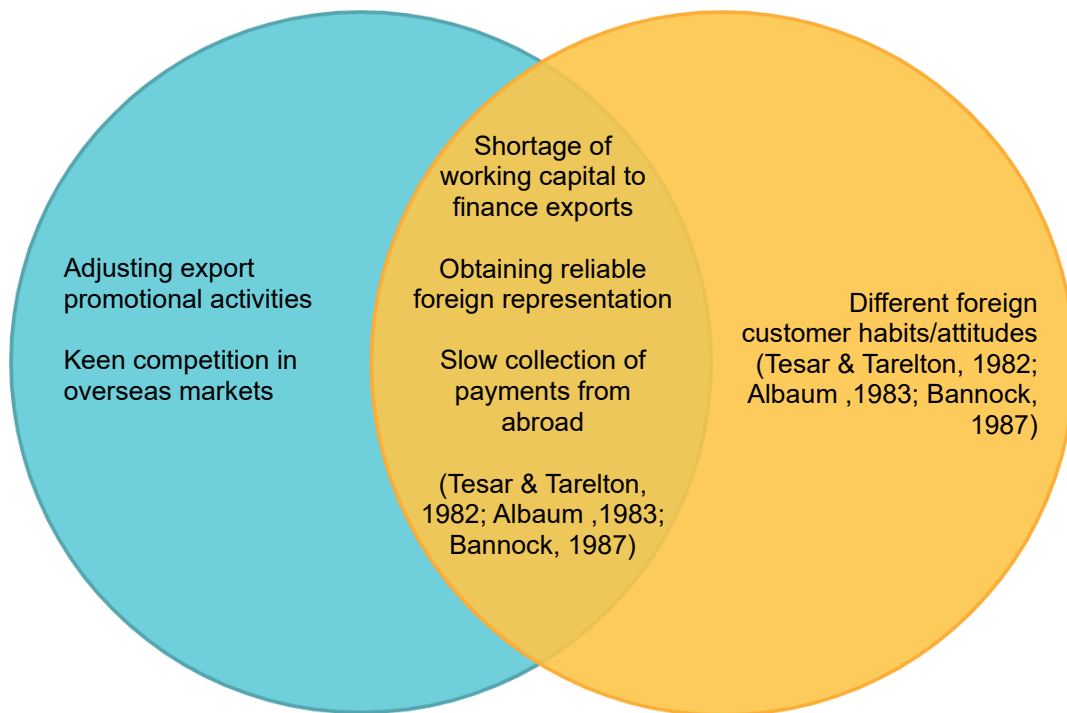


Figure 13: Venn Diagram. Export challenges: exporters' responses vs. literature.

