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Changes in export performance of German B2B companies – a business model perspective

Doctoral dissertation

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Date of submission: ……..

Supervisor's signature

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I would like to dedicate this PhD thesis to my wife, for without her support, this thesis would not have been possible and to my parents for instilling a curiosity for learning into me, that urged me to embark on this academic journey.

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"Information technology is at the core of how you do your business and how your business model itself evolves" – Sataya Nadella (2016).

"It has been said that arguing against globalisation is like arguing against the laws of gravity" – Kofi Annan (2000).

1. Introduction

1.1. Research topic relevance and research gaps

The starting quote from Microsoft CEO Satya Nadella, from a Business Insider interview from April 2016, and the second quote from Kofi Annan, United Nations Secretary General at the time, albeit being from 2000, highlight two major global trends that also translate well into international business research. The first quote points towards business models as a key component of understanding company success, posing the question of how firms can add value to their customers, or – to put it even more directly – ask: Why do customers buy our product or service? This area of research has come under heavier need for revaluation with the impact of digital technologies and the huge steps forward made in information technology. Such a need for revaluation is even more prevalent when one takes into account that even though it and business models are a core component of company success the knowledge of how business model characteristics influence the company performance is limited. If business models are considered at all, they are mostly seen as a consequence of internationalisation choices made by companies rather than a factor of its own influencing international performance.

Apart from this general area still in need of additional research, the current academic level of business model literature offers three research gaps located firmly at the intersection of the business model and internationalisation research.

In this area of research, concepts such as born globals introduced by Hennart (Hennart, 2014) are predominantly used to explain why some firms are better or faster at expanding their international operations, coinciding with the one-directional nature of internationalisation research. Sort and Turcan have conceptualized the cross-section of de-internationalisation and business model research (Sort & Turcan, 2019, 42) and call for empirical studies linking business models and de-internationalisation effects. On the other side of internationalisation research, Hennart et al (Hennart et al., 2021) call for research supporting their empirical

finding that operations in a niche business area have a positive impact on international performance. Child et al. (Child et al., 2017) further provide the mechanisms of revenue creation and material factors of business model choice as future research avenues.

Moving towards internationalisation, the characterisation of globalisation as a force of nature, which entails a certain gloomy attitude towards a world defined by a growing interdependence between economies, cultures, and populations and can be extracted from the quote of Kofi Annan, can be seen as a stark contrast against the internationalisation success stories written by international trade and international economics. This story of successful internationalisation and ever-growing opportunities and earnings to be achieved in more and more international markets to be served by every company can also be found to be reflected in the academic literature on the topic. While a rudimentary search using Google Scholar yields more than 900.000 all-time search results for the key word of “internationalisation”, a search for “de-internationalisation” yields less than 2.000 all-time search results. This relation skews even more out of proportion when the focus is narrowed down to export. A search for export excluding “exit” as a search term yields more than 7.4 million articles, while “export exit” only has 513 results.

Such a single-minded perspective and focus on success stories does not only tend to oversimplify the complexity and potential problems of international operations, but also evokes the feeling of guaranteed success being linked to internationalisation. That is not to say that internationalisation cannot yield considerable results and might even be a necessity for companies, but decisions regarding international operations still have to be evaluated and analysed within the specific context of the company. The aforementioned focus on internationalisation as a one-way street has, however, made research on the impact that decisions to change international operations in both directions have on the firm in terms of performance scarce. Although a certain understanding has already been reached that international operations do not necessarily follow a linear path towards success (Benito & Welch, 1997), such an understanding is not reflected in a clear and concise stream of academic articles. The literature regarding the antecedents and consequences of de-internationalisation is split between a variety of smaller, isolated effects and factors (Tang et al., 2021). Furthermore, studies taking the more flexible nature of internationalisation into account tend to focus more on the antecedents that lead to internationalisation changes while the consequences of these changes

tend to be overlooked. This dynamic becomes even more prevalent when focusing on export as a key internationalisation mode. All four foundations of export development dealt within this thesis place the growth and success of export development at the forefront of their theories. This thesis therefore aims to answer the call made by Tang et al. in their thematic review (Tang et al., 2021, 293) for insights into the consequences of de-internationalisation and tries to make a contribution by adapting a more holistic approach towards export and export change. The scarcity mentioned gets aggravated when the specific conditions a firm operates under are taken into account as well. In order to combat this lack of research, this thesis will focus on research taking such dynamic decisions on internationalisation and firm characteristics as a priority.

This thesis aims to merge the three research calls related to the business model dynamics of internationalisation intersection and focus on the way that changes in export operations are affected in their impact on export performance by business model characteristics. The central research question can therefore be formulated as such:

How do changes in different export dimensions of a firm affect the export performance considering the characteristics of the business model?

1.2. Research objectives

When taking the current level of academic research on the topic and the research gaps mentioned into consideration, the key aim of this dissertation is the expansion of the existing level of research towards a more holistic approach, determining how changes in different dimensions of internationalisation of a firm affect the export performance under the special consideration of certain business model characteristics. In order to reach this aim, the following objectives have been established:

1. identification of theoretical foundations of firm internationalisation (Chapter 2.1 up to Chapter 2.7) with a particular focus on export and export development (Chapter 2.8);
2. establishment and critical review of existing research on firm performance (Chapter 3);

3. distinct assessment of research showing business model concepts (Chapter 4) with a specific focus on factors influencing international business model change and international business model innovation;

4. further refinement of the findings of Chapters 2 to 4 for manufacturing small and medium sized enterprises (SMEs) operating in business to business (B2B) markets with a particular focus on the role of German SMEs (Chapter 5);

5. empirical investigation of the moderating effect of business model characteristics on the relationship between changes in international dimensions and export performance (Chapter 6 up to 6.3.4.);

6. discussion of the obtained results against the backdrop of extant research and development of recommendations for future studies (Chapter 6.4.).

To be able to fulfil these research objectives, an empirical study was conducted to examine the relationship between the variables studied which were chosen according to the author's own analytical framework, which is presented in detail in Chapter 6.1.

The analytical framework presented in this study draws first of all on the resource-based view (RBV) as an understanding of the firms competitive advantage as a driver of internationalisation success. On the firm side, an overview over internationalisation is provided (Welch & Luostarinen, 1988) to understand changes in international dimensions (Dikova & Brouthers, 2016), while the categorization of business model characteristics is used to classify firm characteristics according to Zott et al (Zott et al., 2011) . This dissertation also draws on the current understanding of firm performance given by Taticchi (Taticchi et al., 2010) and sharpens this perspective by incorporating the specifics provided by an established export market and established firms as well as a more niche product (Ettlie & Rosenthal, 2011) and customer base (Lilien, 2016). The interaction of these perspectives that build the foundational logic of this dissertation's structure can be found in Figure 1 below.

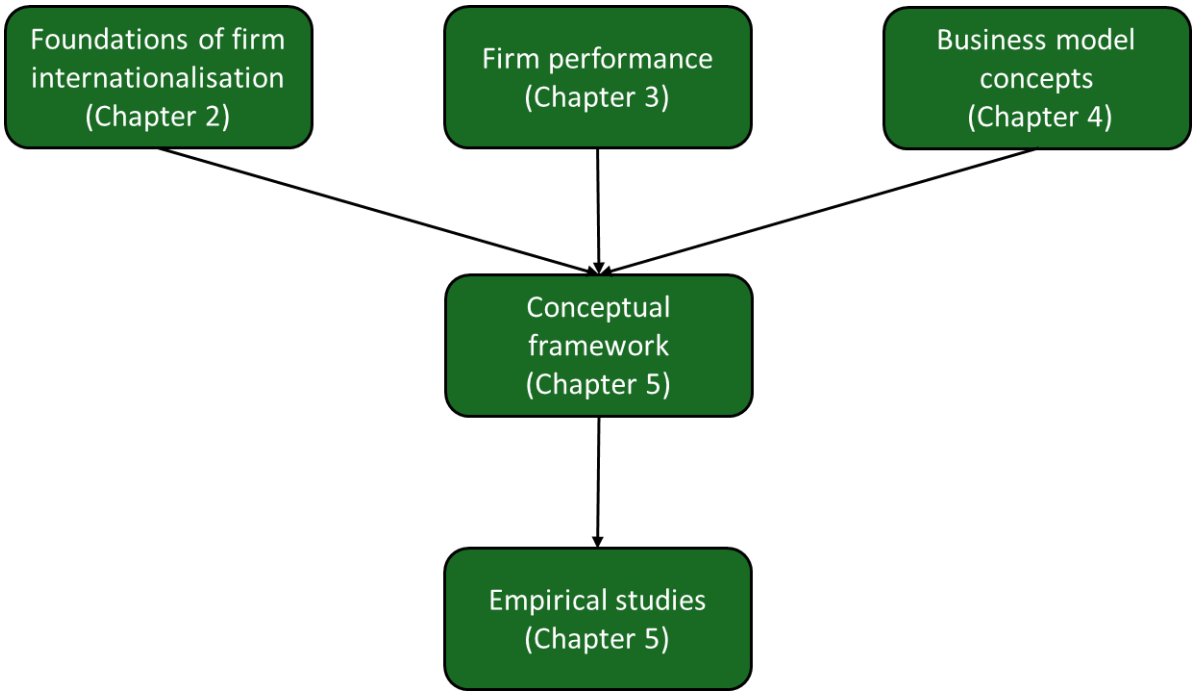


Figure 1 – Structural logic of the dissertation

Source: The author's own elaboration.

Based on this research concept and the adopted theoretical background, this thesis aims to contribute to filling the existing gaps in the research by formulating the following hypotheses:

The impact of changes in export activity on export performance

H1: *A change in international activity in either one of the two dimensions of export depth or export breadth has an impact on export performance or export performance change.*

Moderation of business model characteristics

H2: *Product complexity moderates the relationships in H1 insofar that for lower (or higher) product complexity it becomes more positive.*

H3: *Technological capabilities moderate the relationships in H1 insofar that for higher technological capabilities it becomes more positive.*

H4: *The use of Internet technologies moderates the relationships in H1 insofar that for a higher use of the Internet it becomes more positive.*

These hypotheses reflect the assumption that a seemingly basic relationship between international operations and export performance can be significantly influenced by individual firm characteristics and therefore needs to fall under the scrutiny of precise operationalisation and thereby direct verification at an empirical level. As shown in the introduction and expanded upon in the hypotheses development in Chapters 6.1.1. and 6.1.2., a study of the mere direct effects on performance would oversimplify a more complex relationship and fail to take more indirect factors into account. For the sake of presentation clarity, the above hypotheses were aggregated. However, given the distinctions between export breadth and depth, as well as export performance and its change, to enable fine-grained empirical testing these of hypotheses will be decomposed into more detailed ones in Section 6.1.

1.3. Research design

The research process has gone through sequential stages and started with the deduction of hypotheses, which were then operationalized and tested empirically, before the results of the empirical testing were analysed, compared against existing theory and placed against the aforementioned research gaps. The analysis regarding the current level of academic literature and the identification of research gaps conducted in Chapters 2, 3, and 4 was done as a qualitative content analysis (Seuring & Gold, 2012).

On the basis of this analysis, a quantitative study was conducted and further evaluated by combining descriptive statistics with a correlation analysis. The subsequent analysis of the quantitative study results is meant to classify the findings and evaluate their potential within the context of the research gaps while placing further emphasis on the way future research might draw indications from them.

Sticking to the research objectives formulated above, the design adopted consists of a multi firm, single country approach. The data was gathered from a set of German firms operating in export markets, defined as companies registered and located in Germany, that identified themselves as operating in international markets in a relevant matter. The relevancy was given when the company generates at least 10% of the total turnover internationally. A structured online survey was sent to the pool of companies and the progress was constantly monitored.

To test the hypotheses developed, multiple regression models were tested using the SPSS software package. An overview of these stages detailing the research process of the dissertation can be found in Figure 2 below.

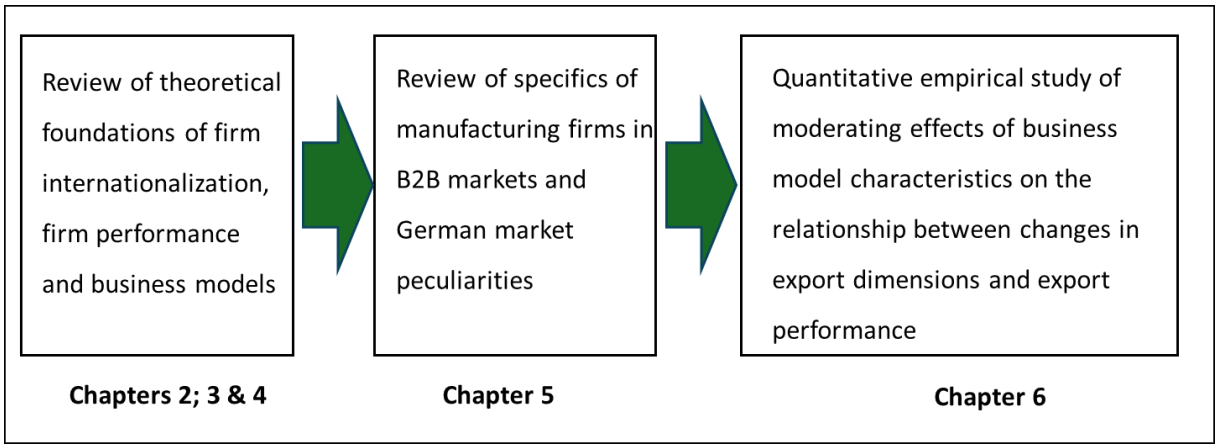


Figure 2 – Overview of the research process

Source: The author's own elaboration.

1.4. Dissertation structure

The structure of the dissertation will shortly be highlighted in the following subchapter, starting with the nature of this introductory Chapter, which sets out to show the central research agenda by pointing out the rationale and need for such an academic work as well as detailing the steps undertaken and the methodology used in order to achieve the research objectives. Chapters 2 to 4 each tackle one of the three theoretical building blocks of the thesis by depicting and discussing the foundations of firm internationalisation, firm performance and business models. The second Chapter deals with the topic of firm internationalisation, establishing the basic concepts, motives and forms of internationalisation as a foundation for a common understanding before placing specific interest on export as an internationalisation method. The Chapter continues with perspectives of de-internationalisation and internationalisation dimensions, broadening and contextualising the topic, before export development is touched upon to sharpen the focus again.

The third Chapter aims to establish the foundations of firm performance as the second pillar needed for the theoretical building blocks. In order to achieve this, the overall concept of firm performance is defined and both financial and non-financial performance measures are discussed. After a common understanding has been reached, firm performance is then correlated to multinationality. International performance is discussed for firms entering new

markets and, before the Chapter closes with an emphasis put on export performance, its measures and antecedents. Chapter four then finishes with the third pillar and addresses business model concepts. For that purpose, business models are contrasted with similar concepts such as strategy and the theoretical roots of business models, especially the resource-based view, are examined. Once this basis has been formed, business models are – in a similar vein to firm performance – contextualized within the topic of internationalisation. International business model choice and innovation are touched upon to round out the Chapter.

After Chapter four, the three main theoretical building blocks have been established and a have been put into a rough context. Chapter five then changes the thesis direction towards a needed sharpening of the perspective in another context. While Chapters two to four have established their topics in a general and holistic way, the next Chapter chiefly delves into three aspects of the firm yet to be mentioned. Firstly, a more in-depth view is taken towards the specific characteristics of firms operating mainly in B2B relationships. Secondly, the challenges and opportunities that manufacturing firms face in an international context are stressed. The third factor is the firm size, as the perspective gets narrowed down even further to shed even more light on the internationalisation of manufacturing SMEs. Hidden champions as a concept combining these three characteristics are defined and a short emphasis is put on their success stories and challenges in an international context. After the overall nature of the firms discussed in this thesis has been clarified, Chapter five is rounded out with a perspective switch from a non-specific view of international markets towards a German perspective. The nature of the German economy and notably the role of German SMEs in the international context are considered. After Chapter five, all concepts needed for the formulation of the analytical framework and research hypotheses are sufficiently tackled.

Chapter six therefore starts with the analytical framework and the formulation of the research hypotheses based on the arguments developed in Chapters two to five. In this final empirical Chapter, the assumptions, methods and results of the quantitative analysis are presented. These results are then interpreted and balanced against the backdrop of the theoretical analysis and the research gaps presented. The Chapter ends with an emphasis on directions and implications for future research and international business practice as well as the limitations and main takeaways.

2. Firm internationalisation as a multi-dimensional phenomenon

2.1. Concept of internationalisation

To discuss the effects of internationalisation, one must first develop an overall theoretical understanding and adopt a clear definition of internationalisation. Although the term "internationalisation" itself is used not only in academic vocabulary and has a common understanding, a clear definition has not been established yet. The internationalisation of companies and the closely linked discussion of international economic relations have been a mainstay in the academic discourse for over a century (Edminster et al., 1931). Especially the importance of trade and trade barriers such as tariffs were a strongly debated topic in the early discourse (Hoover, 1945, 311). A focal shift in perspective occurred in the 1960s, when multinational corporations and their impact, particularly regarding foreign direct investments, became a key issue. A common denominator is the outward movement in a company's international operations (Johanson & Wiedersheim-Paul 1975, 307; Pieray 1981, 27). Welch and Loustarinen expand on this basis and suggest "the process of increasing involvement in international operations" (Welch and Luostarinen 1988, 37). From this static perspective, a dynamic shift towards the decision process behind such foreign direct investments contributed to the development of a longitudinal approach regarding expansion activity. Calof and Beamish (Calof & Beamish, 1995, 116) apply a much broader definition for internationalisation as "the process of adapting firms' operations (…) to international environments". Andersen (Andersen, 1997, 28) puts a different focus on the adaptation of exchange transaction modalities to better fit international markets. Fletcher (Fletcher, 2001, 26) points out that beyond a mere definition of growing beyond domestic markets, the stream of research on internationalisation follows either factors causing internationalisation or focuses on the internationalisation process. This focus on two factors can also be found in Harzing and Sorge, who rely on the factors of internationalisation strategies and corporate control mechanisms and conceptualize internationalisation based on these factors as a way that relations between headquarters, international subsidiaries, diverse markets, and institutional contexts are fashioned (Harzing & Sorge, 2003, 192). The next set of definitions to be discussed in this context mainly revolves around resources, as Ruzzier et al. (Ruzzier et al., 2006, 479), who define internationalisation as "the process of mobilizing, accumulating, and developing resource stocks for international activities". Liu and Ko (Liu & Ko, 2017, 217) also use resources and the interaction with them as their key internationalisation component and define internationalisation as "the procedure of organizing

and utilizing global economic resources, such as capital, raw material, labour, information, market and management". Lastly, two short outliers need to be noted. Firstly, Sun (Li Sun, 2009, 130) defines internationalisation solely as a static degree of a firm's revenue or operations conducted outside the home country, whereas Serrano et al. (Serrano et al., 2018, 2) base their definition on internationalisation leading to geoGraphic diversification, not product diversification. The definitions of internationalisation mentioned above are also shown in Table 1 below in a chronological order.

Table 1 - Definitions of internationalisation

Author	Year of Publication	Definition
Johanson/ Wiedersheim-Paul	*1975*	The outward movement in a company's international operations.
Welch/ Luostarinen	*1988*	The process of increasing involvement in international operations.
Calof/ Beamish	*1995*	The process of adapting firm's operations (…) to international environments.
Andersen	*1997*	The adaptation of exchange transaction modalities to better fit international markets.
Harzing/ Sorge	*2003*	The way that relations between headquarters, international subsidiaries, diverse markets, and institutional contexts are fashioned.
Ruzzier	*2006*	The process of mobilizing, accumulating, and developing resource stocks for international activities.
Li Sun	*2009*	The degree of a firm's revenue or operations that are conducted outside the home country.
Liu/ Ko	*2017*	The procedure of organizing and utilizing global economic resources, such as capital, raw material, labour, information, market and management.

Source: The author's own elaborations.

As the expanded definition of Welch and Luostarinen has been one of the main definitions established in the academic literature (e.g. Erramilli et al., 1999, 29; Susman 2007, 281), internationalisation in the context of this work will be understood as any bundle of activities that increase the involvement of a company in international operation.

2.2. Motives of internationalisation

After an overview over the various definitions of internationalisation has been given, the following sub-Chapter will deal with the reasons and motives companies have for increasing their involvement in international operations.

The task to create a comprehensive list of all the motives a company has to internationalize might be unrealistic and would tend to shift the perspective away from the key points and issues towards a more granular approach where the discourse could be lost in the details. It is, however, possible and sensible to first pick up on the already existing classifications of motives.

The earliest classification was made by Hymer (Hymer, 1960, 65), who split internationalisation motives into vertical and horizontal components. According to him, firms either control enterprises in a variety of countries in order to minimise international competition and maximise the ability to sell to each other, which is called horizontal internationalisation. The alternative are firms that undertake all operations in a single international market to fully appropriate the returns they can generate. This component is called vertical internationalisation. Hymer developed two categories, which – although it offers a certain degree of explanation on nearly all internationalisation processes – also limits the understanding drawn from it due to its basic nature. Especially the internationalisation in a more complex and globalized world has changed its profile and most companies will employ motives that can be seen as both horizontal and vertical.

The next classification originates from Hollander (Hollander, 1970), who establishes three kinds of internationalisation motives. Commercial motives are mainly economic reasons, in so far as a company will enter a market to gain a competitive edge. This edge can be gained through offering a product or solution that directly leads to the acquisition of a sufficient market share, but it can also be gained by learning about innovative and fresh ways to deal with the market. Non-commercial motives contain a whole plethora of political, personal, ethical, or social responsibilities that may compel a company to enter an international market. Lastly, inadvertent internationalisation cannot truly be linked to a proper motive, as a company can find itself as a target of inadvertent internationalisation without actively contributing. Inadvertent internationalisation can take place when the environmental conditions change, and

the company must operate in a different market afterwards. One example of an inadvertent change is the change of borders last seen with the split of the Soviet Union into smaller countries. To draw a swift conclusion, inadvertent internationalisation seems to tackle a largely theoretical issue, whereas most internationalisation efforts will have direct or indirect commercial motives. There can and will be secondary motives that are non-commercial, but most companies will be bound by economic necessity to make commercial decisions.

The third classification was established by Kacker and is the first one that differentiates between sources of the internationalisation motive (Kacker, 1985, 72). Push factors are motives and reasons in a company's domestic market that lead to the search for new, international markets. They are regarded as negative, as they are often linked to the saturation of the home market and a failure of a firm to find sufficient domestic success. However, push factors can also be a positive influence such as a government tax refund on international trade taxes (Evans et al., 2008, 261). In contrast to push factors, pull factors are opportunities in international markets that lead companies to seek further international activities. Whereas push factors are portrayed negatively, pull factors are commonly depicted as positive drivers for internationalisation, as they include foreign market characteristics that promise to enable the firm to fulfil its economic international potential. Although the classification makes it seem as if each internationalisation motive is either a push or a pull motive, internationalisation decisions are influenced by a variety of motives both push and pull. For example, a company can feel the economic pressure of a highly competitive domestic market and take up the opportunity to enter a fresh international market with a growing demand, combining a push and a pull motive.

Instead of focusing on the market itself, Porter classifies internationalisation motives regarding the relative position in the value chain (Porter, 1986, 111). With the internationalizing firm itself as the focal point, possible target companies are split into upstream and downstream. Given the understanding of the value chain as a steady flow starting with the first supplier and ending with a final consumer or customer, upstream internationalisation means entering the market of a foreign input supplier, therefore shortening the external value chain and providing important benefits such as improved efficiency due to cumulative production experience or research and development (R&D) (Naldi & Shaker, 2007, 3). Logically, downstream internationalisation means entering the market of a customer, starting as lightly as

exporting or marketing abroad. This provides companies with additional market knowledge and shortens the external value chain. The precise split in upstream and downstream delivers a definitive starting perspective for the company and allows for a clear distinction in the motives of internationalisation. Nonetheless, it still offers only a very basic split and therefore a limited understanding due to the limits of the perspective itself.

Taking up the basal classification of push and pull motives established by Kacker, Williams expands on the existing body of knowledge (Williams, 1992, 271). While he also offers motives such as a limited domestic opportunities and international growth orientation, he focuses on a path analysis that extends beyond the singular perspectives of previous categorizations. Taking internationalisation motives as a basis, he combines them with obstacles and organizational characteristics. The main takeaways on the internationalisation path are that most firms are facing the obstacle of limited resources and a small size, which leads to the main motive being an appealing or innovative retail offer. The concrete chance to enter a profitable market seems to weigh heavily enough on the risk-reward ratio that the limits of size and resources are overcome. This understanding is reinforced by the next point where the main supporting organizational characteristic is ethnocentricity, which especially benefits smaller companies that can focus their administrative and overhead tasks in their domestic area of operation and only expand with smaller, strictly needed resources, e.g. retail shops. The overarching end point of the path analysis and the main motive is proactive and growth oriented. The main motive being economic motivation fits with the necessity to achieve positive commercial results already discussed in other classifications.

Taking a step back and shifting the focus back on the firm itself, Dunning proposes that the main motive for internationalisation of a firm is the seeking of a missing piece (Dunning, 2008, 63). The motives are categorized by what a company is seeking to obtain by internationalisation. The first category are natural resources seekers, companies that internationalize to establish or ease their access to the natural resources needed which cannot be found in the domestic market or only with increased cost and difficulty. The second category are market seekers. These are companies similar to those experiencing a push or pull motive described by Kacker. They seek a foreign market due to either a higher reward in the form of an additional customer base in a market that is not as competitive in terms of market share or price or are driven towards foreign expansion due to economic pressure such as shrinking domestic

margins. The third category are efficiency seekers. These companies seek to improve the efficiency of a particular part of their value chain by going abroad. The efficiency increase might be due to added know-how, reduced cost or a simplification of processes or logistics. The fourth and last category are strategic asset seekers. Firms in this category have identified key strategic assets of such high importance – tangible or intangible – that internationalisation to obtain them is necessary and the most sensible alternative.

As already depicted above, the classification of Welch and Luostarinen of internationalisation as the process of increasing involvement in international operations will be followed (Welch & Luostarinen, 1988a, 37). Foreign direct investments (FDI), meaning investments from a firm into a foreign company or project with the aim of gaining an ownership stake (Dunning & Pitelis, 2008, 168) can easily be subsumed under the given definition. Whilst FDIs, their antecedents and motivations have been a mainstay of internationalisation research for decades (Denisia, 2010; X. Li et al., 2018), they are only briefly touched upon in the context of the eclectic paradigm of internationalisation. In this theory, also known as the OLI-framework, Dunning puts forward the notion that companies will avoid any transactions such as FDIs if the alternative solution of solving the issues internally comes at a lower price (Dunning, 1979, 273). Starting with this basic assumption, the author further postulates three conditions that must be met for a firm to engage in FDIs, expanding on the available partial explanations of internationalisation and forming a broader view by drawing on concepts such as industrial organisation theory (Caves, 1974), location theory (Horst, 1972b) and product cycle theory (Vernon, 1979). This expansion on transaction cost theory incorporating a plethora of different influences and factors makes it superior to the basic transaction cost approach, even when that approach is paired with nominally unrelated theories (Agarwal & Ramaswami, 1992; Brouthers et al., 1996; Brouthers et al., 1999; Dunning & Kundu, 1995; Tatoglu & Glaister, 1998; Tse et al., 1997). The three conditions are ownership, location, and internationalisation advantages. Ownership advantages are mostly intangible assets which are exclusive or specific to the owner, such as trademarks, patents or the superior availability and use of internally available skills and knowledge that allow a firm to exploit international operations more effectively. Firms have a higher incentive to exploit this advantage the further the advantages outweigh any disadvantages of FDIs. Location advantages are by their name characteristics linked to the specific country relevant to the FDI decision. The advantages of the target

country need to meet a certain threshold of size and ease of utilization to make international investments profitable enough in comparison to serving international markets solely by export. Advantages include financial advantages such as product and labour prices or lower tax rates, institutional advantages such as political stability and a climate suited to investment, and structural advantages such as a proper infrastructure to ease transport and communication. However, advantages can also include a small psychological distance in terms of language, culture, or business customs. Originally, country-specific characteristics and advantages have been used to explain international trade through comparative advantages stemming from the immobility of the factors of production. Nonetheless, technological advancements have led to the reliable argument that some advantages of a firm are not tied to the location, but rather transferable across national boundaries. This leads to multi-national corporations that can freely decide which countries to choose for FDIs. This point also ties in with the ownership advantages, supplementing the theory that a greater internationalisation and multinationality in the ownership structure and operations of a firm will have its roots in ownership advantages that are not tied to a location.

The last condition are internationalisation advantages. For these, Dunning postulates that it must be more beneficial for the enterprise to internalize its advantages through an extension of its international activities than to externalize them by giving the advantages to an independent firm operating in the foreign market by licensing or other contracts. The firm must therefore be able to use their advantages in an international context more easily or with a bigger upside than international partners or competition might. A good example of an internationalisation advantage are market-product combinations, where a product that is very know-how intensive to develop and skill intensive to produce needs to be sold to a new market. The company will likely be able to protect intangible assets more easily, be better prepared to make sales pitches that are appropriate to the complexity of the product without the need for international know-how transfer and be able control the speed, scope and intensity of market penetration. OLI cannot only work as a descriptive model projecting entry mode selection, but can also be seen as a normative model, giving firms a way to decide on whether to use FDIs or not (Brouthers et al., 1999, 839).

To quickly summarise, the internationalisation of production capacities is linked to ownership, locational and internationalisation advantages, where a bigger advantage will increase

the temptation for firms to seize them. The OLI-framework has, since its inception over 50 years ago, become a mainstay in internationalisation theory and is a reliable tool to describe and project the results of foreign direct investments. As Dunning's work is heavily geared towards the internationalisation decision in question being foreign investment, which is needed to make proper use of the advantages discussed, this thesis will limit the discussion and interaction with the current academic standpoint on the eclectic theory to shift the focus more towards holistic perspectives and especially internationalisation decisions not burdened with such a high entry barrier in terms of capital needed, starting with simple export decisions.

Having described a variety of options to classify internationalisation motives and expanded to the factors necessary to seek out foreign direct investment, in the next step, the thesis will follow Cuervo-Cazzura et al. and try to tie these together using a theoretical underpinning based on behavioural economics (Cuervo-Cazurra et al., 2015). In contrast to earlier classifications of motives, which mostly tried to explain the classifications ad-hoc, the author focuses on behavioural economics and puts the manager in charge of the decision. This perspective acknowledges the limitations of managerial decisions, most importantly irrationality and risk-aversion in combination with asymmetric and imperfect information (for more information regarding this theory, consult Altman, 2015; Diamond & Vartiainen, 2012). Managers therefore make decisions that are best suited to satisfy expectations rather than necessarily maximise a firm's profit. With managers being the main economic actors and internationalisation a key strategic decision, the economic expectations of managers and their continual learning about a company's internationalisation successes and failures lead to a constantly updating cycle of learning and therefore expand and change their motives. Building on the combination of economic necessity and psychological influences on the manager, expectations can also be split along these lines. Economically, the separation goes between the exploitation of existing resources and new resources. Psychology-driven influences lead to the separation between searching for something good and avoiding something bad (Tversky & Kahneman, 1991, 1054). The interaction of these two lines of separation creates a total of four categories of internationalisation motives, as shown in the Table below:

Table 2 - A behavioural economics classification of internationalisation motives

Economic actions / psychological actions	Obtaining better host country conditions	Avoiding negative home country conditions
Exploitation of existing resources	*(1) Sell more*	*(2) Buy better*
Exploration of new resources	*(3) Upgrade*	*(4) Escape*

Source: Cuervo-Cazurra et al., 2015, 26.

The exploitation of existing resources while simultaneously obtaining better host country conditions (1) leads to a manager taking the operations of a firm abroad in an attempt to access a larger customer base and new markets and therefore increase revenues. Companies aim to use the same competitive advantages that benefited them in their domestic market by profiting further from economies of scale. International sales are added on top of already existing domestic sales.

The exploitation of existing resources and the avoidance of negative home country conditions make managers aim to buy better (2). In this case, the managerial decision will be driven by the need to avoid comparative disadvantages the firm faces in its home country. Knowledge and the ability to manage resources will be transferred to the host country, where host country resources are meant to be properly integrated with company processes to create a new comparative advantage. In this case, domestic sales and operations might be reduced.

The next internationalisation motive combines the search for better host country conditions with the exploration of new resources (3). Managers seeking to upgrade aim to explore new resources that can help improve the competitiveness of the firm. They do so by expanding towards new markets and new firms in these markets to improve existing operations. The focus is on the upgrade of the domestic markets by advantages found abroad. A good example of this motive are acquisitions of advanced economy firms by emerging economy competitors (Luo & Tung, 2007, 496; Madhok & Keyhani, 2012, 32).

The last motive sees managers trying to avoid the negative conditions of their home country by searching for new resources (4). With this escape reaction the company tries to avoid the comparative disadvantage in the domestic market and at the same time improve efficiency by obtaining new resources and capabilities that might add up to a new competitive advantage. Furthermore, limitations of the home country can also be removed from the

company (Cuervo-Cazurra & Ramamurti, 2014, 95). Similar to (2), a manager will likely also decide to reduce domestic operations.

Table 3 - Classifications of internationalisation motives

Author	Classification
Hymer (1960)	Vertical and horizontal internationalisation motives
Hollander (1970)	Commercial motives Non-commercial motives Inadvertent internationalisation
Kacker (1985)	Push factors Pull factors
Porter (1986)	Upstream motives Downstream motives
Williams (1992)	Internationalisation path focus
Dunning (2008)	Natural resource seeking Foreign market seeking Efficiency Seekers Strategic asset seekers
Cuervo-Cazzura (2015)	Behavioural economics based on managerial decision-making process: - Economic actions (exploitation of existing resources, exploration of new resources) - Psychological actions (Obtaining better host country conditions, avoiding negative home country conditions)

Source: The author's own elaboration.

To conclude the part concerning internationalisation motives, one can say that even though the literature has expanded considerably on the Hymer classification from 1960, a complete framework that can include the previously mentioned theories has only recently been established. The classification of Cuervo-Cazurra is also the first theory that rightfully puts the manager as the main decision maker of the company into the theoretical focus. However, all classifications agree on the economic need to find international markets and expand operations,

simply taking on different perspectives and clustering the factors contributing to the decision differently. The different classifications discussed above are also summarized in the Table 3.

2.3. Forms of internationalisation

Companies choosing to enter new and foreign markets can operate from a variety of options of internationalisation influenced by different determinants (Baldwin and Beiling, 2012, 484). Most market entries by companies are influenced by industry-level determinants (Alvarez and López, 2008, 705). In an industry, firms can be divided between exporters and non-exporters and the main driver influencing this division are trade costs. Higher trade costs are directly linked to lower market entry and higher market exit as they force companies to make sure that the strategic decision to enter a foreign market is supported by a proper financial and non-financial situation. They are therefore a valid indicator of a company's possible survival odds. These "foreign operation modes" are generally understood as a company's way of operating in foreign markets (Welch and Luostarinen, 1988, 37).

2.3.1. Entry mode criteria

To pick up on the definition of internationalisation, which was rather unspecific in defining the exact processes or sequences needed to increase the involvement in foreign operations, a further look regarding the meaning of mode is needed. However, instead of trying to frame a formal definition on a topic which proves hard to grasp in details, a classification of different modes with the help of a given set of criteria seems more fitting to the task (Benito et al., 2009).

To stick with Anderson and Gatignon (Anderson and Gatignon, 1986), a classification of entry modes by three categories (control, commitment, risk) can be seen as a relevant starting point. Control is defined as "the ability to influence systems, methods and decisions" (Anderson and Gatignon, 1986) and serves as a key factor for a firm to coordinate actions and carry out strategies. Control is a focus of the literature as it determines risk and return at the expense of resource commitment needed. The higher a resource commitment needed for an entry mode, the higher the level of control and the possible return. As an example, a wholly owned subsidiary offers the highest level of control and the possibility of highest returns, but also needs the largest commitment of money in the form of equity and know-how in the form of either internal employees or external consulting. Control itself is not necessarily limited to

ownership of a company. It can also extend to daily involvement in operations, influence on the decision-making process or the ability to fill key leadership positions with suitable candidates. Anderson and Gatignon further point out that entry modes can be categorized using the balance of interests concerning the actors involved as an additional factor. The more control an entry mode offers, the more the balance of interests swings in favour of the side gaining such control. Based on a categorisation of 17 modes by Anderson and Gatignon (Anderson and Gatignon 1986, 3), Hill et al. (Charles W. L. Hill et al., 1990, 120) summarise the different entry modes into three distinct categories: licensing/franchising, joint ventures, subsidiaries. Brouthers and Hennart (Brouthers and Hennart, 2007, 396) further simplify the matter by defining only two entry modes, contracts and equity, where they only differentiate between methods chosen to remunerate input providers. Taking the aforementioned classifications of control, commitment and risk as well as contracts and equity into consideration, one can subsume entry modes into the three most distinguished fundamental groups of exporting modes, contractual modes and investment modes (Horská et al., 2014. 136). A common preliminary step to prolonged international operations is e-commerce in the form of international mail ordering, where a company only acts in the foreign market in question when prompted by individual orders. Exporting modes as the next step involving a relatively low level of risk and commitment will be discussed in depth in Chapter 2.4. below.

