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A cross-national study of internationalisation barriers with reference to SME value chain

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Abstract

Research background: The study responses to the internationalisation issue, one of the essential factors of SMEs growth. Particularly to companies' efforts towards setting international co-operation and circumstances obstructing these struggles. The study takes into consideration that internationalisation in specific areas of company's operations differs noticeably. Similarly, different barriers may arise depending on the areas of the company's value chain that are the focus of the enterprises' internationalisation strategies.

Purpose of the article: This study aims to identify barriers to internationalisation regarding various areas of a company's value chain. The study employs the Value Chain Model by Porter.
Methods: The field data was collected using a questionnaire survey on a sample of small and medium enterprises (SMEs) located in countries in the Baltic Sea region (Denmark, Estonia, Finland, Germany, Latvia, Lithuania and Poland). A multiple regression analysis was performed to determine the impact of barriers on internationalisation.
Finding & value added: The study indicates three areas that are most often the subject of internationalisation in SMEs: operations, outbound logistics and marketing and sales. Barriers differ between value chain areas; however, cultural differences and competition are perceived as the most important hindering factors by companies experienced in internationalisation. At the same time, barriers regarding knowledge and finance diminish when companies becoming more experienced in internationalisation in particular value chain areas. This study is one of few employing the value chain framework to examine internationalisation.

Introduction

Advancing globalisation, which goes along with higher levels of business internationalisation, is one of the major issues characterising the business environment in the twenty-first century (Pinho & Martins, 2010). This necessitates the internationalisation of domestic companies (Zimmermann & Kattuman, 2007). Growing domestic competition is an additional factor forcing companies, particularly those from the small and medium enterprise (SME) sector, to enter international markets (Kuada, 2006). For many SMEs, internationalisation, a significant means of maximising business opportunities, is a journey towards setting up foreign entities (Rundh, 2007; Saixing *et al*., 2009; Al-Hyari *et al*., 2012). Companies' internationalisation contributes to more effective management by influencing the development of management capacities and skills, facilitating access to new resources, and ensuring greater flexibility in undertaking diversified business risks. On a macro level, it contributes to GDP growth, increased productivity, jobs creation and the development of nations in the broad sense of the term (Rocha *et al*., 2009; Pinho & Martins, 2010).

Companies' efforts towards international co-operation might be suppressed by barriers to internationalisation in specific areas of enterprise operations. The study assumes that different barriers may arise depending on the areas of the value chain that are the focus of the enterprises' internationalisation strategies. Therefore, this study aims to identify barriers that are particularly important to SMEs striving to internationalise in various links of company's value chains. Barriers relevant for SMEs involved in internationalisation processes have been identified. The study investigates the economic development level of companies' home countries as a factor associated with barriers to internationalisation.

Literature review

Internationalisation is an important component of a globalised economy (Kauppinen & Juho, 2012; Roy *et al*., 2016). It can be identified with institutional change, a very important achievement for every company (Maringe, 2012; Olson *et al*., 2005; Johnstone & Proctor, 2018) and a strategy necessary for development that helps boost revenue and outcomes (Hadryś-Nowak, 2018), mainly through access to new markets and technologies (Gaur & Kumar, 2009; Chari, 2013; Iona *et al*., 2013; Shukla & Akbar, 2018). Every kind of foreign activity can be considered internationalisation (Hadryś-Nowak, 2018), and it should be noted that some experts deem the range of foreign involvement irrelevant, saying that internationalisation occurs even if an enterprise has engaged in activity beyond its home border only once (Dicken, 1998). Meanwhile, others claim that only activity in multiple foreign countries can be considered internationalisation (Rugman, 1980).

In the last few decades, internationalisation has been discussed from many different angles and perspectives, with increasing interest in internationalisation not only in large companies but also in SMEs (Ruzzier *et al*., 2006). The literature on internationalisation is not coherent regarding the classification of various forms and spheres of a company's internationalisation. The Value Chain Model described by Porter (1985), with its fundamental explanation of sources of a firm's competitiveness, may provide a good framework for internationalisation research. The value chain concept offers a framework for understanding and analysing a company's competitive advantage (Porter, 1985; Pearce & Robinson, 2009; Sainio *et al*., 2011). It looks at a business as a chain of activities that produce value and consume inputs as part of a wider value network (Pearce & Robinson, 2009). However, only a select number of activities are sources of core competencies and determine competitive advantage (Hitt *et al*., 2019). Among them, several areas can be distinguished: production, logistics (inbound and outbound), marketing and sales, services and auxiliary areas that facilitate the realisation of basic activities (Priem & Swink, 2012; Tansuchat *et al*., 2016; Hernández & Padersen, 2017): research and development (R&D),

infrastructure, human capital management, technology management, purchases and finance.