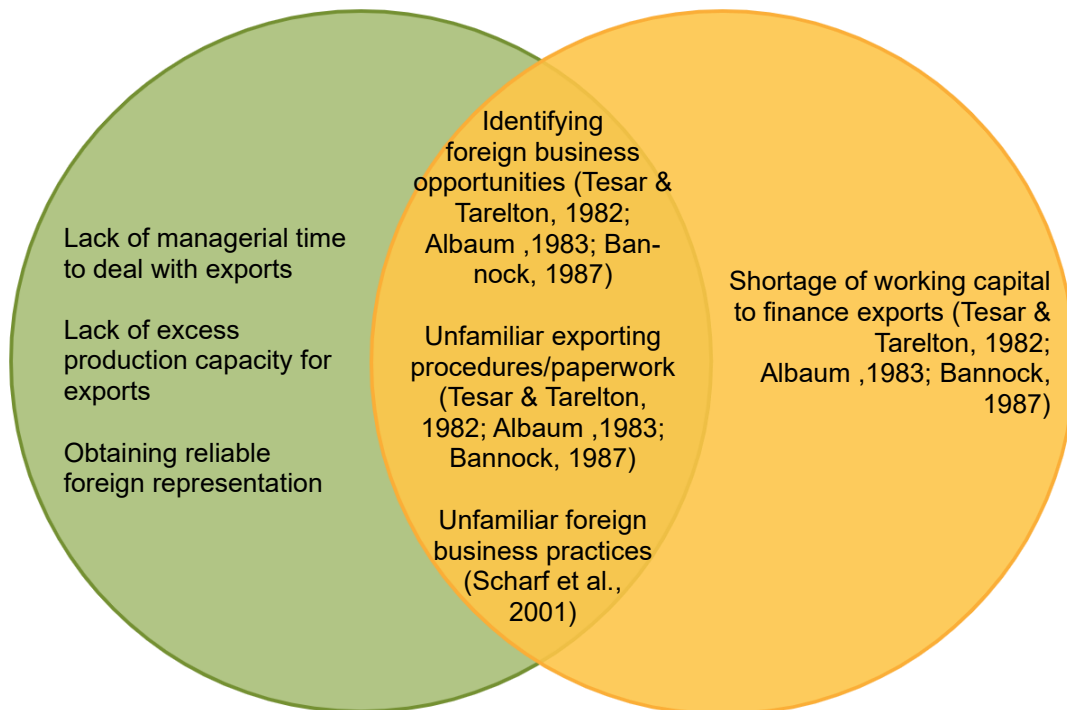


Figure 14: Venn Diagram. Export challenges: non-exporters' responses vs. literature.

These findings show that exporter SMEs in Ostrobothnia find adjusting export promotional activities, keen competition in overseas markets, shortage of working capital to finance exports, and slow collection of payments from abroad as the major challenges faced when dealing with exports. While non-exporter SMEs find the lack of managerial time to deal with exports, lack of excess production capacity for exports, identifying foreign business opportunities, unfamiliar exporting procedures/paperwork, and unfamiliar foreign business practices as the major challenges. Regardless of the companies' engagement with export activities, SMEs in Ostrobothnia perceive obtaining reliable foreign representation as a major barrier.

To gain a better insight into the preferred modes of collaboration with international students for SMEs, respondents were asked to rate each collaboration mode from 0 to 100 using a slider (for details, see appendix 1). Figure 15 below presents the average rating among respondents (n=36).

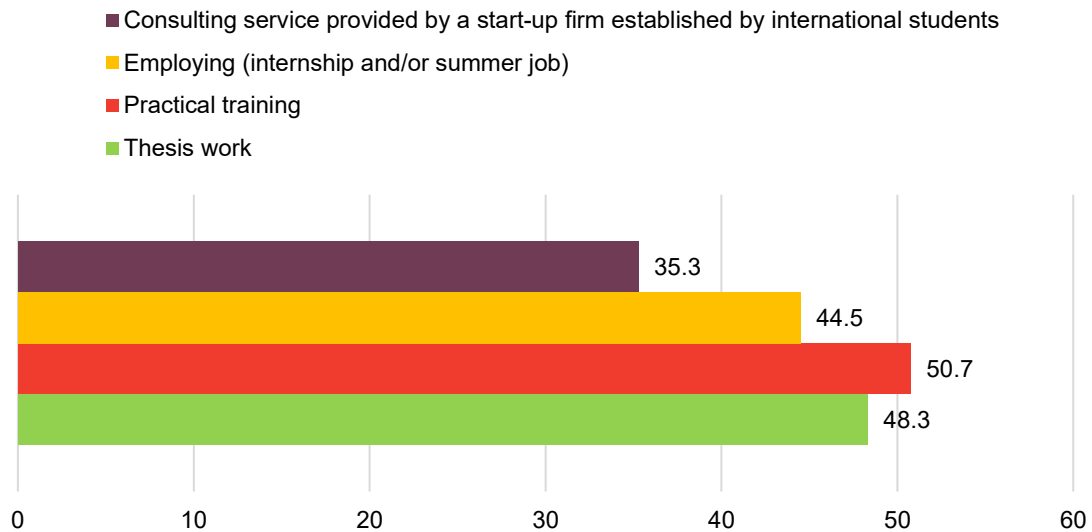


Figure 15: Collaboration modes average rating.