2.3.2. Contractual modes

The second group of entry modes is connected to contracts with foreign partners and includes international licensing, franchising, subcontracting, various assembly operations as well as turnkey operations and contract manufacturing. **International licensing** means the foreign sales of rights that are covered by an intellectual property to be used for commercial purposes. Licensing offers a low-entry cost, low financial risk way of generating both a steady income and a strong marketing presence in terms of brand and logo while profiting from the local knowledge of the licensee. These advantages need to be weighted against the disadvantages, with the main issues being a relatively low income only from royalties and the lack of control over technologies, know-how, quality standards on the foreign market and loyalty of the licensee. **International franchising** describes the practice of selling the rights to conduct commercial activities as a local branch of the company. It offers the possibility of rapid international expansion in both large and distant markets at low entry cost, but requires a certain level of control and associated cost and needs appropriate franchisees with sufficient

qualifications and the ability to maintain uniform and quality standards. Furthermore, the franchisee requires the sharing of profits. The third mode is **subcontracting**, where a foreign counterpart serves as a domestic manufacturing company producing specific orders. This allows for international manufacturing operations with low capital commitment and low risk, seeking additional resources and efficiency. However, when using subcontracting services the company cannot gather any international experience and is in a rather weak position in any negotiations with the subcontractor that holds the local experience that is specific to the product. **Assembly operations** are a more specific form of cooperation where the domestic firm is contracted to specifically perform assembly in accordance with the instructions. This mode can be divided into part fit-up and shimming, where a semi product is sent abroad to undergo further assembly steps and is returned to the country of origin afterwards; drilling operations and fastener installations, in which drilling and fastening as specific assembly steps are outsourced; and repair operations, where the goods sent abroad are specifically intended to be repaired before being returned to the country of origin (Horská et al., 2014, 139-141). **Management contracting** is a knowledge-based service of management, where a foreign firm acquires only operational management services for the duration of the single contract. The main advantage of this low capital commitment, low risk market entry is the transfer of knowledge from domestic managers to the company. The main disadvantage is relatively low profitability. Finally, **turnkey operations** describe the complete construction of any industrial plant abroad, which gives the company a chance of a permanent presence in the foreign market with the potential ability to generate higher profits. The downside is a high financial risk due to the high initial investment required in combination with operational difficulties connected to the construction of complex buildings such as industrial plants (Horská et al., 2014, 140).

2.3.3. Investment modes

The third kind of entry modes are investment modes, which are characterised by the physical and constant presence of the international business in the foreign market which is created by the setting up of foreign branches or subsidiaries. The main form of international investment are FDIs which have been defined above and which can be created in two ways – with brownfield and greenfield investment (Bayar, 2017, 20). Brownfield investment means the merger or acquisition of existing local firms, which gives the firm swift access to production or service capacities in the foreign market, but which also limits the firm to the existing facilities in the short term. In the longer term, further investment to align the existing facilities to the

needs of the firm might be needed. Greenfield investing on the contrary means investing into a project from the start, giving the company opportunities to influence the process as needed, but leading to a slower access to international markets. From an organizational perspective, the investment modes can be divided into a foreign branch and a subsidiary with the subsidiary being either a joint venture or fully owned by the internationalising company. A **foreign branch** means the creation of an organizational unit of the parent company in a foreign market, where the branch remains an organizational and legal part of the parent company. The main advantage of a branch is the full control with lower entry cost and risk in comparison to a subsidiary, but the scope of the branch is limited and often considered a preliminary step before being transformed into a full subsidiary. In contrast to a foreign branch, a **subsidiary** is a separate legal entity operating solely under the laws of the host country. An early classification of subsidiaries was established by White and Poynter (White & Poynter, 1984, 92) and is still considered relevant today (e.g. Wang et al., 2014, 113). Following that classification, five fundamental activities for subsidiaries are distinguished which can be summarized as follows:

Miniature replicate: A subsidiary that replicates most or all of the activities of the parent company.

Marketing satellite: A subsidiary that sells products in the local market on behalf of the parent company, which centrally produces the goods.

Rationalized manufacturer: A subsidiary that specializes in producing specific parts or products for international markets.

Product specialist: A subsidiary that focuses on manufacturing a limited range of products for the global market, demonstrating production specialization.

Strategic independent: A subsidiary that operates independently from the parent company and has strategic autonomy in its operations.

The last differentiation mentioned above is the distinction between a joint venture subsidiary and a wholly owned subsidiary (Daszkiewicz & Wach, 2012, 103). A **joint venture subsidiary** is defined by the joint control of the company by the parent company and a foreign partner, which can lead to synergy effects not only from a combination of knowledge between the exporter and a local partner, but also increases the local acceptance of such a company. Furthermore, the high entry cost and high risk are shared between the partners. The downside is a potential conflict of interests between the two partners, which can severely limit the subsidiary's ability to conduct business. A **wholly owned subsidiary** is fully controlled and owned

by the parent company, which guarantees full and centralized control and potentially the highest profitability with no limits to the subsidiary's operations. On the other hand, the parent company is solely responsible to bear the financial and operational risk of the subsidiary.

The different types of entry modes are summed up in the following Graphic.

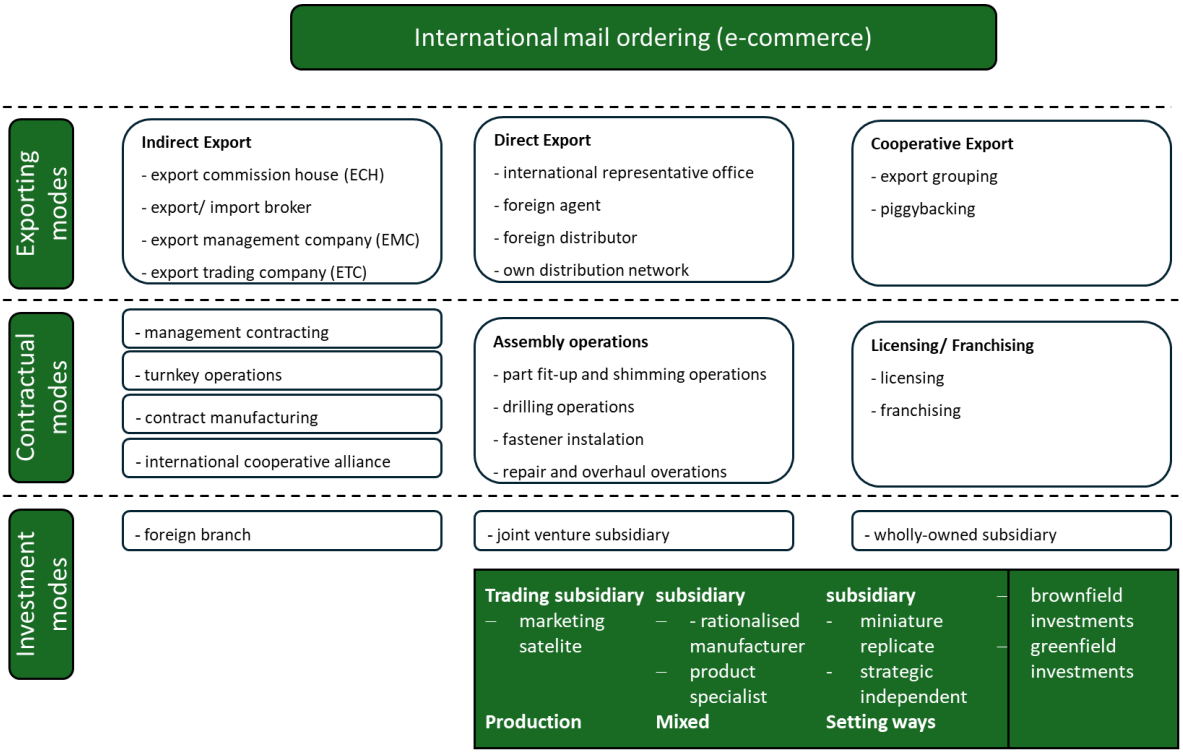


Figure 3 - Classification of internationalisation modes

Source: based on (Horská et al., 2014, 137).

Taking all the modes mentioned above into consideration, following Benito, Pedersen and Welch (Benito et al., 2009), one has to point out that all these categorizations stem from a fixed entry point which by definition blocks out the evolution of international activities over time. Furthermore, the depiction of single-entry modes as strict alternatives is insofar not realistic as mixed modes of internationalisation in a single market could exist e.g. as a result of an acquisition or a merger. Companies can and will choose a mix of different operation types available to them which best fit their current needs (Benito et al., 2011, 805). The general tempo of internationalisation and the transformative power are especially relevant when focusing on emerging and transition economies (Dabic and Lamotte 2017, 155). Lastly, the process of entering a foreign market is not necessarily as closely linked to singular modes or linear stages of progression as a categorisation by commitment and control could lead one to

believe. Even taking such criticism into consideration, the categorization still offers a valuable insight into the understanding of internationalisation of companies in general.

2.4. Export as an internationalisation method

Despite foreign entry modes being defined as a company's way to operate in a foreign market, all entry modes and specifications discussed so far share the common denominator of commitment. They all need a company to commit a certain minimum of resources in order to get the level of control needed for the intended operational and organizational penetration of the market. International markets, however, offer their potential not only to firms that are ready for such a commitment. The logical first step then is one that mandates only slight operational changes. Therefore, taking a step back one needs to address export as a way to most easily enter a foreign market first. Export has been defined in the literature as the international, marketing-related decisions and activities of internationally active firms (Cavusgil and Nevin, 1981, 115). The key difference to the defined modes is the form of engagement, as the firm does not control the foreign operation, but is only the seller in an international transaction (Shoham 1997, 60). Following either of these definitions, a broad spectrum of internationally involved firms can be included, starting from minimal involvement in the early stages of the internationalisation process and extending to established global competitors in a market. Exporting can also be classified as the first possible step in an internationalisation process, as it poses minimal business risks, needing the lowest resource commitment possible whilst maintaining a high flexibility in actions. Export defined as such also fits the interpretation of internationalisation presented in the beginning of the Chapter.

2.4.1. Characteristics of export as an international entry mode

However, such a basic definition does not sufficiently reflect the specific characteristics of export as an international entry mode, which will be discussed as follows. Firstly, the motivation for export lies in the opportunity and ability to generate profits in the international markets, but the form of export activities does not necessarily stay constant (Horská et al., 2014, 137). Export activities can take the form as indirect export, direct export and more specific forms of export with a similar effect being achieved by international mail ordering as a form of e-commerce, where the main difference is that a company does only act on orders it receives, not as a proactive player in the foreign market. Indirect export modes are characterised by no direct interaction between the firm and its international customers, which makes the market transaction taking place domestic in nature (Horská et al., 2014, 138). The advantages

of indirect export are a low financial risk directly linked to the low entry costs, as the entry difficulties are placed completely on the domestic intermediary. This reliance on the intermediary also entails low staffing requirements and a lack of marketing costs, making it the least complicated mode of internationalisation and allowing for a company to relatively simply extend their sales markets. On the downside, the full dependence on the intermediary poses a direct risk and leads to a variety of indirect risks and issues. The first issue is that the company's lack of knowledge of international markets and the inability to gain such international experience provides the intermediary with a higher power of negotiation, allowing them to dictate the pricing to a higher extent, cutting into the margins of the providing company and leading to lower profitability. The second issue is that a high reliance on the intermediary with the only advantage that the company itself can offer being the product itself allows the intermediary to search for an alternative solution easily. This solution can be a better provider or a market entry with production in the domestic country by the intermediary themselves.

2.4.2. Indirect export

Hollensen (Hollensen, 2007, 313) and Martin et al. (Martin et al., 2007, 1402) identify four different forms of intermediaries that can handle this contact. The first one (1) is an export commission house, which is representing foreign buyers in the exporter's home country. The services of the export commission house include the identification of potential suppliers and the negotiation of prices and contract details. Secondly (2), an export or import broker does not handle the product itself, but merely functions as a specialist for the communication and contractual issues involved, bringing buyer and seller together. The next (3) option is an export management company, which specializes in the handling of export activities for a particular type of product, a particular region or customer base. The last option (4) is an export trading company, which is an intermediary similar to an export management company. The difference is that an export trading company usually claims the product before exporting.

Direct exporting in contrast to indirect exporting is characterized by a direct contact between the company and customers in the foreign market, with the company taking on intermediary duties themselves (Daszkiewicz & Wach, 2012, 102). The most common direct export methods for a company that will be shortly touched upon are a representative office of their own, a foreign agent, a foreign distributor and its own distribution network. The representative office can act as the salesman for foreign contracts, negotiating terms of delivery and

conducting market research and can be designed as either a domestic employee of the company delegated into the foreign market, a local employee of the company directly employed in the foreign market or a local business partner that solely represents the interests of its singular principal. The advantage of a representative office is that it offers a physical presence on the foreign market that can establish a direct contact with foreign customers. Such an office is also permanently able to react to local signals of the foreign market. The main disadvantage of a representative office is the high cost of maintaining such an office, as a physical presence is costly to uphold. Furthermore, any local trade barriers can serve as a potential hindrance. A foreign agent serving as a foreign intermediary – the second form of direct export – acts on behalf and in the name of the exporter and is the form of direct export with the lowest level of cost and financial risk. In contrast to a domestic intermediary in indirect export, a foreign agent acts in the name of the company and thereby gives the company a larger international profile. The main disadvantage of a foreign agent is the high dependence on the agent and the inability of the firm to gain international experience. The third form of direct export is a foreign distributor serving as a foreign intermediary. The foreign distributor only handles logistics and distribution and acts on their own accord and in their own interest, leaving the international sales in the hands of the company itself. The main advantage is the lack of staffing and marketing cost, as these parts are covered by the distributor. Furthermore, an existing distribution network of the foreign distributor can be used. The main disadvantage is the natural trade-off for the low marketing and staffing cost as transport cost is high. The last form of direct export discussed is a foreign distribution network of their own, where a company combines exporting with foreign direct investment in the form of a commercial or trading subsidiary. Such a network offers a strong presence in foreign markets and allows for the most direct form of customer interaction. It also gives the company full control over the sales process and a relatively high profitability once established, as all costs accrued are internal by nature. On the flipside, such a network is very expensive and time-consuming to establish and needs sufficient international experience to work efficiently.

After indirect and direct export have been discussed, a final remark needs to be offered on cooperative forms of export. Such an export mode is especially relevant for SMEs as it takes less strain on their financial and human resources (Horská et al., 2014, 140). The two main cooperative forms are export consortia and piggybacking. Export consortia are voluntary

alliances formed by companies to jointly promote their products and services in foreign markets. They help SMEs overcome financial barriers to internationalisation by sharing export costs. Piggybacking is a collaboration between a small entrepreneur (rider) and a larger company (carrier). The carrier provides access to its foreign distribution network, charging a commission. It benefits both parties, but risks include reputation damage and loss of distribution control for the rider. It is recommended for micro and small businesses lacking resources for independent foreign investments.

2.5. Internationalisation mode choice and change

As previously elaborated, a defining factor of internationalisation and its modern contribution to an even faster and constantly changing economic landscape is the ability of firms to quickly enter a market, change the operational mode or exit it again. After an understanding of the nature of internationalisation and export has already been established, a closer look needs to be taken regarding the way and reason why companies change their mode of operation in a market. While a variety of economic theories such as the theory of comparative advantage, factor endowment or demand similarity (Leonidou and Katsikeas, 1996) can add valuable insight into the broad issue of international trade, they can hardly explain the way singular entities operate in an international context. In general, foreign market entry has to be understood as the whole process in which companies establish a market position in a foreign market over a prolonged period of time, not just the entry decision and operational mode itself (Lee et al., 2012, 29). To choose the Uppsala-model developed by Johanson and Vahlne in 1977 (Johanson and Vahlne, 1977) as a reference point, the process of entering a foreign market includes the gradually increasing international involvement. These small steps are especially influenced by existing information and experience. In such a dynamic model, each step in the process is influenced by earlier steps and will in turn influence future steps. Market knowledge and commitment of resources affect further commitment decisions and the operational implementation of current activities, whilst these in turn affect the level of knowledge and commitment in a firm (Aharoni, 1966, 13). As such a response to a change in underlying factors is not fixed to a higher involvement, it might also include divestments or sales of foreign plants, meaning that internationalisation activities can also include de-investment (Calof and Beamish, 1995, 116). If one were to take the perspective of progressive internationalisation as a variant of mode change, market entry and market exits would merely be the first and last mode changes a company can make. Modes of internationalisation, however, pose two

distinct and important questions in themselves: How do companies change modes, and why? It is worth noting that the internalization and externalization processes covered in this discussion only lead to inter-mode switches, mode changes that imply a change in the way a company is organized. In contrast to inter-mode switches, companies can elect to perform intra-mode switches, where the operational mode is maintained, but a local operator is changed.(Welch et al., 2007, 361)

The first academic consensus on mode changes was dominated by a stages approach that tried to analyse mode changes by employing a pattern (Johanson & Wiedersheim-Paul, 1975, 307). This pattern, also called the "establishment chain", uses four stages of internationalisation, which offer an increasing degree of international involvement (Cavusgil & Nevin, 1981, 114):

1. No regular export activities
2. Export via independent representatives
3. Sales subsidiary
4. Production or manufacturing.

Apart from a few characteristics relating to the firm (Cavusgil, 1984, 198), the key thesis here is that internationalisation and therefore changes in operational modes only occur in incremental steps moving from one stage to an adjacent stage (Burton & Schlegelmilch, 1987, 38). These incremental steps are based on an increased commitment that is closely linked to a risk-reward ratio each company and its managers have regarding the market (Cavusgil, 1984, 198; Johanson & Vahlne, 1977, 30). As a firm learns more information about and gains more experience in a market, market operations become less uncertain and therefore less risky. The movement from one stage to the next is therefore closely linked to previous experience companies have made in the given market and environmental situation (Kedia & Chhokar, 1986, 42).

As pointed out by Calof and Beamisch (Calof & Beamish, 1995, 117), the stage approach has – while containing valuable information regarding the way management perceives the risk-reward ratio of a foreign market – two major shortcomings. The first one is that it simply does not hold up to empirical evidence of reality. Companies might internationalize along the lines suggested by the stage pattern, but can also start at a later stage or leave certain stages out of the process (Newbould et al., 1978). Evidence even suggests that stepwise

internationalisation was the exception rather than the rule (Millington & Bayliss, 1990). The second shortcoming is related to the steps the statistical review takes. Instead of examining the precise moments when companies progress from one stage to the next using a longitudinal approach, companies are grouped into stages and the firm characteristics correlating with the stages are analysed (Calof & Beamish, 1995, 118).

Taking the academic issues with the stage model into account, we can still extract two aspects. Firstly, a key aspect of internationalisation processes is that they are naturally linked with the decision-making processes in companies. Mode changes are direct consequences of company actions that are based on the decisions that in turn are made taking a myriad of assumptions and market information into consideration. Secondly, the mode change decision made by management is – similarly to most economic decisions – based on the basic assessment of the risk-reward ratio in the environment. The questions of how and why firms change their operational mode, however, is still unanswered. Regarding the question of how operational modes are changed, one should firstly take a step back and revisit the issue of international entry mode choice.

Entry mode choice is the choice where one would assume that the company has the least information and experience and therefore faces the highest uncertainty (Root, 1987, 10). An initial investment of company resources might be low but can yield a high reward (Figueira-de-Lemos et al., 2011, 144). Companies can try to reduce the uncertainty beforehand by using experienced employees or other forms of information gathering and networking and utilising information that is available. While the information gathered by operating in the market might be insufficient or too narrow from a company perspective only, a broadening of the perspective automatically reduces uncertainty (Johanson & Vahlne, 1977, 29). Furthermore, a company can grow complacent with success, making later mode change decisions more uncertain than necessary (Johanson & Vahlne, 2009, 1417).

These arguments only work to weaken the definitive argument of the entry mode choice having to be taken under the highest uncertainty, but they also support the fact that entry mode choices lead to the same challenges and a comparable general decision for the company. Therefore, research on entry mode choices – while not being identical to subsequent mode change research – can lead to relevant discoveries and a valuable broadened perspective.

As was already established, an international market entry is always linked to the first mode choice a firm must make. Following the simplifying classification of international entry mode into the two basic categories of contract and equity (Brouthers & Hennart, 2007, 396), Dikova and Brouthers (Dikova & Brouthers, 2016) offer a comprehensive overview over the international establishment mode research and literature. In their literature review, they include research dealing with firms that either try to create a foreign market subsidiary by using a greenfield approach of founding a start-up venture or enter the foreign market of their choice by the acquisition of a foreign subsidiary, therefore limiting the results shown to equity choices. They show a total of fifteen theoretical frameworks and split the examined variables used in the research into the following four categories:

1. Firm-level variables
2. Country-level variables
3. Industry-level variables
4. Subsidiary-level variables

It is also worth noting that the existing research states that singular mode choices solely driven by a pre-given number of influences might oversimplify a complex decision-making process. This understanding led to a variety of combinations between different variables such as the interaction between technological and institutional host country conditions as drivers of institutional pressure faced by a multinational firm. Divoka and Brouthers also widen the academic perspective somewhat and expand the understanding by also including an overview of the performance of international establishment modes. The indication from the research included is that a universally best establishment mode seems to exist. This issue however, is separately tackled by Brouthers (Brouthers, 2013, 15) by raising the endogeneity problem (for a more detailed approach regarding the issue of endogeneity in mode choice areas consider Shaver, 1998) and finding that subsidiary performance and therefore establishment mode performance is contingent on its alignment with the research predictions. Firms that use the mode suggested by theory had a greater performance than firms that did not align their mode to theory.

It can therefore be stated that a theoretical optimal establishment mode does not exist in the way that was previously assumed. This distinction is important insofar as there cannot be an end point of mode choice that is always optimal and that all companies perpetually work

towards. However, we can conclude that even the first mode choices are influenced by a large variety of interdependent factors that need to be properly incorporated and included in a company's decision. Decision-making processes, however, must be analysed keeping in mind the specific target a firm aims for and environment a firm operates in.

If you go further with challenging basic mode change presumptions that were seen as facts, the assumption that a mode choice is a result of strategic decisions made by a company and therefore influenced by actions that induced the necessary change must be revisited, as well. The underlying storyline of companies being in rather complete control of their change processes instead of merely trying to stay afloat in an ever-changing net of internal and external factors warrants a critical look (MacKay & Chia, 2013, 211). The common narrative of economic success, where positive outcomes are intertwined with decisive interventions of key individuals in charge, places the focus on agency (Burgelman & Grove, 2007, 966). This focus also leads to the logical conclusion that economic failure is a direct result of a lack of correct actions taken by slow and lumbering managers (Wiesenfeld et al., 2008). The direct connection of a decision to an identifiable and quantifiable outcome, however, only works ex post and creates what e.g. Chia (Chia, 1996, 70) and Rorty (Rorty, 2009, 301) have called a *representationalist epistemology* (Whitehead, 1985, 61-65). The result is a significant oversimplification of the messy, interdependent, and complex situations organisations must face to a neatly arrangeable series of key decisions, actions, and events. These decisions, actions, and events contribute to the analytical predisposition of methodical individualism, where outcomes are more likely to be linked to deliberate intentions and consequential conscious choices by social entities disregarding disparate and impersonal influences (Chia & Holt, 2009, 69; MacKay & Chia, 2013, 211).

MacKay and Chia analyse the long-term strategic decisions of an American automotive company and show that an unowned process perspective, meaning a perspective where chance, nonlinearity and unintended consequences of actions can lead to unforeseen process results, can explain process results that do not fit into the already depicted clear causal chain of decision and outcome. They offer a conceptualization of change processes that is linked to the two variables of choice and environment. Both variables are split into two categories. The "owned" category includes factors that can be influenced by an entity, either through deliberate action and sequential goal seeking in the case of choices or through the creation of a

predetermined structure in the case of the environment. The “unowned” category includes factors that are not within the control of the entity, which either is in environmental flux or simply copes with a given situation. This concept – as depicted below in Figure 4 – therefore divides strategic changes into four categories.

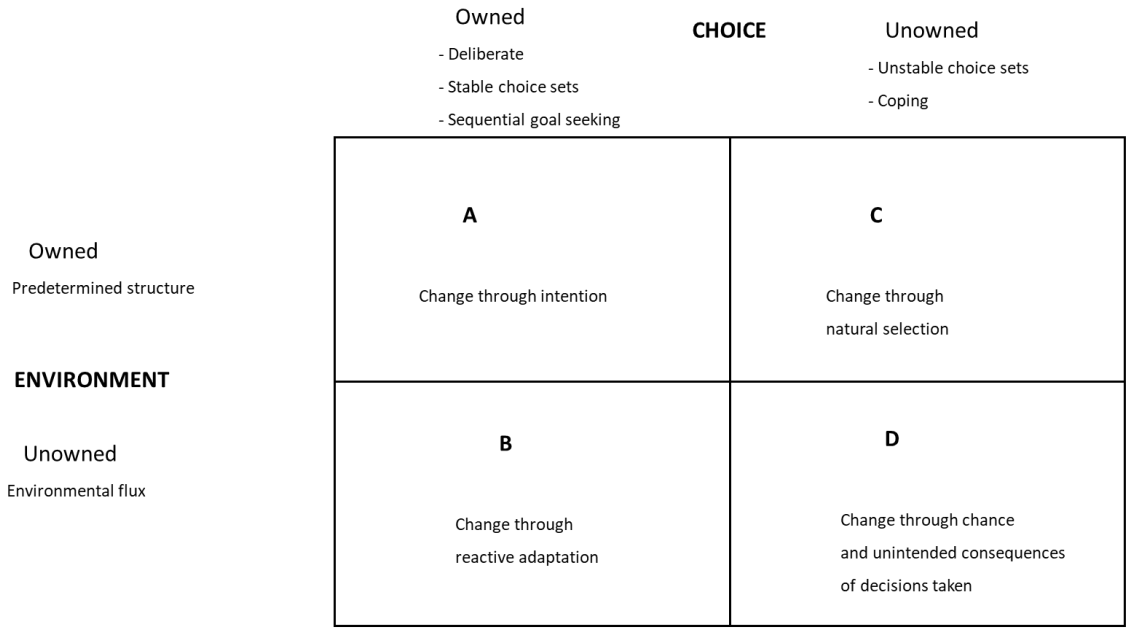


Figure 4 - Division of strategic changes

Source: based on MacKay & Chia, 2013, 225.

In category A, change is a stable and orderly process likely owned by a firm. In category B, the change still comes from an owned set of choices in a changing environment, meaning managers will still be able to reactively control the change. In category C, choices are limited and determined by environmental selection, while in quadrant D, neither environment nor choices are in the hands of the firm, making strategic decisions highly superfluous and driven by momentary actionism.

If you go back and correlate these results to mode change as a form and antecedent of strategic changes, the conclusions to be drawn are twofold. Firstly, the decision of mode change does not necessarily lead to a direct and quantifiable result. Operations in a highly complex field such as the global market are not as completely in the hands of the firm as previously assumed. A variety of changing factors completely out of the control of the firm can lead to unintended and unforeseeable results. Secondly, the need for decisions on mode change is still there, the decision-making power of the company remains a key factor. It is,

however, clear that a) these decisions do not have the same weight and effects as previously thought, and b) companies might be pushed to decisions simply to cope with a changing environment.

Offering a small conclusion, one might be inclined to point out that decision-makers in a company will have to make strategic decisions on a subjective optimal international mode of operation for the given situation, even though their knowledge of and control over the internal and external factors will nearly always be either incomplete or biased.

After the academic perspective is somewhat sharpened, a decisive answer to the questions of why and how firms change their international operation modes is still to be found. The necessary focus, however, is to be put on the reasons and processes that lead to a mode change rather than the actual operative steps a firm must take. To quickly reiterate a previously mentioned key finding, a mode change decision in a company will always be a matter of risk and reward. The decision-making personnel in a firm will necessarily try to improve the economic situation of the firm. The main point now is to find common factors that lead to and drive these decisions.

Pedersen, Petersen and Benito (Pedersen et al., 2002, 340) point out that a once optimal mode of operation does not necessarily stay optimal. They focus their analysis on factors inducing and impeding the change, making a distinction between internal and external factors while assuming a perfect information flow to decision makers. Factors inducing mode change have already been examined by Calof and Beamish (Calof & Beamish, 1995), who identified corrective and adaptive stimuli. Corrective stimuli include the underestimation of exporting costs leading to switch to a mode with a higher level of control for the resources committed, a misjudgement of local demand leading to a higher international commitment to generate necessary sales, and an incompatibility with the company's growth objectives, which leads to the switch to a mode more aligned with the future direction of the company. Adaptive stimuli consist of organizational, relational, and external changes. Organizational changes are changes based on internal factors of the company such as changes in management or market commitment, but also improvements of internal intangible resources such as the acquisition of new local market knowledge. Relational changes are changes in the network the company operates in in an international context, which leads to either extremely good or extremely bad

performance. Last but not least, external changes are changes to the environment the company operates in, such as a new trade area regime.

Pedersen et al. find two additional factors that induce a mode change. The first one is diminishing satisfaction with the performance a foreign intermediary can deliver. This low return in relation to the high level of resource commitment needed leads to a re-evaluation of the relationship. Dissatisfaction in such channel relationships as a fundamental reason to focus on the creation of an in-house sales force has also been identified as a vital reason for change in various studies (Anderson & Narus, 1990, 56; Shamdasani & Sheth, 1995, 17). The second reason, the accumulation of market knowledge by the exporter, can also be seen as facilitating the mode change, as decision makers in the export company generally tend to perceive the market risk as too high and the market environment as too complex, sticking to low-risk, low commitment entry modes such as a foreign intermediary. International operations even through an intermediary in the given market accumulate market knowledge due to the flow of knowledge, which allows for more realistic decisions to be made. Risk and complexity can be more accurately perceived and international modes of operations generally associated with more commitment and therefore more risk become a realistic alternative.

Pedersen et al. also identify a variety of factors that impede mode change. To better categorize and explain them, they take up the concept of perceived switching costs firstly introduced by Weiss and Anderson (Weiss & Anderson, 1992, 104). This concept refers to difficulties or costs that would occur were a company to change their mode of operation and can be split into two categories. The first one are take-down costs, meaning all costs incurred and revenue lost by the dismantling of an existing foreign operation. Examples could be severance pay or a lost customer due to their loyalty to a distributor rather than to a manufacturer. Set-up costs on the other hand include all costs and revenue losses that come with the establishing of a new foreign operation. Examples are recruiting and training expenses for employees for a foreign subsidiary or losses in efficiency due to learning effects in a new market environment. With the use of perceived switching costs, four factors impeding mode change have been identified and empirically tested. The first one are contractual restrictions, as some contracts might include clauses that either make termination of existing relationships, e.g. with a distributor, difficult or impossible or increase the costs due to severance pay or agreed fines. The second influence is the loss of local sales revenue, where a take-down cost could be

customers being loyal to local networks instead of the exporter itself. The higher the loyalty of local customers, the easier the switch to other substitute products will be for the distributor, making the switching cost higher and the switch itself more unlikely. The third impeding factor is the cost of training or acquiring new personnel. Whether it is the take-over of experienced employees from a terminated intermediary, if even possible, or the training of new employees, both the direct costs allocated for training and wages and the lost revenue due to inexperienced staff lead to an increase in switching costs. The last factor hindering mode change are perceived learning costs due to a lack of international experience. Novices in international operations will suffer various initial failures and a higher probability to miss turnover, increasing switching costs.

To round off the topic of mode choice and to further challenge the assumption of gradual and local increasement of international operations posted by the Uppsala model, a closer look needs to be taken regarding born globals and international new ventures (INV). Øyna and Alon (Øyna & Alon, 2018) offer a comprehensive overview over concepts categorizing companies that are characterized by early and fast internationalisation. Born globals were first defined as a term for companies that internationalize from inception by Rennie in 1993 when presenting findings on Australian companies (Rennie, 1993). This definition gets expanded on by Knight and Cavusgil, who see the seeking of a substantial portion of revenue from the sales in international markets as the key factor (Knight & Cavusgil, 2004, 124). Slightly different to born globals, the concept of international new ventures does not limit the aspect of internationalisation to the revenue created from international sales, but also includes the derivation of competitive advantages from the use of resources and sales in multiple countries (Phillips McDougall et al., 1994, 470). The common denominator is the sales output, which means that while born globals only include companies that internationalize outwards, INVs also extend to companies that only source internationally. Current literature indicates that born global firms which have more of an entrepreneurial mindset regarding internationalisation Rialp et al., 2005, 165) differ from firms that internationalize more conventionally in their business mode. INVs and born globals tend to sell more niche products and services to an internationally diverse customer base and benefit from low overhead costs and low-cost information and delivery methods. This method of operation is supported by three entrepreneurial capabilities, i.e. international opportunity identification, institutional bridging and the ability to bridge

cultural differences to ensure efficient collaboration (Paul & Rosado-Serrano, 2019, 841). Early and fast internationalisation benefits from technology- and knowledge-heavy industries that allow them to use previously established networks and connections by leaning on new information technology to foster trust and to fulfil market demands. They can act early, establish themselves as a first mover and survive through fast organizational learning and innovation.

The current literature on born globals still has some issues, e.g. the lack of a widely accepted definition and the uncertainty regarding number of markets, percentage of international sales and speed of international growth needed to consider a firm a born global (Paul & Rosado-Serrano, 2019, 847). With these limitations in mind, born globals still offer a valid challenge to the Uppsala model and deliver an explanation for the rapid internationalisation of small companies.

2.6. De-Internationalisation

2.6.1. Overview

Having already established that internationalisation processes do not follow a linear progression along given stages, one must still point out that the focus in internationalisation literature has been put on the successful journey companies take to become fully international (Benito & Welch, 1997). Research in the opposite direction is still relatively young, becoming a new phenomenon as part of the dynamics of firm internationalisation (Welch & Welch, 2009). This dynamic has been sped up by big international shocks such as the COVID-19 pandemic, which saw a significant drop in international trade flows according to the OECD (OECD, 2022). De-internationalisation as a basic concept is included both by Welch and Luostarinen (Welch & Luostarinen, 1988a, 37), who point out that the internationalisation process of a firm does not inevitably continue in the same direction, and Calof and Beamish (Calof & Beamish, 1995, 116), who simply describe internationalisation as adapting to international environments, not taking any special direction out of the context. De-internationalisation combines multiple different actions sharing similar conceptual frameworks, such as export reduction, foreign divestment, termination and backshoring (Turcan, 2006, 129).

Before we delve further into the theoretical underpinnings of these concepts, their different motivations, actions and outcomes, de-internationalisation needs to quickly be differentiated from a simple halt in internationalisation processes and initiatives (Tang et al., 2021, 267). De-internationalisation has far-reaching implications for firms that rely on their

international part of the business to add sufficient value, as it actively reduces the substance that can be used for this value creation. In contrast to that, a halting of internationalisation processes only seeks to freeze the international activities on a level the firm is comfortable with and confident of regarding continued operations and the contribution of these operations to the value-creation efforts of the firm. As stated before, the term "de-internationalisation" encompasses a variety of different aspects that all share the same underlying principle, a reduced degree of internationalisation. De-internationalisation can therefore be defined as the sum of all those activities that actively decrease the number of international operations undertaken by a firm, including, but not limited to, the complete stop of international operations, the switching of the international operation modes to a mode where less resources are needed and the reduction of invested resources in the international activities in an already existing mode of internationalisation. This conceptualization differs from the stop of international activities (Meschi & Métais, 2015, 411), changes in entrepreneurial activities (Turcan, 2006, 129), complete divestments of foreign subsidiaries (Blake & Moschieri, 2017, 748) to a lower degree of internationalisation due to changes in the business model (Sort & Turcan, 2019, 40).

However, like internationalisation research, the current academic streams on this topic can be split into four major themes: concepts, antecedents, consequences, and moderators.

Tang et al. (Tang et al., 2021) have conducted an extensive literature review, streamlining and synthesizing 218 articles. Their first point of interest is the split of de-internationalisation into three perspectives regarding their role in the internationalisation process itself. If the de-internationalisation step serves as an end, it can be observed as a firm's exit from only a foreign market (Chung et al., 2008, 291), the complete withdrawal from a host country even as a production location (Fisch & Zschoche, 2012, 807), the stand-alone survival of a foreign subsidiary (Peng & Beamish, 2014, 448) or the closure of a foreign operation (Mata & Portugal, 2015, 677). If the step is seen as a turning point in the internationalisation process, an opportunity to refocus or to adjust the business model, it will more likely be related to the shifting of production locations such as backshoring (Dachs et al., 2019, 2) or reshoring (Albertoni et al., 2017, 418) or the imposing of limits and reductions on the level of international market activities either by reducing the firm's own activities, e.g. by de-exporting (Turcan, 2006, 130), or by reducing the interaction with international partners by de-licensing or de-franchising

(Sort & Turcan, 2019, 40). The last perspective taken is with regard to international cashflows and foreign divestment, where firms can de-internationalize by divesting directly, e.g. restructuring their international investment portfolio to be smaller or refocused on different countries (Calof & Beamish, 1995, 116), the complete sell-off (Blake & Moschieri, 2017, 740) or individual dissolution of foreign operations (Mohr et al., 2016, 412). Regardless of the role of internationalisation, a few logical distinctions and limitations have been pointed out in the literature. The first one is that de-internationalisation is dependent on the path the internationalisation has taken. A firm may only divest a foreign subsidiary in which it previously invested (Belderbos & Zou, 2009, 600); a company can only exit a foreign market that they entered in the first place (Choquette, 2019, 424). Furthermore, the reduction of the international engagement of the firm can be measured regarding the scope and the degree of reduction. Firms may choose to exit a chosen number of foreign markets, reducing the scope on a geographical level with regard to the host country (Blake & Moschieri, 2017, 737), or close or sell a plant which would lead to reduction on a foreign-operation level (Steensma & Lyles, 2000, 840).

2.6.2. Antecedents

As de-internationalisation decisions are not taken without any prior influences starting or influencing the decision-making process, the academic research on de-internationalisation has investigated a significant variety of factors that may cause a firm to reach a de-internationalisation decision. These factors can be differentiated into the two categories of external and internal dynamics (Tang et al., 2021, 281).

External dynamics encompass all factors that drive the firm's decision but that do not originate from within the firm itself. These factors are related to the environments of the host country, the conditions of the home country and the differences between host and home countries. On a host country level, risk related to political uncertainty cannot only prevent the firm from entering a host country but can also fasten a decision to leave (Liesch et al., 2014, 869). Host country dynamics also prove to be a facet depicting the changeable nature of de-internationalisation influences. Governmental reshuffles leading to institutional instabilities might drive foreign firms to exit a host country market (Fernández-Méndez et al., 2019, 299), as adverse changes in the host country environment are an important antecedent of subsequent de-internationalisation (Belderbos & Zou, 2009, 613). As a flipside of the host country

environment, home country conditions can also influence de-internationalisation decisions (Soule et al., 2014, 1033). Especially the political climate at home, including protests, political freedom, and transparency of institutional decision-making drive de-internationalisation patterns. Lastly, the differences between home and host country can influence de-internationalisation. If the differences on a cultural (Hennart & Zeng, 2002, 712; Malik & Zhao, 2013, 707), economic, and political level are higher (Demirbag et al., 2011, 423), the chances of continued survival of established international operations are smaller.