The company’s value chain, in its first conceptualisation, has been considered to have great potential for getting an advantage from cross-nationally or globally spread activities (Porter, 1985; Magretta, 2011). However, the point is not exactly owning the value creation activities or assets, but also controlling them in the parts of the world where they are located (Oviatt & McDougall, 1994). A firm’s value chain as a concept is widely discussed, including with regard to internationalisation issues; however, empirical studies in this area are rare. Servais *et al*. (2006), focusing on the value chain of small firms, found that their early internationalisation efforts are aimed mostly at extensive foreign purchases. However, Vadana *et al.* (2020), studying digitalisation issues concerning companies’ internationalisation, stated that marketing and sales are often core elements of early internationalisation. Ball *et al*. (2008) investigated the value-adding activities in soft service firms seeking to enter foreign markets and proposed a model of the value creation process for these kinds of firms. Based on the value chain concept, Vadana *et al.* (2020) marked companies’ outward internationalisation and inward internationalisation activities. The former refers to particular value chain activities, namely delivery, sales and marketing, and the latter refers to others, like product design and production.

Scholars underline that the value chain concept facilitates a clearer understanding of firms’ positions in cooperation chains and allows the development of accurate business models; hence, value creation logic provides a better understanding of why and how internationalisation occurs (Jensen, 2019; Jensen & Petersen, 2012; Möller, 2006). Although corporations have been setting up value chain activities globally for a very long time, the issue of internationalisation in terms of value creation activities is still not comprehensively studied, particularly regarding SMEs. When studying the internationalisation of SMEs, one must consider that these companies are not merely smaller versions of large enterprises (Shuman & Seeger, 1986; Pangarkar, 2008). Operating in a globalised environment is more complex for SMEs, as each initiative concerning foreign markets requires a greater share of resources of smaller companies (Hadryś-Nowak, 2018) and entails higher risk (Lu & Beamish, 2001). SMEs usually adopt different models of internationalisation (Rexhepi *et al.*, 2017; Lam & White, 1999). For this reason, in the case of these firms, particular attention needs to be focused on barriers to internationalisation.

Theories of internationalisation identify several barriers (Leonidou, 2004; Morgan & Katsikeas, 1997), although their perception may vary in terms of intensity (Morgan & Katsikeas, 1997). Researchers pointed out that a lack of knowledge about local markets is one of the main obstacles to internationalisation. Additionally, companies experience lower uncertainty regarding markets that are culturally and psychologically alike (thanks to an absence of cultural barriers), so they are more likely to begin foreign activity in similar markets (Johanson & Vahlne, 1990). Barriers, however, can have very extensive roots — from lack of knowledge to poorly developed markets. The literature on the subject most often divides barriers to internationalisation into two categories: internal (endogenous) and external (exogenous). Internal barriers mainly include those depending on the company itself, e.g. psychic distance (presented in the Uppsala Model), which hampers information flow into and out of a given market. Factors that cause psychic distance include language differences, education levels, applied business practices, cultural aspects and levels of industrial development; these factors increase the uncertainty connected with internationalisation and become barriers (Johanson & Vahlne, 1977). Another internal barrier that significantly affects internationalisation is lack of necessary resources (Kanda *et al*., 2016; Korsakiene, 2014), including knowledge (Oviatt & McDougall, 1994) — particularly in the case of SMEs — risk aversion (Kahiya, 2013) and high transaction costs (Dunning, 1988; Anderson & Gatignon, 1986).

External barriers, meanwhile, should be analysed in the context of the domestic and target markets. These barriers include procedural barriers (e.g. the operational aspect of transactions with foreign customers, lack of knowledge concerning techniques and procedures, communication errors or long payment flows), government barriers, barriers related to an unfamiliar environment and the priorities of different countries (Clark & Pugh, 2001). Internal barriers are considered more important in the internationalisation of SMEs (Hutchinson *et al*., 2009a; Gardó *et al*., 2015). Authors involved in internationalisation research also propose several other approaches (e.g. Morgan, 1997; Pinho & Martins, 2010). Nevertheless, the literature to date does not offer a comprehensive review of barriers to internationalisation regarding the organisational spheres in which they occur, but contains some insights into this field.