It can be said from the data presented above that the preferred collaboration mode among SMEs in Ostrobothnia is practical training, and the least preferred collaboration

mode is a consulting start-up firm established by international students. It is very likely that constrained economic resources play a significant role in SMEs' preferred collaboration modes since the two least preferred modes usually involve payment for the service or salary.

For statistical purposes, respondents were asked if they had previously collaborated with international students in any form before. Results indicate that, notably, 58% of the respondents (n=21) have collaborated with international students in the past and 42% (n=15) have not. In this case, the high proportion might be due to the fact that companies that have collaborated with international students in the past have, in general, a higher willingness to respond to a survey sent out by an international student than those companies that have not.

In the final section of the questionnaire, the potential of student start-ups providing market-specific services for SMEs' export activities was surveyed. Respondents were asked to indicate the likelihood of using consulting services from a start-up company as the one previously described. On a scale from 0 to 10, with 0 meaning "Very Unlikely" and 10 meaning "Very Likely." On average, the likelihood of SMEs in Ostrobothnia using such services is 4.44 out of 10. Further details can be found in the descriptive statistics data presented in Table 9 below.

Table 9: Likelihood of SMEs using consulting services from an international student-run start-up company.

Descriptive Statistics	
<i>Likelihood of using consulting services from an international student-run start-up company</i>	
Mean	4.44
Standard Error	0.44
Median	5
Mode	5
Standard Deviation	2.66
Range	9
Maximum	9
Minimum	0
Count (n)	36
Outliers	None

Before finalizing the questionnaire, respondents were asked to indicate, by providing their email address, if collaboration with international students was an interesting topic for them and if they were willing to discuss the topic further. Those respondents who provided their email addresses were then invited to participate in a short interview.

3.2 Semi-structured Interviews

With the aim of collecting more detailed and insightful data for this study, two semi-structured interviews were conducted. Semi-structured interviews were selected as the preferred interview mode since they offer the feeling of a one-on-one casual conversation, ultimately leading to an insightful discussion of the topic (Adams, 2015). The interviews were held via Google Meet and had a duration of 35 minutes on average. Both interviewees were the companies' CEOs. Table 10 below summarizes the validity and reliability of the interviews.

Table 10: Interview data validity and reliability.

Date	Position	Analysis	Duration of interview
8.4.2021	CEO	The interviewee answered all questions. The conversation led to an insightful discussion of the topic.	00:31:27
14.4.2021	CEO	The interviewee answered all questions. The conversation led to an insightful discussion of the topic.	00:37:02

3.2.1 Results and Analysis

The audio of the interviews was recorded and then analyzed. According to both companies' questionnaire responses, they had previously collaborated with international students. Questions from the interview were tailored accordingly. Table 11 below summarizes the key points collected from the interviews.

Table 11: Interview Analysis

Question	Key Points
What do you need in order to expand to new markets?	Contacts and networks helping in closing the deals rather than companies providing market analysis services.
How did your collaboration with international students begin? How was the contact?	Collaboration with international students began thanks to programs covering the trainee's salary for a period of time (usually three months).
How was your experience collaborating with him/her/them?	Contact was made mainly through HEIs. Past experiences have been excellent and have left companies feeling extremely satisfied.
What do you think would facilitate the link between companies and international students?	HEIs connecting international students and SMEs.

3.3 Collaboration Model

After a thorough analysis of the data gathered through the questionnaires and interviews, a collaboration model between SMEs and international students is proposed. The proposal is an idea with some extent of flexibility and adaptability. Nevertheless, three key characteristics must be met for the model to be successful. These characteristics and the idea proposal are presented in Table 12 below.