Internal dynamics are influences on de-internationalisation that come from within the firm itself. Research shows that that a parent firm's partnership with firms in the host country and with the foreign operations gives a representative picture of the internal pattern of de-internationalisation. Parent firms can operate in a host country either as a foreign investor or as an exporter (Tang et al., 2021, 281). Their inherent capabilities and assets, their way of behaving and governing in an international context and any other characteristics can therefore facilitate or hinder a firm's internationalisation potential and process, in turn also influencing the potential for de-internationalisation. There are some firm characteristics where a consensus has been reached on the influence on de-internationalisation likelihood. Among these influences are the expansion speed, which is positively related to the likelihood of de-internationalisation(Jiang et al., 2014, 116; Mohr et al., 2018, 780). due to less time to form networks and to reduce cultural differences; and corporate governance and ownership, where family CEOs are less likely to withdraw from foreign subsidiaries, and state ownership will also hinder de-internationalisation efforts (Kim et al., 2019, 930; Mohr et al., 2016, 421). The effect of diversification can itself be differentiation in relation to the topic of diversification, as diversification on a product level will increase the chance of de-internationalisation – the positive effects of diversification are not linked to internationalisation efforts of the firm (Bane & Neubauer, 1981, 231) – whereas diversification on a geographical level will decrease the chance of de-internationalisation – the positive effects of diversification are directly linked to the internationalisation efforts and the number of countries served by the firm (Chang et al., 2013, 330). No consensus has been reached on the effect firm age and identity (Wan et al., 2015, 217) as well as the innovation ability and technical know-how have. While innovation ability can help a firm survive in a foreign market by improving the ability to adapt and adjust to a changing environment (Sui et al., 2019, 1037), companies in possession of a high level of technical know-

how are more likely to focus on markets with high technologies to best use their comparative technological advantage, leaving foreign markets with weak technologies in the process (Myles Shaver & Flyer, 2000, 1191).

However, not only firm characteristics, but also the choice of local, focal partners in the host country influences de-internationalisation. Specifically, the relational assets that partners can bring to change their local networks are essential, as firms with similar relational asset portfolios are less likely to withdraw from the foreign market the host country partner operates in (Kim & Kim, 2017, 1055; Lu & Ma, 2015, 1058). These findings are aligned with the current state of academic research that states that interfirm dissimilarity and diversity can negatively impact the stability of home and host country partners (Park & Ungson, 2017, 280; Parkhe, 1991, 582), as the same logic already pointed out for external dynamics of antecedents applies: interfirm dissimilarity can increase cultural and governance-related distance on a personal and interfirm level, which makes efficient working relationships necessary for international survival harder to achieve.

2.6.3. Consequences

After a closer look at the antecedents predating a de-internationalisation decision has been taken, one can say that the state of the academic research regarding the consequences of de-internationalisation processes is rather meagre and focuses on the firm performance and re-internationalisation. In general, the topic of firm performance, including ways to define, operationalize and measure, will be discussed in Chapter three below. De-internationalisation in the form of closing a foreign plant has been shown to have a negative impact on the stock market value of a firm (Tsetsekos & Gombola, 1992, 221) in such a way that even the announcement of de-internationalisation is sufficient (Depecik et al., 2014, 154) to hint at internal turmoil so that risk-averse investors restructure their portfolio (Blanchard et al., 1986, 16). Going a step further, divestment from foreign subsidiaries does not only affect the stock market value of the firm negatively, but it may also have a negative impact on the short-term performance of a firm (Zschoche, 2016, 202). Taking a small step back from divestment from foreign subsidiaries, which in itself is the reversal of a rather resource-heavy and far-reaching internationalisation mode, to export exits, which are the reversal of the first logical step of internationalisation, a study on Belgian SMEs has found that firms that stop exporting have lower profitability in the first place, which then declines even further after the export exit (Onkelinx et al., 2016, 54).

These consequences of de-internationalisation paint a grim picture that positions de-internationalisation as an inconvenient decision a company is forced to take and that leads to negative impact on performance, going so far as to even perceive de-internationalisation as a failure (Turcan, 2006, 55). However, that is not necessarily the case. If you take a closer look at de-internationalisation from a business model perspective, the main challenge for companies that aim to or need to de-internationalize is the reconfiguration of the business model and the inherently needed re-thinking of the value proposition (Sort & Turcan, 2019, 41). Shifts in global trends have an impact on internationalisation and international value creation in a major way, as current political and economic events such as nationalist and protectionist policies in Europe and the USA have contributed to unfair international competition leading in turn to de-internationalisation trends such as divesting, de-licencing among other things, where companies try to re-import parts of their value chain creation.

This reconfiguration of a firm's international operation might lead to de-internationalisation in the first step, the dynamic nature of internationalisation processes allows for re-internationalisation in the future. Therefore, a closer look at re-internationalisation needs to be taken.

2.7. Re-Internationalisation

As has been repeatedly pointed out in this thesis, internationalisation research as a distinct area of international business research has focused on the outward process from countries (Welch & Welch, 2009, 567). This focus in turn limits research not only to inward processes and de-internationalisation activities, but even more to steps necessary and surrounding re-engagement. The term "re-internationalisation" has been coined by Luostarinen, depicting the "process surrounding the re-engagement in international operations by firms which have previously exited" (Luostarinen, 1979, 201). Welch and Welch have expanded on this definition (Welch & Welch, 2009, 568), conceptualising the term as three distinct periods of time connected with two necessary process steps. In their concept, firms need a period of international business activity, before an exit or reduction of that activity leads to a time-out period of some duration, then a process of re-entering international markets or re-starting international or internationalisation activities and finally a period of successfully renewed international operations. This rather straightforward concept poses two issues when trying to apply it to practice, namely the withdrawal from international operations and the treatment of

internal international activity. The withdrawal from international operations has already been conceptualised and defined above, but the treatment of internal international activity needs to shortly be touched upon. The aforementioned withdrawal might insofar be incomplete as a company might only cease their own international operations related to their turnover or their products, but from a value or supply chain perspective, its domestic business activity is either not fully eliminated or not even reduced. We cannot, however, specify the withdrawal as a binary decision, but rather as a process similar to internationalisation mode changes, where incremental changes are made and where small progress can already be an indication of international withdrawal (Welch & Welch, 2009, 575).

Re-internationalisation as a concept only applies to those companies that have withdrawn from international involvement and have intentions of restarting their international sales. Drawing a distinction between re-internationalising companies and companies entering a market for the first time, the conceptual difference is the historical experience of the re-entering firm, which can be positive or negative. It can furthermore be classified in a variety of ways, starting with the depth of the experience gained, which can be measured by duration, geographic spread in the number of markets entered and resources committed to foreign markets (Bonaccorsi, 1992, 630). This experience can range from a short foreign intrusion, e.g. a drop-out of early exporters after insignificant international sales (Welch & Wiedersheim-Paul, 1980, 342), where experiences and experiential assets usable in a re-internationalisation process are scarce, to long and extensive international activities. The depth of experience is a crucial factor in developing an international mindset for managers of a company (Roth, 1995, 203), which in turn factors heavily into the forming of the international heritage of the firm. The learnings and interpretations gained by international activity by key decision-makers affect the international heritage. The relationship between the success of the international activity and the learnings is not straightforward, failed outcomes can introduce positive learning benefits, leading to companies avoiding crucial mistakes of earlier market entries in their re-internationalisation journey. One reason for that might be that failure offers an easier way of explaining itself, making the act of learning and reaping the benefits itself an easier one (McGrath, 1999, 27). However, institutional learning itself might not be properly equipped to handle international heritage. One issue is called failure myopia, where successes are oversampled and failures are undersampled, leading to the elimination of failure experiences by

confidence-boosting interpretations of previous outcomes (Levinthal & March, 1993, 101). This tendency and the resulting limited focus in the learning process seem to be more prevalent for owner-managers (Forbes, 2005, 624) and can in turn lead to a warped perspective on the internationalisation ability of the firm. This optimistic and overconfident approach partly explains the high proportion of former exporters that are interested in re-starting their discontinued activities despite previous failures (Crick, 2004, 575). The experience itself, even if properly handled by the organisation, also allows for a positive or negative impact. It can enable companies to better suit their approach to the market (Crick, 2004, 562), avoid earlier mistakes and support a future return (Stam & Schutjens, 2006, 16).

Re-internationalisation chances are not only influenced by the previous experience of the company operating in the market, but also by the characteristics of the export exit itself. If the export exit is "ugly" – meaning forced and completely due to e.g. a financial shortage – a change in the management and therefore a change in the international heritage can reset the willingness of a company to re-internationalize. Without such a change, the attitude towards international operations might have been severely altered, making the exit decision itself more difficult to handle and consequently re-internationalisation even more unlikely (Welch & Welch, 2009, 575). In a similar vein, re-internationalisation might not be feasible for the company, but for the individual. This could be due to their entrepreneurial mindset, trying to internationalize with a newly founded company. The circumstances of the exit extend their influence not only to internal factors, but also affect external factors similar to the international network formed by various relationships such as buyer-seller relationships. If a company making an exit decision can withdraw from a market without hurting not only themselves, but also the other party and the connected network (Alajoutsijärvi et al., 2000, 1284), a re-entry might be more feasible. Such residual network structures, also called sediment, can be differentiated by origin, availability, structure, and geographical, professional, and industrial context (Maciej Serda et al., 2002, 461). This sedimental structure circles back to the international heritage on a personal level, as these networks tend to be interpersonal linkages rather than formal organisational bonds. On the other hand, a highly damaging exit with a bigger strain on international networks might erode sediment and sentiment alike, making a re-entry more unlikely. The structural damage caused by an exit is closely linked to staff retention in the exit

aftermath, as capabilities and network links tied to particular staff will be lost if they leave the company.

The third aspect influencing a company's chances to re-internationalize is the time a company spends without international activity. The longer a company is absent from the international market, the more networks start to suffer, and less international heritage and experience remains in the company. This can especially be true as de-internationalisation is often seen as a trigger for shedding staff, so that re-entry would have to be attempted without personal knowledge (Benito & Welch, 1997, 17). Furthermore, knowledge specific to a certain context within the market will not necessarily adapt to changing market conditions and dissipate, leaving a company less prepared for a re-entry than the company would think, in turn lessening the chances of a successful re-entry even further. On the other hand, a longer time-out period can also increase a company's likelihood of successful re-entry, if the international failure beforehand was the result of unhelpful foreign networks and if the negative experiences have an unfavourable impact on the overall decision-making process in terms of internationalisation. In such a case, dramatic changes on a personal, cultural, or economic level need to be made within a company to properly enable the decision makers to reconsider internationalisation. Such changes can include a new management, a sudden influx of international interest in the company product or a downturn in the domestic market. The passing of time and the subsequent internal restructuring, the replacement of damaged networks and the emergence of new positive influences on re-internationalisation plans can lead a company to forget and refresh their international heritage.

As a short conclusion, previous international experience can provide a firm with positive or useful conclusions to draw, in turn enabling a company to perform better when re-internationalising (Ali, 2021). However, for previous international experience to have a positive effect, companies need a remainder of their previous international networks or knowledge available.

2.8. Dimensions of internationalisation

After an extensive discussion of internationalisation forms with a special focus on modes of international operation and the drivers of mode change decisions, one needs to take a closer at the dimensions of internationalisation. A dimension refers to a group of attributes that are specific to a concept, therefore expanding on that object's characteristics (Rossiter,

2002). Common issues in the understanding of dimensions are the number of items used to measure a given dimension and the general number of dimensions that can be attributed to a concept, the key words here being unidimensionality (Buckley et al., 1978) versus multidimensionality (Christophe & Lee, 2005). The academic literature started out with a unidimensional perspective of firm internationalisation (Collins, 1990; Horst, 1972a; Siddharthan & Lall, 2009), but a paradigm shift in line with the more diverse theories of internationalisation has led to a universal acceptance of multidimensionality (Sullivan, 1994a). However, there is still a debate about the actual number of dimensions one needs to consider with opinions ranging from two-dimensional theories and frameworks up to concepts including six dimensions. In the following, one can find a short overview over each concept to establish a common groundwork for a critical remark on the issue.

The first concept including two dimensions stems from Hassel et al. (Hassel et al., 2003), whose two dimensions are the real dimension of production and the financial dimension of corporate governance. The real dimension focuses on overseas activities related to production operations and can be measured by indicators such as sales percentages, international assets or the number of employees engaged in international activities all in relation to total numbers of the firm. The financial dimension instead focuses on activities related to the international capital market and can be measured by indicators such as subsidiaries' debt, the relative weight of foreign capital in the company and the acceptance and use of international accounting standards.

The main three-dimensional concept was developed by Sullivan (Sullivan, 1994a) and builds on Aharoni's proposal (Aharoni, 1971) which uses the dimensions of performance, structure and attitudes. The performance dimension is linked with results and conditions that apply abroad. It was expanded by Dörrenbacher (Dörrenbächer, 2000), who explains that the performance dimension is linked to the success or failure of a firm's international operations in each timeframe, suggesting the volume of sales and the international revenue as measurable variables. The structure dimension is related to the resources available abroad. Based on the concept of multinational firm organization that strongly relies on control and ownership of subsidiaries ((Stopford & Wells, 1972), this dimension is associated with the level of international involvement of a company and measurement variables proposed are the number of countries with established activities and the proportion or amount of international assets

(Dörrenbächer, 2000). The last dimension is attitude, which is related to the attitude of leading executives towards their international strategic orientations. It is therefore associated with the way multinational companies view a particular country and the ensuing relations with subsidiaries in said country. As the focal point is more process-related, no measurable variables are given by Dörrenbacher (Dörrenbächer, 2000).

Adding another dimension to three-dimensional concepts as stated above, Kutschker and Bäuler (Kutschker & Bäuerle, 1997) take the static concepts existing beforehand and add a dynamic fourth dimension. They briefly touch on the three static dimensions, number and geographic distance, added value and integration. The number and geographic distance dimension is understood as the number of countries the firm is operating in, as well as the cultural distance to these countries, where a higher distance is an indication of a higher degree of internationalisation. The added value dimension focuses on international purchases, sales and other operational activities. The higher the value international operations can add, the more internationalized the firm is. Integration as the third dimension depicts how smooth and well-oiled the international processes are compared to domestic processes. Contrary to the existing body of knowledge, Kutscher and Bäuler, however, do not see internationalisation as a static phenomenon, but one with a dynamic dimension: time. According to them, internationalisation can be understood as a constant battle of a firm and the decision-making personnel of said firm to achieve its international potential. The ever-evolving nature of international markets and environments leads to the necessity of a dynamic perspective that can properly depict the current status quo of a company, but also offer insights into future potentials.

Welch and Luostarinen have taken a far broader perspective with regard to the number of dimensions, including six dimensions to internationalisation (Welch & Luostarinen, 1988): operation methods abroad, sales objects, target market, organizational structure, personnel, the financial dimension. Their dimension of operation methods abroad is characterised by the various operational methods a company employs, meaning the way business is conducted abroad. It includes a variety of international entry modes ranging from direct export to production abroad, and internationalisation is understood as a pattern where companies increase their international commitment, as described above. The second dimension are the sales objects, simply meaning the product or service offered. According to the authors, a higher degree

of internationalisation will lead to a higher diversification. The third dimension is the target market, which in itself is related with physical and cultural distance, political and environmental issues and financial compatibility. The fourth dimension concerns the organizational structure and focuses on the need to change the formal and informal structure of the firm to better fit the needs of the internationalized firm. The personnel dimension is characterised by the people involved in the internationalisation and their skills, training, and experience, all held together by their commitment to the firm and its international journey. The last dimension is the financial dimension which in this case simply proposes the idea that a greater internationalisation warrants a greater financial need to improve the resources available. This greater financial need makes it necessary to improve the techniques to attract money, be it on the capital market or through other means.

Based on Welch and Luostarinen, Chetty (Chetty, 1999) uses a case study of five companies operating in the apparel industry in New Zealand after the economic deregulation of 1984, which led to an increase in export and internationalisation. The main contribution of the paper is the realisation that a company can be further along a few dimensions of internationalisation in comparison to other dimensions. As an example, an increase in export sales in a new market might not be reflected by a similar increase in firm competencies such as market knowledge or planning. This aspect is still relevant in academic discourse today as a basic building block for analysis on various current internationalisation topics such as overall internationalisation process reviews (Chaldun et al., 2022), digitalisation in internationalisation contexts (Gaweł et al., 2023), international B2B relationships (Kuster-Boluda et al., 2020), and the role of organizational learning on internationalisation (Sendawula et al., 2021).

Drawing a short conclusion of the internationalisation views depicted in this Chapter, one can state that they all share the same outward perspective, in which internationalisation takes root in a firm choosing to export into a non-domestic market with all the other dimensions being a necessary and logical further step on an international road. In contrast to these perspectives, Fletcher (Fletcher, 2001) offers a holistic approach to internationalisation. While he acknowledges that internationalisation had already been established as a complex and multidimensional process, he points out that all existing perspectives on internationalisation have a coherent definition as “a process by which firms increase their involvement in international business activities”. Building on this definition, Flechter diverges from the existing path in two

major points. The first point is that he also establishes a dynamic instead of an incremental approach, but also includes de-internationalisation in his perspective. This can happen in the form of either voluntary de-internationalisation, as companies' downsizing, reduction of operations in unprofitable markets and focus on core business fields are not limited to domestic markets but may occur in an international context. It can also happen as involuntary de-internationalisation, which can mean the reduction of operations in said international market, a switching of modes or even the complete withdrawal. Both voluntary and involuntary de-internationalisation allow companies to answer the increasing need to serve customers in a global environment and to bring special products to target markets more quickly and at lower costs. This global competitive pressure leads Fletcher to a second important conclusion, where he states that "in order to be internationally competitive, firms also need to be internationally cooperative". Expanding on international cooperation, he further states that firms can also internationalize by inward-driven activities such as indirect or direct importing, licensing or by a joint venture. Outward and inward internationalisation processes can benefit from the networks they create and can be linked using strategic alliances, cooperative manufacturing, or countertrade. Empirical evidence in the same study indicates that internationalisation of the firm cannot be viewed as only one form of involvement, but rather that firms tend to tailor their outward and inward international activities to both the needs of firm and market. Furthermore, the same company and management characteristics that support outward internationalisation lead to a global mindset also supporting inward internationalisation.

After this short overview over existing theories regarding dimensions of internationalisation, re- and de-internationalisation, a few closing remarks are needed. First it has to be stated that internationalisation is an established multidimensional phenomenon, but the number of dimensions still is an issue. Current academic discourse can, however, accept a minimum of two dimensions, namely performance and structure. Most theories that focus on more dimensions split these basic categories to create a finer and more diversified categorization. The mentioned concepts including the different dimensions apart from the additions of Fletcher are depicted in Figure 5 below.

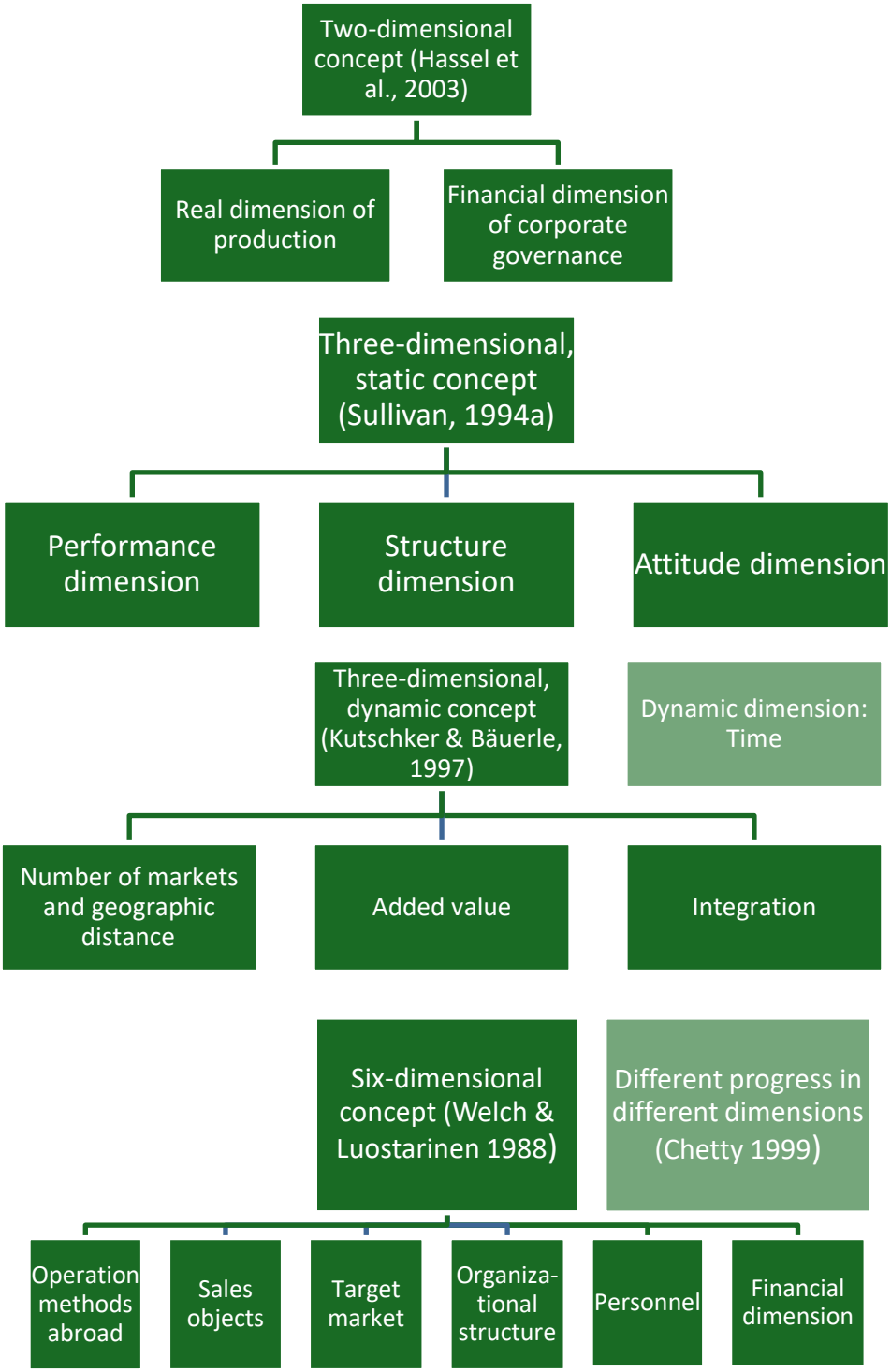


Figure 5 – From a two-dimensional to a six-dimensional concept of internationalisation

Source: The author's own elaboration.

2.9. Perspectives on export development

After establishing a comprehensive overview over the current academic body of knowledge concerning dimensions of internationalisation as a broader concept, one needs to refocus the perspective and narrow it down to a specific discussion concerning export dimensions. Export

as a simple internationalisation method for companies nonetheless can develop in a few different dimensions, where research can focus on several factors indicating whether a company is confident in their export decision and whether said decision is supported by the market. As a method of internationalisation, the academic discussion regarding dimensions of internationalisation in general can also be adjusted and adapted to fit export decisions. A basic split into the dimensions of finance and production, as proposed by Hassel (Hassel et al., 2003), can describe export behaviour, but so can more distinctive concepts such as the six dimensions suggested by Welch and Luostarinen (Welch & Luostarinen, 1988), who explicitly mention export as an operational method for the perspective of internationalisation. Further additions to the dimensions such as time, adding a dynamic perspective to a previously static concept as seen by Kutschke and Bäuerle (Kutschker & Bäuerle, 1997), can easily be applied to export, as well. Following this line of argumentation, a necessary refocus of perspective to better match the aim of this thesis can hardly be done using only the concept of export dimensions.

2.9.1. Theoretical foundations of export development

Before the topic of changes in export activity is touched upon, different theoretical foundations of export development will be characterized. The development of export as a way to internationalize can be seen as an element of corporate-level strategy (Bamberger & Wrona, 2013), which allows for research paradigms established in strategy research to be drawn upon. In the process perspective of strategy research, there is a distinction to be made between two understandings of process. On the one hand, process means organisational change as change of a given strategy and its characteristics, also named “content-oriented process view”, whereas process can also be understood as a series of activities within an organisation that lead to the creation of a strategy in the decision process, also known as the “activity-oriented process view” (Bamberger & Cappallo, 2003, 94; Fahey & Christensen, 1986; 170; Ginsberg & Venkatraman, 1985, 424). There are four approaches that attempt to provide an explanation of the way firms progress along different paths of internationalisation by using international strategies with them being the Uppsala model, the Helsinki model, the 3E-model including the GAINS paradigm and the product lifecycle theory.

2.9.1.1. The Uppsala model

The Uppsala model considers internationalisation as an evolutionary process with constant evolvement steps, where the focus is put on knowledge development and resource commitment instead of singular and isolated decisions (Vahlne & Johanson, 2017). In the view

presented by the Uppsala model, strategy is a result of multiple, complex, interacting processes not all of which are under the control of management. The Uppsala model in the expanded and revisited version of 2017 is centred around a variety of key components. The first important aspect is the constant nature of change. Langley et al. (Langley et al., 2013, 5) describe firms as being "continually in a state of becoming", which expresses that decision makers – mostly managers – must act in an environment that is characterized by a flow of ongoing events that will not reach an equilibrium. This leads to changes at the level of the individual firm, which can take place at two starting points, namely at the intermittent decision process related to the commitment of resources or at the continuous knowledge development process through learning, creating, and trust-building (Vahlne & Johanson, 2017, 1092). The process of resource commitment includes re-configuring and coordinating and is by its nature taking place under uncertainty and risk, basing the allocation decision on a reasonably positive trade-off between the expected benefits and possible downsides. It is not limited to the big decisions made by top management regarding large scale investments, but also includes more routine allocation decisions taken by middle management. The part of reconfiguring and coordinating resource allocation can be associated with members of the internal network, e.g. subsidiaries, or of the external network, e.g. suppliers. It allows these units to achieve advantages of scale, specialization, and adaptation otherwise not achievable and in the same vein can realign the unit closer to the organizational purpose. The downside of coordination processes can mostly be found in decreased flexibility, as an implied increase in specialization of interdependent units makes them less able to perform different tasks. This decreased flexibility in turn calls for a higher level of managerial intervention to secure smooth functioning. The knowledge development process is similarly not limited to the organization, but can occur within external and internal network units, as learning, creating, and trust-building can take place within all these partner relationships. Learning and creating are both regularly initiated by exposure to foreign knowledge within professional relationships and overlap conceptually, as learning means the simultaneous understanding and use of specific inputs that allow for proper understanding of a new piece of information, while creating is related to "sense-making", which is similarly connotated. The development of entrepreneurial knowledge leads to a switch in entrepreneurial attitude which is a key facilitator for a successful further internationalisation of the company (Vahlne & Johanson, 2017, 1095). The process, however, is split into various subprocesses and part of the variety of knowledge development subprocesses in companies,

which all share the fact that they are influenced by the experience and enactment of a collective, meaning the sum of individuals belonging to a subgroup from different firms or within the firm. These subprocesses can unfold simultaneously, but quasi-independently from one another and affect the more formal resource commitment process, thereby possibly triggering a changed and likely improved package of operational and dynamic capabilities The entrepreneurial knowledge development process involves three key subprocesses: building relationships, flexible strategy implementation, and adapting to the organizational environment.

1. **Relationship-building:** It is a gradual process, fostering trust through shared experiences and efforts towards common goals.
2. **Flexible strategy implementation:** Over time, intended strategies translate incrementally into realized strategies, shaped by both top and middle management.
3. **Adaptation to the environment:** Dynamic organizational adaptation occurs at multiple levels, influencing entrepreneurial attitudes and resource allocation.

Overall, these subprocesses shape entrepreneurial knowledge development, emphasizing trust, strategy flexibility, and adaptation.

Developments in both areas of resource commitment and knowledge development allow a company to move across the evolutionary process of internationalisation (Vahlne & Johanson, 2017, 1098). This process is traceable along two dimensions, the *establishment chain* and the *psychic distance chain*. Firstly, the establishment chain connects to operating modes within a host country and starts with no activities, before progressing through export, sales subsidiaries and manufacturing subsidiaries (Johanson & Wiedersheim-Paul, 1975, 307). This sequence corresponds to a rising resource commitment and longer exposure to local market conditions. Secondly, the psychic distance chain determines that firms enter foreign markets according to successively higher differences in language, culture, political systems etc.. This additional challenge posed by a disturbed flow of information by higher psychic distance is majorly influenced by the concept of the liability of foreignness, which will be further discussed in 2.9.2.2.

Although the Uppsala model has been established as a prominent concept in international business literature, it has also been subject to a variety of criticism. The most important point is that the suggested linear character of the internationalisation process is not supported by

empirical evidence, which instead suggests a more irregular path. Concepts such as born globals (Paul & Rosado-Serrano, 2019) or the leapfrogging of intermediate stages are supported by the increase of trade liberation and the rapid dispersion of information technology, which increases the dynamic nature of the international environment (Fletcher, 2001, 29). Further criticism stems from the point that the explanatory capacity of the model itself is limited as it does not include a possible reasoning for undertaking internationalisation in general or mode changes to be specific (Andersen, 1997). Apart from that, the Uppsala model is said to miss a number of relevant market entry modes (Vissak, 2010, 564). The main conceptual criticism, however, remains the overly deterministic character of the process model, which has been addressed in a few other conceptual approaches.

2.9.1.2. The Helsinki model

The first model addressing the aforementioned criticism is the Helsinki model, which was developed by Welch and Luostarinen in 1988 (Welch & Luostarinen, 1988a). They point out that "a sequential process of internationalisation does not necessarily mean some smooth, immutable paths of development" (Welch & Luostarinen, 1988a, 47). They manage to address weaknesses of the Uppsala model on a conceptual and an operational level by distinguishing six factors coming from the firm and its interaction with the environment that affect the dynamics of internationalisation patterns, which are as follows (Welch & Luostarinen, 1988a, 50-54):

- Resource availability
- Knowledge development
- Communication networks,
- Risk and uncertainty,
- Rising control over foreign markets
- Commitment to an international strategy.

These factors and other situational influences are reflected in a less deterministic internationalisation path, that can possibly lead to a more gradual expansion. The internationalisation path of any firm can therefore be different through different foreign markets and times, which is depicted below in Figure 6.

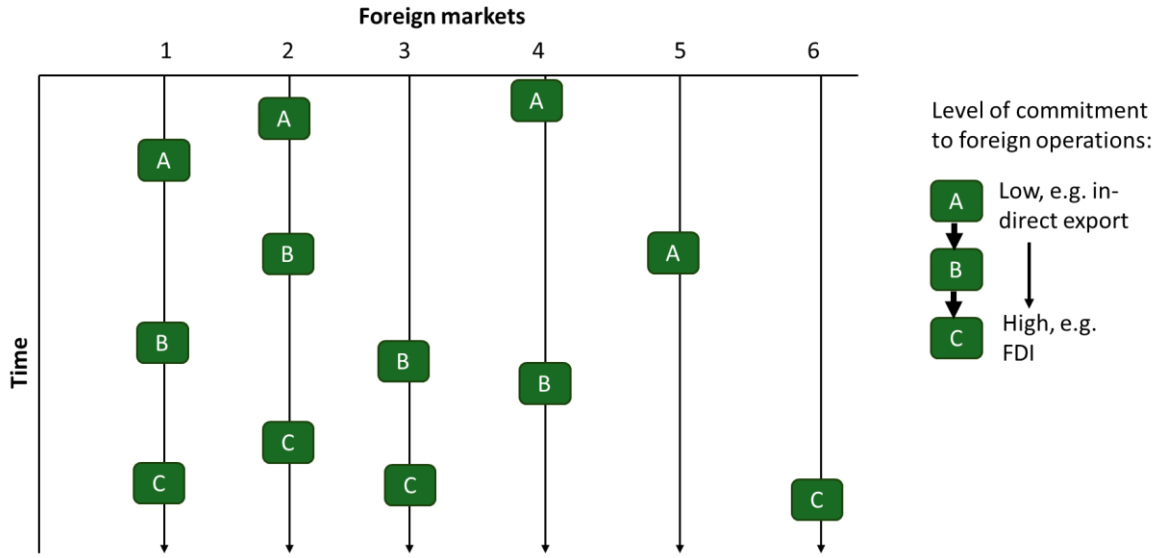


Figure 6 – Internationalisation paths of hypothetical firms

Source: The author's own elaboration based on Welch & Luostarinen, 1988a, 49.

Diverging from the focus on internationalisation along the establishment chain, Welch and Luostarinen acknowledge that international expansion can involve different dimensions. They include the diversification of the firm's international offering, towards an extension of an existing product line or the provision of more complex products. Further included is the dimension of personnel, as further commitment to foreign expansion is increased by a more international mindset of the management team. The last two dimensions are the organisational structure and the finance dimension. The organisational structure reflects the rising capability of the firm to handle the increased complexity stemming from international operations, while the finance dimension is an indication of the increased range of finance sources available and possibly needed with internationalisation (Welch & Luostarinen, 1988a, 39). Figure 7 shows a comparison along the different dimensions between two hypothetical firms and can be found below.

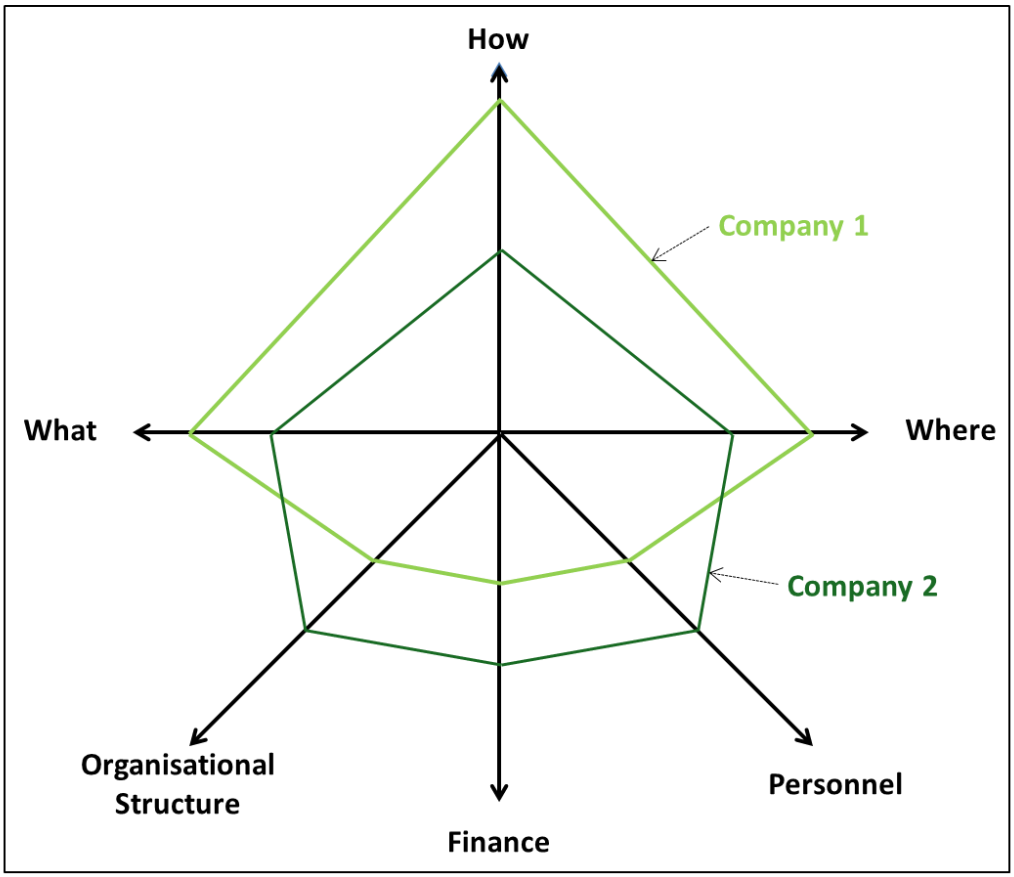


Figure 7 – Comparison of internationalisation dimensions

Source: The author's own elaboration based on Welch & Luostarinen, 1988b, 39.

2.9.1.3. The German approach

Moving from a Scandinavian view on internationalisation theory to the "German school", two process approaches are notable in itself. The first is the "3E" model by Kutschker (Kutschker, 2002) which posits an internationalisation process consisting of international evolution, international episodes, and international epochs. This interaction between the three concepts is depicted in Figure 8 below.