Smaller firms require a special attention and approach for considering the internationalisation (Bochra & Saridakis, 2018). When analysing barriers to internationalisation in view of the chain value, one should focus primarily on those related to basic activities (production, operations, logistics, sales and marketing). The internationalisation of the production system is one of the key decisions that should be considered in the internalisation process (Mula, 2014). The results of empirical studies of production internationalisation are mixed, but they usually show that at a certain stage of the process, the efficiency of internationalised production can drop owing to growing transaction costs. Although internationalisation (particularly regarding the intensity of export) has a positive impact on productivity (Abor, 2011), insufficient capital, human, information and material resources (Paunovic & Prebezac, 2010; Kislingerova & Novy, 2005) and the inability to produce on a large scale and thus draw benefits from economy of scale and increased costs entailing lower margins and profits (Colapinto *et al*., 2015; Brochado *et al.,* 2020) may all prove to be considerable barriers to the internationalisation of production networks. Other authors point to the necessity of developing new products for foreign markets and different technological norms and health and safety regulations (Kubíčková & Toulová, 2013). When production internationalisation is considered in a larger context, time is also an essential factor, especially given the turbulent environment of supplier and recipient markets (Brochado *et al*., 2020).

Logistical processes constitute another major area that enables the internationalisation of organisations (Leonidou, 1995; Lakew & Chiloane-Tsoka, 2015; Barker & Kaynak, 1992; Katsikeas & Morgan, 1994). In a survey conducted by Straube *et al*. (2008), over 80% of respondents treated logistics as a key field of internationalisation. The research has also revealed that international logistical processes are closely linked to success in the global market (Gani, 2017). However, even though the idea of internationalisation through logistics is an important and topical issue, the problem has yet to be fully investigated. Other studies concern the creation of international logistical strategies (Marchet *et al*., 2016; Creazza *et al*., 2010) and central planning of the supply chain (Jonsson *et al*., 2013) in internationalisation. In this context, scholars cite variables that can affect the success of an international logistical strategy — for instance, local legal regulations, financial aspects and the product innovation index (Marchet *et al.,* 2016). Morgan and Katsikeas (1997) pointed to high costs and low margins as factors that may result in logistical and operational barriers (Hutchinson *et al*., 2009b), whereas Al-Hyari *et al*. (2012) stressed the significance of high costs of insurance, low accessibility of warehouse facilities abroad, and high costs of transport.

Studies on international sales and marketing strategies show that inappropriate sales and marketing strategies are the biggest barriers alongside limited organisational and managerial resources, restrictive legal regulations, disparate business practices, and distance costs (Leonidou, 2000). Marketing deficiencies may hamper a company's potential to exploit foreign market opportunities, impairing its financial results and even delaying or altogether preventing the process of internationalisation (Welch & Wiedersheim-Paul, 1980). Among the main barriers to internationalisation in the context of sales and marketing, Al-Hyari *et al*. (2012) mentioned difficulties in developing new products for foreign markets, adapting export product projects, maintaining standards for export products, meeting requirements associated with packaging and labelling, and technical and post-sale servicing. Toulová *et al*. (2015) additionally indicated high costs of marketing strategies. Therefore, the adopted marketing strategy is a key determinant of a company's results. The internationalisation of marketing and sales makes it possible to take better advantage of the economy of scale, build a strong negotiating position and negotiate more advantageous trade conditions, which is particularly important to the SME sector. That is why especially smaller companies should consider cooperation in this respect to facilitate their entry and operation in foreign markets (Piorunkowska-Kokoszko, 2016).

Company's support activities (R&D, infrastructure, technology and supply) are much less studied when it comes to internationalisation barriers. Studies present a variety of benefits from the internationalisation of specific support value links. For example, the internationalisation of R&D has been seen to result in a better understanding of R&D determinants; streamlined transfer and diffusion of knowledge; access to local science, technology, markets and customers; a shortening of the time in which products are launched (Von Zedtwitz & Gassmann, 2002) and more efficient internal distribution and allocation of resources (Gassmann & Von Zedtwitz, 1998; Gassmann & Von Zedtwitz, 1999). The main motives for internationalisation of the purchasing process include lower prices abroad (Overby & Servais, 2005; Quintens & Matthyssens, 2005), higher levels of quality and technology (Knudsen & Servais, 2007), greater accessibility of products (Andal, 2006), increased number of suppliers, the chance to boost the level of confidence, the shortening of supply time (de Oliveira Pereira &

Cleto, 2018), access to new markets and the possibility to strengthen the competitive position (Nassimbeni, 2006).

Methods

A Value Chain Model by Porter (1985), as already mentioned, is used to identify the company's competitive advantage. To be a part of international networks and trying to be active on foreign markets, SMEs need tools to identify their main potential, especially in relation to foreign entities. It was, therefore, recognized that the Value Chain Model by Porter can be such a framework, both in terms of research and application.