Table 12: Collaboration model proposal

Characteristics	Idea Proposal
HEIs must be involved. HEIs would serve as the link between SMEs and international students.	A course organized by a HEI or even an event organized in collaboration between HEIs in the region where SMEs submit an internationalization challenge or goal they want to solve or reach. Depending on the size and scope, one or more students can work on an actual proposal to solve the challenge or reach the goal. At the end of the course or event, students present their proposals to the companies. With this (1) students get to network, (2) students apply their skills in a real-life environment, (3) students gain experience and maybe even an internship or thesis work opportunity, (4) SMEs see what the students are capable of, and (5) SME receive a structured proposal to solve their challenge or reach their goal.
Due to economic resource constraints, it must be free for SMEs to participate in the collaboration model.	
Due to time resource constraints, the collaboration should not require too much time from the manager or representative from the SME.	

Similar collaboration models between students, companies, and HEIs have already been executed successfully but usually involving only large companies, e.g., hackathons (Kvarken Space Center, 2019). The success of these initiatives shows great potential for similar ones involving SMEs instead.

4 Conclusion

The final chapter of this study discusses the key findings and future research areas product from this thesis. This research highlighted several interesting aspects of the entrepreneurial environment of the Ostrobothnia region. Still, further research is needed in order to confirm the collaboration model proposal and to compare the findings with other regions in the country.

The validity and reliability of the study were evaluated in tables 3, 4, and 10. One might say that results are reliable, especially when assessing the diverse research methods utilized and the measures taken to increase the reliability. Besides, the sample size in the questionnaire is quite large and satisfactory for the purpose of this study. Likewise, results from the interviews were consistent with those of the questionnaires. Ultimately, the interviews' duration, together with the appropriate methods used to interpret the results, helped establish a solid validity and reliability.

Despite an appropriate validity and reliability, the study results are limited to and applicable only to SMEs in the Ostrobothnia region.

4.1 Key findings

This research aimed to determine how international students can help SMEs in Ostrobothnia meet their internationalization needs. To answer this research question, the following sub-questions were considered:

1. What are the major challenges of SMEs in Ostrobothnia related to internationalization?
2. How would companies want to collaborate with international students?
3. What is the best possible collaboration model between SMEs and international students?

The following answers are obtained after the study:

1. As presented in figures 12, 13, and 14, the perception of export challenges differs between exporting and non-exporting SMEs. Moreover, regardless of their exporting category, SMEs in Ostrobothnia perceive obtaining reliable foreign representation as a major barrier.
2. Even though there is currently not a strong potential for an international student-run start-up providing internationalization consulting services to SMEs, there is indeed a willingness from SMEs to collaborate in other ways with international students. Nevertheless, this willingness is restricted by the limited economic and time resources from SMEs. Aiming to address this, collaboration models between SMEs and international students should be considered so that SMEs can participate without substantial economic or time investments.
3. The best collaboration model between SMEs and international students should have the characteristics presented in Table 12. Moreover, this study reveals no unique collaboration model but rather a wide range of possibilities with great potential as long as these include the suggested characteristics.

In general, findings from the empirical study section of this thesis are strongly aligned with the existing literature. In particular, the time lag between the year of establishment and the year of start of exports is even lower than expected, reflecting the strength and innovative capabilities of SMEs in Ostrobothnia. Similarly, the high percentage (55%) of companies currently engaged with some type of internationalization activity also indicates the connectedness of the region with the world and the increasing possibilities for SMEs expanding abroad.

Differences in, for instance, the percentage of SMEs engaged with some type of internationalization activity according to this study results (55%) if compared with the official Finnish statistics (21%) (Suomen Yrittäjät et al., 2020) are most likely due to the defining criteria considered for the population of this study.

4.2 Future research

Further research could be done in the form of a follow-up study where input is collected from international students to confirm their willingness to participate in the collaboration model. Equally important, HEIs in the region and their possible participation in the model should be included in future studies.