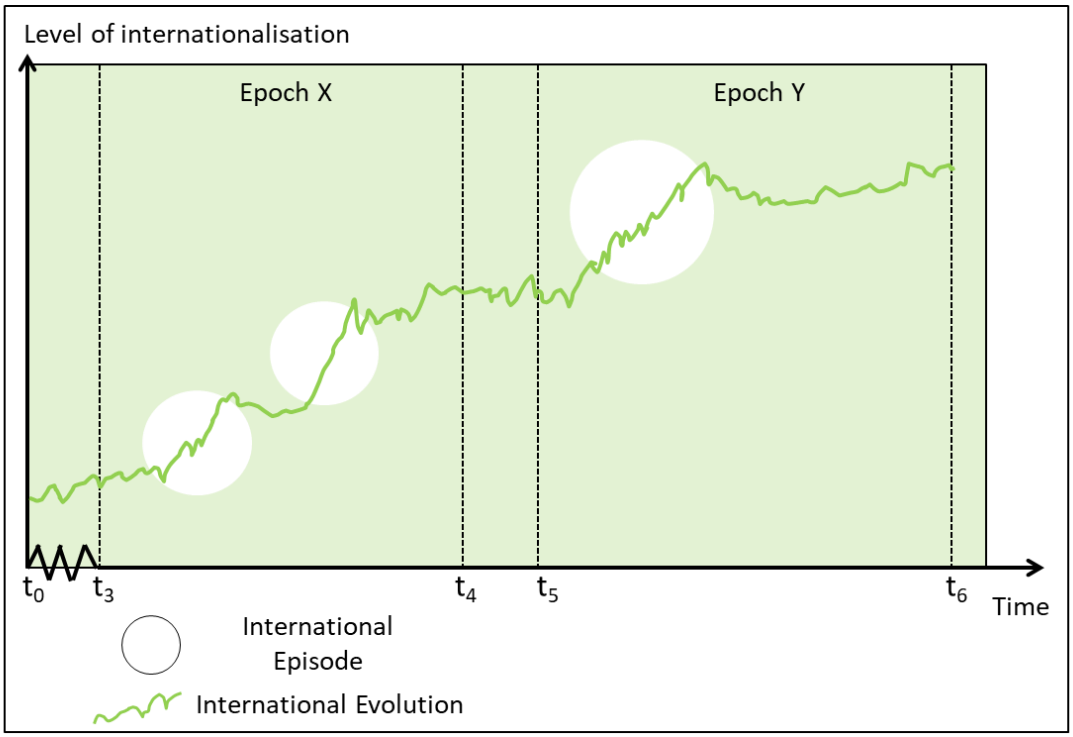


Figure 8 – The "3E" concept of firm internationalisation

Source: Own elaboration based on Kutschker & Bäuerle, 1997, 185.

Of these concepts, **international evolution** on the one hand reflects the incremental process where gradual foreign expansion is a direct result of almost constant ad-hoc decisions, where each decision is likely to only affect singular parts of the entity such as sole customer-product combinations for one foreign market (Kutschker et al., 1997, 185). On the other hand, **international episodes** are related to a more abrupt burst of international expansion, where single events have a stronger impact on the firm's international footprint.

International epochs are characterised by the combination of evolution and episodes and rely on a common internationalisation strategy. Whether a firm is experiencing evolution or an episode is dependent on the activities and competence of managers, which can result in both deliberate and emergent strategies. The effect of internationalisation on the company is distinguished in two ways (Kutschker et al., 1997), affecting the surface structure and the deep structure. The surface structure consists of strategic manoeuvres, the organisational structure, management information systems, and business processes, while the deep structure means the values and contextual orientation of the members of an organisation. If internationalisation is intended by the company to have a long-lasting impact, the effect of stronger

internationalisation steps on the deep structure needs to be accompanied by effective change management.

The second concept to be considered from the "German school" is the GAINS-Paradigm (Gestalt approach of International Business strategies), which was developed by Macharzina and Engelhard in 1991 and is rooted in the organisation theory Gestalt approach (Macharzina & Engelhard, 1991). In contrast to the other stage-based approaches depicted earlier, the underlying assumption of the Gestalt approach is that there is a limited number of internally consistent organisational archetypes, the so-called "gestalts", that can correctly represent organisational complexity. These archetypes exist depending on influences from environmental, structural, and strategy variables. In relation to export, three archetypical stages of international involvement are shown with them being Non-Exporters, Re-active exporters, and active exporters (Macharzina & Engelhard, 1991). They differ in four categories, which are as follows:

- Environmental variables, such as home market conditions.
- Organisational variables, such as firm age or organisational structure.
- Strategy making variables, such as marketing strategy or export scope.
- Management variables, such as risk and profit perceptions and managerial expertise.

2.9.1.4. Product cycle theory

The last theory depicted in this subchapter is the product cycle theory in the context of firm internationalisation, which was developed by Vernon in 1966 (Vernon, 1966). It emphasises the geographical patterns of internationalisation with a special view on the changing role of the production location with changing maturity of the product. The underlying assumption is that economies of scale are enabled by production, while consumption preferences are similar in different countries, but depend on the level of economic development. A new product is usually developed and produced in an advanced economy, which leads to a high initial price due to the limited production volume (Vernon, 1966, 191f). Exports begin because of foreign demand, before price pressure due to rising competition leads to a production shift to cheaper locations, reflected in FDI. The demand structure similarity mentioned above, however, leads to the locations being in the same economic category, while production – being unified and therefore requiring less skilled labour – is increasingly relocated to emerging markets, making

the satisfaction of demand in the country of origin a matter of export in itself. This pattern is adjusted by Holtbrügge and Welge (Holtbrügge & Welge, 2010, 55-58), who split the new product stage of Vernon down into the innovation phase and the initial export phase. Such a four-product lifecycle stage model for different economies is depicted below in Figure 9.

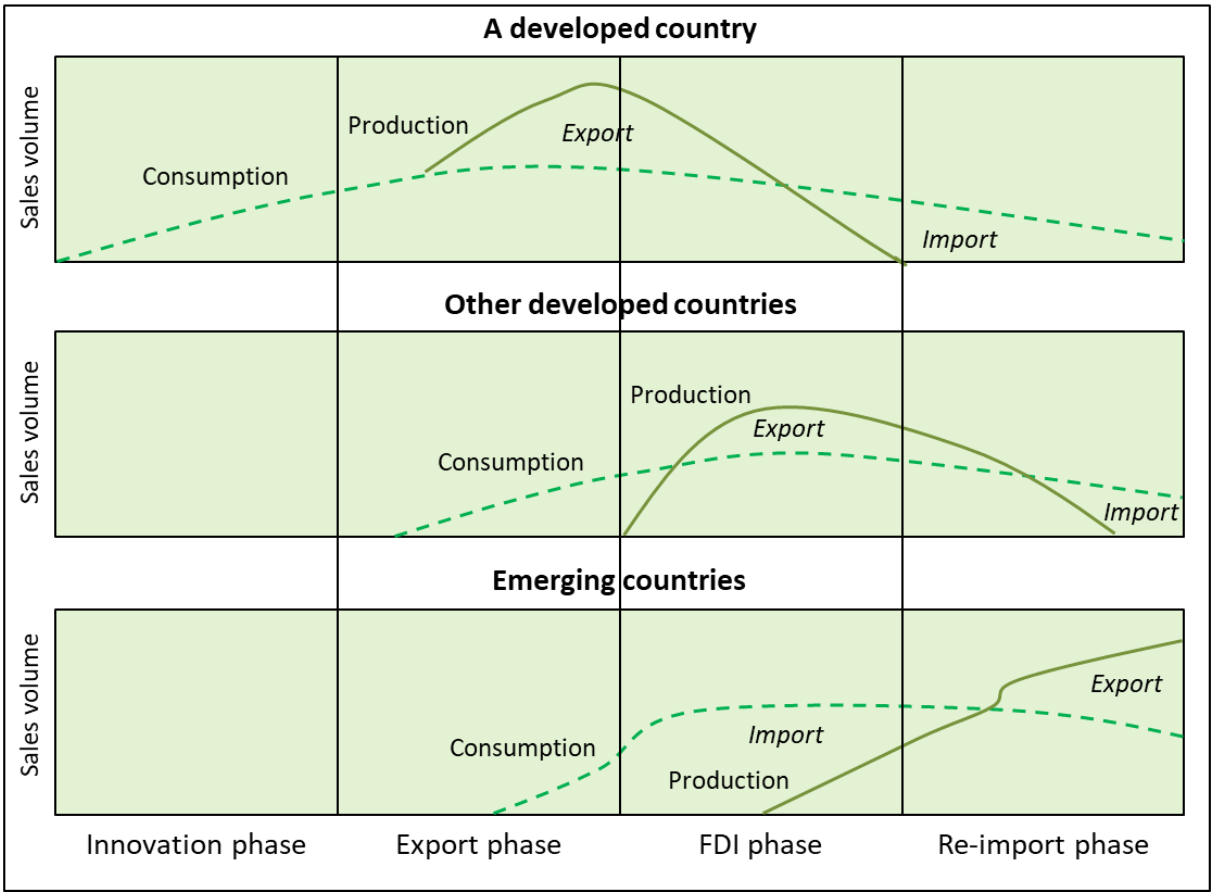


Figure 9 – The Product cycle theory: geographical patterns of internationalisation

Source: The author's own elaboration based on Holtbrügge & Welge, 2010; 55.

The product cycle theory has faced some criticism, firstly that the sources of technological advantages for firms starting a product cycle are not specified and secondly that the specific location pattern within the broad country categories are not touched upon either (Dunning, 1988, 31). Furthermore, the same limitations facing the Uppsala model in relation to the concept of born globals also serve as valid limitations for the product cycle theory.

Apart from the aforementioned theories and models, a few other factors influence and explain the heterogenous export paths of firms. Among these, firm capability and industry are leading to a more sequential path for firms which have limited, mostly domestic experience and operate in industries with predominantly domestic competition (Vahlne & Nordström,

1993). This sequential path is broken up by regional or global exposure and experience or more international competition, where firm-level characteristics take a more limited role in contrast to competition influences. Furthermore, the organisation of production activities is found by Malhotra and Hinings (Malhotra & Hinings, 2010) to lead to a gradual path that can skip stages when mass production organisation is used, while a disaggregated production organisation sticks to the contractual obligations. The third alternative of project-based production organisation follows internationalisation paths bound to the time-limited nature of the projects realised abroad.

After the most important theoretical foundations of export development have been shown and discussed, the next sub-Chapter will deal with the different perspectives and dimensions that changes in export activity can take.

2.9.2. Changes in export activity

Changes in the export activities of a firm itself can be divided into different routes, where – instead of a change of the international operation mode – a company changes their level of activity in the given mode of operation. As pointed out above, the internationalisation decision making process is always linked to the paradigm of risk and reward. Although the internationalisation process does not necessarily follow the incremental steps firstly described by Cavusgil (Cavusgil & Nevin, 1981) and while mode changes also stick to a more fluid pattern than the categorization into distinctly different modes suggests, decisions leading to changes in international activity that only tackle export are faced with lower barriers, lower sunk cost, and lower institutional challenges. This relative ease of exporting, also described in depth above, in turn leads to a necessity of distinction between the different routes of export activity change. As with all internationalisation processes, export is not a binary decision but follows a more flexible route in terms of scale and scope. The three perspectives that categorise the export decisions in question are export intensity, export scope and export commitment.

2.9.2.1. Export intensity

Export intensity means the level of export that the company achieves in total. The entity in focus is the firm, as export intensity concerns the international sales of a company either in total or in each market (Bonaccorsi, 1992). Export intensity is defined as export divided by total sales and gives an indication of how reliant a company is on their international sales. The export decision in this case puts the focus on the binary decision of whether to increase the

export volume, which in turn might affect the other perspectives, as well. Interdependency of the three perspectives is not only an option, but is the norm in reality, as decisions to change international activity will very rarely be taken using only a single perspective to judge the risk-reward ratio. It instead is the case that export decisions by their nature and the underlying complexity of a firm's structure, sales, and export operations affect all three perspectives at once, although there will likely be a central argument from one perspective as the main decision driver. The given perspectives on export changes are therefore not particularly useful when trying to make such a decision but can rather serve as an analysis tool in academic research from an ex-post perspective.

Going a small step further, few studies only take a single perspective on export. Instead, most studies use multiple indicators (Leonidou et al., 2002) and perspectives to try to limit the amount of misinformation that focusing on a single perspective might cause. Export intensity itself is influenced by a variety of factors, starting with the firm size. On first thought, a positive relation of a firm's size to its propensity to export seems logical (Bonaccorsi, 1992). However, such a straight-forward relationship cannot be empirically supported (Verwaal & Donkers, 2002), which can be explained by the transaction cost theory. This theory states that the costs related to a certain transaction are especially important if the transaction is linked to a specific relationship under uncertainty. The investments needed for export can be specific in terms of adjustments to products or sales networks to be established, while uncertainty is increased in export decisions due to geographical distance, cross-border issues, and the information asymmetry of buyer vs seller. Therefore, economies of scale that can successfully be realised to minimise the risk should not be considered regarding the overall firm size, but rather the volume of export transactions with a particular international customer, also called export relationship size (Williamson, 1985). This export relationship size is positively related to export intensity especially for small firms across various sectors (Verwaal & Donkers, 2002), as smaller firms profit from their additional flexibility in adjusting to customer needs and can reduce the disadvantage of limited resources when focusing on a few big export relationships. Furthermore, companies above a certain size might not engage in export from their domestic market, but might instead engage in foreign direct investment, lowering the risk of trade-restricting interventions and decreasing total costs at very high rates of output (Buckley & Casson, 1981). If you move from an internal to an external factor, domestic growth is negatively

related to export intensity (Pavord & Bogart, 1975), as the main motive for foreign market entry is the saturation of the home market (Forte & Carvalho, 2022). This can mean a total saturation or hint at the fact that foreign markets grow faster than the domestic market with no regard of the degree of domestic market penetration (Schlegelmilch & Crook, 1988). Greater domestic demand and therefore a higher chance of local sales directly translates into greater opportunities without the attached exporting risk, which in turn will lead a company to divert sales to a domestic market given capacity constraints. The second external factor that affects export intensity is the general export environment. Driven by institutional factors, divided into regulatory, normative, and cognitive-cultural factors (Hernández et al., 2022), the general export environment determines the ease of export from an institutional perspective with regulatory factors such as laws and regulations being regarded as the main source of transaction costs (Peng et al., 2008). The result of the export environment is the tradeability across borders, referring to all influences that enable or hinder exports, thereby impacting the international competitiveness of companies and in turn their export performance (Beise-Zee & Rammer, 2006). A positive export environment is therefore positively related to the export intensity.

To draw a quick conclusion on export intensity, it does not have a clear-cut impact on export performance but depends on internal and external factors and especially on the consideration whether added operations make total operations too complex and too expensive in contrast to the added value generated by added international turnover.

2.9.2.2. Export scope

In contrast to the export intensity perspective, where the total amount of exported goods with no particular importance to customer or country is taken into account, export scope refers to the number of foreign markets to which an exporting firm exports their products (Qian & Delios, 2008). The Uppsala model would dictate that companies expand their export scope slowly, beginning from a narrow and local one with market concentration as the preferred strategy (Kuivalainen et al., 2012). On the other end of the scale, born global companies already begin their initial operations in multiple international markets (Loane et al., 2014), making their approach more suited to market spreading strategies. This spread of either a concentration on a small number of markets geographically close to the domestic market or the inclusion of many markets might even happen simultaneously in a company (Leonidou & Katsikeas, 1996) and can be explained using the RBV and resource optimization aspects. In a

market spread strategy, companies can maximise sales and market shares on a constrained budget, but also diversify their international operations against risk such as individual market fluctuations and safeguard against competition (Rialp et al., 2005). On the other hand, operations in multiple markets incur a higher degree of organisational and structural needs, as well as additional costs for operations and transactions, which will not automatically be offset by the added benefits (Datta et al., 1991). A market concentration strategy on the other hand enables a firm to concentrate the available assets on only a few markets, allowing for a higher degree of optimization and additional economies of scale (Li et al., 2012) Export diversification research has tackled the issue using different theoretical approaches including transaction cost theory (Tallman & Li, 2017), portfolio theory (Denis et al., 2002), the institution-based view (Delios et al., 2008) and the Uppsala model (Almodóvar & Rugman, 2014). Throughout all these perspectives, no consensus has been reached on the relationship of export diversification and export performance with positive (Delios et al., 2008), negative (Chang & Wang, 2007), curvilinear (Gaur & Kumar, 2009) and no direct relationship (Hennart, 2011) being discussed. There is even a dispute regarding the form of the curve for a curvilinear relationship with suggestions ranging from a simple U-shape (Contractor, 2007), an inverted U-shape (Borda et al., 2017), an S-shape (Lu & Beamish, 2017) and an M-shape (Almodóvar & Rugman, 2014) to a W-shape (Zhou, 2018). This missing consensus is directly linked to a series of contradicting arguments that muddle the relationship and can shift it into different directions. The first argument for an overall positive relationship is rooted in portfolio theory (Rugman, 1976) and states that in given markets that are not perfectly correlated an increase in export diversification reduces the market risk of the total export portfolio. This argument not only extends to export, but can go even further, as a higher international commitment in the form of international subsidiaries in geographically dispersed countries also allows for a switch of production in the case of uncertainty or of more profitable markets propping up (Kogut & Kulatilaka, 1994). The second argument states that international diversification allows companies economies of scale regarding both costs and opportunities. On the cost side, common and centralised expenses can be split over a higher variety of markets (Hitt et al., 1997). This is mirrored by an added access to cheap resources such as labour, natural resources, and advanced technologies, combined with an ability to acquire unique resources and overcome domestic constraints (Chen & Tan, 2012; Hitt et al., 1997). According to the resource-based view, the access to these resources results in a competitive advantage, which in turn increases the

overall export performance of the company. This is supported by learning theory, as companies operating in additional international markets are exposed to more external stimuli both with regard to their absolute number and their uniqueness, allowing for the faster absorption of new knowledge and therefore for the identification and utilization of a larger range of business opportunities (Hitt et al., 1997).

Both arguments, however, have been contradicted by transaction cost theory. The assumption of non-correlated countries that was stated as a basis for the risk reduction clashes with the transaction cost theory suggestion that companies choose their international investments in culturally and economically related countries. Such a cultural and especially economic relationship also indicates similar risk characteristics, leading to the necessity of additional diversification over product segments to fully utilize diversification effects (Arte & Larimo, 2022). Secondly, the argument of economies of scale due to additional access to resources regarding the whole company export can be countered by an argument regarding economies of scale in singular markets. If available resources are split across a variety of markets, the market penetration of a singular market is limited. The chance to tap into a sufficiently large market to maximise investments due to economies of scale in that market is therefore limited, as well. An additional argument for a negative or inverse relationship is the liability of foreignness (Denis et al., 2002), which describes the inherent disadvantage foreign companies face in non-domestic markets in contrast to native firms. Related to this argument, an international diversification with too many countries with larger cultural and economic differences increases the cost of integration and coordination and in turn has a negative impact on export performance (Patel et al., 2018). This is also supported by a cultural distance perspective, as such an expansion into culturally unrelated environments also imbalances internal competencies and external demands (Ruigrok, 2003).

A different emphasis on the various arguments linked with a step from simple, linear relationships to more complex, multi-phased models leads to the more complex relationships. Especially the changing balance of an increase of administrative and coordination costs versus the benefits of learning effects and economies of scale is used to explain and support different empirical findings. As was pointed out above, the current literature has not yet reached a consensus on the relationship between export diversification and export performance. However, it is necessary to draw a fine line between defining export diversification and export scope. Export diversification does not necessarily mean entering a completely new market,

but rather the extent to which companies perform value-adding operations in foreign markets (Brouthers & Hennart, 2007). Empirical research on Polish exporters has shown that the relationship between export scope and export performance can follow an inverted S-shape (Cieślik et al., 2015), supporting both market concentration and market spread strategies. In the long run, however, market spread strategies prove to be more beneficial to a firm's export performance. After a shallow market penetration in many markets in the beginning, a decline in sales across markets might occur due to marketing budgets having to be shared across several markets. However, if a company manages to survive this dangerous adaptation phase, the additional learnings and experiences will allow for them to better adapt and align their newly acquired assets to the demands of the markets, in turn improving their export performance again. This long-term improvement demands a long-term perspective and the resources to stay in the international market, though.

We can quickly summarize that export scope can be an indicator of export performance, given the added benefits of multinationality. After the relationship between operations in multiple markets and export performance has been discussed, it is necessary to take a step back and examine which factors determine the export scope of a firm. McNaughton conducted a study in 2003, which focused on determinants of export scope, especially considering the challenges to existing process models posed by born-global firms (McNaughton, 2003). He examined micro-exporters in Canada and found that even for companies of such limited size, a variety of influences could already be determined. The age of the company had a positive influence on the export scope, likely due to the accumulation of experience and opportunities over time. In the same vein, a small domestic market pushes companies to more heavily lean on international sales to make up for missing domestic opportunities. This is further exemplified by external influences on the market. If the industry sector a company operates in is already characterized by global demand, companies need to create their own transnational networks to participate (Johanson & Mattsson, 2015). The last set of findings is related to the kind of product the company sells. Empirical results show that both proprietary and knowledge-intense products lead to a higher export scope. This can be explained by the quality of innovation, which in turn leads to a unique and protected product, where the elasticity of the product is very low, making switching to competitors' products challenging for customers.

The matter of foreign market expansion strategy is taken up again by Cos et. al (Cos et al., 2019), focusing on Spanish exporters. The study supports firm age and knowledge-intensive products and the linked R&D intensity, confirming other literature (Filipescu et al., 2013), but adds international commitment in the form of foreign direct investment, firm size, and the level of foreign ownership as determinants of increasing export scope. FDIs as the maximum level of international commitment (Cos et al., 2019) are seen as being rooted in various motives, including the reduction of risk and costs when entering other new markets (Boateng & Glaister, 2003), access to important resources and the need to diversify (Boateng et al., 2008). The level of foreign ownership denotes the network of interorganisational ties that help a company accumulate knowledge and experience and use the business group's competitive advantages, allowing for faster and easier entry into different markets. Lastly, firm size is seen as a positive indicator of export scope, as small companies may lack the resources to properly compete in international markets. It is, however, important to point out that even though firm size serves as a determinant (Calof & Beamish, 1995; Gomez-Mejia et al., 2010; Losada Pérez et al., 2007) for export market diversification, even Fortune 500 companies tend to keep their internationalisation localised to reduce the strain of greater coordination costs (Kumar & Singh, 2008; Rugman & Verbeke, 2004).

To draw a quick conclusion on export scope, firms aim to use the export markets they serve as a means to diversify the market risks, having to balance additional costs of coordination and foreignness against added benefits of e.g. access to resources. Although some factors such as company age and a knowledge- and technology-heavy product tend to increase export market scope, the relationship between export market scope and export performance especially considering the aspect of international diversification as a closely linked topic is not clear cut, depending on a variety of internal and external factors.

2.9.2.3. Export commitment

Export commitment has been very shortly mentioned in the discussion regarding export market scope, where FDIs as the highest level of commitment were seen to be a positive determinant of export market scope. Export commitment in short means the willingness of the decision-making personnel in a company to properly allocate adequate resources, e.g. financial or human, to operations and activities related to a singular export market or export in general (Donthu & Kim, 2008). There are, however, two schools of thought regarding the classification of export commitment as either an attitude or a behaviour (Navarro et al., 2010).

The first way depicts commitment as a generally positive disposition that top level management has regarding exporting. Committed exporters are seen to believe in the contributions that export can make to their targets and are therefore willing to commit the necessary resources, making the crucial part of the commitment itself the mental belief rather than the action. In contrast to that, the second stream categorizes export commitment as the behaviour acting on the belief, making the act the crucial part. Export commitment is seen as the allocation of resources, not as a mental and attitudinal issue. However, both schools of thought acknowledge that a comprehensive picture of commitment can only be drawn when both attitude and behaviour are considered. Export commitment therefore consists of both current export commitment, which is defined by the level of resources allocated as described above, and future export commitment, which is defined as the anticipated willingness of top management to allocate the resources in the future. The positive relationship between export commitment and export performance has been extensively studied and empirically tested (Cavusgil & Zou, 1994; Donthu & Kim, 2008; Lages et al., 2008). Export commitment has a significant positive effect on the product adaptation and in turn on export intensity, current export performance and the management satisfaction with said performance in the short term (Lages et al., 2008, p.315). From a theoretical background, this can be explained using the RBV, as commitment is nothing else but the allocation of resources. Added resources allow for a company to tailor their product more to the needs of an international customer base, giving them a distinct competitive advantage. Such an advantage is supported by a more realistic management expectation, as a higher involvement with export operations and processes enables managers to weigh risks and opportunities and adjust expected performance in a more realistic way. The international marketing strategy of a company also positively influences export performance and is itself influenced by export commitment. Missing commitment can lead to management decisions that are not as informed as they should be, including the suboptimal mix of products, poor execution, or wrong promotional timing. Furthermore, such international marketing strategies need to be adapted to the sensitivities of cross-cultural variables, preventing only superficial advertising campaigns from failing as they do not match the target markets' cultural preferences (Cavusgil & Zou, 1994, p. 14).

To provide a quick summary, export commitment has a positive influence on export performance due to higher adaptation and resource allocation, but needs to be understood both from a behavioural and an attitudinal perspective.

As the influence on export performance has been discussed, the question of determinants and antecedents of export commitment needs to be examined. In an early conceptualisation, Kacker (Kacker, 1975, p. 63) proposes that top management philosophies and organizational goals in line with the belief that exporting is generally beneficial to a company are needed for export commitment, arguing in the same attitudinal perspective already discussed above. Cavusgil and Nevin (Cavusgil & Nevin, 1981, p. 115) also focus on internal drivers, but, according to them, export commitment depends on resource availability in the company. Navarro et al. (Navarro et al., 2010) expand on these arguments and propose a trinity of antecedents in export market orientation, specific export capabilities and resources. Export market orientation is defined as the generation of market intelligence regarding export operations, the information flow to decision makers and the design and implementation of actions towards customers, competitors and other factors on the export market based on this information (Navarro et al., 2010, 45). The focus of export market orientation is on information, thereby enabling a company to learn about the specific market situation, generating a dynamic knowledge-based capability to gather, interpret and use more export-related facts more efficiently, in turn assisting in the discovery of market opportunities and value proposal. Based on the added efficiency and identified opportunities, companies can more safely allocate resources to the export market, increasing the export commitment.

Specific export capabilities describe capabilities needed to process and interpret information coming from the export market and include fluency in foreign languages and an education in international business, a distinct knowledge of the idiosyncrasies of the foreign markets such as culture, values and lifestyle, and, lastly, permanent contacts with the exporting market. The knowledge of languages, codes of business conduct and country-specific sets of behaviour enables a company to more efficiently cluster and process information about the needs and preferences of the export market and reduces uncertainty in decision making by further enhancing communication and preventing misunderstandings. Permanent contacts with the exporting market not only ease communication, but also strengthen the firms' export focus.

As already pointed out, the availability of resources to satisfy the demands of an export market is a necessary antecedent to export itself, but regarding export commitment, the resources in question are related to the managerial, human, and organizational capital. Bigger firms tend to possess greater managerial and financial resources and face lower risk in exporting operations, generally having more employees linked to exporting. This higher link to exporting in turn leads to a higher knowledge gain and the generation of additional export opportunities. To add to that, companies focusing on export and therefore in need to allocate a higher number of resources and facing more dire consequences of failure will need to use their allocated resources more efficiently to reach their goals, more likely relying on a separate organisational setup such as an export department. Such a department has two major advantages. The first one is an additional positive input towards managerial attitude and general export-mindedness in the company, the second is that the bundling of export knowledge and export knowledge-heavy operations allows for economies of scale and reduces uncertainty even further.

To draw a quick conclusion on export commitment, it is driven by a managerial mindset that focuses on international operations and needs resources that can be allocated to export. If done correctly, it has a distinctly positive impact on export performance.

To close the theoretical background it is interesting to point out that export commitment is the only dimension where an increase by a company has a solely positive impact on export performance. Export scope and export intensity both have a more complex impact on export performance that depends on a volatile balance between added complexity of operations and added value.

To establish an interim conclusion and to sum up the Chapter of internationalisation, we firstly stuck to the definition of internationalisation as increasing involvement in international operations. A large variety of motivations that can be classified in various ways exists for internationalisation, but the main motivation is economic, stemming from the need to earn money. The biggest determinant for a successful internationalisation is the range of advantages in the host country and the firm's ability to utilize these competitive advantages. In essence, behavioural economics are needed as a basis for internationalisation research, as managers in their function as central decision makers take centre stage. They are driven by their desire to fulfil expectations by using internationalisation as a big strategic decision and

gaining from international success. Internationalisation necessarily starts with foreign market entry, which can come in the form of different entry modes. The choice of entry modes is based on the trade-off between control and resource investment or risk and is influenced by a variety of variables related to the firm, the country, the industry, and the subsidiary. In general, the more control a company wants, the more resources are needed. Starting from the initial entry mode choice, no clear and logical path can be established from initial to further internationalisation. Instead, the process is dominated by constant feedback loops, which makes it dynamic and also includes de- and re-internationalisation phases. This ties in with the fact that internationalisation is not one directional, but rather based on the antecedents of internationalisation decisions in single companies and the reasoning of their decision makers. However, under uncertainty, companies try to diversify the international risk, which can lead to them oversimplifying the complexity of international operations. Export is the easiest form of internationalisation, as it needs the lowest commitment and offers the lowest amount of control. It is easy to enter a foreign market by export, which is defined as transactions across national boundaries. To round off the internationalisation part, dimensions of export have been discussed. Of the many dimensions researched in literature, three measurable ones are essential for this thesis: export intensity, export scope and export commitment.

After both internationalisation in general and export in particular have been discussed in depth, the next step towards the definition of a research gap and a research question is the analysis and establishing of a common understanding regarding firm performance in its different aspects and dimensions.

3. Foundations of export performance

3.1. Concept of firm performance

To establish a common understanding of export performance, a closer look needs to be taken at firm performance in general. Although the general concept of performance as a measurable assessment of success seems straightforward, a clear definition and a mode of measurement have been the topic of academic debate (Taouab & Issor, 2019). Starting in the 1950s, firm performance was originally considered to be the equivalent of organizational efficiency.[1] Productivity, flexibility and interorganizational tensions were chosen as criteria. This view shifted in the 60s and 70s, with the focus then on the firm's ability to exploit their environment to access and use limited resources. Porter (Porter, 1986) introduced the idea that firm performance was linked to the value creation ability of the company. However, nearly the whole body of research defined and expanded on determinants of firm performance, missing the needed definition of firm performance. Such a definition was provided by Lebas and Euske (Lebas & Euske, 2002). According to them, "performance is a set of financial and non-financial indicators that offer information on the level of accomplishment of objectives and results". They further note that for a correct interpretation of performance, the knowledge of the fundamental characteristics of each area of the firm and the ability to quantify the results are necessary. They also describe performance as a dynamic interpretation of results that can differ depending on the people involved in the assessment.

Venkantraman and Ramanujam (Venkatraman & Ramanujam, 1986, 803) offer a different definition of business performance in contrast to overall organizational effectiveness. For them, business performance consists of financial performance, which entails the use of simple outcome-based financial indicators that by assumption reflect fulfilling economic goals on firm level, and operational performance, characterized by non-financial indicators such as market share, product introduction or value added through manufacturing. Business performance is also understood as a subset of organizational effectiveness, which means the degree by which firms achieve their target goals. The three domains are depicted in Figure 10 below.

[1] The task of defining the term of "firm" will not be included in this thesis, but a comprehensive overview can be found in Nightingale's meta analysis (Nightingale, 2008).

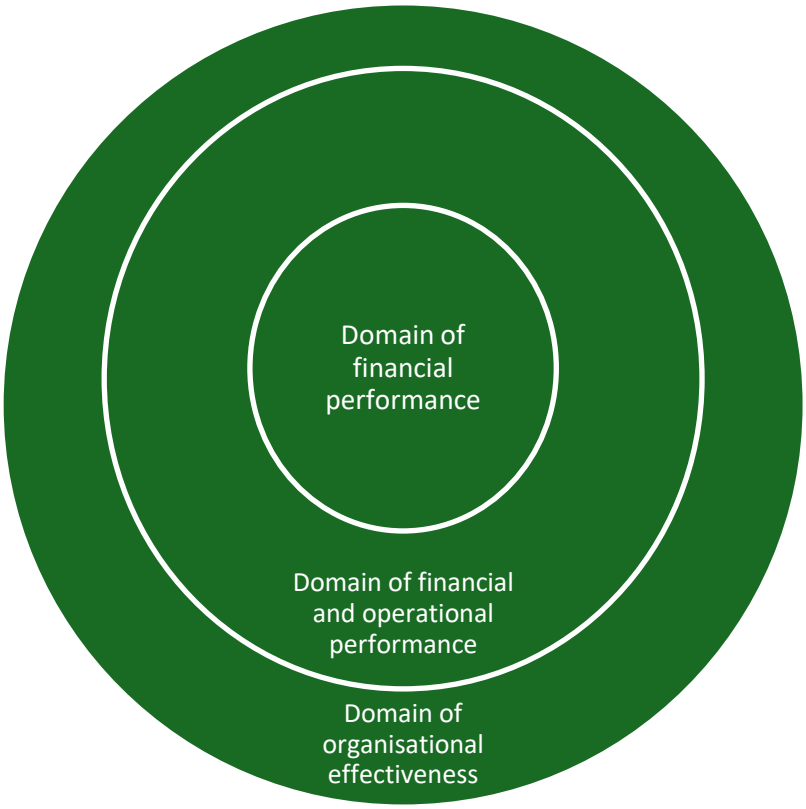


Figure 10 – The domains of performance and organizational effectiveness

Source: Based on Venkatraman & Ramanujam, 1986.

Before diving into the different financial and non-financial aspects of performance, it is important to point out that the results of firm performance measurements and the lessons learned from them can vastly differ depending on the perspective. The desire of researchers to understand factors that cause firms to perform differently can lead them to judge a complex phenomenon by their own limited experience (Siepel & Dejardin, 2020). These different views are not limited to different researchers, but also extend to the diverging emphasis put on by the company and the researcher. Academic research can for the most part only choose its own focal points from outside the research object's sphere of influence, while the company might focus their resources differently, leading to differences in perspective. Another important distinction is that firm performance includes a substantial temporal facet. Performance measurement can only give a limited snapshot and can hardly include influences that occurred before the start of the research. This is linked to the phase the company in question is currently in. Companies that are growing strongly will deliver vastly different data from companies that have already established themselves in their markets, even though they might generally be comparable and on the same path of development. Having quickly pointed out

that it is crucial to keep the different perspectives and timeframes for research in mind in order to correctly interpret the results, we take a closer look at the perspectives and measures that are widely used to assess firm performance.

3.1.1. Performance measures

Following the definition of firm performance established above, the evaluation of the firm's competitiveness is done using microeconomic effectiveness measures, which reflect the position of a firm in a market relative to its competitors and are usually based on the effects of firm operations

These performance measures or indicators can be reliant on financial or non-financial indicators and come in different variants that can be combined into performance measurement systems that can put the focus on nearly every aspect of firm operations. Taticchi et al. have identified over twenty different performance measurement systems depicted in literature in less than 30 years of academic research on the topic (Taticchi et al., 2010, 10). These measurement systems take both financial and non-financial indicators into consideration. In the following, a general differentiation between financial and non-financial performance measurements will be made with a short description of a few key indicators included. Before we go into detail on a few chosen indicators of financial performance, a closer look needs to be taken regarding a distinction made by Venkantraman and Ramanujam, who differentiate between primary and secondary sources within financial and operational indicators. This differentiation leads to ten approaches to performance measurement, four of which are restricted within a particular "cell" (Venkatraman & Ramanujam, 1986, 804). These four approaches are the elicitation of financial data from primary sources, e.g. taking a profit and loss statement in accordance with US GAAP regulations, the use of financial performance data from secondary sources such as aggregate databases, the focus on operational indicators collected from primary sources such as market share data coming directly from the companies, and lastly the collection of information using operational indicators from secondary sources such as the aggregate databases mentioned above. The limitations of such a singular focus are the narrow perspective on business performance and the limited results and the conclusions that can be drawn from the results.

Venkatraman and Ramanujam expand these approaches with "across-cell approaches" that either are a reflection of the broadening conceptualization of business performance across financial and operational indicators or address the convergence of methods across

different levels of data sources. The broader conceptualization of business performance is characterized by multiple performance criteria that are combined for additional information. In contrast to that, the convergence of methods means the combination of primary and secondary data either on a financial or operational level and is statistically proven to increase the validity of the measures due to the correlation on different levels (Venkatraman & Ramanujam, 1986, 806). To round off the approaches, the last two options are the combination of primary financial data with secondary operational data and vice versa. The first option is largely theoretical in nature, as the availability of financial data from a primary source is a likely indicator for the availability of primary operational data. Furthermore, the combination of primary financial and secondary operational data would likely raise issues with regard to comparability and different confounding levels of analysis. The second option of primary operational data and secondary financial indicators is appropriate for a broad conceptualization of business performance with regard to a special research question without the availability of primary financial indicators. After a distinction on a general level has been established, advantages and disadvantages of financial and non-financial measurements will be discussed, before a few chosen measurements are depicted.

3.1.1.1. Financial performance measures

Sticking to the differentiation between primary and secondary data of Venkatraman and Ramanujam, the advantages and disadvantages of certain kinds of measures will now be discussed. To start with primary financial data, the main advantage is the provision of self-reported financial data with less problems with regard to external interpretation or aggregation of data, which can be used at both corporate or strategic business unit level of analysis. The downside of such data is that no full data might be available due to confidentiality issues and if full data is available, it might still be subject to biases. Secondary financial data on the other hand can provide data on financial aspects that might not be available otherwise and can thereby enable analysis within a single business type sample or within an industry. It furthermore makes the use of stock market indicators feasible. On the downside, secondary financial data has limits in comparability due to different accounting policies and cannot be used at the strategic level of different business units due to aggregation. The combination of both primary and secondary financial data enhances the quality of the measurements by giving a further assessment to the validity of the data. However, this added validity is bought with difficulties

in data compatibility, as the two data sets might neither be compatible nor comparable. In the following, a few chosen areas of financial performance measures are described in more detail.

Turnover

Turnover and measures derived from turnover are a simple and easily measurable way to gain information on a firm's financial performance (Siepel & Dejardin, 2020). The necessity to generate liquidity and margin to be able to continue operations makes sales a necessity for companies, as well. Turnover and turnover growth give a quick overview over the position a company holds in the current market and its development in comparison to its competitors. Furthermore, turnover data is generally more easily obtainable than more complicated measures of financial performance. However, turnover can only be a superficial measure, as it does not allow any conclusions regarding the profitability of operations.