Internationalisation, understood as expanding enterprise operations beyond the home border, may be perceived differently depending on the kind of operations being internationalised. Also, barriers to internationalisation might be perceived differently. The study aims to identify barriers determining internationalisation processes, considering various links of enterprises' value chains. Barriers relevant for subjects involved in internationalisation processes in value chain areas are identified. The study also considers the level of economic development of the investigated enterprises' home countries as a factor associated with barriers to internationalisation. For this reason, the barriers perceived by respondents from high-income countries and medium-income countries are examined separately.

The field investigation was performed within the GoSmart BSR project, which was conducted simultaneously in seven countries (Poland, Lithuania, Latvia, Estonia, Finland, Germany and Denmark), entitled 'Strengthening smart specialisation by fostering transnational cooperation' and financed by the Interreg Baltic Sea Region Programme 2014–2020. A PAPI survey was conducted to gather the views of 199 respondents representing SMEs located in the countries participating in the project. The number and structure of respondents were limited by the project capacity; the investigation assumption was the number of respondents from each country should be roughly equal. The aim of the paper was not to generalize the results, but rather to notice certain relationships and characteristics that can be deepened in research on larger samples. It seems that the value of this research project was the possibility to compare the specificity of entities from high and medium income countries. However, the minimum number of respondents in each country group has been met, as according to the literature for the regression analysis 30 cases in each group is the minimum, but if some statistical approach employed (RML) even 20 cases is the minimum (McNeish, 2016; Hox & McNeish, 2020).

Each of the project partners was responsible for distributing the questionnaires among entities meeting the needs of the study, i.e. SMEs involved in the internationalization process and looking for sources of competitive advantage in this area. The first part of the questionnaire referred to the self-assessment of the degree of involvement in activities on international markets according to Value Chain Model. The next part of the questionnaire concerned the assessment (in five-point scale) of barriers in the internationalization process. The last part was the metric questions.

The measurement scale reliability has been tested; Cronbach's alpha is 0.91. Table 1 shows in detail the structure of the study sample by origin country, geographical area of activity, period of operation on foreign markets and the line of business. The respondents indicated the neighbouring countries' markets (56.4%) are the most desirable target of foreign expansion. Nearly 15% of them operated in the Asian market, while slightly more than 10% operated in North America. They declared that their primary business activity fields are manufacturing (almost 52%), health and food (13.2%) and key enabling technologies (9.15%). A significant proportion of the surveyed companies had already been functioning in international markets for many years; almost half had attempted to internationalise more than five years earlier.

The study considers the barriers to internationalisation in countries with different levels of development. Based on Eurostat data (Table 2), the studied countries were divided into two groups. The first one comprises countries with high GDP per capita: Denmark, Finland and Germany (hereinafter 'high-income countries'), while the other comprises those with medium GDP per capita, including Estonia, Latvia, Lithuania and Poland (hereinafter 'medium-income countries').

Results and discussion

The representatives of companies were asked to declare what their experiences were in internationalisation in particular areas, namely marketing and sales, human resource management, inbound logistics etc., on a scale from 1 to 5, where 5 meant the highest level of internationalisation (Table

3). Nine per cent of the companies reported having had no experience operating in international markets. The surveyed companies cooperated most intensely with foreign partners in the following areas: marketing and sales (mean 3.06), operations (mean 3.06) and outbound logistics (mean 3.00). Interestingly, the lowest level of foreign cooperation was reported regarding human resource management (mean 2.17) and finances (mean 2.29).

In the next questions, the respondents were asked to assess the impact of several factors with a possibly negative impact on internationalisation processes (Table 4). Among the listed barriers, they ascribed the greatest importance to strong competition in the foreign market (mean 3.40), insufficient knowledge about the market (mean 3.28), lack of/insufficient financial resources (mean 3.28), insufficient knowledge about the possibilities of cooperation (mean 3.24) and insufficient knowledge about clients (mean 3.13). It is worth underlining that three of the barriers mentioned above were associated with insufficient knowledge about foreign markets.

The study mainly focuses on internationalisation barriers relating to the level of internationalisation experience of the surveyed enterprises and the development of their country of origin. First, attention is devoted to barriers corresponding to enterprises differing in their internationalisation experience with regard to SMEs whose internationalised marketing/sales, operations and outbound logistics (the highest answer levels to the question referred to internationalisation experience, see Table 3). Second, the study assumes the perception of barriers might depend on the development level of a given enterprise's country of origin. Consequently, a multiple regression analysis (the method OLS) has been conducted to determine which barriers have the greatest impact on internationalisation experience level.