The researcher also suggests replication of this study in other regions in Finland. By replicating the study, comparisons could be made among regions, and knowledge transfer and the exchange of best practices could occur.

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Appendices

Appendix 1. Questionnaire

Please note that the questionnaire was created using SurveySparrow, an online survey builder (SurveySparrow, 2021). To improve the questionnaire's readability in the present work, an adapted printed version of the questionnaire is included. To give the reader a sense of how the online questionnaire looked like, the questionnaire's introduction and completion page sections are presented as screenshots of the original online questionnaire.

It is also important to mention that conditional logic was used in some of the questions. Respondents selecting any of the “No” variants in Question 6, were automatically directed to Question 11, skipping questions 7 through 10. While respondents answering “Yes” in Question 6 continued with Question 7. If respondents selected at least one of the two “Exporting” variants in Question 7, they continued to question 8 and so on, skipping only Question 11. Instead, if respondents did not select one of the “Exporting” variants in Question 7, they were automatically directed to the introductory text for Question 12, skipping questions 8 through 11.

Introduction



This survey is conducted as part of a master's thesis work at the University of Vaasa in cooperation with MUOVA's West Coast Startup incubator.

We are studying the internationalization challenges of SMEs in the Ostrobothnia region.

All the information provided will be treated as confidential and will only be used for research purposes. Your comments will not be identified as belonging to you, instead, they will be combined with those gathered from other survey participants and will be analyzed as part of a group. We do not use any of the information you provide for any type of non-research activities.

The data gathered from this survey will be stored only while it is being analyzed. Once the material is analyzed, the data will be deleted.

The estimated time to complete the survey is 15 minutes. Thank you for your participation!

START >

Question 1

Please provide the following general information:

We require this information to avoid duplicate entries of data and to be able to confirm which companies have completed the survey already.

Name (First Name is enough 😊)

Company

Job Title

Hello {Name}! If you need to go back to the previous question at any point, just click the up arrow in the bottom-right corner of the screen 😊.



Note: We recommend you have this browser window in full-size to have the best possible survey experience.

Question 2

Year of establishment of your company:

Question 3

Number of employees:

- Less than 10
- Between 10 and 49
- Between 50 and 249
- 250 or more
-

Question 4

Turnover:

- Less and up to €2 million
- Between €2 and €10 million
- Between €10 and €50 million
- More than €50 million
-

Question 5

Product(s) and/or service(s)

Please briefly describe your company's main product(s) and/or service(s)

Question 6

Is your company currently engaged with any type of internationalization activity?

e.g., exports, licensing, franchising, subsidiaries, etc.

- Yes
- No, but it is part of our short or long-term goals
- No, and most likely it will remain this way in the future
- No, we used to but not anymore
-

Question 7

What internationalization mode(s) is your company currently using?

Select all that apply

- Direct exporting
- Exporting via an intermediary
- Licensing and Franchising
- Strategic alliances/Joint ventures
- Sales and/or manufacturing subsidiaries
-

Question 8

Year of start of exports:

Question 9

Export share in %: export sales / total sales

Question 10

What are your main export markets?

Select all that apply

- East Asia & Pacific
 - Europe & Central Asia
 - Latin America & Caribbean
 - Middle East & North Africa
 - North America
 - South Asia
 - Sub-Saharan Africa
-

Question 11

Which of the following describes best the reasons for your company not expanding internationally?

Select all that apply

- Our product(s)/service(s) is/are not suitable for export
- Our product(s)/service(s) is/are made for the Finnish market only
- We currently do not have enough resources to internationalize
- We currently do not have enough knowledge to internationalize
- We have enough demand from the local market
- Other

You're half-way there {Name} (yay 🎉)!

In the following section, please indicate how strongly you agree or disagree with each of the statements by selecting one of the options provided.

If your company is currently not engaged with any type of export activities, try to think of the reasons why your company is not exporting right now.

Question 12

When thinking about exporting, _____ represents a big challenge for us.