Profitability

To expand on turnover as a basic indicator of financial performance, the firm's ability to generate profits from their sales is essential for them. It also shows the ability to recognise and capitalise on opportunities and is an important driver for future growth (Chandler et al., 2009; Coad et al., 2017). Measuring profitability, however, is a matter of discussion. Absolute measures such as EBIT or net profit that can be found in financial statements are limited in their comparability, but financial ratios such as return on sales or return on assets can be hard to calculate due to issues with the availability of the data.

Productivity

In contrast to profitability, which is accounting-dominated, productivity can also be used to measure a firm's performance by indicating the efficiency of their production factor use (Siepel & Dejardin, 2020). It can refer to labour productivity, such as the value added by working hour, or capital productivity. Productivity is closely linked to the types of technology used and to the emphasis they put on labour or capital. A measure of productivity is the total factor productivity which measures the ability of a firm to create output given a finite amount of input. Productivity, however, also depends on data availability, as input and output data might not be available and proxies such deflated firm sales drastically depend on the quality of the deflator.

The contrast between profitability and productivity as a performance measure can also be expressed as the contrast between accounting performance and operational performance. Accounting performance measurements take previously defined and comparable financial Figures and use them to give management the ability to make educated financial decisions (Otley, 2001). Annual earnings reports and international accounting standards give the impression of comparable information of different companies. However, how much of the perceived profit and profitability is related to the operational core of the company instead of accounting policies such as e.g. the accrual or provision of reserves, can be a complex and intransparent topic. Operational performance, on the other hand, refers to the ability of a company to reduce overhead costs, improve the effectiveness of raw material use or distribution capacity, among other things. An improvement in operational performance is the key for companies to increase revenue and profit (Truong et al., 2017). Operational performance would give a more precise overview over the ability of a company to reliably generate profits, but data availability is an issue. On the other hand, official profit data is more easily obtainable, but cannot offer such a comprehensive performance overview.

3.1.1.2. Non-financial performance measures

Although the necessity of operational or non-financial performance measures has already been touched upon above, a more in-depth discussion of the issue is still necessary. Even though financial performance measures can properly reflect organizational effectiveness in a highly synthetic way, the introduction of different approaches to performance in different disciplines makes the insufficient character of solely financial performance measures apparent. From the field of organisation and management, the argument is put forward that the analysis of outcomes and means should also include non-financial factors that are essential to the survival of the organisation or the fulfilment of stakeholder expectations both internal and external (Otta & Gorynia, 1991). Examples of such measures include market share, new product development, product quality, or marketing effectiveness. The strict separation between financial and non-financial measures only works on an immediate basis, as some of the operational variables mentioned have an impact on financial results, leading to mediate changes in financial measures. It is therefore necessary for a more meaningful evaluation of firm performance to include both kinds of measures in the analysis. This also fits into the concept of overall organizational effectiveness shown in Figure 10.

As a last conceptual step before narrowing down the perspective on performance, the point of reference that is used for the evaluation of performance needs to be touched upon. Gorynia (Gorynia, 1995) attempted a summary of performance criteria used in praxeology, economics, management, and organisation theory and distinguished three criteria in efficiency, efficacy, and adequateness. These criteria are defined as follows: efficiency is the way in which assumed goals are realised based on economic fundamentals, efficacy is defined as the extent to which the realisation of predefined goals is the result of certain actions by the firm. Adequateness refers to the correct selection of goals and the subsequent adaptation of the operational methods to the existing conditions. An important notification in this regard is that an entirely efficient and efficacious economic activity cannot lead to high performance without the fulfilment of adequateness. Whether an action is adequate, however, can hardly be objectively judged as contingency factors are prone to interfere. For this thesis, it is assumed that financial and non-financial performance dimensions can be seen as positive if certain thresholds are reached (Cabała, 2007).

To quickly sum up, performance is a measure of a company's success and can use financial and non-financial measures, although both kinds are needed for an in-depth overview over a firm's competitive situation. The field of performance in general, however, is far too broad to try to find any usable consensus and subsequently needs to be narrowed down. To do that, a focus will be put on performance in the context of internationalisation studies to explore the relationship between company success and multinationality.

3.1.2. Performance and multinationality

The relationship between internationalisation and firm performance has been a hotly discussed topic in international business literature for decades, starting with the first studies in the 1970s (Bausch & Krist, 2007). The topic is even more relevant today with an increasingly global focus of a firm's strategic actions and direction (Hitt, Tihanyi, et al., 2006). Early research focused on the added benefits of internationalisation, as was fitting for a world that slowly started the globalisation process in earnest (Allen, 2016, 1), and therefore proposed a very basic linear relationship (Vernon, 1979). This linearity, however, was broken up in the 1980s and 1990s, as the idea of international failures and drawbacks became more prevalent. More recently, the focus has been shifted again to the examination of the benefit-cost-trade-off and its role in the various diverging findings. The proposed models of the relationship vary from

U-shapes to inverted U-shapes and cubic curves. The fact that both non-linearity and curvilinearity have been empirically tested, but not confirmed across the board, further complicates clear conclusions.

Different researchers drew different, inconsistent (Harveston et al., 1999), and contradictory (Geringer et al., 2000) conclusions from the heterogeneity of empirical results, which opens the question whether a single universal relationship between internationalisation and firm performance exists. Even the heterogenous state of research has created various explanations. The first recurrent line of thought falls back on theoretical shortcomings and, based on that, differences in research methodology (Gomes & Ramaswamy, 1999). The second argument was put forward by Sullivan (Sullivan, 1994b) and states that measurement errors distort the estimates of effect sizes and variances and that, due to these errors, empirically testing a theory cannot answer the question of whether the acceptance or rejection of a hypothesis is based on an error or on the adequacy of the underlying theoretical basis. Grant (R. M. Grant, 1987) does not consider mistakes in the theoretical or empirical conduction of the research, but rather states that contradictory findings in the direction and magnitude of multinationality and their influence on performance are due to different moderating variables considered by some researchers, but not by others. These moderating variables include the firm size, the industry and research and development costs and are said to influence the basic relationship and in turn make different studies not comparable.

As the variety and number of research papers that contain moderators for the internationalisation-performance relationship are too large to discuss in depth in the context of this thesis, the focus will be put on a series of meta-analyses that have already shed some light on the current status quo of the research. The first meta-analysis in question was conducted by Bausch and Krist (Bausch & Krist, 2007). They not only tried to answer the question of the overall nature of the relationship between internationalisation and performance, but also included common moderators in the research. They found three theoretical streams based on theories of foreign direct investment, learning theory and the resource-based view of the firm. In theories of foreign direct investment, the aim is to define and explain the conditions that make it beneficial for a firm to operate in foreign markets. This can focus on internal settings to leverage firm specific resources or on external settings to exploit market imperfections. Learning theory defines the benefits of internationalisation as the accumulation of knowledge and operational learning not possible in a domestic context. The gradual improvement of

operations due to higher know-how offers a competitive advantage in contrast to less internationalized firms. In the resource-based view, internationalisation allows companies to generate economic rents through further exploitation of their core resources and opens additional and unique resource pools for the proactive company.

All the three lines of research, however, agree that the costs associated with internationalisation can at least partly offset the gains. This offsetting can be rooted in different theoretical foundations, such as liabilities of foreignness as an operational barrier in the FDI research (Kostova & Zaheer, 1999), limits to the efficiency of organizational arrangements in the internationalisation theory (Cohen & Levinthal, 1990) and an increase in coordination, communication, and motivational problems with increasing heterogeneity in markets in learning theory (Hofstede, 1980). In their meta-analysis, the authors found a small, but still statistically significant relationship between internationalisation and firm performance (Bausch & Krist, 2007). However, the truly crucial assessment they present is that this relationship is heavily reliant on context.

They identified and found empirical support for the hypotheses that the four moderators of research and development intensity, product diversification, firm age, and firm size significantly affect the gains attributable to internationalisation. R&D intensity is understood as the spending for technological research and development in comparison to overall sales. It serves as an indicator of the intangible asset of a firm's technology-based know-how (Caves & Caves, 1996), as well as innovative ability (Harrison et al., 1991) and can therefore be regarded as a main source of competitive advantage (Kaufmann & Schneider, 2004). It is a unique capability which – according to the resource-based view – should be internationally leveraged as long as economically feasible. The assertion is logical that if internationalisation is not a valuable strategy, a higher R&D spending can more efficiently be utilized with increased multinationality. R&D intensity is found to be a positive moderator of the basic relationship, which is in line with the indication provided by most of the previous research. This underlines the competitive advantage that can be gained by any additional effort put into the generation of technology based on know-how and shows that such an advantage can be more successfully exploited by multinational firms (Bausch & Krist, 2007).

Product diversification as an aspect of firm diversity allows a company to diversify risks related to market demand, to better fit to customer needs, and can in general lead to superior results, if the product diversification happens in related fields, as was already postulated by

Bettis and Hall in 1982 (Bettis & Hall, 1982). These superior results can once again be founded on the resource-based view, where the opportunity to leverage a firm's strategic resources enables more efficient operations as long as the operations stay within the strategic scope of the firm. This added benefit of product diversification in an internationalisation context is offset by transaction costs, as well as rising governance costs (Egelhoff, 1982). As the argument regarding related diversification can also be expressed in such a way that unrelated product diversification has a negative impact on performance, Bausch and Krist hypothesise that product diversification has a negative moderating impact on the basic relationship between internationalisation and performance (Bausch & Krist, 2007). This hypothesis is empirically supported, which shows that the ability to moderate complexity is a key success factor for internationalisation. Product diversification significantly interacts with geographic diversification and a firm only has a limited absorptive capacity for complexity (Cohen & Levinthal, 1990). As this limited capacity needs enough managerial skill and effort to utilize the diversification effects and limit the complexity drawbacks, a lower diversification leads to a higher positive impact of internalization on performance.

Firm age in itself is not necessarily linked to added performance through internationalisation but influences the nature of resources that are available to a firm. The longer a firm exists, the more specialized towards current market conditions these resources become to enable the firm to operate in the current market more efficiently, but they become less flexible in the process. In contrast to that, resources of new ventures are less specialised, but can more flexibly be deployed in changing environments (Thornhill & Amit, 2003). This flexibility is an important factor for the internationalisation process and failure to adapt to environmental changes can cause companies to fall behind their competitors (De Carolis, 2003). This flexibility advantage for internationalisation is strongly linked to an entrepreneurial mode of behaviour, as the willingness to take risks and remain proactive and innovative is a key success factor, which is more prevalent in younger firms (Sapienza et al., 2003). The hypothesis that younger firms can more easily adapt to internationalisation changes and that firm age therefore serves as a moderator for the basic relationship, has been empirically supported by the meta-analysis (Bausch & Krist, 2007). The last moderator to be analysed is firm size. Small and large businesses differ in various structural points and processes, but most importantly they differ in the number of resources they have available for the international business expansion (Smith et al., 1988). Firm size can therefore be seen as an indicator of managerial and financial

resource availability and enables firms to look for business opportunities abroad, if sufficient resources are available (Dhanaraj & Beamish, 2003). As small firms often lack these resources, they have a harder time overcoming internationalisation barriers such as the liability of foreignness.

This lack can also lead to managerial constraints, as top management candidates with a higher international experience and sufficient absorptive capacity needed at early stages of internationalisation might not be affordable. The hypothesis of larger firm size leading to a higher international involvement and in turn to a higher firm performance is empirically supported. However, an important aspect to add is related to the combination of the effects of firm size and firm age. As companies grow with age, their effects on internationalisation are reverse to each other. Both a larger firm size and therefore a higher resource availability as well as a younger firm age and therefore a higher resource flexibility are desirable characteristics for a firm in terms of internationalisation and performance. However, effect sizes of younger firms in the meta-analysis were higher than the effect sizes of larger firms. This leads to the conclusion that flexibility both in resources and in mindset is such a key success factor for firms trying to broaden their international operations that added resource availability cannot overcome inflexibility.

While Bausch and Krist found firm size as a moderator for the multinationality-performance relationship, Kirca (Kirca, Roth, et al., 2012) conducted a different meta-analyis where firm size did not serve as a moderator. The issues this research shows are twofold. Firstly, one problem with a meta-analysis is that differences in the context of data collection and data analysis have to be taken into account when interpreting the results. The contexts of the study, the aim and subsequent biases in the research models need to be brought to light in the research design stage of the meta-analysis, as well. Secondly, internationalisation as a concept is too broad and influenced by too many independent factors for the reproduction of results not to be too reliant on the specific population of the database. Even small changes in the environment can shift the results in such a way that comparability with previous studies is an illusion rather than a fact.

However, even though the results concerning the identification of singular moderators and contextual factors differ, the overall tone of the two meta-analyses is nearly identical. They both offer moderating factors that can explain the seemingly contradictory results of previous research. Heterogeneity of both firm level characteristics (Hitt, Bierman, et al., 2006) and from

industry level characteristics (Bowen, 2007) can be the cause of variation in the results. Hitt et al. identify other moderators apart from firm size, with the most intriguing moderator according to them being home country characteristics. They found that companies from advanced economies profit more from internationalisation than companies from developing countries. They firstly base their assumption on country-specific domestic factor endowments such as physical infrastructure, financial and human resources and institutional characteristics such as political, legal and societal influences (Hitt, Tihanyi, et al., 2006). These endowments and characteristics enable companies from advanced economies to gain more from multinationality, as abundant resources and effective institutions make the engagement in international expansion easier. In addition, firms from advanced economies can further expand their competitive advantage by relying on a broader and deeper skillset developed in the home market and honed by more intense rivalry and more sophisticated demand. Apart from a higher availability of resources and capabilities in relation to their current international operations, firms from advanced economies have had the opportunity to operate in foreign markets longer in contrast to firms from developing economies, which have only recently developed the capabilities for international operations. This in turn leads to firms from advanced economies profiting from faster and easier learning, using concepts such as cross-subsidiary knowledge transfer and activity sharing, making them more adaptive to deal with organizational problems.

Another moderator influencing the basic relationship identified in the analysis is the industry firms operate in. Manufacturing firms benefit more from multinationality than service firms. As one might assume that an increase in international operations would yield similar benefits for both kinds of companies, the explanation can be found in the cost of expansion. Service firms suffer from the need for higher initial investment, as they are largely built on intangible resources such as service skills and relational networks (Hitt, Bierman, et al., 2006), and from higher operational costs, as production and consumption of services cannot be split and services need to be more adaptive to customer market needs than manufactured products (Knight, 1999).

Furthermore, service firms by their nature need to have strict control and active management over the extent of their internationalisation, as reaching additional markets through different kinds of intermediaries is far more complex. These factors lead to a higher cost of transferring and exploiting the firm-specific assets across different markets for service firms. Kirca

et al. are among the first researchers to point out that a differentiation can be made between the aspects of performance that internationalisation can positively impact. Multinationality generates larger benefits for revenue generation purposes than for profit maximization, which is explained by the primary role of internationalisation as a revenue generator due to the exploitation of intangible assets across various markets (Kirca, Roth, et al., 2012). This is supported by the finding that a potential creation of returns from international operations is more likely to occur if a company spreads operations across multiple countries instead of focusing on a smaller number of countries or markets. In line with previous research by Allen and Pantzalis (L. Allen & Pantzalis, 1996) as well as Tomas and Eden (Thomas & Eden, 2004), they subsume that a larger breadth of an international operations network enables the manager to more efficiently allocate a higher percentage of a firm's resources to specific foreign operations and to achieve a higher level of economies of scale and scope.

The topic of home country characteristics is taken up and expanded upon by Marano et al. (Marano et al., 2016). According to them, the main gap in the consideration of home country institutions is that they are only considered superficially as either a basis for institutional differences between home and host country or as a dummy or single variable. They aim to change that perception by depicting home country factors as complex, multi-faceted institutional environments that have a major impact on the shape and development of the internationalisation-performance relationship by being the foundation of social structures and the main building block of national business, governance, and innovation systems. This is supported by the influence that home country institutions have on a single firm's ability to succeed internationally by either increasing or decreasing efficiency and uncertainty and thereby determining international transaction cost (Marano et al., 2016). Furthermore, specific inputs from the home country will allow a firm to either rely on these inputs or develop compensating capabilities if they lack them (Cuervo-Cazurra, 2011).

To aid in the conceptual depiction of the moderation, Marano et al. follow the existing distinction by Holmes et al. of a country's institutions into formal and informal (Holmes et al., 2013). The definition of formal institutions considers all regulatory, administrative, economic, and political arrangements that codify their impact on the people, systems and organisations acting in a country through a written set of laws, regulations, and policies. Beyond the ability to set these rules, formal institutions have the hierarchical ability and also the means to enforce them. Formal institutions therefore impact the behaviour and behavioural guidelines

from and for the actors in a society through the establishment of regulatory structures (North, 1990). An example of the possible moderating impact of formal institutions on internationalisation and performance is that firms from countries with a common law system, which provides stronger rights and protection to shareholders and creditors than a civil law system, have a weaker performance in international operations in comparison to their counterparts (J. Li & Yue, 2008). However, this moderator was not supported in the meta-analysis (Marano et al., 2016, 22).

Another example that once again highlights the high complexity and conflicting results of internationalisation research is the impact of the quality of business regulations in the home country. The first argument supported e.g. by Kirca et al. (Kirca, Hult, et al., 2012) and Chacar et al. (Chacar et al., 2010) is based on the reduction of opportunistic behaviour and uncertainty through stronger regulations, which in turn reduces the transaction costs for the company, positively influencing the international performance. Furthermore, lower transaction costs leave more resources in the national economies, which allows companies to further develop and strengthen their ability to profit from international operations. In contrast to this line of thought, a conflicting perspective is offered e.g. by Luo and Tung (Luo & Tung, 2007). They propose that companies with successful home country operations have necessarily developed a stronger set of coping skills suited to also deal with foreign institutional issues in order to survive in the domestic market, which can be translated into a competitive advantage in international markets, as well.

Informal institutions are not codified but constitute a durable set of norms and beliefs that are shared by the members of society and contribute to the shape of societal structures and behaviours (Holmes et al., 2013). One of the essential informal institutions is a country's culture, which consists of interrelated values and stories and is used by people to determine strategies for action. Culture is durable and changes only slowly and therefore provides a solid basis and context for the development of formal institutions. Furthermore, it has an impact on the firm's administrative heritage and with that managers' ability to interpret and react to strategic issues. Culture and more specifically cross-cultural differences can also contribute to communication issues and lowered operational efficiency. An example of the moderating impact of informal institutions is the role of societal trust. Societies with a higher level of societal trust tend to have stronger cooperative norms which in turn enable economic actors to gear their effort more towards collective benefits. In a specific internationalisation context, a more

distinct form of societal trust called generalized trust defined as the extent to which trust is afforded to members of a social category, e.g. a foreign country, is essential (Ertug et al., 2013). A higher level of generalized trust is a direct indicator of a firm's openness to international activities and operations, as well as a higher orientation and willingness to learn (Yamagishi et al., 1998). As proposed by the theoretical argument, the meta-analysis supports the positive moderating impact of generalized trust on the focal relationship (Marano et al., 2016).

Based on the distinction between formal and informal institutions, the moderating influence of home country characteristics is exemplified by the five specific influences of the quality of business regulations, political risk, generalized trust, long term orientation, and uncertainty avoidance (Marano et al., 2016). Political risk is understood in the context of the meta-analysis as the potential for arbitrary and capricious policy-making and therefore as a potential source of uncertainty for firms (Henisz, 2004). The impact of a reduction of political risk, e.g. through the implementation of democratic systems, is debated with the two lines of arguments being similar to the arguments presented for a change in business regulations. Research in the one direction shows that firms that locate their headquarter in a country with stronger political institutions profit more from internationalisation with the main argument that firms with headquarters in countries with weaker political institutions "lack globally redeployable capabilities" that would be needed to successfully compete internationally (Wan & Hoskisson, 2003, 31). Although the competitive advantage of firms based in countries with weaker political institutions is founded on the added flexibility a higher vacuum in power allows them, translating that advantage to different markets proves difficult (Wan & Hoskisson, 2003). In short, home-country political risk is supposed to negatively moderate the basic relationship.

In contrast to that, research in the other direction (Elango & Sethi, 2007; Khanna & Palepu, 1997; Puffer et al., 2010) yields different results. Their main argument is in line with the arguments for the quality of business regulations and proposes that a laxer political structure and a higher political risk both increase the chances of market instabilities and inefficiencies, which forces firms to develop coping strategies in order to successfully operate in the domestic market. These coping mechanisms can be beneficial for a firm to tackle the tasks they face internationally.

To conclude, the moderating impact of home-country political risk proposed is positive. The meta-analysis conducted supports the second argument, implying that the benefits of the acquired skills outweigh the disadvantages of added uncertainty (Marano et al., 2016, 22).

This result is in line with the results for the quality of business regulations, where a higher quality also negatively moderates the I-P-relationship (Marano et al., 2016, 22).

The fourth moderator identified and tested in the meta-analysis is the future orientation of home countries. Future orientation shows how much companies in a country gear their planning and investing activities towards long-term outcomes (Ashkanasy et al., 2004). Such a future orientation is created by social norms that e.g. suggest foregoing immediate spending for saving, value loyalty and commitment (Ouchi, 1981), and benefits a company by capital accumulation and long-term investments instead of short-term spending (Hofstede & Bond, 1988). The future orientation therefore has an impact on the supply and demand of capital in a country as it shows investment options In that county as long-term growth opportunities. This shift of focus from short-term earning to long-term growth enables a firm to extract value more efficiently from foreign investments and operations. This idea is supported by research, as home country future orientation as a positive moderator of the I-P relationship is supported by the meta-analysis (Marano et al., 2016).

The last home country aspect discussed is uncertainty avoidance. This is a measure of how far individuals from a certain cultural background can tolerate and act when faced with uncertain situations. The more individuals want to avoid uncertainty, the more easily they feel threatened by ambiguous situations. To combat this threat, they aim to operate with structures, regulations and with enough expert knowledge to mitigate the risk. This risk mitigation – apart from the binding of resources – also creates cognitive constraints that negatively impact a firm's strategic flexibility (Brinckmann et al., 2010). This can harm a firm's capability to learn from international markets, in the medium and long term negatively affecting their ability to perform internationally. This line of argumentation is supported by the meta-analysis, as home country uncertainty avoidance negatively moderates the internationalisation-performance relationship (Marano et al., 2016, 23).

To draw a quick conclusion, the basic relationship between internationalisation and performance is dominated by early gains offset later by additional costs of added complexity. This relationship is heavily moderated by a series of influences that can yield different results when all environmental factors are tak vcen into consideration.

3.1.3. Entry mode performance

After the general relationship between internationality and performance has been explored, a closer look needs to be taken regarding entry mode performance as a necessary focus shift towards the final discussion regarding export performance. Based on a quite recent meta-analysis on the topic conducted by Zhao and Yang (Zhao et al., 2017), a first overview will be provided of the major theoretical underpinnings for the entry mode performance relationship. Similar to internationalisation performance research in general, the research on entry mode performance comes from a variety of theoretical backgrounds, which include transaction cost economics, the RBV, OLI, institutional theory and organizational learning. These theoretical foundations have already been discussed in the context of this thesis and as the adaptation to entry mode performance is largely the same as the adaptation to internationalisation and international performance in general, the next focus will be put upon detailing a few key aspects characterising the current status of entry mode performance research. Firstly, the existing studies focus mostly on ownership-based entry modes, leaving export and franchising as easier entry modes out. Secondly, in the ownership-based entry modes research, a further focus can be found regarding the equity related ownership structures. The relationship most studied is the impact one entry mode choice has on performance with distinctive results remaining at large, as the resulting relationships remain inconclusive in their nature. Especially the comparison between ownership and non-ownership kinds of entry modes is hard to draw considering the missing research.

The original study stipulating that there is an impact of entry mode choice on performance comes from Brouthers (Brouthers, 2013) and is based on the theoretical foundation of institutional, cultural, and transaction cost. His first postulation is in relation to the entry mode choice, as he notes that firms that perceive the transaction costs as very high will tend to use wholly owned entry modes, while a lower level of cost is also related to joint venture modes. This distinction is then adapted and empirically supported to also include few legal restrictions, and low investment risk. The second postulation is based on the first and states that firms are performing better when they utilize the mode that has been predicted by the transaction cost model from an ex-ante perspective. Brouthers therefore starts to gather information to state that the entry mode choice has an impact on firm performance, although he himself already notes that the limitations of a singular study apply.

If you keep this in mind, there is still a performance effect of entry modes that can be found and is discussed in the meta-analysis mentioned above. Overall, the entry mode effect on firm performance was found to be significant with a positive effect on performance by high-control entry modes. This finding was also supported by a one-way ANOVA comparison, where the entry modes were classified into three categories ranging from high control to low control, following Brouthers and Hennart (Brouthers & Hennart, 2007; Zhao et al., 2017, 670). This finding, however, only holds true at an aggregated level, as further analysis on the level of specific entry modes only revealed a significant positive impact on performance for wholly owned subsidiaries as an entry mode. This result aligns with an empirical study by Haar and Marinescu, who researched entry modes and firm performance in Romania (Haar & Marinescu, 2014). The study found that acquisitions tend to perform better than greenfield investments. This is because acquisitions in sectors with limited competition and economic advantages can help the acquiring company turn an asset into something more valuable, aligning with traditional financial models.

For the specific case of international joint ventures as an entry mode, Larimo and Nguyen (Larimo & Nguyen, 2015) have established a total of twelve moderators which are split into three main categories. The first category includes investment specific factors such as the establishment mode, the ownership mode and uncertainty. The *establishment mode* can be divided into an acquisition mode or a greenfield investment. Acquisition, however, significantly increases the rate of divestment, as unrealistic levels of synergy goals and very high transaction costs are associated with the integration of the foreign unit. This positive influence of greenfield investments on the performance of entry mode internationalisation is also statistically relevant (Larimo & Nguyen, 2015, 57). The *ownership mode* is related to the dominance of one partner versus the other with a dominant partner having a positive influence on stability, decreasing the managerial costs inherent to international joint ventures. This effect is countered by an increased interest and engagement in the joint venture if both partners own roughly similar equity shares. Overall, no direct relationship between the ownership mode and the entry mode performance has been found so far. The last moderator is *target country uncertainty*, which is related to institutional risks such as rapid changes in legislation, which in turn is reflected in an increased perception of problems in short- and long-term planning.

Therefore, the target country uncertainty negatively impacts the basic relationship between performance and the entry mode.

The next category includes parent-firm specific factors. The first one are the *motives for the international joint ventures*. Current academic research identifies three total kinds of motives which are market seeking, efficiency seeking and learning seeking. Market-seeking motives are interests by firms to gain access to local markets, as this enables them to access a skilled labour force that is locally available and establish a long-term position in the market. Learning or knowledge seeking as well as efficiency seeking are harder to achieve or might take longer as the involvement of foreign firms in the partnership is more instrumental. Market-seeking entry motives therefore positively moderate the basic relationship between performance and the entry mode. The second motive is the previous *joint venture experience*. Although early research found that previous joint venture experience does not impact the later success of joint ventures, the decrease of internationalisation costs caused by the management needs that is affected by prior experience has been found to have a positive impact on the joint venture performance. The third parent-firm specific factor is *competitive strategy*. Linked to the work of Porter already discussed in this thesis, the differentiation between cost leadership and differentiated strategy is at the core of the strategic choice to be made. Larimo and Nguyen point out that the limitations of purchasing power by customers in the Baltic states lead to a better impact on performance by a cost leadership strategy (Larimo & Nguyen, 2015, 63). This result, however, cannot be generalized but has to be adopted to the individual market in question. Although some researchers theorize that asymmetries in size and therefore in different power levels between parent and child company lead to mismatches in strategy, organisational culture, and bureaucracy, Larimo and Nguyen empirically find that this effect is more than offset by the managerial, financial, and other resources that larger companies can provide for their international joint ventures (Larimo & Nguyen, 2015, 67).

The last category of moderators includes inter-partner relationship-specific factors and details a total of four moderators. The first one is the *similarity in management styles*, where the empirical result suggests that firms with smaller differences in management styles between the parent and daughter company have a distinctly better performance. The second moderator are the *control mechanisms* used. Firms can employ control in an international joint venture context in four dimensions: mechanisms, extent, focus and timing. The most important

dimensions analysed are mechanisms and focus, with mechanisms including formal and social controls available to firms to protect their interest. The focus dimension can be interpreted broadly over the whole international joint venture or narrowly with control only over key activities. As the level of resources a firm can realistically spend on control mechanisms is limited, the study finds that using the social pressure in a firm as a control mechanism and focus on key activities has the most positive effect on the performance. The third moderator is the *commitment and trust* between the firms participating in the joint venture. A higher level of trust and commitment decreases the level of uncertainty in the decision making and decreases the transaction costs that occur when dealing with the joint venture, therefore positively moderating the performance-joint venture relationship. As a last addition of note, the *age of the joint venture* was not found to have a distinctive moderating effect.

Sticking with the topic of moderators, Hollender et al. (Hollender et al., 2017) further identify international experience and product adaptation. They firstly contend that international experience is a semi-permanent intangible organizational resource, which is scarce to acquire and hard to substitute (Hollender et al., 2017, 252). They argue that such a resource helps overcome the liabilities of smallness and foreignness and mitigate the sensitivity to external challenges in foreign markets that firms face with their initial international ventures (Hollender et al., 2017, 253). This hypothesis is empirically supported. The authors further postulate that the ability to adapt the product to foreign markets can allow firms to take full advantage of their flexibility, overcoming the same challenges and issues mentioned above (Hollender et al., 2017, 255). This hypothesis is also empirically supported. One important item of note is that Hollender et al. limit their analysis to companies that are forced to choose a non-equity mode of entry due to their limited resources. Therefore, the challenges faced, and advantages gained can only be applied to a firm of limited size.

Whether it is on the direct level of entry mode and performance or related to the level of moderators, the initial assessment of the meta-analysis of no conclusive result of the research remains correct, which can also be seen by the large variety of factors included in the literature. One last point to consider is the limited size of the research on the topic so far. If you keep these limitations in mind, there are still a few quick conclusions that can be drawn. Firstly, the choice of entry mode has an impact on the international performance of the firm.

Secondly, internationalisation and entry mode choice both follow the overarching trade-off of risk and control with firms using modes with higher control when the overall risk increases.

3.2. Export performance

Departing from the vast topic of internationalisation and performance in general, we now need to narrow the perspective down considerably. After the focus was firstly refined to go from internationalisation in general to more specific entry mode choice, the next refinement is the focus on a singular kind of international mode of operations. The focus in this thesis will be put on export. As already pointed out in detail above, export is the international mode of operation that needs the least commitment of resources, but also offers the least control over international operations. This first entry mode also makes export the last exit mode with it generally being the latest mode of operation to be discontinued if a company exits a foreign market step by step. Export and export performance research are especially relevant considering increased globalisation of trade, which has multiplied the number of companies that intend to focus on export markets not only as an expansion, but also as a necessity for economic survival (Sousa, 2004).

3.2.1. Export performance measures

In order to get a clear and comprehensive picture on export performance, this Chapter needs to be divided into two subchapters, with the first one examining the different methods to measure export performance, and the second one highlighting factors affecting export performance. One, however, has to keep in mind that export performance research itself, similar to performance and internationalisation research in general, is characterized by divergence and discordance (Chen et al., 2016). This missing consensus is also prevalent in the export performance measurement. Chen et al. (Chen et al., 2016) use a meta-analysis to firstly identify economic measures as the most frequent method of performance measurement. Export profitability is the economic measure used most often and can be defined as the return on export sales. It is a performance indicator that is easy to calculate, easy to understand and easy to interpret, but that can hardly show the importance of export for a firm on its own. The economic measure used second most often is export sales growth, which profits from a dynamic perspective and allows the immediate analysis of the results on a timeline. However, sales measures as performance indicators lack the inherent view on costs and profitability and are therefore limited in their validity regarding overall performance.

International sales as the performance indicator used third most often are static in nature in contrast to international sales growth and can thus only allow a glimpse of a single moment into a company's international performance. International sales as an absolute number, however, and in relation to the total sales of a company, can give an indication of how important export and international operations are for the economic result of the whole company. The last economic measure is export intensity, which has already been discussed above. When examining export performance, it is crucial to keep in mind that export performance decisions are not made in a vacuum, but that the decision makers in the company, in general the export manager, will have certain expectations and goals related to export performance. As these goals and expectations can also be seen as targets that a manager himself might get measured against, the general satisfaction with export performance and export goal achievement in a more specific way defines the two major non-economic measures used to assess performance. They do not gauge comparable economic results, but operate more on a meta level, which, on the one hand, allows a performance indicator more related to the specific situation of the company, but which also includes two downsides. Firstly, the comparability of different companies is rather low, as the expectations and goals for exporting will themselves be hardly comparable. Secondly, the process of goal setting is dependent on the manager and his stance on risk aversion, the level of ambition related to the goals among other things. Even though these factors need to be taken into consideration, non-economic performance measurements allow researchers to take a different perspective and put different emphases when examining the export performance of firms. The last important issue to point out in a very short discussion of the advantages and disadvantages of different export performance measures, is that the information and analytical basis that a singular measure offers is, by its nature, limited. Export performance itself is already a multi-faceted issue and research on the topic should be enhanced by the use of multiple measures to properly capture different aspects.

To draw an intermediate conclusion of the aforementioned points, a dominant measure of export performance has not been established yet, but export performance should always be examined by more than one measure to account for the complexity of the studied phenomenon. It is therefore paramount for this thesis to properly define, operationalize, and argue for the performance measurements used in the quantitative analysis.

3.2.2. Export performance antecedents

After the discussion of export performance measures, an extensive look needs to be taken regarding the factors that influence export performance. In the meta-analysis by Chen et al. (Chen et al., 2016), the authors identified a multitude of antecedents to export performance, including 65 different firm characteristics and 44 market characteristics. A detailed analysis considering all the characteristics discussed in the literature based on the scope and complexity of the influences is therefore neither feasible nor sensible in the context of this thesis. It is more important to show the possibilities of categorizing these antecedents in order to create a common basis of understanding and give a comprehensive overview over the state of academic research on export performance influences. The categorized factors are then to be used to show an export performance research framework, which is intended to be used as a basis for hypothesis building for the quantitative analysis. To firstly sketch broad categories for determinants of export performance, Sousa et al. (Sousa et al., 2008) used the results of an earlier meta-analysis to develop a system of the three categories of internal factors, external factors and moderating variables, which has been expanded on in later research.

3.2.2.1. Internal factors

Internal factors consist of determinants that come from within a company itself and influence export performance either directly or indirectly through the available resources and capabilities. The original internal factors were export marketing strategies, firm characteristics, and management characteristics, with firm capabilities being added at a later stage (Chen et al., 2016; Sousa et al., 2008). The most common and widely discussed internal factor is the **export marketing strategy**, which encapsulates the way a firm markets the product or service internationally and which can be split into various sub-strategies that focus on different aspects of export. The most prominent variants are a product strategy, where competitive advantages are gained from adapting the product optimally to market needs, a pricing strategy, where the advantage comes from cost leadership leading to a lower price, and a promotion strategy, where marketing tactics are intended to raise awareness of and therefore demand for the product.

The current research offers no comprehensive result on the question of whether export marketing strategies should be standardized or adapted for each firm. However, we will follow the main argument proposed by Katsikeas et al. (Katsikeas et al., 2006, 881), which states that export success is heavily reliant on the interplay between export strategies and the marketing

environment and that therefore a generalized optimal strategy cannot be found. One relatively modern aspect to include is that with an increase of environmental regulations the implementation of sustainable marketing strategies can boost export performance, as well (Antonietti & Marzucchi, 2014; Zeriti et al., 2014). One dimension that is neglected in most of the current research is not related to the export marketing strategy itself, but to the way the strategy interacts with other aspects of the firm, most notably strategic implementation effectiveness and strategic fit (Morgan et al., 2012). Strategic implementation effectiveness is a measure to see how efficiently and effectively the process of turning the strategic vision for export marketing into a reality can be achieved, and strategic fit is a concept that mainly states that not only the quality of a strategy itself, but rather its fit to environmental influences, firm structure and capabilities determines success.

Firm characteristics as a basic determinant of export performance are a main influence considered in the literature. The research on this is split along many single factors with 13 influences included in the meta-analysis mentioned (Sousa et al., 2008). The two classic variables studied in this context are export size and export experiences and for both a positive influence on export performance is widely supported (Chen et al., 2016). A third variable established in research in the last 20 years has been the market orientation of a company. Market orientation can be defined as a company culture that is directly responsible for the creation of behaviours necessary for the value creation and therefore for consistent export performance (Narver & Slater, 1990, 21). This includes the collection and dissemination of information to enable operational shifts to better meet the stakeholder needs and demands. A higher export market orientation is widely seen as also positively influencing export performance. A short explanation can be found in the RBV, as the generation and use of valuable market information enables a firm to use its resources more efficiently, thereby gaining a competitive advantage. Recent studies have advanced the research from only considering the direct relationship between firm characteristics and export performance and argue that the aforementioned relationship between export marketing strategy and export performance is heavily influenced by firm characteristics, such as export experience augmenting the positive effect outsourcing can have on export performance. Lipuma et al. (Lipuma et al., 2013) find that due to firms' global operations decisions related to the export marketing strategy are necessarily intertwined with firm characteristics and influence export performance.

Firm capabilities, meaning the skills and knowledge that a firm has accumulated in its organizational processes and routines, are the third internal factor categorized. The main firm capability researched is export market orientation, which in a previous meta-analysis was categorized as a firm characteristic. Market orientation is not inherently linked to skills and knowledge but is rather contingent on them to be successful. It can therefore exist without the proper skills, but it cannot be successful over any meaningful period of time. Apart from market orientation, other new strategic orientations based on technological leadership and a specialised skillset for export are studied. Firm capabilities are a main factor for a company's international behaviour and therefore a key target for firms to pursue.