Each dependent variable, i.e. the type of enterprise involvement in the internationalization process, was compared with the same set of independent variables, i.e. the perception of internationalization barriers by entrepreneurs. These barriers have been grouped into six categories. Only statistically significant independent variables have been presented in the Tables (5, 6, 7). The aim was to highlight the differences between individual dependent variables, i.e. the type of company involvement in the internationalization process. In the opinion of the surveyed companies, political and legal barriers turned out to be irrelevant. The study was carried out in countries with a stable legal and political situation, hence the importance of these factors may be marginal.

In the first set of calculations, the dependent variable is ‘marketing and sales’. It concerns enterprises operating on international markets, mainly in sales and marketing. Period of operation in international markets and barriers are independent variables. They are grouped into the following categories: barriers associated with knowledge (Table 4: Q2.1, Q2.2, Q 2.3, Q2.4, Q2.9, Q2.10, Q2.12), political and legal barriers (Table 4: Q2.13, Q2.16), barriers associated with insufficient support (Table 4: Q2.14, Q2.15, Q2.18,), strong competition (Table 4: Q2.17), financial barriers (Table 4: Q2.8) and barriers stemming from cultural differences (Table 4: Q2.20). Furthermore, an analogous analysis is performed separately for high-income and medium-income countries.

The results of the multiple regression analysis are presented in Table 5. The period of operation in international markets proved to be a strong determinant of the companies’ international experience in sales and marketing. For this group of respondents, financial barriers are serious. Furthermore, knowledge-related barriers are also statistically significant; however, they decrease as enterprises’ involvement in cooperation with foreign partners intensifies, resulting in accumulated experience.

Figures show that for entrepreneurs from high-income countries who mainly cooperated internationally in marketing and sales, the significance of knowledge-related barriers disappeared; however, the barriers that stem from cultural differences are important. On the other hand, knowledge deficiencies remain in a negative relationship in SMEs operating in medium-income countries as internationalisation progresses. For companies from these countries, knowledge-related issues are still a key success factor in internationalisation in the field of marketing and sales; in other words, only entities with great internationalisation experiences do not see knowledge-related issues as a barrier. Generally, these data prove an intensive learning process when internationalising for respondents who operate in medium-income countries. Additionally, the level of fit support programs to SMEs is an important issue in the case of highly internationalised entities from medium-income countries.

Company operations is another area of internationalisation that is intensively practised by the surveyed enterprises. A regression analysis of this area is presented in Table 6. Advancements in internationalisation in this area are associated with the enterprise’s period of operation in foreign markets. According to respondents, barriers associated with cultural differences and knowledge-related were the most serious obstacles in terms of operations, although the latter became less important as the enterprises' involvement in operations processes increased.

Those SMEs that focus their international cooperation on operations and come from high-income countries regard barriers associated with cultural differences as a hindrance to the development of international cooperation. On the other hand, respondents from medium-income countries indicate barriers related to insufficient knowledge as impediments to developing international cooperation.

The third area of concern is characteristic of outstanding experiences in internationalising outbound logistics. As in the previous areas, the period of operation on international markets was the most significant variable for internationalising outbound logistics. For this company group, strong competition is the major obstacle to internationalisation. It appears that the sphere of logistics (company's final products delivery) is characterised by intense competition in the studied area of the Baltic states. Another observed peculiarity is that progress in the internationalisation of a company in this field goes hand-in-hand with the declining importance of financial barriers. When the activity is developed enough, the logistics possibly do not require the involvement of considerable financial resources.

However, the regression analysis implies that the perception of barriers varies depending on a country's income level. Enterprises that internationalise outbound logistics and come from high-income countries most frequently point to strong competition as a barrier, and it appears that these entities suffer the most in this matter. At the same time, the relief mentioned above in financial barriers perception going along with advancement in internationalisation refers to entities in middle-income countries.

The identification and classification of barriers in the internationalisation process have long been an object of many studies (Oviatt & McDougall, 1994; Dunning, 1988; Morgan, 1997; Pinho & Martins, 2010; Kahiya, 2013; Gardó *et al*., 2015). Nevertheless, this is still an interesting research area because a dynamic environment can generate new types of barriers. However, contemporary organisations internationalise themselves in different ways. One of the issues is that international cooperation is undertaken by enterprises in different spheres, the most convenient to them and which possibly create greatest added value at a given time. According to Porter's value chain, these spheres include the basic spheres of entry and exit logistics, production / operations, marketing and sales, and services; and the auxiliary spheres of R&D, infrastructure, human capital management, purchases and financing (Priem & Swink, 2012; Tansuchat *et al.*, 2016; Hernández & Padersen, 2017).