Fill in the blank with the sentence fragments presented below.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
limited information to locate/analyze markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
problematic international market data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
identifying foreign business opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
inability to contact overseas customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lack of managerial time to deal with exports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
inadequate/untrained personnel for exporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lack of excess production capacity for exports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
shortage of working capital to finance exports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Question 13

When thinking about exporting, _____ represents a big challenge for us.

Fill in the blank with the sentence fragments presented below.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
developing new products for foreign markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
adapting export product design/style	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
meeting export product quality standards/specs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
meeting export packaging/ labeling requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
offering technical/after-sales service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
offering satisfactory prices to customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
difficulty in matching competitors' prices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
granting credit facilities to foreign customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Question 14

When thinking about exporting, _____ represents a big challenge for us.

Fill in the blank with the sentence fragments presented below.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
complexity of foreign distribution channels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
accessing export distribution channels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
obtaining reliable foreign representation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
maintaining control over foreign middlemen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
difficulty in supplying inventory abroad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
unavailability of warehousing facilities abroad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
excessive transportation/insurance costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

adjusting export promotional activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Question 15

When thinking about exporting, _____ represents a big challenge for us.

Fill in the blank with the sentence fragments presented below.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
unfamiliar exporting procedures/paperwork	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
problematic communication with overseas customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
slow collection of payments from abroad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lack of home government assistance/incentives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
unfavorable home rules and regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
different foreign customer habits/attitudes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
keen competition in overseas markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Question 16

When thinking about exporting, _____ represents a big challenge for us.

Fill in the blank with the sentence fragments presented below.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
poor/deteriorating economic conditions abroad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
foreign currency exchange risks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
political instability in foreign markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
strict foreign rules and regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
high tariff and nontariff barriers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
unfamiliar foreign business practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
different sociocultural traits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

verbal/nonverbal language differences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

You are reaching the final section of the survey {Name}.

We are interested in finding out how international students in the Ostrobothnia region could help SMEs overcome some of the most common internationalization challenges.

We want to know what would be the best possible collaboration model between international students and SMEs.

Question 17

Please rate each of the following possible collaboration models between your company and international students:

0 means that the collaboration model is not appealing to you at all. 100 means that you would be interested in this type of collaboration model. You can place the slider anywhere between 0 and 100.

Thesis work	0	100
	<input type="range"/>	
Practical training	<input type="range"/>	
Employing (internship and/or summer job)	<input type="range"/>	
Consulting service provided by a start-up firm established by international students	<input type="range"/>	

Question 18

Have you ever collaborated with international students in any way before?

Yes

No

We are also surveying the possibility and potential of student start-ups providing market-specific services for SMEs' export activities.

The student start-up's value proposal would be the knowledge of the local language and market, connections, and familiarity with the policies and bureaucratic processes.

The following few questions are related to the evaluation of this idea.

Question 19

How likely would it be for your company to use consulting services from a start-up company like the one described in the previous section?

	1	2	3	4	5	6	7	8	9	10	
Very Un-likely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very Likely

Question 20

Which of the following consulting services would you be interested in receiving from this consulting start-up?

Select all that apply

- Market analysis
 - Finding intermediaries or sales agents
 - Providing general understanding of the market
 - Other
-


Question 21

If you are interested in export-development activities for your company in collaboration with international students, please provide your email, and we will contact you to discuss the opportunities 😊.

Email

Completion page

You completed the survey now.

Thank you so much for your help ! Your input will help us obtain reliable results from our study .


If you wish to contact the team conducting this study for any matter, you can do so by sending an email to:

Ville Tuomi, Supervisor

Email: ville.tuomi@uva.fi

Adriana de la Garza, Responsible Researcher

Email: c115572@student.uwasa.fi

You can now close this window and enjoy the rest of your day !

[Edit Responses](#)

Made with
 SurveySparrow