Management or **managerial characteristics** are the fourth category of internal factors discussed. Management is the driving force behind decision making processes and therefore instrumental for changes in international operations, which will influence export performance. The performance itself is affected by objective variables, but the strategic choices that influence the performance are in turn influenced by managerial perceptions (Brouthers, 2013). The most important management characteristic is the manager's international experience, which directly improves the quality of internationalisation decisions made. Among other managerial characteristics studied, export commitment and support also positively influence the export performance (Sousa et al., 2008). Both are directly linked to the allocation of resources to export operations and offer a root cause for improvement based in the RBV. To counterbalance the role of managerial characteristics and their influence on export performance, a study from Lages et al. (Lages et al., 2008) is worth mentioning. When examining the influence of past performance on the decision-making process for export in the near future, the authors indicate a limited influence of managerial export experience on the export performance, with a firm's export experience being one factor that can balance missing managerial capabilities.

3.2.2.2. External factors

External factors in contrast to internal factors do not rely on resources or capabilities of the firm, but on the environment in which said firm operates (Sousa et al., 2008, 355). The external factors originally established were country-level characteristics split into foreign and domestic market characteristics, later expanded on with industry-level characteristics (Chen et al., 2016, 646). Foreign markets as a separate field of operations offer a distinct mix of opportunities and threats and their characteristics can therefore heavily influence export performance.

Foreign market characteristics have been a split field in literature as well, with a total of eight different characteristics mentioned in the original meta-analysis. If you focus on the characteristics most widely discussed, the legal and political situation takes centre stage once again. As already pointed out in the Chapter on internationalisation and performance, the influence of political uncertainty is negative, as it increases the risk a firm operates under. In contrast to home-country characteristics, however, institutional uncertainty in the host country does not lead to an initial increase in the ability to deal with political and legal uncertainty and can therefore not be leveraged into a competitive advantage for export performance. The second influence discussed is environmental turbulence, the third cultural similarity. Environmental turbulence is related to the volatility, uncertainty and unpredictability of external factors influencing the company (Rego et al., 2022). The rate of unpredictable changes in these external factors has a distinct impact on the measure of uncertainty a firm's management experiences or feels pressured by in the decision-making process. Such an increase in uncertainty has a negative impact on export performance. Cultural similarity as the last foreign market characteristic to be discussed is associated with a shared cultural background and, based on that, a similar interpretation of social cues, which creates an emotional bond for people (Shi & Tang, 2015, 34). As a first positive effect, communication between employees from different companies sharing the same cultural background profits from higher efficiency and a lower risk of misunderstandings and misinterpretations. Secondly, cultural similarity decreases the operational disadvantages that can occur due to the liability of foreignness, which has already been discussed above.

In contrast to foreign market characteristics, **domestic market characteristics** were not considered in such breadth and depth earlier on in research with only two characteristics identified (Sousa et al., 2008). This limited research has since then been somewhat expended, with a total of six domestic market factors found (Chen et al., 2016, 646). The first determinant is **environmental hostility** of the domestic market (Robertson & Chetty, 2000). Environmental hostility can be defined as the threat level a firm faces from the intensity, vigour, and multifacetedness of the competition in the market (Khandwalla, 1976, 23), with the competition being related to e.g. technological, price, or product leadership taking resource shortages for labour and materials into consideration, as well as regulatory or social restrictions and trends. Such a hostile environment could lead to two reactions, as it could either force a company to develop the skills and capabilities necessary to gain the competitive advantages needed to

survive in such a competitive market or force a firm to use a higher percentage of their resources and manpower on the domestic market than would have been needed in another case. As already discussed above, the assessment of these two contradicting effects can lead to different total effects as it is reliant on the individual resources and efforts of a firm.

The next domestic factor is **domestic demand**, which influences a firm's willingness and ability to export (Esteves & Rua, 2015, 1174). High domestic demand will allow companies to work at full capacity to solely meet these domestic demands, limiting the resources a company can allocate to export. Low domestic demand will free up these resources, leading to a higher level of exported goods. Taking the research a step further, Esteves and Rua examined not only the influence of domestic demand on export, but also on export performance. They use the example of the Portuguese economy to find that decreases in domestic demand lead to a negative turn in export performance in the short run, as companies are forced to sell in less profitable international markets to compensate for a loss in domestic demand. This relationship, however, cannot be generalised as applicable in the other direction, as an increase in domestic demand does not necessarily lead to an increase in export performance. The seemingly logical explanation of higher domestic demand allowing a company to focus on the export markets with the highest performance possible does not withstand empirical research and seems too reliant on a firm's ability to capitalize on these opportunities.

The third domestic market characteristic that has an impact on export performance is **export assistance**. Export assistance describes the level of support a company can rely on by e.g. the government to ease entry into and operations in an export market. In the short term, higher export assistance allows firms to make up for missing resources and enables learning and networking in a more controlled environment. In the long term, the same supportive environment can also prevent a company from growing as much as needed to maintain a previously gained competitive advantage, as it can lower the necessity for a competitive edge. Export assistance influences export performance, but the direction is unclear and cannot be generalized.

The fourth characteristic examined is **infrastructure quality**. On a macroeconomic level, improving the infrastructure of a country is a possible way to facilitate more international trade and thereby more export (Portugal-Perez & Wilson, 2012). This effect is stronger for physical infrastructure in general, e.g. roads, and especially if the improvement in infrastructure leads to higher access to transport and communication (Blyde & Iberti, 2014; Francois &

Manchin, 2006). This macroeconomic result can also be adapted to the individual firm. Once again the theoretical roots of the logical application are to be found in the RBV, where a higher level of infrastructure gives companies two main advantages. The first advantage is that operations in the domestic market, not only from a logistical, but also from a risk standpoint, are likely to be easier and will not bind as many resources as before. This leaves more company resources to be invested in operations in export markets, allowing a company to gain a competitive advantage there. Secondly, infrastructural gains in the domestic market also generate added efficiency for operations needed for export markets but geographically located in the domestic market. A good example is the access to added communication technology, which – even though domestic infrastructure – can positively affect the whole company communication. Therefore, infrastructure quality positively influences export performance.

The fifth characteristic, which also has a positive impact on export performance, is **legal quality**, which has already been discussed above in the context of influences on export intensity and the relationship between internationalisation and performance. A higher quality of the legal system includes points such as the reliability, duration and transparency of actions taken by legal institutions and reduces the idiosyncratic risks a company needs to overcome (Laeven & Woodruff, 2007). This reduction of risks leads to a reduction of transaction costs and opportunism as the reliance on law can even offset a lack of access to protection and privileges offered by local informal institutions (Li et al., 2013, 362).

The last characteristic picked up in the meta-analysis is the **institutional environment**. Home-country institutions as a driving force of internationalisation and performance with the diametrically opposed effects of an increase in necessary skills with weak institutions and of a decrease in risk and uncertainty with strong institutions having already been discussed above. In the context of export performance, a weaker institutional environment, especially political instability, can increase the willingness of a firm to export and in turn lead to the development of a special domestic skillset that can also be applied to export markets and increase export performance, as Li et al. found in a study of BRIC companies (Li et al., 2013). On the other hand, Ngo et al. proved for a sample of Vietnamese firms that stability, predictability, and enforceability as domestic institutional attributes have a positive impact on export performance of firms from emerging economies (Ngo et al., 2016). This is also supported by Siddiqui and Singh for the Indian economy (Siddiqui & Singh, 2021). Similarly to the research mentioned above relating to institutions and internationalisation, different studies also lead to

different results concerning export performance, as the effects mentioned above oppose each other with the same logical reasons.

After giving a short overview over the domestic market characteristics and thus closing the topic of country level characteristics, a quick dive into industry-level factors to give an impression of the antecedents impacting export performance (Chen et al., 2016) is needed. The three industry-level factors found in the meta-analysis are **industry adaptation**, **industry concentration** and **technological related variables**. Of those three, only technological related variables in the form of technological development are further touched upon as they improve commitment in the whole industry and can eventually increase the export performance of individual firms.

To draw a conclusion of the meta-analysis, a large variety of factors can influence the export performance of a team. It is therefore paramount for the foundation of a research model to conceptualize the impact of certain factors on export performance. To do so, we work with a conceptual framework developed by Trapczynski et al. (Trąpczyński et al. 2021), who took the previously fragmented and inconsistent research on firm-level exporting and examined it from various viewpoints to establish a framework as a basis for future research. Based on several conceptual approaches and perspectives such as the industry- and resource-based views of the firm, the framework sees export performance as a recurring process in which everchanging antecedents and outcomes create the need for constant re-evaluation and are therefore important perspectives to consider in research (Trąpczyński et al. 2021, 64).

The antecedents are roughly grouped into internal and external factors with internal factors being called exporting firm level antecedents (Trąpczyński et al. 2021, 66). A key component especially in the direction of future research and current research gaps is the evolution of export behaviour from being conceptualised with simple dimensions of strategy towards the more customer-driven business model with its central aspect of how added value is transferred to the customer. Included in the concept alongside the business model is the use of e-commerce as an important aspect of the use of information technology. On the level of export performance, framed as the outcome of a given input and certain antecedents, the authors point out two major gaps to expand on in the current research (Barłożewski & Trąpczyński, 2021, 66). The first gap is the depiction of export performance using only a singular dimension such as export intensity, export sales or export profitability. This firstly misses out on non-financial performance measures such as export performance satisfaction or the

accomplishment of export performance targets, which would include a personal perspective of the decision-making personnel in the company and allow for the inclusion of firm-specific target setting influences such as the aggressive or passive internationalisation strategy set by the management. Secondly, using only one export performance measure leads to the perception of export as a simple internationalisation aspect, underestimating the multi-dimensional nature of the phenomenon. The second gap is related to export exits. While the implications of exit decisions are a somewhat common theme in divestment research, a large gap is still existing regarding the firm performance after an export market exit. This leads to the third level of the concept, the process perspective. In the model, export performance is seen as the result of a continuous process of decisions influenced by earlier export decisions and results and in turn also influencing future export decisions. This process perspective is complemented by adjustments either in the export strategy of the firm or in the total context of internationalisation and the environment a company operates in (Trąpczyński et al. 2021, 67). The role of previous experience has been acknowledged in past research and the dynamic nature of internationalisation in general and export in particular has already been discussed (see Chapter 2). Based on organisational learning, the general connection between previous organisational actions and subsequent strategic choices has already been researched (Santos-Vijande et al., 2012). The current level of research, however, is not specific and nuanced enough, given that the applicability of international experience to a specific export market might be limited and that the direction and type of personal experience and know-how accumulated in a company through its workforce have also been neglected.

To draw a conclusion, export performance research can be categorised in different ways, with a multitude of influences and factors changing the export performance already established. Due to the multiple different dimensions of export performance, further research on the topic not only needs to precisely point out the antecedents considered, and the controlling variables kept constant, but also keep in mind that one-dimensional and purely financial results tend to sell the complexity of the issue short. A proper theoretical foundation is needed that is based on the specific circumstances of the countries, industries and firms involved and that relies on a sharp distinction of a narrow topic through the research question.

After a common understanding of both company performance in general and international and export performance in particular has been established, we will reiterate and expand on a

point made by Trapczynski et al. (Trąpczyński et al. 2021). Their inclusion of a firm's business model as a driving force of export performance will also be used in this thesis, with different aspects of business models serving as factors influencing export performance. In order to properly create a research concept and to establish a firm foundation for the hypotheses later on, an overview over business models and business model research has to be given.

4. Business models – concept, dimensions and relevance for firm internationalisation

To properly round off the theoretical foundations of this thesis, a comprehensive overview over business models in general and both in the context of firm performance and internationalisation and export needs to be provided. This will be achieved by firstly showing the historical development of the business model concept including various definitions and understandings. Afterwards, a clear distinction between business models and related concepts such as strategy will be discussed, before the understanding and components of business models will be defined for the purposes of this thesis. Relating to existing business model research, the state of academic literature both on business models in the context of general company performance and on the business model impact on internationalisation and export will be analysed.

4.1. Business model concepts

Business models as a certain way to conduct business and trade are a concept that has existed in business reality for millennia (D. J. Teece, 2010), but academic interest in the model has been increasing every year since the availability of the Internet as a communication tool around 1995. A frame analysis by Ghaziani and Ventresca (Ghaziani & Ventresca, 2005) found that only 166 articles containing the term “business model” had been published in peer-reviewed journals before 1994, while 1.563 were published in the short time from 1995-2000. This peak of interest is supported by Zott et al (Zott et al., 2011), who found similar numbers up to 2010. In light of such a high interest by academic researchers, business models have been defined and viewed from a myriad of different perspectives. In the meta-analysis by Amit and Zott leading up to 2011, a total of eleven different definitions were noted, with descriptions ranging from a mere statement (Stewart & Zhao, 2000, 290) up to a structural template (Amit & Zott, 2001, 511) or conceptual tool (George & Bock, 2011, 99). Such a high variety of definitions is linked to the adoption of idiosyncratic definitions by individual researchers, which in turn hinder the progress and formation of an overall definition of business models (Zott et al., 2011, 1020). Instead of focusing on the different criteria and the emphasis placed on them by different researchers, we will start going into detail with the topic by following four emerging themes in business model research identified by Amit and Zott that form the

foundation of a business model definition to be created and used later. It is important to understand the context in which business models are used to explain certain phenomena.

The first research stream for business models is related to e-business, which refers to firms conducting their commercial transactions with buyers and suppliers over the Internet (Zott et al., 2011, 1025).

In this line of research, the main interest is the description, organization and conceptualization of a plethora of different business archetypes enabled by Internet technologies. Although mostly descriptive, the literature has defined three aspects of e-commerce business models: firstly the notion of value, secondly financial aspects and thirdly the architecture of the network between the firm and its partners. In this stream of literature, there is therefore no clear distinction between the business model as a value proposition, a revenue model or a network of relationships, as a business model can be all three at once.

The second stream of research on business models focuses on the explanation of the value creation and existence of the competitive advantage of a firm. Through the introduction of Internet technologies, value can be created by the firm and its partners at the same time and scaled up towards a plethora of customers. The concept of a business model as "a set of capabilities that is configured to enable value creation consistent with either economic or social strategic objectives (Seelos & Mair, 2007, 53) is not limited to e-commerce, however, but can be adapted to other industries and firms, as well. The mechanism of value creation in this case is defined beyond the value supplied by a re-configuration of the value chain (E. M. Porter, 1986) or the exploitation of a firm's core competencies, as it includes four potential sources for the additional value, namely novelty, lock in, complementarities and efficiency. These value drivers can also reinforce each other (Zott et al., 2011, 1029). Through the creation of value, a firm's business models represent a source of competitive advantage that can set a standard way of operations new business models aim to beat.

Business models also play an essential part in the explanation of firm performance. Afuah and Tucci propose to regard the business model as the unifying construct that can explain the sources of competitive advantage, giving the definition of "the method by which a firm builds and uses its resources to offer its customer better value and to make money in doing so" (Afuah & Tucci, 2003). This conceptual definition has underlined a number of empirical studies. Zott and Amit linked the business model as an independent variable to firm performance, identifying efficiency and novelty as the key design themes around which a business model

should be shaped (Zott & Amit, 2007). Pazelt et al. found that the impact of firm-specific experience of management team members in founder-based firms on the firm performance is contingent on the business model (Patzelt et al., 2008). In a corresponding vein, Zott and Amit acknowledge a similar effect of the business model as a mediator between product market strategy and firm performance (Zott & Amit, 2008). Specifically, they find that business models can have a positive impact on performance when either a differentiation or cost leadership strategy is coupled with an emphasis on novelty or when the novelty-centred business model is used by early adopters with an early entry into the market.

Business model research has already gone even a step further and also asked the question of how changes in the business model can affect firm performance. In general, business model innovation, the ability to adapt the business model to changing needs and demands of the market, is linked to superior financial performance. Business model innovation can always generate success, no matter which of the following types are emphasised: industry models consider innovation in the supply chain of the industry, revenue models relate to the core concept of revenue and value creation and enterprise models place an emphasis on the role a firm plays in the value chain. One important aspect to point out is that innovation is particularly effective in older companies when the innovative aspects are coupled with external collaboration and partnerships, bringing new and fresh ideas and ways of conducting business into the firm.

The third area drawing heightened attention from researchers is innovation and technology management. Here, the idea is that companies use their business models to commercialize innovative ideas and technologies and that the business model opens a new area of innovation in addition to the traditional innovation subjects of process, product, and organization (Zott et al., 2011, 1032). For the use of business models in the commercialization of ideas, the business model can unlock the value potential embedded in these new technologies that is created by e.g. the implementation and integration of new und updated technology into an existing product. This innovative power is not only shaped by business models, but can also shape them, as technological innovation can change the requirements for the value creation and capture. This is especially important considering that technology per se does not guarantee firm success (Doganova & Eyquem-Renault, 2009), as it does not hold any inherent value (Chesbrough, 2007; Chesbrough & Appleyard, 2007), but needs the specifically designed business model to unlock its commercial potential.

Business model innovation (BMI) as a subject of innovation and thus as a part of the firm's intellectual property (Rappa, 2001) can be a key component of a firm's success as a vehicle for corporate renewal and transformation (Demil & Lecocq, 2010; Hitt et al., 2001; Johnson et al., 2008; Sosna et al., 2010). Such an innovation has a few concepts and antecedents that it can benefit from, but also barriers in a company that need to be overcome. Starting with the beneficial concepts, one has to point out that open innovation and collaborative entrepreneurship have both been researched with regard to BMI. Open innovation as an idea was introduced by Chesbrough (Chesbrough, 2003) and describes a mode of innovation where companies look outside their initial sphere of influence for internal and external sources of ideas to leverage them into a business advancement. Collaborative entrepreneurship (Miles et al., 2006) is a similar concept and bases the creation of economic value on new and jointly generated ideas that emerge from a shared platform for information and knowledge. In both cases, external innovators can be organised as a community where the work is done and shared for free with a high degree of collaboration or as a market where multiple competing concepts are developed with little to no interaction and collaboration between the competitors (Boudreau & Lakhani, 2011). Both these concepts lead to a more open understanding of business models, which in itself can prompt additional innovation as a consequence of the reconfiguration of downstream activities and capabilities. BMI, in the same vein as other forms of innovation, strongly challenges the existing organizational processes and therefore needs certain capabilities and a leadership mentality that enables experimentation and learning (Foss & Saebi, 2017).

After the discussion of these two concepts, there are some more tangible antecedents of BMI to point out. Although research on such antecedents is usually retrospective and case-based instead of predictive and systematically linked to BMI (Foss & Saebi, 2017, 213), some arguments are worth noting. Research by both Doz and Kosonen (Doz & Kosonen, 2010), who see strategic discontinuities and disruptions come along with intense global competition, and by Johnson et al. ((Johnson et al., 2008), who identify competitive pressure and shifts in the competition, aligns with Voelpel et al. (Voelpel et al., 2004), who note major and unpredicTable business environment changes. All three share the common denominator of outside change and pressure that drives a company to adapt the way it operates in a business environment. De Reuver et al. (de Reuver et al., 2009) conducted a longitudinal study of 45 business model change cases and also support the external pressure hypothesis, specifying that in

early phases of business conceptualization and technological development, technological and market drivers are especially important and that decisions about value creation changes are especially fuelled by market developments and external pressure. Apart from pressure generated by environmental changes, BMI is also seen as a reaction to new opportunities such as new technologies (Sabatier et al., 2012), which fits in with the theme of business model research related to e-commerce in general detailed above.

Of the barriers inhibiting business model innovation, an important hindrance can be the rigidity that accompanies established business models (Doz & Kosonen, 2010). This lack of mental flexibility is going hand in hand with a general cognitive inability of managers to properly grasp the value potential of a new business model (Zott et al., 2011, 1033). Another area of rigidity and inertia is the existing configuration of processes and assets. To overcome all these barriers, additional agility must be a target for companies. This additional agility can be achieved by the development of three key meta-capabilities in strategic sensitivity, leadership unity, and resource flexibility (Doz & Kosonen, 2010). The ability of top management to make dynamic decisions and learn actively in order to ease dealing with complex and changing business models is reiterated and taken up on by Smith et al. (Smith et al., 2010). Beyond mere innovation through and in the business model, the business model can also play an important part in large infrastructural changes as it can provide a comprehensive framework for systemic change (Zott et al., 2011).

To round off the short overview on BMI, the effect of BMI on firm performance will briefly be discussed. The assumption that BMI has beneficial consequences for firm performance is the driver for most research done on the topic (Foss & Saebi, 2017), but even with such an incentive the detailed explanation of how BMI can increase firm performance is often lacking. This might be due to the complexity and multitude of firm aspects that BMI has an impact on. BMI can influence the firm's value proposition, segments, value chain, and revenue model, leading to a variety of interdependencies and complex, intertwined links. Accounting for such complicated mechanisms in empirical research is not only difficult, but also increases the qualitative demands made on the database. Even with these challenges in mind, research has found that BMI improves aspects of organizational performance such as competitive advantages, profitability, and innovativeness (de Reuver et al., 2009; George & Bock, 2011; Sabatier et al., 2012).

To draw an interim conclusion, the three topical points generating interest for business model research are e-commerce, value creation and innovation, and in all three areas business models are used to explain economic results based on the central concept of value.

After a short dive into the areas that define and drive business model research, the meta-analysis by de Reuver points out four emerging themes of research: the business model as a new unit of analysis, business models as a holistic, system-level approach to the business operations of firms, the inclusion of firm activities in the conceptualization of business models and last but not least business models as a way to explain the value creation process, not simply the value capturing. Regarding the first theme, the business model seems to cross the gap between more traditional units of analysis such as the firm or the network, as it includes the total way of creating value for the customer beyond the limitations of a more traditional way of thinking. Depending on the researcher and database analysed, the business model is placed closer to either the firm (Casadesus-Masanell & Ricart, 2010) or the network (Tapscott et al., 2000). It is even considered straight in the middle (Amit & Zott, 2001). Secondly, instead of focusing on a particularistic and functional perspective only considering a niche part of firm activities, research on business models generally tries to adopt a holistic and systemic perspective that details not only the operational activities of companies such as the products and services that are provided to address customer needs, the content of "doing business" (Zott et al., 2011, 1037). Thirdly, the concept of a business model is strongly related to the notion of the firm's mostly recurring activities (Teece, 2010). Combining this notion with the first two common themes mentioned, a perspective on business models as a firm-centric, border-crossing system based on activities comes to light, which aligns well with its representational (Morris et al., 2005; Shafer et al., 2005) and systemic nature (Afuah & Tucci, 2003). Lastly, but most importantly, business model research has shifted the emphasis from value capture to value creation with the centrality of value being apparent from the various concepts mostly including value as a theme for business models (Zott et al., 2011).

After the discussion of main themes and areas of research for business models, it is paramount to establish a definition and understanding used in this thesis. For this, I will stick to the concept of value creation and follow Da Silva and Trkman (DaSilva & Trkman, 2014), who discuss the term and its use in contrast to similar concepts such as strategy and business concept which will also be discussed below and for which the research mentioned will be revisited. For this thesis, however, I will follow the given definition and understand the business

model as the total sum of all activities and resources that allow a company to generate value for itself and its customers (DaSilva & Trkman, 2014, 384). With such a definition established, a distinction between business models and similar concepts has to be discussed before business models will be evaluated in the context of internationalisation in general and international and export performance in particular.

4.2. The distinction between business models and other concepts

To lay the foundation of a precise analysis of business model impacts on firm performance as it is intended later in this thesis, it is especially important for such an intangible concept as the business models to be defined in contrast to similar concepts depicting slightly different circumstances. Such a distinction gains even more weight given the imprecision in definitions in current research. To achieve this target, business models will be discussed in contrast to four different models and concepts, namely strategy, business concept, revenue model and economic model.

To start with strategy, the concept is defined by Porter and Gibbs (Porter & Gibbs, 2001, 71) as the fit of all elements of a company's operations. This definition is somewhat similar to the already established definition of a business model and has sparked engaged discussions. Da Silva and Trkman (DaSilva & Trkman, 2014) remark on the following differences. The first argument is that a strategy shapes the development of dynamic capabilities that are intended to improve the efficient response to contingencies and challenges (Ambrosini & Bowman, 2009), which then work as the limits of possible business models in the short term. To put it differently, "business models are reflections of the realized strategy" (Casadesus-Masanell & Ricart, 2010, 204). This idea is expanded upon by Achtenhagen et al. (Achtenhagen et al., 2013, 429), who take the concept of dynamic capabilities a step further by introducing critical capacities as a part of dynamic capabilities enabling a firm to change the business model to uphold a sustainable value creation. They name three types of critical capabilities: the identification and exploration of new business models, a balanced use of available resources and assets and coherence between an active and clear leadership, a strong organizational culture and employee commitment. All these critical capabilities need support by strategic decisions to grow and enable sustainable value creation. In line with this argument, a strategy reflects the long-term target of what a company wants to become while a business model is a depiction of what the company presently is (DaSilva & Trkman, 2014). In contrast to the long-term perspective of strategy, the dynamic capabilities already mentioned are to be considered in

the medium-term and the business model is short-term at best. As a logical consequence, not every company needs to have a strategy and a purposeful development of dynamic capabilities, but every company has a business model. This difference in perspective can even be leveraged into making smarter strategic choices. Lanzolla and Markides (Lanzolla & Markides, 2021) point out that interdependencies in the activities considered in the business model can be used to strengthen the overall position of the firm and that the making of superior strategic choices is contingent on the proper exploitation of information provided by the business model.

To sum up the differences, a short and conclusive overview over the differences between the two concepts can be found in Gorynia et al. (Gorynia et al., 2019). Strategy answers the question of the purpose of the firm and the way it can be achieved and is created in relation to other entities from the company's environment. It refers to the positioning of the company in the market and is dynamic in nature, applying the time dimension and providing a direction for change. In contrast, a business model is a simplified image of the company, concerning only the interior of the enterprise. It focuses on the created economic value and captures the image of the organisation at a given moment, any dynamic aspects coming from business model innovation.

The distinction between business model and business concept is not as sharp as the distinction between business model and strategy. This is due to the ill-defined nature of the business concept, which has been used as a synonym for a business model without any clear distinction (Voelpel et al., 2004). A possible definition of a business concept contains the whole business reality, including the business itself along with strategy and the business model (DaSilva & Trkman, 2014). This very broad definition under which nearly every company operation and activity can be subsumed is in line with other definitions e.g. by Applegate (Applegate, 2001). As long as the concept remains that broad, the potential value for academic research is limited and its progressive disappearance from research is likely.

The last two terms to quickly define and differentiate are the revenue model and the economic model. The revenue model is defined as the specific mode in which a firm generates revenue and includes revenue sources, volume, and their distribution. It is therefore an important part of the business model, which, however, goes above and beyond the mere appropriation of revenue (DaSilva & Trkman, 2014). An economic model is a mathematical description of the determinants of behaviour and the observed outcomes. Strictly speaking, this

economic model is a tool to analyse economic phenomena, but past research has historically used the term “economic model” when meaning what is nowadays understood as the “business model”, e.g. when explaining firm performance. Based on that misunderstanding, the future relevance of an economic model true to the original definition in business model research will be slim.

4.3. Theoretical foundations of business models

Having defined business models and placed some emphasis on their difference to other similar concepts, it is necessary to explore the theoretical foundation of business models and its connection to and interaction with the theoretical foundation of the internationalisation of companies. In this context, two main research perspectives are to be explored with them being the resource-based and network strategic approach (Bołoz, 2018). These concepts will firstly be defined, discussed, and lastly applied to the business model concept described above.

4.3.1. The resource-based view

The RBV was established by Wernerfelt in 1984 (Wernerfelt, 1984) and refined by Barney in 1991 (Barney, 1991). The main aim of the RBV is the explanation of a firm’s sustained competitive advantage (Kraaijenbrink et al., 2010, 351). The source of competitive advantage is the acquisition and control of valuable, rare, inimiTable, and nonsubstituTable resources and capabilities and to have the organization that is able to absorb and apply them. With the focus on resources as the significant component of the firm and the understanding of firms as bundles of resources, the RBV offers an uncomplicated and explicitly reductionist view of companies. Firms are seen as profit-maximizing entities in an unmediated competition led by rational managers operating in a distinctive market. Through a good or lucky estimation of the future value of a resource in comparison to a competitor, a firm can gain an *ex-ante* source of competitive advantage. The subsequent prevention of competitors to gain access to future high-value resources leads to an *ex-post* source of competitive advantage. The RBV has faced quite a bit of criticism over the years, which will shortly be addressed below. Sticking to Kraaijenbrink et al. (Kraaijenbrink et al., 2010), the criticism can be split into eight categories.

Firstly, the RBV is said to have no managerial implications. It indicates that managers should acquire unique resources, but both misses any suggestions on how to acquire them and also exaggerates the extent to which managers can control resource access. This tension, however,

leaves out the key aspiration of the RBV, explaining the competitive advantage of firms instead of delivering operational indications.

Secondly the RBV is set to entail infinite regress, meaning that a second-order capability such as the development of structures to innovate products will eventually surpass the first order capability such as the product innovation itself in value. Such a step can be added ad infinitum, leading firms to search for ever higher order capabilities. This criticism, however, is also not limited to the RBV, as any applied theory is taken further from practical implications if a shift in levels occurs. Furthermore, a perspective taking economic science as a positivistic quest for the ultimate source of competitive advantage misses the key point of strategic management research as a practical operation dealing with uncertainty and open-endedness, thereby robbing itself of the view where the focus can be put on the interaction between capabilities and the learning feedback loop that can offer.

Thirdly, the RBV faces criticism for a lack of applicability, mainly that it can only be applied to large firms with significant market power, as smaller firms' competitive advantages cannot be derived from their static resources. Furthermore, another limitation for the applicability is the focus on firms reaching for competitive advantages, as firms satisfied with their competitive position will not need to strive for unique resources. This criticism does not necessarily shake the RBV in general, but exposes an important limitation. The RBV only holds as long as the environment remains stable. In unpredictable industries where the value of resources drastically changes, other explanations for competitive advantage are needed.

The fourth criticism is related to the achievability of a sustained competitive advantage, as the main counter argument to the RBV is that competitive advantages can only be temporary, as they will be competed away eventually. Such criticism falls short though, as the inclusion of dynamic capabilities allows for the RBV to account for ex post sources of sustained competitive advantage. It is, however, necessary to note that asymmetrical information leading to a different emphasis on resources can only explain the sustained competitive advantage from the ex-ante perspective for a limited time. The RBV can therefore not fully explain competitive advantages ex-ante in a dynamic setting.

The fifth criticism is that the RBV aims to explain not only the difference in rent creation, but also why firms exist. For this explanation to remain relevant, the RBV lacks a detailed analysis regarding the boundaries and internal organization as well as any explanation for incentives or opportunism of management. The lack of sufficient explanation for the aspects of the

RBV that touch the theory of the firm, however, does not constitute any problems for its application with regard to competitive advantages. While the first five points of criticism did not offer any material challenges to the substance of the RBV, the last three issues are harder to handle.

The sixth criticism is substantial and states that the concept of unique resources the RBV is based on is neither necessary nor sufficient to explain sustained competitive advantage. Without the ability to properly apply these resources, no competitive advantage can be gained. This lack in sufficiency combines with a lack in necessity for the RBV. Following Foss and Knudsen (Foss & Knudsen, 2003), an argument can be made that uncertainty and immobility are truly basic conditions responsible for a sustained competitive advantage to arise. The counterargument against this criticism is an adjustment to include the managerial capabilities in the resource bundle of the firm. Although this can lead to a clear distinction between the building, acquisition, and possession of certain capacities, resources, and capabilities and the processes of deploying such capacities, this adjustment only worsens the problem depicted in the seventh criticism.

The seventh criticism is related to the axiomatic definition of resources. The definition of resources originally read "(…) anything which could be thought of as strength or weakness of a given firm" (Wernerfelt, 1984, 172). This overinclusion drives the theory towards tautology and leaves the distinction between resources and capabilities to use these resources unclear. Such an issue could be solved if the RBV itself evolved to explicitly recognize differences among different types of resources such as static, dynamic, tangible, intangible, financial among others.

The eighth and last point of criticism is not related to the definition of a resource, but to the value attributed to that resource. The RBV uses the concept of resource value and the sustained competitive advantage it generates in identical terms, making it tautological. One possible solution of this more fundamental argument is the decoupling of resource acquisition and gaining of the competitive advantage. This could lead to the value of a firm's resources at an earlier time leading to a different value of the competitive advantage later with the competitive advantage being reliant on the non-resource-produced transformation of its earlier resources bundle. To sum up the criticism, a general refinement and extension of the basic definitions in the RBV is necessary.

After the RBV has been touched upon regarding the basic definitions and the criticism it faces, the necessary next step is to apply the theoretical concept established to the business model concept. In that regard, Falencikowski and Nogalski (Falencikowski & Nogalski, 2015) and Bagrij (Bagrij, 2015) both establish groundwork picked up and expanded upon by Bołoz (Bołoz, 2018). They argue that the RBV is strongly related to business models as the business model itself can be viewed as an organizational resource. The business model is unique to the company and the way it is used and combined with other technological, financial, or other resources can lead to a sustained competitive advantage.

Taking the basic building blocks of the RBV, it is important to note that new approaches have been developed to advance the RBV into different categories to better reflect the changing nature of firm understanding. The new approaches that will shortly be touched upon are the dynamic capabilities, the knowledge-based view (KBV) and the relational view.

Dynamic capabilities (Laaksonen & Peltoniemi, 2018) extend the resource-based view by focusing on a firm's ability to adapt to rapidly changing environments through the integration, building, and reconfiguration of internal and external competencies. The central factor of dynamic capabilities lies in the firm's processes that enable adaptation, innovation, and long-term competitive advantage. These processes can be grouped into three primary functions based on their characteristics: sensing opportunities and threats, seizing opportunities, and transforming the organization. This approach underscores the significance of managerial skills and organizational routines in transforming resources to meet new market demands, thereby driving the firm's evolution and growth in both domestic and international markets.

The KBV (Curado & Bontis, 2006) builds on the resource-based view by emphasizing knowledge as the most strategically important resource within a firm. This approach focuses on the integration and application of knowledge to achieve competitive advantage. The central factor of KBV is the management of knowledge, which can be divided into three key functions: knowledge creation, knowledge transfer, and knowledge application. Effective management of these functions enables firms to leverage their collective knowledge, especially tacit knowledge, to outperform competitors. By fostering a culture of continuous learning and investing in knowledge management systems, firms can enhance their strategic positioning and drive growth both domestically and internationally.

The relational view (Dyer et al., 2018) extends the resource-based view by highlighting the value derived from inter-firm relationships and networks. The primary focus of this approach

is on the relationships between entities that generate competitive advantage through collaboration and resource sharing. The central factor of the relational view involves the creation and management of these relationships, which can be categorized into three main functions: establishing relationships, conducting collaborative operations, and integrating shared resources. Through these functions, firms can co-develop unique capabilities, create relational rents, and enhance their competitive edge. This approach emphasizes the importance of trust, social capital, and effective governance in forming successful partnerships, thereby facilitating the firm's growth and transformation in both domestic and international markets.

4.3.2. Network approach

The second management science theory that needs to be discussed is the network approach. The network approach is a behavioural and dynamic model that aims to explain a process of internationalisation and company growth through the relationships a company forms. The determining factor of the network approach are relations between entities operating in the same sector that form a network (Dragun et al., 2020; 128, Fonfara et al., 2009, 13). These relations can be grouped into three functions based on their features, which are the establishment of relations, the carrying out of cooperative operations and the integration of resources. All this leads to the creation of networks between cooperating enterprises that transform the company both on the domestic and foreign market (Dragun et al., 2020, 129). This leads to three possible configurations, which are shown in Figure 11.

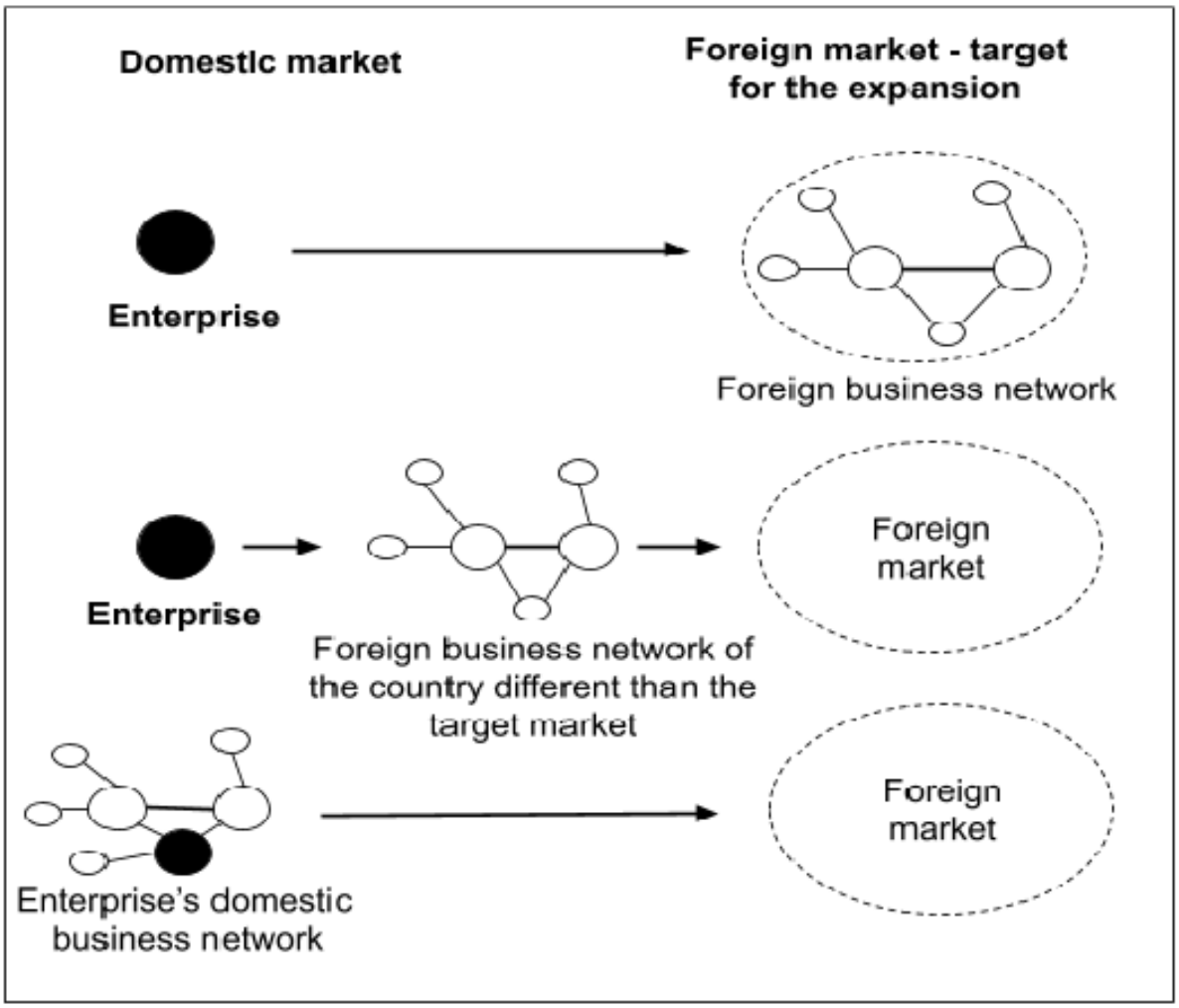


Figure 11 – Possible network configurations between domestic and foreign markets

Source: Dragun et al., 2020, 129.