This study has identified the companies' advancements in internationalisation in particular value chain areas. As indicated above, some of them are particularly likely to develop international cooperation and deserve a deepened study on barriers to internationalisation. By examining the barriers, the calculated regressions showed an interdependence between advancements in internationalisation and the period of operation in international markets. This means that companies' experiences hitherto really matter. This is, to some extent, the opposite of what emerged from the in-depth study by Vanninen *et al.* (2022), which concluded that younger SMEs adopt multinational operations more easily while older SMEs do it with more difficulty. That study was also based on companies' value chain examination. The findings for the period of operation in foreign markets suggest that the development of internationalisation in particular value chain areas is a lengthy process involving much time and effort for the company.

Previous studies indicate several barriers to internationalisation, e.g. local laws and financial aspects (Marchet *et al.*, 2016); others point out technological norms and other domestic regulations as barriers (Kubíčková & Toulová, 2013). This study identifies major barriers to internationalisation referring to company value chain areas; additionally, it considers the origin of internationalising enterprises: some from high-income countries (Germany, Denmark and Finland) and some from medium-income countries (Poland, Lithuania, Latvia and Estonia). The results achieved by regression analysis are placed in the matrix below (Table 8).

First, the calculations reveal that companies vary in their perception of barriers to cooperation on foreign markets. Undoubtedly, barriers related to cultural differences and strong competition in target markets are those which noticeably hinder international activities. Entities advanced in international activities in the studied value chain areas have expressed concern for those barriers. Interestingly, both types of barriers affect mainly respondents from highly developed countries. Enterprises relocating production or other core operations to foreign markets point first to barriers related to cultural differences. These results are consistent with previous studies that prove that the barriers for this type of entity are insufficient human or information resources (Paunovic & Prebezac, 2010; Kislingerova & Novy, 2005).

The perception of knowledge-related barriers in the investigated SMEs seems very peculiar. Their importance is revealed in the internationalisation of operations and marketing and sales. As indicated by Al-Hyari *et al*. (2012), insufficient knowledge may concern the methods of introducing new products to foreign markets, maintaining standards for export products, knowledge of packaging or labelling requirements, and the principles of building a technical and after-sales service. This study indicates that the knowledge-related barriers are important only when a company starts internationalisation activities; when an enterprise reaches a certain level of experience, the knowledge issues cease to be barriers. Moreover, these barriers' disappearance effect is typical for companies from medium-income countries. It suggests possible typical for medium-income countries entry barriers related to the knowledge for starting internationalisation. This field would possibly be efficient for public support instruments facilitating SMEs' internationalisation at an early stage. It should be underlined that inadequate support instruments, also referred to as marketing and sales, are currently barriers for the interviewed companies from these countries.

Financial barriers are particularly important for marketing and sales internationalisation and outbound logistics. Conclusions emphasising the importance of financial aspects have been formulated by other researchers, including Marchet *et al*. (2016) and Morgan and Katsikeas (1997). However, barriers involving marketing and sales are obstructing for companies advanced in internationalisation, as internationalising marketing and sales would consume many financial resources. Maintaining international public relations, brand recognisability and sales points, among other things, would be a serious financial weight for an SME. On the other hand, internationalisation in the area of outbound logistics possibly appears cost consuming at first, but becomes less of a barrier when a company is advanced in internationalisation in this area, it concerns companies from countries of medium income.

Conclusions

Based on international data obtained from SMEs covering seven countries of varying income levels, the study shows that three spheres are most frequently internationalised by SMEs: operations, outbound logistics and marketing and sales. In these areas, the interviewed companies seek and gain benefits leading to increased value through co-operation with foreign partners. As it emerges from this research, it should be underlined that marketing and sales, which is typically associated with foreign expansion based on 'ordinary export', is not the prevalent area of internationalisation. The surveyed enterprises are also actively engaged in foreign cooperation in other value chain areas. The barriers to internationalisation that the interviewees encounter are chiefly associated with knowledge, experience and competition in foreign markets.

Performed regression analyses shed an interesting light on barriers to internationalisation regarding a company's value chain. Thus, when considering companies advanced in internationalisation in particular areas, the cultural differences and strong competition in target markets are perceived as real barriers. Some of the barriers seem to appear more frequently in enterprises in high-income economies, such as Germany or Denmark, others in medium-income economies, e.g. Poland or Latvia. However, the special role of some barriers has been identified, namely knowledge-related and financial barriers in medium-income countries. These kinds of barriers are outstandingly important when a company is at the beginning of its international cooperation journey, but when it becomes advanced in internationalisation in a specific area of the value chain, the barriers lose their relevance.