The first configuration shown depicts a singular enterprise that forms a direct relation with various international partners that themselves form a foreign business network in the target market for the expansion. In contrast to that, the second configuration is defined by the relation of the enterprise with a foreign network that does operate in a country that differs from the target market. The network can serve as an intermediary of sorts and allow their partners on both sides to derive benefits from the indirect cooperation. The third configuration is defined by the network of relations being set up between the enterprise and its domestic partners, allowing the firm to rely on their partner's capabilities more towards the beginning of the internationalisation process, thereby reducing the risk of internationalisation failure and likely increasing the internationalisation rate.

Regardless of the exact configuration of the international network, using the network approach as a company subjects it to a variety of advantages and disadvantages. Firstly, and

most importantly, international cooperation extends the means of operation that a company can use, enabling it to start and maintain activities otherwise impossible to sustain. On the other hand, the means of international cooperation are limited in nature and can only enable the enterprise to a reasonable extent. Secondly, access to a network lets the firm gain mutual support of members operating within the same network, reducing risk and enabling safety mechanisms utilizing problem solving capabilities otherwise not available to the firm. The downside of such a network is the conflict of interests that can occur between different members of the network. This conflict of interests is based on the necessity to generate turnover for each individual member and can hamper cooperation, lessening the potential upside generated from the network. The third point to address is that the membership in a particular group can motivate members to actively participate in the activities of that network if other members lead by example and can in addition serve as a reminder which targets can realistically be met in the network. On the downside, such a membership can also cause the enterprise to develop a dependency on the activities of other enterprises, leading to a lack of individual operations and a lack of individual accountability on the level of the enterprise. The second to last advantage to point out is related to the benefits of individual relations in the network. The presence of enterprises operating in similar environments cannot only serve as a benchmark, but it can also allow the enterprise to learn from it and gain valuable experience, allowing for faster and less risky growth and development. On the downside, the existence of such a network also allows for one individual enterprise to dominate the relations and determine the status of different participants in the network circulation solely with regard to the dominating enterprise. Last but not least, a membership in an enterprise network can lead to the creation of synergy effects, which increase labour efficiency. This, however, is reliant on an uninterrupted flow of communication, which can be difficult due to the multilateral nature of the relations. Any form of interrupted communication or miscommunication can decrease efficiency even below the level it could reach in a singular enterprise.

The main advantages and disadvantages of the network approach are shortly summarized in the Table below.

Table 4 – Advantages and disadvantages of the network approach

Advantage	Disadvantage
Extended means due to international cooperation	Limited means of international cooperation
Mutual support of network members and risk reduction	Limited upside due to potential conflicting interests
Motivation through other members	Lack of individual activity due to dependency on other enterprises
Benchmarking and learning from other enterprises	Individual enterprise dominates the network
Increased efficiencies due to synergies	Decreased efficiency due to difficult communication

Source: Dragun et al., 2020, 130.

Similarly to the resource-based view, the network approach also needs to be adapted and related to business models. The general approach for this adaptation is the focus of network studies on the logic of creating and capturing values from the level of the entire network, which in itself can be understood as a network business metamodel (Bołoz, 2018, 89). In the network approach, the business model as the logical architecture to connect the use of resources to the achievement of business goals is not the only factor influencing the creation, delivery and capture of value, but these steps are also influenced by the skilful use of external resources. One, if not the main external resource in the network approach is the quality of connections between entities in the network, which reflects the ability to use and combine the resources of all the participants. The ability of the network to generate and effectively distribute value is the key component that affects the competitiveness of the network as a whole. This ability is reliant on communication and cooperation within the network to solve issues that arise from the necessary mutual adjustments of individual business models of the partner entities within the network. If the ability leads to the network achieving above average returns and the distribution of these profits is beneficial to an enterprise, such a network can serve as a bridge to foreign markets. This is due to the heightened exposure of singular enterprises to valuable knowledge about new markets, market entries and other beneficial knowledge that is generally hard to acquire. In short, the network approach utilizes the business model in two ways, firstly as one half of value creation and capture and secondly as a firm factor that needs to be adjusted to avoid inefficiencies.

4.4. Business models and internationalisation

After the concept of business models against the backdrop of other terms and possible theoretical underpinnings has been discussed, the next step is to narrow the perspective of business models to the context of internationalisation.

Before a closer look can be taken at the connection between business models and internationalisation, it is important to understand which question the business model can answer: Why do some firms internationalize faster and more successfully than others (Hennart, 2014, 117)? Although born globals and the challenge their existence poses to traditional learnings postulated by the Uppsala model have shortly been mentioned in 2.8.1.1, a deeper look into the conclusions that can be drawn from the born globals with regard to internationalisation and business models needs to be taken. To increase domestic sales, a firm needs to identify potential customers, adapt its marketing mix, provide after-sales services, consider credit options, and manage logistics. Factors such as customer awareness, marketing adaptations, customer support, credit arrangements, and transportation requirements affect the speed of sales growth. Understanding these factors is crucial for effective sales planning (Hennart, 2014, 120). The general assumption is that internationalisation of companies requires more time and incurs higher costs than domestic sales growth. However, Hennart identifies two companies in the Australian software company Atlassian and French hardware provider Logitech that challenge the results of the Uppsala model and entail the following four necessary conditions for born globals that can be subsumed under the business model.

(a) They specialize in selling unique niche products and services sought by dispersed customers worldwide. Distinctiveness is achieved through technology, design, provenance, and delivery methods. Niche products include high-tech machinery, high-design furniture and fashion, high-quality food, and specialized services. Buyers have specific tastes within the niche and possess product knowledge. Unlike mass-market manufacturers, these firms require less market research and advertising since their target customers are already aware of the products' features and ready to purchase.

(b) They sell products or services without the need for significant international marketing adaptations. This allows for rapid scalability when consumers have homogeneous tastes or are able to adapt products themselves.

(c) They utilize low-cost communication and delivery methods. High communication and transportation costs are financial barriers to international expansion. However, firms

leveraging low-cost communication and distribution channels can sell abroad as quickly and affordably as in their home markets and ignore this barrier. The Internet plays a crucial role in cost-effective communication, information dissemination, and digital product distribution.

(d) They are based in countries with small domestic markets for their products or services. Smaller home countries increase the likelihood of being a born global. For instance, a firm in Belgium would have a higher foreign sales ratio than a firm in the United States due to the limited size of the domestic market. This compels companies in smaller countries to target international markets for growth.

There are a few spots of evidence that support the suitability of business models to explain differences in firm internationalisation. Firstly, they can explain fast internationalizing firms in low tech sectors by pointing to international sales niches. This notion is supported by Evers and Wickramasekera and Bamberry (Evers, 2010; Wickramasekera & Bamberry, 2003). Furthermore, Hennart found empirical evidence supporting the positive impact of niche business models on internationalisation (Hennart et al., 2021, 1678). Sticking with these results, the influence a business model has on internationalisation needs to be further evaluated.

4.4.1. Antecedents of international business models

The international business model as the sum of all value creating actions in a firm fits between the antecedents and outcomes of internationalisation and can even in its most basic form differ from the business model used for domestic markets (Child et al., 2017). Adaptations to fit the specific customer needs or business context of the international market might be needed to ensure value creation (Landau et al., 2016). Based on this distinction, factors influencing the initial choice of an international business model and factors influencing international business model innovation and its outcomes must be discussed separately.

4.4.1.1. Factors influencing international business model choice

Starting with factors influencing the initial international business model choice and business model components that aid internationalisation, Child et al. (Child et al., 2017) found three antecedents that influence a firm's choice. The first antecedent is the industry in which a firm operates. The authors establish a system of three classes with each of them having a key set of features regarding innovation, core competitive strengths and key external network sources and assets. The **first class** depicts a traditional market-adaptive business model which is characterised by a high probability of modifying existing products and a low probability of developing new products. This goes along with a low probability that the firm will consider

innovation capability a core competency. The overwhelming majority of companies in this class were clothing companies with 89% and thus companies operating in a traditional manufacturing field around an established product. As a quick conclusion, firms in the first class use their business model to adapt to the market in a traditional way.

The **second class** shares a high level of exploitation and a low level of exploration with the first class, but the average R&D intensity is higher and innovation capability is generally regarded as a possible core competitive strength. Along the same lines, there is a higher probability to view modern technology such as the Internet as a main transaction channel. Firms grouped in class two are majorly software firms without a physical product to distribute. To sum this class up, firms in class two operate as technology exploiters.

The **third class** shifts the focus even more towards R&D intensity and exploitation with exploration and exploitation being weighted equally. This focus leads to the overall innovation capability to be considered as an important core competitive strength. This competitive strength is then likely to be used in a balance of direct exporting and an export via agents or to include licensing as a transactional channel. The class is mostly populated by biotech firms which follow the ambidextrous exploration model. In short, the industry in which a company operates has a direct effect on the combination of capabilities considered important for internationalisation and the mix between changes to an existing product portfolio and the development of new products.

The second antecedent is the level of home economy development. Domestic national context, especially through institutions and the support they can offer, is essential for the international business model choice of a firm (Rugman et al., 2011). The institutional void already discussed above (see Chapter 2.2) that can exist in home countries with less developed economies can also affect the business model choice. It can lead to constraints on the in-house development of innovation (Cuervo-Cazurra et al., 2015) and force a company to adopt a less risky and less costly international business model by e.g. a lower investment into product and process development. This development is reflected in the fact that companies from developing economies are more likely to adopt business model configurations in classes 1 and 2, while firms from developed economies are more likely to adopt class 3. To draw a quick conclusion, the level of home economy development has a direct effect on the innovativeness of the international business model a company can afford to employ.

The third antecedent is the international experience of key decision-makers. Previous international experience can reasonably be assumed to have an impact on the current decision-making processes in the firm. However, the direction of this impact is a matter of debate. On the one hand, the experience is found to lead to more rational and more informed decisions to be made (Hilmersson & Jansson, 2012) and that these business model adaptation decisions are linked to an enhanced knowledge and experience network of the decision makers that allow them to be more in line with the contingencies affecting the firm (Child et al., 2017). On the other hand, an increase in international experience has been found to lessen the reliance of management on systematic market analysis (Collinson & Houlden, 2005) and to increase the risk of overconfidence (Sandoval & Rank, 2022). Independently from the line of argumentation that is followed, an impact of previous international experience on the international business model choice is evident. This is supported by Child et al. (Child et al., 2017), who find that such experience is a significant indicator for firms that differentiate between contrasting international business models in the adoption process. In short, international experience has an effect on initial international business model choice, but the direction of the effect is contingent on the individual decision-maker and the individual firm.

Based on factors that have an impact on initial business model choice, an argument can be made that the results of Child et al. do not actually describe antecedents to a concrete business model choice, but rather factors that positively impact the likelihood of a specific international business model choice well suited for internationalisation. In the same vein, Hennart et al. (Hennart et al., 2021) chose the perspective of born globals and use business model characteristics as an influence on internationalisation speed. Internationalisation speed, e.g. measured by an increase in international sales, is an important indicator of the ability of the firm to adapt their operations to international markets and to translate their firm-specific advantages, if possible. Taking the antecedents to a specific business model choice as a comparison, one can argue that the major result of the factors researched can be described as an increase in the ability of the firm to adapt the business model to needs of an international market as fast as possible, if at all. Whether an antecedent is suited to improve the adaptation speed or the likelihood of a change in general is not crucial for this thesis insofar as any relevant factors positively influencing the business model choice should be quickly touched upon with the detailed mode of influence being of secondary importance. In the study already mentioned above, Hennart et al. take their understanding of a business model as a holistic system

of value creation and use it to contrast two generic business approaches, a mass market model and a niche model. They find that niche business models have a positive impact on the internationalisation speed of firms, but they need to be studied in conjunction with previous international experience of managers, a factor that has already been shown to support international business model adaptation (see Chapter 3.2.1.). Niche business models have a positive impact on internationalisation speed due to a variety of reasons, starting with the product. A niche product is by definition distinctive in technology, design, quality, or provenance and therefore subject to far less intense competition, which grants the niche seller a higher degree of market power (Hagen & Zucchella, 2014; Merrilees & Tiessen, 1999). A higher degree of market power and the missing availability of suitable substitute products lead to the demand for a niche product to be more inelastic with price increases, allowing the firm to shift the costs for internationalisation such as shipping costs to their customer base. The higher degree of market power is also linked to the target market or market segment choice. The focus on a smaller market segment means that firms with a niche business model are bigger fish in a smaller bowl (Zucchella et al., 2016). This limits the availability of potential customers in general and domestic customers specifically, forcing the firm to expand internationally. Such a quick international expansion has the added benefit of limiting the opportunities for competitors to imitate the product by acting with a first mover advantage and is further aided by the nature of niche customers. Niche customers tend to be a homogenous group that shares certain preferences and requirements, which in conjunction with the smaller number tends to facilitate communication and the creation of networks (Fan & Phan, 2007), allowing the seller to save time on identifying and establishing an international customer base on an individual basis.

To draw a quick conclusion, a variety of factors can influence the ability and speed in which firms can adapt their international business model. These factors are not limited to internal firm factors, but also include the industry and economy-wide influences.

4.4.1.2. Factors influencing international business model innovation

After influences on the initial choice of international business models have been discussed, one needs to take a closer look considering the business model as a dynamic and evolving concept that is subject to constant change and re-evaluation. The innovation, evolution and adaptation of international business models is widely seen as an important driver of successful internationalisation (Dunford et al., 2010). In contrast to innovation of a product or a process,

business model innovation relates to dynamic changes in a system of products, services, technology, or information flows beyond the core focus of the firm (Clauss, 2017, 388). These changes can be said to occur naturally in an internationalisation process as firms adjust better to the needs of their international stakeholders (Casadesus-Masanell & Ricart, 2010). In a case study of a company operating in the agriculture industry, Cavallo et al. (Cavallo et al., 2019) identify two dimensions of innovation with value delivery and value creation, which they support with various first-order themes and two second-order themes each. For the value delivery, innovation was achieved through changes in customer experience and engagement, such as an overhaul of the selling process, and through changes in the supply chain, such as an upgrade to packaging suppliers to be compliant with local regulations. The value creation was tackled by adding new features and services to the existing product, such as a different presentation and new packaging, and the addition of new products. A visual indication of the grouping into first and second order themes and aggregated dimensions to better illustrate the logic can be found below in Figure 12.

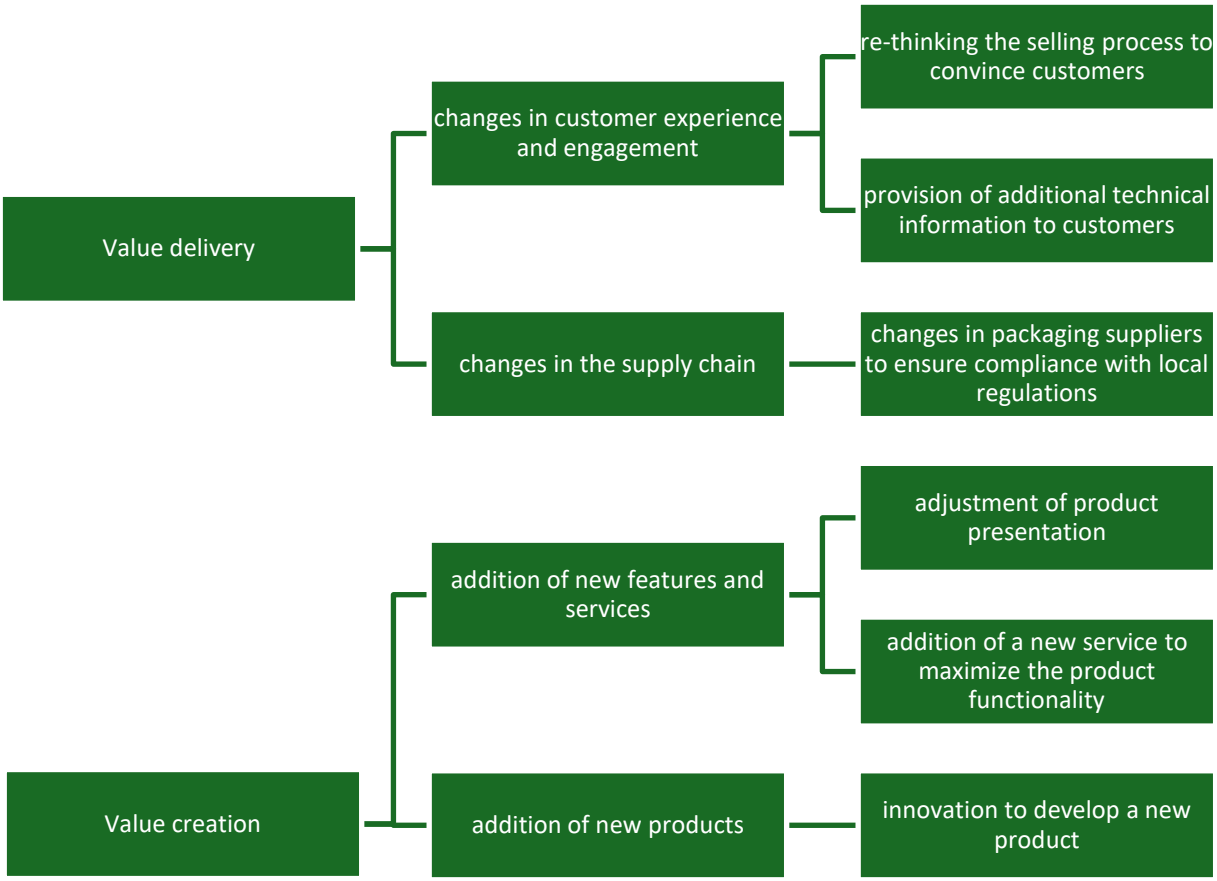


Figure 12 – Dimensions of business model innovation

Source: Cavallo et al., 2019, 206.

These innovative changes provided the cornerstones on a path towards a more niche-targeted product. This niche then allowed the focus on creating and delivering value to a specific international customer base (Cavallo et al., 2019, 212). A business model catering to a niche market is therefore not only a positive antecedent of internationalisation but can also have a positive impact on the internationalisation success and performance of a company when it is a target to be achieved through business model innovation.

Moving from a singular case study to a more comprehensive understanding of business model innovation and internationalisation, Evers et al. (Evers et al., 2023) offer a systematic literature review driven by the increasing relevance of business model innovation as a possibility to sustain international competitiveness (Colovic, 2022; Reuber et al., 2021) due to

developments such as new digital technologies and the global pandemic. The current state of the literature depicted in this review shows a variety of antecedents and outcomes of business model innovation in the context of internationalisation. The antecedents are split into two categories, internal and external. The internal antecedents start on the level of the individual firm with the first antecedent being *managerial cognitive capabilities*. Management cognition has a central influence through the style of leadership and decision-making capabilities, as it might improve the efficiency of internal information processes and thereby the resource allocation related to business model innovation. The second antecedent identified and already touched upon multiple times in this thesis (see e.g. Chapter 3.3.2) is *prior international experience* of top management. Managers with international experience can obtain more resources, make better decisions, and have a higher level of foreign market knowledge and international networks. They are also better at using their experience to reduce psychic distance and perceived uncertainty to improve the success chances of business model innovation.

On a firm level, the consensus about the discussed antecedents is much more heterogenous. The first antecedent of the five discussed in total are the *knowledge and learning capabilities*. International business model innovation can be an iterative and adaptive process based on trial and error, which can benefit from learning mechanisms and overall knowledge capabilities. The underpinning of these organisational capabilities are the individual technical know-how and the experience of employees. A higher degree of these capabilities also increases the success chance of international business model innovation. The second antecedent are *network capabilities*. Related to learning capabilities, a firm's ability to leverage the knowledge and resources externally by using international network partners further increases chances to successfully innovate the international business model. This positive impact is due to a facilitation of coordination and integration of activities both internal and external across the whole value chain, also improving the firm's ability to deliver value. The third antecedent is *organizational agility,* defined as "the capability of an organization to efficiently and effectively redeploy/redirect its resources to value creating and value protecting" (Teece et al., 2016, 17). The key argument is that the ambidextrous ability to shift between the exploration and exploitation of new opportunities works well with the nature of the business model as a dynamic tool evolving over time to ensure the sustaining of a competitive advantage over time. This agility empowers a firm to align their strategy and their interrelated activities to create, capture and deliver value with the demands of international markets. The fourth

internal antecedent at firm level is the *age of the firm at international entry*. Especially important in the topic of born globals already discussed (see Chapter 4.4.), the age of a firm can have an impact on the innovation ability. Although explored only conceptually, the idea is that younger firms tend to be more novel in their approaches to business model innovation, that they are more open to experimentation and reconfiguration to find the best way to adapt the business model to international market needs. The last internal antecedent is the *product strategy*, which can improve innovation ability through either a unique product of superior quality or innovative product development. Both these attributes are key enablers in understanding a target market and therefore the necessary adaptation.

The influence of external factors depicted in the literature review moves along the duality of home and host country factors that have already been discussed in depth in the analysis of internationalisation in general (see Chapter 3.2.). In the context of business model innovation, the complexity of a functional home country business model can increase due to international market challenges such as foreign customer culture, institutional and regulatory factors. This leads to an increased need for adaptation of value creation and delivery. Therefore, host country factors that differ fundamentally from home country factors increase the need for and effect of business model innovation. For home market antecedents, there are some cases of companies exploring their possibilities of business model innovation in the safe environment of their home market only to copy the successful process and replicate it in international markets (Dunford et al., 2010). Overall, the process of business model adaptation is dynamic in nature and therefore constantly influenced by changing factors and antecedents. In contrast to the extensive research on antecedents, the results regarding outcomes of business model innovation in the context of internationalisation are very scarce. The few conclusive results indicate that an increase in business model innovation has a positive impact on international performance (Asemokha et al., 2020) and internationalisation speed (Hennart et al., 2021).

To draw a quick conclusion, the concept of business models needs to be adapted in the context of internationalisation in two ways. Firstly, international markets may demand changes and adaptation to the business model both when first entering a market and while operating in it. Secondly, various factors influencing the business model can also lead to the business model having an effect on the speed of internationalisation and the international performance in total.

To sum up the state of academic literature on business models in the context of this thesis, a business model is understood as a holistic way of creating and delivering value to customers. This is by nature dynamic and influenced by ever changing factors both internal and external. It therefore differs from other concepts such as strategy and is by definition necessary for all companies. In the context of internationalisation, business models and business model characteristics are able to explain the difference in internationalisation speed between different companies and allow a deeper insight into the phenomenon of born globals. Business models can be placed between the antecedents and outcomes of international operations and differences in the international business model can be used to explain different internationalisation speed and gaps in international performance between different firms and groups of firms.

5. Specificity of manufacturing SMEs in B2B markets

After the three areas of internationalisation, firm performance and business models in current academic literature have all been explored in detail, one last adjustment of perspective is needed in order to develop a conceptual framework for empirical research underlying this dissertation. To achieve that, the firm will be evaluated from different perspectives with the aim to develop a set of characteristics that are specific to a certain subset of firms. In order to do so, the focus will firstly be put on firms that operate in a business-to-business (B2B) market. B2B transactions make up nearly half of the yearly global transaction revenue with that percentage rising up to nearly 90% when e-commerce is considered (Lilien, 2016, 2). Although this balance does not properly reflect into academic research – in part due to a lack of easily available reliable data on B2B transactions (Lilien, 2016, 5) – a deeper dive into B2B markets and firms is both possible and necessary. Further characteristics will be extracted from academic research considering industrial firms and SMEs. These characteristics are then going to be evaluated in relation to their impact regarding the overall question of performance and multinationality under the influence of business model characteristics.

5.1. Characteristics of B2B firms

In contrast to the business-to-consumer (B2C) market, a company operating in a B2B market focuses on exchanging products, services, or information with other companies instead of individual customers. They therefore tend to operate in a culture driven by manufacturing or technology instead of marketing and aim their operations at value chain intermediaries (Lilien, 2016, 4). Such an operation could be the purchasing of raw materials along the value chain from a supplier or the provision of consulting services to a customer firm. A classic example from the industrial area in Germany are automotive suppliers, which often operate with only a very limited customer base. The nature of the customer base of B2B firms leads to a few specific characteristics of the interaction in the market. Firstly, the number of potential customers is more limited, with customers having a clearer picture of their needs (Lilien, 2016, 4). Business customers will more often rely on a specific purchasing or procurement department, which will not make spontaneous, irrational, or impulsive buying choices, but will make these decisions based on a specific set of criteria established beforehand. The selling company therefore needs to be able to offer customers solutions that are tailored to their needs more than in a B2C market. This goes hand in hand with a sales force that has sufficient product knowledge to identify the customer needs, either find or develop the correct solution and

present a fitting offer to the customer. This solution also needs to be presented to the customer in such a way that any necessary knowledge to implement and use the product is transferred. This need in combination with the smaller customer group size leads to longer-lasting supplier-customer relationships, where topics such as a personal network and relationships as well as the possibility of technical support and after sales services from the supplier side gain additional relevance. This relevance is also reflected in interlocked production and delivery processes (Lilien, 2016, 4).

This has two direct implications. The effort placed on customer care by the supplier needs to be much higher, especially for more important customers making up a high percentage of overall turnover, with events such as customer days, where e.g. a visit to a factory could be arranged, or regular personal contact through webinars or workshops. Furthermore, the importance of a dedicated and well-trained salesforce that is proficient with both the market needs and the product range is even higher as without such employees selling the correct product and satisfying customer needs becomes much harder. This highly proficient salesforce also needs to interact with a larger variety of stakeholders such as financial analysts, engineers, and manufacturing personnel both from inside and outside of the company (Lilien, 2016, 4).

Although firms operating in B2B markets are in no way a homogenous group, a few distinct characteristics can be found among most of the group. Firstly, there is quite a large gap in the size of the customers, with a few big key accounts likely contributing the majority of turnover in larger individual transactions. Secondly, as the decision-making process for business customers is influenced by various needs in the customer environment, such as a good price for the purchasing manager, efficient use for a production manager, and minimising risk for the safety manager, the B2B buying process will need significantly longer. The longer time between a first contact, a possible contract signing for a sale and the final cash collection needs to be properly accounted for e.g. in the liquidity planning for the supplier.

As the characteristic of the customer in B2B markets is the most essential difference to B2C markets, B2B thinking, and research is especially important in a marketing context, as the adjustment of operations to important customers can prove crucial to a firm's success. In the initial context, John Wanamaker firstly introduced a concept of retailing and conducting business in the early 20th century that focused on a "generous and proper balance between buyer

and seller", placing an emphasis on customer satisfaction (Hadjikhani & LaPlaca, 2013, 295). This early paradigm was taken up late in the 20th century and implemented in a shift from transaction to behavioural economics. Early on in B2B marketing theory, a purely economic view was prevalent with low prices dominating buying decisions. This could have been due to a short-term focus both in academia and in business, especially in America (Jacobs, 1991). This view was challenged after the second World War, when Alderson and Cox (Alderson & Cox, 1948) established an understanding of a company as an organized behavioural system. Then behavioural sciences were used to investigate buyer behaviour in the context of brand choice (Howard & Jagdish, 1969), being adapted to B2B contexts and cumulating in the movement beyond the B2B dyad by implementing relationship and network analysis (Hadjikhani & La-Placa, 2013, 299). This analysis includes the dimensions of economic, behavioural, and technological relationships and is not limited to two parties.

The importance of a communication and marketing strategy that is adjusted to individual customers has been seen as a critical success factor in B2B research, as already described. Eid et al (Eid et al., 2002) focused their research on international marketing via Internet channels across various industries and classified their findings along the five categories of marketing strategy, web site, global, internal, and external factors. Following Chaffy (Chaffey, 2000), they argue that Internet marketing is an integral part of overall business marketing strategies but is subject to substantial differences in the way networks are formed and maintained and should therefore have a separate plan. Success factors related to marketing strategy that contribute to the overall performance of B2B firms are *top management support and commitment*, the *setting of strategic goals*, the *integration of the Internet* with overall marketing strategies, and *collaboration with strategic partners*. Top management support and commitment to the strategy helps promote and speed up the implementation throughout the company, but also requires the allocation of resources. The dedicated setting of strategic goals that need to be in line with business objectives allows for a company to focus resources on the overall marketing goal more efficiently and along clearer target lines. The integration of the Internet with marketing strategy enables a company to better serve the needs of trading partners at either end of the value chain. It is important to note that a complete cannibalisation of analogue marketing and business conduct is highly unlikely. It is regularly the case that companies will profit from providing both Internet and offline services.

Lastly, the collaboration with strategic partners emphasises the importance of such clear partnerships and shows a target for the allocation of resources. The collaboration can only contribute to a company's success if top management develops a dynamic attitude and responsiveness towards the collaboration in order to enable it to bypass the traditional interaction patterns to form virtual value chains. Regarding web site related success factors, only *website design* and *effective website marketing* are discussed. Academic research agrees that an effective website design is necessary to properly bring the points made on the website across to the target audience. A balance between the options of customizability and coherence is needed, with functions increasing engagement and encouraging the formation of personal relationships between customer and supplier adding an additional layer. Furthermore, the website must go beyond being an online order taking interface, but also provide high value additional information that is easy to navigate, filter and understand. Effective website marketing needs to take ways to get customers onto the website into consideration, moving from offline advertisements including the URL to more modern solutions such as the use of QR codes or search engine optimization. When the customer is already on the website, effective marketing comes through engaging content that allows the customer to be confident of finding all necessary information online. The third category are global factors. In order to capitalise on the capabilities of the Internet especially in B2B environments as a facilitator of international sales, Eid et al. (Eid et al., 2002, 116) have identified five factors with them being *the understanding of the foreign market environment, the resources required for working globally, a multilingual website, culture considerations, and the international delivery availability.* An understanding of the foreign market environment is mandatory in order to adapt the communication strategy towards the customers. Without the necessary resources required for coordinated global operations, possible synergies cannot be realised, and the Internet presence of the company cannot act as a catalyst for global information flow. In the same vein, a multilingual website containing at least the two to three languages prevalent among the established customer base is necessary to ensure the same information flow without issues with translation or any need for additional effort from the customer. Superficially similar, but distinctively harder to achieve, are cultural specifics that need to be taken into consideration. The mistake of not considering special cultural guidelines and restrictions can endanger the communication far more than translation issues can, as they are not only more severe in their potential impact on the personal and organizational relationship network mentioned above, but also

harder to avoid beforehand or identify once occurred. Internet communication needs to keep these cultural specifics in mind not when it takes place but starting from a design and concept phase onwards. Last but not least, a company needs to be able to follow up on the promise of international sales and delivery made by an international web presence.

After the description of the factors on a global level, factors related to the internal environment of the company are the next kind of critical component of successful B2B marketing efforts. Here, Eid et al (Eid et al., 2002, 118) identified the four factors of *technological infrastructure, internal culture, the role of the sales force* and the *training programme.* The first factor – the technological infrastructure of the firm – is a vital and necessary component of the international marketing success, as it is a mandatory predecessor of functioning online marketing operations in the first place. The technological infrastructure can be divided into two elements, the first element being the availability and quality of equipment such as computer hardware and servers, but also the connection to public Internet infrastructure. The second element is computer literacy, which is not meant in a broad sense related to overall literacy of using a computer, but instead as the specific knowledge required to set up and operate marketing activities via the Internet. The second factor is the internal culture, which means the extent to which an organization can adapt to new values and processes needed to successfully operate online. The third factor of the sales force role relates to the opportunity to reposition employees working in sales in order to fully utilize the potential to meet customer expectations also in communications. The last factor is a sufficient training programme, as software or hardware capable of driving the marketing effort in the B2B environment via the Internet is hardly useful without employees that have developed the necessary skills to use this.

In a similar vein to internal factors influencing international marketing via Internet channels, there are also external factors which are defined as factors that are related to external partners and the nature of the relationship between them and the operating company (Eid et al., 2002). The factors include *trust*, *security*, a *successful customer-provider relationship* and *easy* and *affordable B2B strategies* that are also *accepted* and *accessible*.

Trust is especially important in dealing with customers over the Internet, as a personal relationship with rare or no face-to-face interaction cannot rely on usual physical proximity. In this context, trust can be divided into trust in the Internet in general, trust in the information

that can be found online and trust in the services and delivery fulfilment behind an Internet order.

The second factor is security, which is defined as Internet and transaction security. The example of transaction security is no longer relevant in 2023, as financial online transactions are the norm rather than the odd occurrence. In the same way, affordable and accepted B2B strategies are linked to affordable Internet access and acceptance of the use of the Internet as the tool to conduct business, both of which factors where a major shift in business operations has taken place in the last 20 years. Nowadays, the question of security is still relevant, but rather in a sense that personal trust as mentioned above is the prevalent security measure.

The points depicted above by Eid et al. need to be properly contextualized as the journal article was published in 2002, when the Internet was not accepted to such a high degree as it is now. Especially the parts for proper training of employees and the correct inclusion of the Internet in the remaining processes are not redundant, as well as overall trust and acceptance are higher, but the perspective needs to be slightly changed. The question is no longer whether the Internet is useful or will be used in general, but rather in which way such an implementation can be done to gain the maximum results and whether companies have developed the capabilities to properly assess their performance influencing possibilities in the context of B2B interactions.

This trend can also be seen in the current landscape of academic literature, as modern trends such as the use of social media within the B2B marketing strategy (Cartwright et al., 2021), sustainable development goals (Voola et al., 2022) or even AI competencies (Mikalef et al., 2023) have been taken up by researchers.

One conclusion to be drawn at this stage regarding the role of Internet technologies for the mediate success of companies serving a majority of B2B customers is not binary in nature, but rather reliant on the individual abilities and context of the firm.

The special relevance of Internet technologies for the overall export performance of the firm will be touched upon in the research model later in this thesis.

Regarding the perspective of internationalisation of B2B firms, Winch (Winch, 2008) finds that internationalisation of service firms is a growing phenomenon, which is driven by the necessity to meet clients' needs and demands across borders and globally. This attraction of

becoming a global player is especially relevant for accounting, management consulting, and advertising firms that can profit from advantages they gain from their relative size (Winch, 2008, 2). Putting the focus on architectural services, he identifies two dimensions that can be adapted to general internationalisation of B2B firms. The first dimension refers to the level of experience and organisational capabilities needed to fulfil the project, while the second dimension is about the level of architectural qualities the client prefers. From these dimensions, Winch establishes two major configurations that enable architectural firms to internationalize. Firstly, he argues that winning architectural competitions combining a high complexity with low quality preference in general leads to a creation of new relationships with potential new customers (Winch, 2008, 9). This strategy can be adapted to an overall approach to service companies' internationalisation, as a highly reactive and flexible approach to market opportunities within a centralised organisational structure that makes the best use of competent employees is not limited to architectural firms, but can be used in different service industries, where B2B customers actively search the market for candidates to e.g. involve in tenders. On the downside, such an approach requires a flexible workforce as the national regulations of the market they will operate in next can hardly be predicted. This leads to young, internationally mobile professionals, where only a limited number can be retained throughout different projects, as employees trade their flexibility and relatively low level of experience for the reputation and opportunity to work for a highly visible international corporation.

The second approach (Winch, 2008, 10) is based on a highly complex product and high customer demands and leads to firms following established customers in their internationalisation. This approach can also be adapted, as it makes sufficient use of an existing business network, where the service needs to be altered to properly fit the needs a customer has on a local basis, but where decentralized organizational structures within a looser overall network allow for a higher adaptation to ensure proper and punctual fulfilment of high customer needs resulting in a higher customer satisfaction and customer retention. Such an approach, however, is more reliant on the retention of highly experienced employees as the specific connection and knowledge relevant to important customers serves as a key resource. This in turn leads to the need to create systems to incentivize and increase employee retention.

To draw a quick conclusion, B2B firms can be characterized by their focus on technology and manufacturing driven by a niche focus on a smaller, more informed customer base. This smaller customer base in turn leads to a higher focus on relationships and networks with

adaptation and customization playing a key role. This need for adaptation takes this conclusion back to a high level of technological knowledge needed and by itself drives the innovation focus.

5.2. Internationalisation of manufacturing firms

After the differences in the characteristics of B2B and B2C firms have been established, the perspective needs to be further sharpened in a different way. While the specificity of B2B and B2C firms pertains to the nature of a firm's customer base, a key factor in the way a firm operates and therefore internationalizes is related to the nature of their product, namely whether they offer a manufactured product or a service. Manufacturing firms need to act according to a different competitive priority, which means the prioritization of tasks according to overall business strategy, mostly influenced by low cost, flexibility, quality, and dependability (Zeng et al., 2008,45), whereas service firms – due to their lack of a physical product to be observed – can be under less scrutiny making a working relationship with their customers more essential for the operation.