The study's objective was to identify barriers to internationalisation, considering value chain areas. Although not representative, the study shows both the barriers and the intensity with which particular areas are internationalised. This has interesting cognitive value regarding internationalisation, but it also provides a basis for programming SMEs' support instruments at various levels of development policies. Being one of the few studies employing the value chain framework to investigate internationalisation processes, this study proves the value chain model is promising for further studies on various internationalisation issues. Some social implications might be also demonstrated. As all know we are entering now the Industry 5.0 era with the crucial role of technologies in business and social lives, development continues to accelerate. The leaders, social, political ones have to focus much more attention to prepare citizens to open cooperation with other regions abroad. A special attention need to be devoted to knowledge barrier which was found in this study as of special importance in early stages of international cooperation.

A limitation of the survey presented in this study is, to some extent, its size. The survey comprised 199 entrepreneurs representing SMEs from seven countries. It was assumed that the number of representatives of each country should be approximately equal, which was met to some extent, however for regression analysis the two groups were considered which were sufficiently numerous. The cost and time factor made not possible to investigate bigger, fully representative sample. The study results are not representative but rather explorative, hopefully inspiring further investigations into the subject of barriers as seen by internationalised organisations in various value chain areas. Particularly because all the conclusions in terms of variable relationships were on a regular basis confronted to practically oriented experts being in close contact to SMEs in each of seven countries, from project partner institutions. It also allowed to diminish noticeably misinterpretations in regression analysis in terms of the influence of variables. Hence the credibility procedures mentioned by the literature (Atinc *et al*., 2012; Klarmann & Feurer, 2018) might been slightly reduced. The study indicates SMEs' complexity and differentiation of internationalisation between value chain areas. Further examination of the identified barriers exerting influence on internationalised areas of value creation seems an interesting direction for future research. Also, further research could consider national development policies and public support instruments available to SMEs in the internationalisation field.

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Annex

Table 1. Characteristics of the sample

Country of origin	Number	%	Geographical area of activity	Number	%
Estonia	32	16.1	We have not entered foreign markets yet.	43	22.1
Denmark	20	10.0	Neighbouring country markets	110	56.4
Finland	32	16.1	Other European markets	83	42.6
Germany	25	12.6	North American markets	20	10.2
Poland	32	16.1	South American markets	15	7.7
Lithuania	28	14.1	Asian markets	29	14.9
Latvia	30	15.0	African markets	12	6.2
Period of operation on foreign markets	**Number**	**%**	**Line of business**	**Number**	**%**
We have not entered foreign markets yet.	31	15.9	Health and food	26	13.2
			Key enabling technologies	18	9.1
Less than a year	16	8.2	Manufacturing	102	51.8
1–3 years	27	13.8	IT	14	7.1
> 3–5 years	27	13.8	Sustainable innovation	9	4.6
Over 5 years	91	46.7	Construction	9	4.6
			Transport and warehousing	13	6.6
			No answer	6	3.0

Table 2. GDP per capita (2019) in studied countries

Country	GDP per capita, EUR
Denmark	53.270
Finland	43.570
Germany	41.350
Estonia	21.160
Latvia	15.930
Lithuania	17.340
Poland	13.780

Source: Eurostat.

Table 3. Internationalisation experience in areas

No.	Area	N	Mean	Standard deviation
Q1.1	Research and development	109	2.72	1.43
Q1.2	Inbound logistics	122	2.79	1.45
Q1.3	**Operations**	**127**	**3.06**	1.46
Q1.4	**Outbound logistics**	**127**	**3.00**	1.47

Table 3. Continued

No.	Area	N	Mean	Standard deviation
Q1.5	**Marketing and sales**	**152**	**3.06**	1.32
Q1.6	Services	126	2.90	1.32
Q1.7	Infrastructure	95	2.36	1.24
Q1.8	Human resource management	99	2.17	1.27
Q1.9	Technology management	122	2.56	1.30
Q1.10	Procurement	124	2.77	1.33
Q1.11	Finances	102	2.29	1.30

Table 4. Barriers to internationalisation

No.	Barrier	N	Mean	Standard deviation
Q2.1	Lack of experience in internationalisation	193	3.05	1.43
Q2.2	Insufficient knowledge about clients	194	3.13	1.26
Q2.3	**Insufficient knowledge about the market**	196	3.28	1.28
Q2.4	**Insufficient knowledge about the possibilities of cooperation**	195	3.24	1.11
Q2.5	Lack of readiness for internationalisation	193	2.91	1.45
Q2.6	Inappropriate timing (too late/too early entry into foreign markets)	193	2.63	1.33
Q2.7	Unwillingness to cooperate with foreign partners	192	2.31	1.39
Q2.8	**Lack of/insufficient financial resources**	194	3.28	1.37
Q2.9	Insufficient knowledge of legal and financial regulations	196	3.09	1.33
Q2.10	Language barrier	195	2.84	1.43
Q2.11	Level of risk	194	3.00	1.25
Q2.12	Insufficient competencies of employees	191	2.77	1.27
Q2.13	Unfavourable political situation in the target foreign market	192	2.73	1.35
Q2.14	Lack of/insufficient consultancy support	192	2.73	1.27
Q2.15	Lack of/insufficient external support (e.g. investors)	189	2.73	1.35
Q2.16	Unfavourable legal and financial regulations	192	2.82	1.33
Q2.17	**Strong competition in the foreign market**	193	3.40	1.26
Q2.18	Insufficient promotion of the region on foreign markets	191	2.98	1.41
Q2.19	Insufficient coordination between business networks	192	2.80	1.31
Q2.20	Cultural differences	194	2.76	1.22
Q2.21	Other	99	1.53	1.51

Table 5. Regression analysis referred to marketing and sales area

	b*	SE with b*	t(188)	P
Constant			2.31	0.02
Period of operation in international markets	0.40	0.06	6.12	0.00
Knowledge-related barriers	-0.19	0.07	-2.81	0.00
Financial barriers	0.13	0.07	1.99	0.05
Model parameters: R = 0.48 R^2 = 0.23 F(3.188) = 18.341 p<0.000 Standard error of estimation: 1.54				
High-income countries				
Constant			-0.46	0.64
Period of operation in international markets	0.44	0.10	4.23	0.00
Barriers related to cultural differences	0.20	0.10	1.97	0.05
Model parameters: R = 0.50 R^2 = 0.25 F(2.72) = 11.992 p<0.00003 Standard error of estimation: 1.49				
Medium-income countries				
Constant			3.20	0.00
Period of operation in international markets	0.34	0.08	4.01	0.00
Knowledge-related barriers	-0.35	0.09	-3.94	0.00
Barriers associated with inadequate support	0.14	0.09	1.59	0.11
Model parameters: R = 0.52 R^2 = 0.27 F(3,113) = 13.837 p<0.00000 Standard error of estimation: 1.52				

Table 6. Regression analysis in relation to companies' operations internationalisation

	b*	SE with b*	t(188)	p
Constant			2.21	0.02
Period of operation in international markets	0.24	0.07	3.47	0.00
Barriers related to cultural differences	0.20	0.07	2.75	0.00
Knowledge-related barriers	-0.20	0.07	-2.74	0.00
Model parameters: R = 0.37 R^2 = 0.13 F(3.188) = 9.7025 p<0.00001 Standard error of estimation: 1.76				
High-income countries				
Constant			1.63	0.10
Barriers related to cultural differences	0.31	0.11	2.76	0.00
Model parameters: R = 0.31 R^2 = 0.09 F(1.73) = 7.6272 p<0.00727 Standard error of estimation: 1.71				
Medium-income countries				
Constant			3.10	0.00
Period of operation in international markets	0.31	0.09	3.58	0.00
Knowledge-related barriers	-0.24	0.09	-2.75	0.01
Model parameters: R = 0.44 R^2 = 0.20 F(2.114) = 14.070 p<0.00000 Standard error of estimation: 1.75				

Table 7. Regression analysis referred to internationalised outbound logistics

	b*	SE with b*	t(188)	p
Constant			1.22	0.22
Period of operation in international markets	0.30	0.07	4.34	0.00
Financial barriers	-0.18	0.07	-2.55	0.01
Strong competition	0.17	0.07	2.36	0.01
R^2 = 0.15; F(3.188) = 11.052 p<0.00 Standard error of estimation: 1.7392				
High-income countries				
Constant			-0.44	0.66
Period of operation in international markets	0.29	0.11	2.59	0.01
Strong competition	0.19	0.11	1.75	0.06
R^2 = 0.12; F(2.72) = 4.6872 p<0.01 Standard error of estimation: 1.82				
Medium-income countries				
Constant			2.66	0.00
Period of operation in international markets	0.33	0.9	3.82	0.00
Financial barriers	-0.20	0.9	-2.31	0.02
R^2 = 0.17, F(2.114) = 11.979 p<0.00 Standard error of estimation: 1.700				

Table 8. Barriers to internationalisation, study results

	Barriers related to cultural differences	Financial barriers	Knowledge-related barriers	Support barriers	Strong competition
Marketing and sales		+	-		
Operations	+		-		
Outbound logistics		-			+
Marketing and sales HI	+				
Operations HI	+				
Outbound logistics HI					+
Marketing and sales MI			-	+	
Operations MI			-		
Outbound logistics MI		-			

Note: HI - High Income, **+** Positive relationship; MI - Medium Income, **-** Negative relationship