The first important difference in the operational processes between the two kinds of companies is connected to the way the company acts in order to develop a market-ready product. Products by their nature are decoupled from their origin meaning that the development, manufacturing, and delivery to the customer of a physical product can be done with minimal contact with the final customer, while services are necessarily co-developed with customers as their provision is reliant on constant interaction between the two partners (Ettlie & Rosenthal, 2011, 287). This difference in nature leads to a few differences in the operations and innovation processes. Service firms are less formalized in the way they develop innovative services as their reliance on interaction calls for a higher flexibility and a more project-driven approach. This higher flexibility goes along with a higher importance of an open and innovative-minded general manager, who is able to quickly and decisively allocate resources and advance innovation processes. Such an allocation can lead to quicker results as new services are generally less tested and can be employed more quickly without the need for any additional customer care (Ettlie & Rosenthal, 2011, 295) In contrast to this, manufacturing firms can formalize their innovative processes much more, placing their focus on a formal R&D unit and linking product and process innovation. New products need extra care as the level of additional knowledge that needs to be transferred to the customer is – although not necessarily higher – further removed from the general level of customer care that the firm needs to practice (Ettlie &

Rosenthal, 2011, 294). Ettlie and Rosenthal find in a quantitative study that innovation as a means to further progress a position in a market is viewed differently, as manufacturing firms see innovation as a matter of "reconciling the past with the future through formal shifts of strategy and structure", while service firms see it as a reconciliation of the present, which is a reflection of the continuous flux service firms are under with regard to a customer base and possible alternative futures (Ettlie & Rosenthal, 2011, 296). Such a focus on innovation and the differences in perspective, however, do not result in a different importance of technology in general and information technology to be specific. The impact of investments into IT yields similar results for service and manufacturing firms and the missing difference is argued with the same need for interaction with the customer (Grant & Yeo, 2018, 132) Although an overall similarity in the necessity for customer interaction cannot be denied, the positive impact of IT due to improvements in productivity and reduction of cost is linked to certain necessary antecedents. The theoretical basis of the positive IT impact can once again be found in the RBV, although IT as a singular resource in itself does not generate any advantages, but relies on underlying resources such as human capital, organisational culture and other intangible resources in order to utilize the installed IT capabilities properly (Sohal et al., 2001, 32). More innovative and flexible organisational design can help with the IT integration and enlarge the possible competitive advantage that can be gained.

In general, manufacturing firms tend to be above a certain minimal size (Sohal et al., 2001, 34), while the specific needs of a manufacturing firm in terms of IT utilization will manifest themselves in a different kind of software used such as customer-aided design, customer-aided manufacturing, and customer-aided engineering (Sohal et al., 2001, 44). It is, however, important to point out that simply using this kind of software will not automatically ensure any kind of operational and competitive advantage, but that the IT utilisation needs to be matched with the organisational needs. Sohal et al. have identified five factors in a questionnaire with manufacturing companies that are most crucial for IT success with them being system implementation, use of the complete software package, quality of IT staff, software support and training of the users.

To draw a short interim conclusion, manufacturing firms are more formal entities that have a product development and innovation ability mostly independent from their customer base. This characteristic allows them to position themselves more accurately in a product niche. This product niche also benefits from a technological leadership (Chetty, 1999, 129). Furthermore,

manufacturing firms need to adjust the use of IT to their organisational needs to properly benefit from it. In contrast to manufacturing firms, service firms are more flexible entities that develop and innovate in more regular contact with their network, limiting the potential benefits of a niche offering and a technological leadership. Although service firms also benefit from IT, their benefit is not as reliant on the fine-tuning to their organisational needs.

5.3. Internationalisation of small and medium manufacturing firms

After the differences between service and manufacturing firms have been quickly touched upon, the focus will be shifted towards manufacturing firms with particular attention being given to small- and medium-sized firms. With the overall field of interest of this thesis being the internationalisation and effect on performance of firms, such a question gains added weight and interest once the resources and capabilities of the firms in question are limited. To focus on a few international juggernauts that already rely on well-established international networks and are used to operating globally would diminish the weight of the answers gained. The internationalisation of SMEs garners additional interest due to their focus on and success in niche markets, avoiding the competition dominated by big firms benefitting from economies of scale and scope (Zucchella & Palamara, 2007, 64). This strategic choice, however, is not purely defensive and in search of protected markets, but also suggests a certain level of entrepreneurial proactivity and innovativeness as these market niches need to be shaped rather than discovered.

As previously stated, one of the main differences between SMEs and larger firms in terms of internationalisation is the availability of resources, which leads to companies trying to internationalize to take various strategies, one of which is the use of resources that are controlled by other firms (Chetty & Blankenburg Holm, 2000, 80). In general, SMEs are faced with constant pressure to explore new markets and to diversify their customer portfolio to ward off the threat of decreasing domestic demand. Such a diversification however is risky as it binds a substantial amount of the limited resources of the firm (Chetty & Blankenburg Holm, 2000, 87). Apart from the lack of financial and knowledge resources, a lack of economies of scale and a general aversion to risk taking are the two other constraints SMEs face in their internationalisation struggle (Zeng et al., 2008, 45). To overcome such constraints, the main avenues to explore are the development of alliances and collaborative partnerships to form alliances and the use of technology.

The use of collaborative networks aims to expand limited capabilities, as the pooling of resources can be done with several actors in the business network (Chetty & Blankenburg Holm, 2000, 80). This readjustment in the allocation of available resources can help to alleviate the pressure of operational bottlenecks or even prevent them from forming in the first place. Such a relationship can be even more important than certain characteristics of the product itself, especially in the context of Asian markets (Chetty & Blankenburg Holm, 2000, 86). Furthermore, these relationships in itself can already serve as an entryway into new markets and new customer bases. It is, however, important to point out that the increased demand for technological innovation and overall higher complexity of products has also increased the complexity of relationships and the demands all members of business networks need to fulfil (Zeng et al., 2008, 45). Apart from the resources made available in such networks, they can also aid the company in developing necessary organisational and managerial skills such as an international mindset and improving the internal capabilities needed to internationalize, enabling the firm to more firmly rely on their own abilities (Osei-Bonsu, 2014, 179).

High technology products as the result of a generally higher ability to innovate on a technological basis are another way for SMEs to overcome the challenges posed to them by their limited size. They appeal to target customers throughout different markets and can achieve a higher export intensity (Chetty & Blankenburg Holm, 2000, 85). They thereby allow operations to be more likely to be expanded in a different range of markets, shifting the focus of the firm more towards a niche product. Such a focus can also be feasible if the missing economies of scale make a competition on a cost level impossible, but it still needs resources and know-how (Chetty, 1999, 127).

To draw an interim conclusion, SMEs need to adapt their internationalisation strategy to match their limited resources. To achieve that, trying to create and fill a market niche is a possible solution (Stachowski, 2012, 100). The competitive advantage needed to sustain the niche can be maintained through the use of a business network and by leveraging the technological knowledge to better appeal to an international customer base.

Although the current research on the internationalisation of SMEs already offers a quite comprehensive overview of the processes involved, a deeper or rather different perspective is still called for. Especially the impact of de-internationalisation and the use of online resources remain a distinct hole in the research (Ribau et al., 2018, 10).

Adding the characteristics of B2B-firms, namely the focus on technology and manufacturing as well as a niche focus on a smaller, more informed customer base, plus the characteristics of manufacturing firms, especially the independent product development and innovation ability, to the characteristics of SMEs, one gets a quite comprehensive set of key firm characteristics that will form the basis of the research in this thesis.

To give a distinct list, these characteristics are a limited size of the firm, the focus on a niche customer base of business customers that can be diversified and expanded on a global scale, a high technological level and product complexity and an established network of international partners as well as the need to use the capabilities of the Internet as a further network driver.

5.4. Hidden champions as an international phenomenon

Although the focus of the argumentation presented in this thesis has now shifted away from the large, international companies, the group of SMEs is still very relevant as an actor in the economic landscape especially in Europe and Germany. It is important to point out that one of the key economic drivers for Germany, the so-called “Mittelstand”, does not only consist of SMEs, which are defined by the German government as having a total turnover of up to 50 Mio € and less than 500 employees but also of family-owned companies above that size. The “Mittelstand” is responsible for 207 billion € export turnover, creating 60% of the total net value added and employing more than 54% of the total employees in Germany (Der Mittelstand, 2023). Furthermore, more than 1,300 of 2,700 global hidden champions originate from the “Mittelstand”. Both the overall economic and export situation of Germany and the concept of hidden champions will be expanded on further. For the moment, the main takeaway is the fact that the theoretical foundations mentioned above that lead to a narrowing of the perspective towards manufacturing SMEs also meet a practical field of interest essential to the economic development of an established Western economy.

To go a step further into the definition of a group of entities that successfully embody the characteristics mentioned above, a closer look needs to be taken regarding the so-called hidden champions.

Hermann Simon established the concept of hidden champions (Simon, 1990) as a phenomenon to be researched in 1990 and the concept has since been expanded and adjusted to match the reality of a world dominated by globalisation. Simon himself has summarized the characteristics and teachings of hidden champions as follows (Simon, 2012, 11-13): Hidden champions are not well known but have leading market positions achieved through leading

performance and products. This leading market position is not necessarily linked to the biggest market share, but also to the ability to set standards and benchmarks in the environment of customers, competitors, and markets. Their aims target growth and the maintenance of the leadership positions, but the focus and depth needed to create technological leadership and market-dominating solutions also lead to the growth generally being more continuous and sTable instead of being characterized by larger leaps. The capabilities needed to be a hidden champion and to achieve this growth are kept closely guarded and remain purely internal but tend to focus on a specific niche of production or product. That focus also translates to a possible expansion in the case of market saturation as such an expansion will be a “soft” diversification into a market that is closely related to the original saturated market. Such a focus also leads to a relatively lean administrative overhead which limits complexity of operations.

Of the internal capabilities that make up the competitive advantages two are pointed out by Simon to be special even in comparison to competitors. The first capability is the direct and close contact to customers that is directly responsible for the creation and maintenance of reliable and resilient business networks. This networking is supported by the tendency to sell the product using their own subsidiaries instead of third parties even in foreign markets. Furthermore, even the diversification into new markets is often closely followed by an organizational split that sections the different markets into singular divisions ensuring a clear contact and interaction definition for the customers. This clear contact can be traced up to top management, where the closeness to customers is up to five times higher than in large companies. Lastly, hidden champions utilise their competencies not only to provide the best product to their customer but have also expanded along the value chain to ensure that the customer is also optimally supplied in terms of consultancy, after-sales services, and integration of the product into existing systems.

The second key capability is the ability and willingness to innovate on a technical level to make sure that the essential utmost quality of the product can be upheld. This capability is firstly rooted in the organizational structure, where special care is taken to keep employee retention rates and training levels high, and supported by the nature of their management, which tends to have longer tenure and be more familiar with the product. Secondly, hidden champions not only invest more money into research and development with the rate being up to 100% higher than other German industrial manufacturers, but also generate five times as many patents per employee with each patent only costing 20% on average. The need to

keep up and drive technological advances and the ever-changing demands and needs of a relatively constant and well-informed customer base are the main drivers for this innovation.

To draw a short conclusion, hidden champions generally operate as one-market and one-product companies that are highly profitable and highly successful on the international stage. Their high equity level and low need for external financing allow them a higher level of operational independence where they can more easily capitalize on their strong experience and strong competitive advantages.

In the context of hidden champions operating on a global stage, the concept of changing internationalisation strategies towards a more globalized view that Meyer called "globalfocusing" offers a valid additional perspective on the processes that firms might employ and reasonings that the firms might have (Meyer, 2006). In his article, the author postulates that the focus on a singular or the reduction to only a few products in narrower niche markets is a result of the changes in the competitive terrain used by companies to develop international corporate strategies. The basic observation is that companies can go one of two ways in reaching for a niche market position they deem necessary when competing on a global scale, a scale and competition that they can hardly avoid. Companies can either try to divest and reduce their product portfolio to focus more on existing core competencies and markets or accelerate their international expansion by defining the global niche markets in question beforehand. Both ways are based in the RBV, as access to global resources shifts the relative importance of local resources and capabilities that can now be expanded with the use of global supply and supply chains. The issue of resources coming in indivisible bundles that are difficult to transfer across different markets and divisions also means that the application of existing resources to a task tends to start a pattern that calls for their re-deployment in a similar fashion. Such a redeployment is further driven by the need to be efficient and optimized to better face competitive and cost pressure in global operations. Therefore, the search for an optimized niche in a core market is driven by the company's aim to increase the marginal utility they can generate from their resources. It has already been depicted that hidden champions are characterized by their technological prowess and high networking abilities, but that they also tend to focus on singular markets and products, therefore optimizing the use of their resources and having already established operations along the lines of the globalfocusing called for by Meyer, which can offer an additional perspective to explain the success of hidden champions.

5.5. International operations from a German perspective

5.5.1. Overall classification

The topics of hidden champions and global focussing discussed above can be used to refine the perspective already depicted. A strong result both in terms of performance and technological leadership in a niche market in terms of a complex product family that has been expanded towards a global scale underlines the characteristics shown above. If you consider a set of companies that embody such characteristics, it is suitable to revisit the specific circumstances provided by the German economy. The relevance of the German „Mittelstand“ has already been touched upon, but a more in-depth view is needed in order to assess whether data considering Germany is suitable to conduct a more in-depth quantitative study.

To start such a view, a general classification of the German external trade can help to properly gauge the size of the market in question. Historically speaking, Germany has been a strong exporting country steadily growing from 4.2 billion € of external trade value in 1950 to 1.594 billion € in 2022 with milestones of 100 billion € being hit in 1974 and 1,000 billion € being reached in 2011. It is further notable that Germany has managed to gain a considerable export surplus in every year since 1952 with the total reaching up to 250 billion € in 2016.

Figure 13 below shows the evolution of export, import and the yearly net total for the years 2000 until 2022 in billion €.

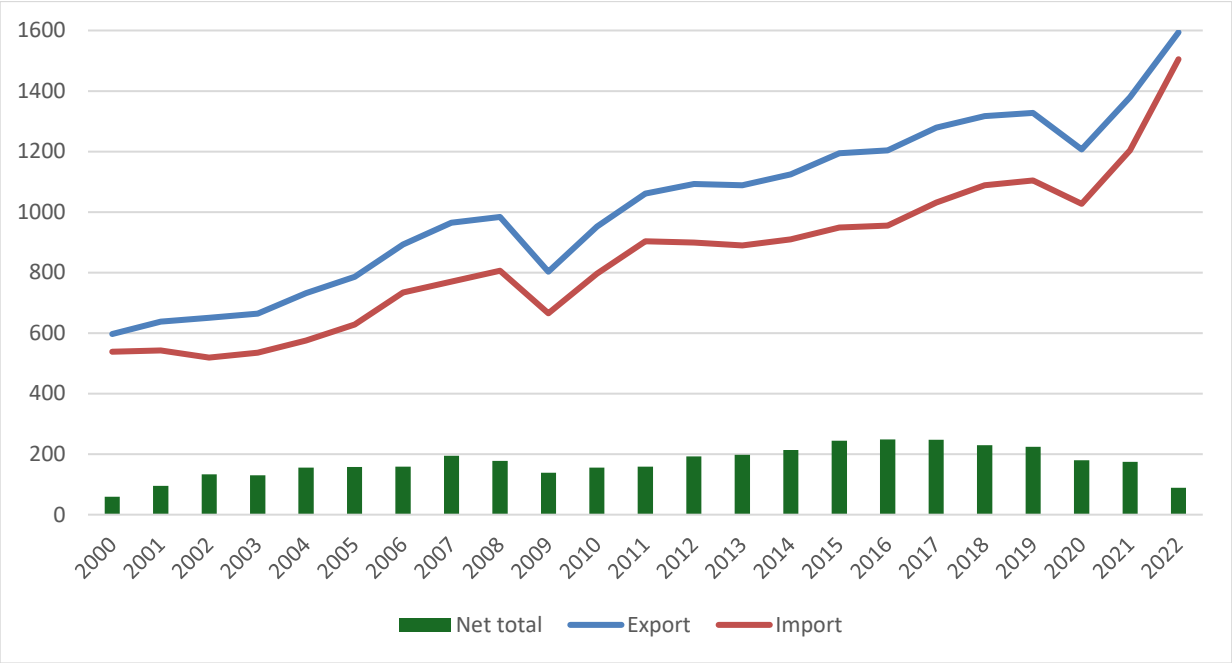


Figure 13 – Evolution of German export and import since 2000

Source: The author's own visualization based on DeStatis.

Expanding on the overall value of 1.594 billion of exports in 2022, two further bits of information are important in the given context. Firstly, it is notable that the largest five components make up 55% of the total export value and all of these parts are from complex industries either from mechanical engineering or chemical production. The biggest export driver are motor vehicles and their parts which are responsible for 246 billion € and 15% of the total export value of 2022, an industry that is also historically seen as a strong characteristic of the German industry. The top five goods by department are also shown in Table 5 below.

Table 5 – Top five goods by export value in 2022

Goods department	Export value 2022 in billion €	% of the total export value
Motor vehicles and motor vehicle parts	246	15%
Machines	211	13%
Chemical products	165	10%
Data processing equipment, electrical and optical products	134	8%
Pharmaceutical and similar products	122	8%
Total	878	55%

Source: The author's own visualization based on DeStatis.

Although the conclusions that can be drawn from data on the whole country are limited in terms of applicability to individual firms, the overarching theme of technological leadership and innovation on a global scale is at least supported. The argument of global scale is also supported by considering the main partners for German export. The biggest partner by value 2022 was the USA with 156 billion €, but no single partner reaches above 10% of export share and the top 10 partners are also limited to 61% of share. This is also shown in the Table 6 below.

Table 6 – Top 10 trading partners by export value in 2022

Country	Export Value 2022 in billion €	% of the total export value
USA	156	10%
France	118	7%
Netherlands	112	7%
China	107	7%
Poland	93	6%
Austria	90	6%
Italy	89	6%
UK	74	5%
Switzerland	71	4%
Belgium	63	4%
Total	**973**	**61%**

Source: The author's own visualization based on DeStatis.

Even though the same limits to applicability are also relevant in this context, it can be subsumed that German exports interpret the niche they operate in as a product niche, not in

terms of a geographical market. While three of the top five trade partners are direct neighbours of Germany, the limited share of export value of each country and the relative homogeneity among the export values point towards the argument that a diversification on a global scale has already taken place.

5.5.2. Internationalisation of German SMEs

After the perspective has initially been turned towards the overall internationalisation and export situation of the German economy, this perspective is in need of refinement and will therefore be sharpened by considering the specific situation of German SMEs in the context of both an overall economic situation and internationalisation decisions.

Following the definition of German SMEs that are generally understood in the context of the term “Mittelstand” and which can be found above, this sharpening of the perspective starts with a deeper overview over relevant statistics of SMEs. According to the German institute for research on SMEs, the number of German enterprises that can be classified as SMEs was roughly 3.37 Mio, accounting for 99.3% of the total number of enterprises in Germany. Of a total of 7,790 billion € of turnover in 2024, SMEs generated 2,439 billion €, which equals 31%. The turnover percentage of family-owned businesses in the same timeframe was 37%, showing again that family-owned businesses and SMEs are similar in many ways in Germany, but need to be considered differently in details. Figure 14 below shows the turnover per firm size of 2021.

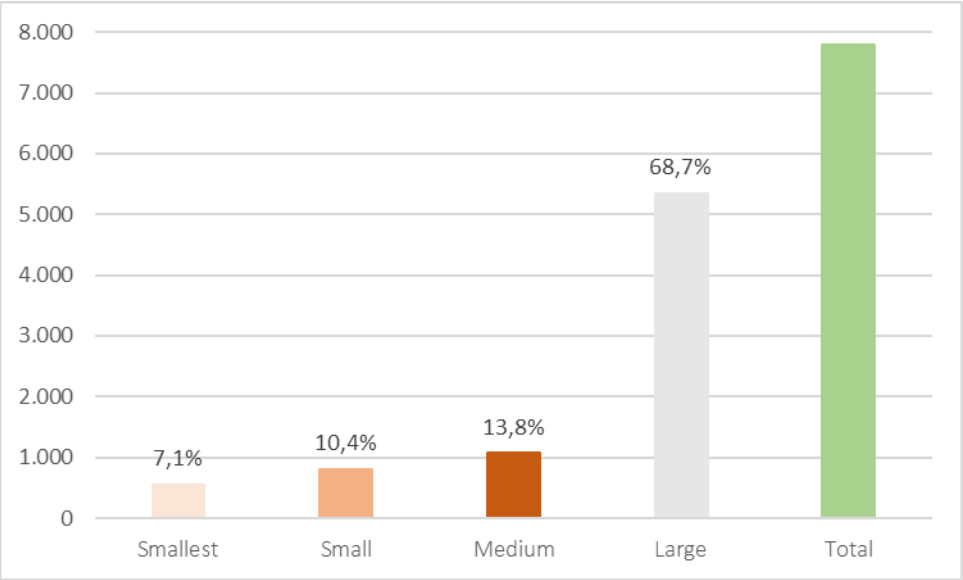


Figure 14 – Turnover for German firms in bio € by firm size

Source: The author's own elaboration based on Federal Ministry of Statistics.

From a historical perspective, the overall share of turnover to be allotted to SMEs has slightly decreased since 2011, when SMEs were responsible for 35% of turnover. The reduction of 3.6 percentage points or 10.3% percent is a further indicator pointing to the struggles that SMEs face in a more digitalized and globalized world and to the fact that non-optimal decisions in the face of crisis have a more devastating impact for companies that have less reserves to rely on. This development is also shown in Figure 15 below.

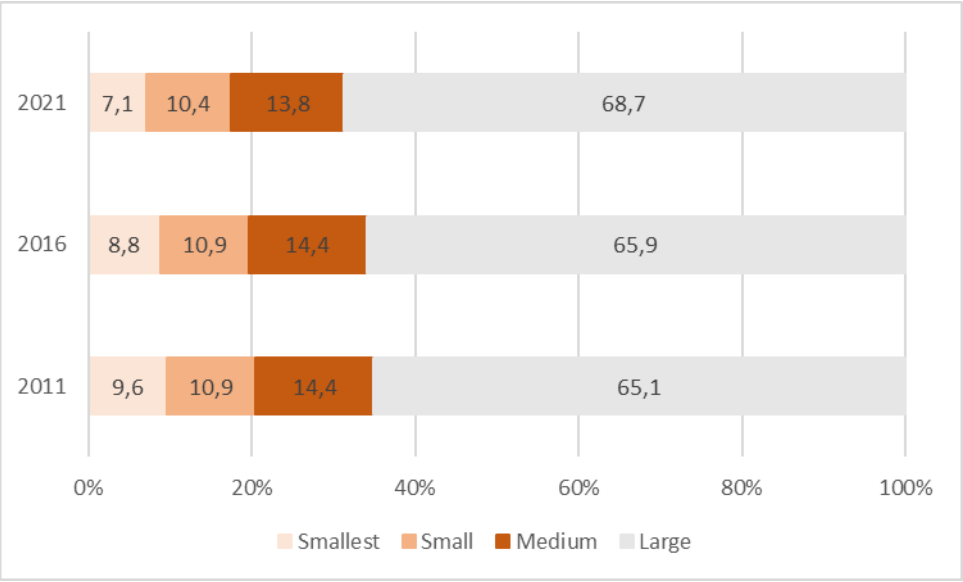


Figure 15 – Turnover share for German firms by size since 2011

Source: The author's own elaboration based on Federal Ministry of Statistics.

In the context of manufacturing firms, the 2021 turnover share lies at 19,9%, which, albeit being lower than the overall share, still shows the relevance of SMEs for the total manufacturing industry in Germany.

To move on from an overall perspective on turnover of SMEs in various constellations, the next step is to consider international activities of German SMEs. According to a study conducted by the German Institute for SME research (Holz & Kranzusch, 2022), 353,000 German SMEs engaged in export activities in 2021, which equals 11.7% of total German SMEs. This also means an increase throughout all sizes of firms, starting with a 6.5% increase for the smallest firms and going to 4.1% for small firms, before finishing with a 6.5% increase versus 2020 for medium enterprises. In the same vein, the overall export turnover of 227.7 billion € in 2021 also meant an increase of 20.3 billion € versus 2020 and an increase of 13.6 versus 2019, although a comparison with 2019 seems more sensible as 2020 includes a considerable pandemic effect in export. The 227.7 billion € equals 15.9% of the total German export turnover, which also results in a reduction of 2.3 percentage points versus 18.2% of 2011. The main reason for this reduction in the percentage is the fact that successful medium-sized companies have grown above the limits of definition and are now classified as large companies. This story of undisputed success, however, has come under heavy scrutiny given the global challenges of 2022 and 2023. According to a survey published by the German Credit Institute for Reconstruction, a state-owned bank especially tasked with the development of German infrastructure and economy, global supply bottlenecks and capacity constraints have also negatively impacted the German export growth (KfW Research, 2023, 6). A sharp drop of export in March 2020 by 11.8% has since then been recovered, but the growth is mostly due to price rises necessary. Export prices on average were 9.5% higher in 2021 versus 2020. This negative development in price increases and the subsequent decrease in demand is also reflected in a slower recovery with the growth being 14% lower for SME exports versus overall export values. Two important facts need to be highlighted. Firstly, the main hit was taken regarding non-European turnover, as turnover generated in European countries declined by 7%, while turnover outside Europe dropped by 17%. Such a decrease in foreign demand may have also led to the complete withdrawal from certain foreign markets. Secondly, the driving role of manufacturing companies in the context of foreign turnover was lost as well, likely due to SMEs that focus on supplying the automotive industry feeling the overall effect of decreases in

automotive sales by 16% (KfW Research, 2023, 8). Drawing a quick conclusion, this short insight into the relevance of German SMEs in export and internationalisation shows that the topic is not only relevant, but that the challenges and negative impacts of the recent past make German SMEs an interesting case for quantitative research.

In order not to deviate too far from the list of characteristics established beforehand, the next characteristic to be highlighted in the context of economic statistics is the high technological level of the product, which is a rather direct result of the money invested in research and development. For the purpose of this statistic, only internal expenses that are linked to the creation or upholding of long-term internal know-how are considered. According to a survey done by the German Society for Science, the expenses of German SMEs for research and development rose from 5.6 bio € or 11% of the total R&D expenses of German firms in 2011 to 7.2 bio € or 9.5% in 2021. The development per year is also shown in Table 7 below.

Table 7 – R&D expenses for SMEs in Germany in mio € and as a percentage share

Year	R&D expense in Mio €	% of total R&D expenses
2011	5.615	11
2012	5.657	10,5
2013	5.191	9,7
2014	5.268	9,2
2015	5.257	8,6
2016	5.340	8,5
2017	5.725	8,3
2018	5.724	7,9
2019	6.708	8,8
2020	6.630	9,3
2021	7.173	9,5

Source: Forschung und Entwicklung (FuE)-Institut für Mittelstandsforschung Bonn.

To narrow this overall perspective down to manufacturing companies in the database, the share of SMEs concerning the R&D expenses goes down by 3.4 percentage points to 6.1 %, which needs a more detailed clarification. Firstly, the manufacturing industry is dominated by the automotive industry, which in itself already contributes 37.7% towards the total R&D expenses (25.8 bio € of 59 bio € total) and naturally decreases the share realistically available for SMEs. Apart from that rather mathematical reason, this low share also points to the argument that a once-established product in a niche market needs lower R&D expenses to adapt and

innovate compared to the development of a completely new product, which is especially important considering the limited resources available to SMEs. Secondly, it also leaves room for developments into the future and could potentially strengthen the idea that an empirical analysis of German SMEs will be able to identify and analyse firms with various stages of R&D expense and thus development of technological know-how. The impression given by this argument that the R&D expenses of German SMEs and the emphasis placed on the subsequent technological know-how as a necessary prerequisite of technological leadership are low is incorrect, though. If you sharpen the perspective again towards industries that are research intensive – defined by at least 2.5% of turnover as R&D expenses – the share goes up to 9.5% again. This above average share goes up even further when only high end technology with a research intensity of more than 7% turnover is taken into account. There, SMEs take up 13.4% of the total R&D expenses.

To draw a short conclusion on this topic, German SMEs have increased their R&D expenses over the last ten years, but not at the same rate as larger companies. This high focus on R&D is lower for manufacturing companies in general, but higher for research-intensive industries and especially high-end technology.

The last point that needs to be considered in this context is the necessity of an established customer network and the ability to support and keep contact within such a network on a global scale. The use of digital technologies and the Internet in particular has been discussed on a theoretical level and has already been found to have a positive impact on firm performance. Starting with the overall state of digitalisation in Germany, the German Ministry for Economy and Climate Protection published their digitalisation index 2023 (Bundesministerium für Wirtschaft und Klimaschutz, 2023). They state that the overall digitalisation of the German economy has somewhat stalled in 2023. Compared to the improvement of previous years, a more lateral movement and slight regression happened in 2023. This overall decrease of 1.9 index points from 110.5 to 108.6 indexed versus 2020 (Bundesministerium für Wirtschaft und Klimaschutz, 2023, 1) can also be split up into individual index categories, where interesting points to note are a decrease in products by 15.4 points and human capital by 16.9 points. Especially the decrease in human capital is notable, as it directly relates to an increasing skills gap between the demands of open positions and the skills of the available job seekers. This gap did shrink due to Covid, but the widening of the margin points to a more general problem

regarding the digital know-how of the German workforce (Bundesministerium für Wirtschaft und Klimaschutz, 2023, 3). A decrease in products also hints at ongoing crises, as lower available resources will lead to companies foregoing necessary investments into the digitalisation of their products. In contrast, qualifications increased by 9.8 points and digital processes increased by 0.3 points. The increase in qualifications follows a large drop in 2021 and shows companies trying to circumvent the availability of suitably knowledgeable candidates by offering additional training to IT professionals and IT users, thereby trying to solve the problem "in-house". The high level of processes already digitalized and the nearly stable development in 2023 point to a state where all processes that can easily be digitalized have already been digitalized, making the next steps in the digitalisation of processes more difficult and therefore more costly. Figure 16 below shows a detailed index for Germany by category.

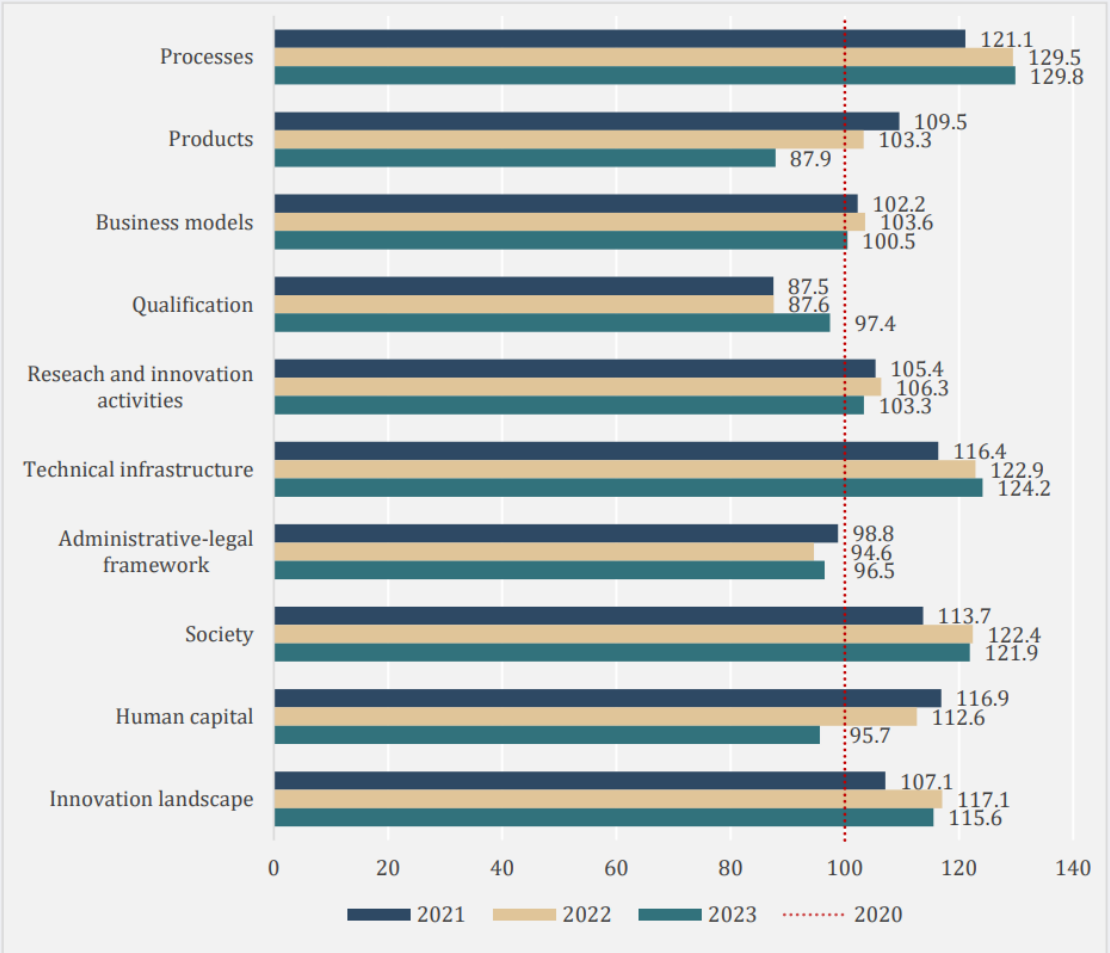


Figure 16 – Digitalisation index for Germany by category in index points

Source: Bundesministerium für Wirtschaft und Klimaschutz, 2023, 2.

After the narrowing of the perspective from a general overview towards industrial manufacturing companies done above, the level of digitalisation can also be analysed for different industry groups. The relevant manufacturing groups of „vehicle construction, electrical and mechanical engineering" and "other manufacturing industries" decreased the index level for 2023 from 161.3 to 154.8 for the first category while increasing the level from 72.9 to 76.7 for other manufacturing industries. This means that the bottom-placed other manufacturing industries have managed to slightly increase their digitalisation, being able to partly digitalize their products. However, it also shows that there is a large discrepancy between the high-technology industry groups of electrical and mechanical engineering and other manufacturers, pointing towards the more limited resources and possible lower customer demands for companies not linked with high-technology customers such as the automotive industry on the one hand and towards a more single-case based evaluation before these limited resources get invested in the digitalisation on the other hand. The argument of limited resources can also be supported when the perspective is changed towards the company size. There, it can firstly be seen that the digitalisation is lower for smaller companies. Figure 17 below also shows the digitalisation index already seen above in the context of company sizes.

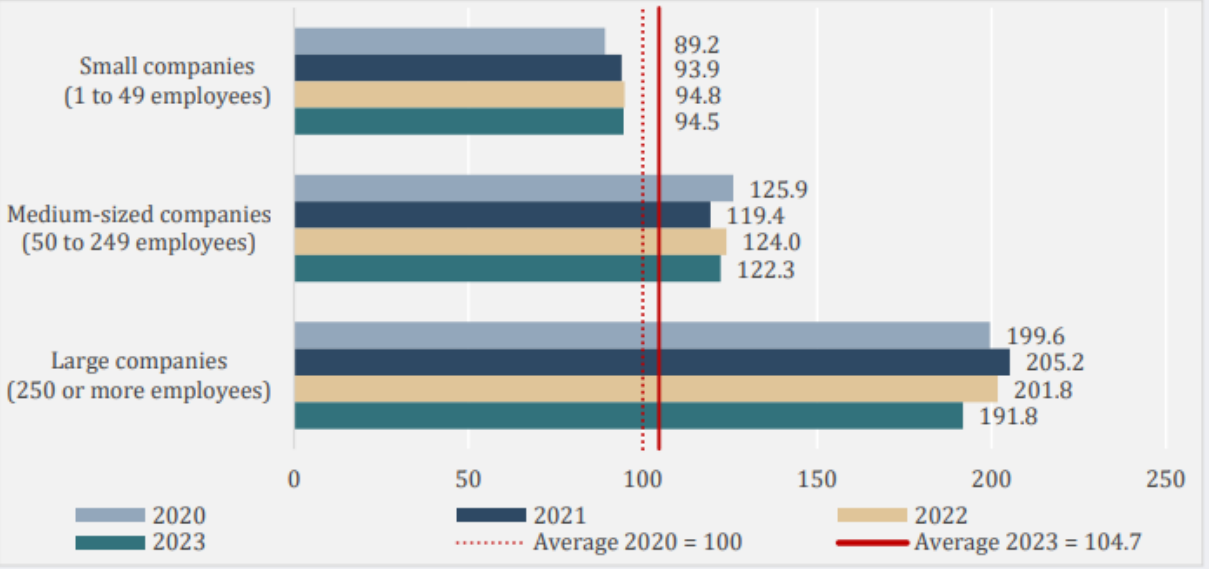


Figure 17 – Digitalisation index for Germany by company size in index points

Source: Bundesministerium für Wirtschaft und Klimaschutz, 2023, 6.

This index allows for two additional conclusions in the context of this thesis. Firstly, the overall level of digitalisation has increased on average in comparison to 2020, but this increase has been mostly driven by large companies. In the same vein, the overall reduction of 2023

versus 2022 was also mainly driven by a reduction in large companies. Secondly, the small changes made since 2020 for SMEs allow us to pick up the point made above regarding the digitalisation of processes and the stalling speed of change in that category. Similarly to the argument made in that context, it can also be said that SMEs use their more limited resources to firstly digitalize the kind of processes and tasks that are easy to change and adapt, supporting the point also made for manufacturing companies. As a quick conclusion on the German market, it can be said that German companies especially in the context of SMEs and manufacturers have increased their level of digitalisation in the last years, but especially the scarce availability of resources and the ongoing crises in the last three years pose a significant challenge of constantly keeping the speed of digitalisation high.

Even though the data on the German situation regarding digitalisation offers some valuable insights, it cannot be analysed in a vacuum, but needs to be considered in contrast to the digitalisation of competitors as a comparative, not an absolute advantage. In order to evaluate such a comparison, the European Ministry of Statistics EUROSTAT offers data on the digital intensity of companies and gives some insights on competitors that face at least roughly similar circumstances and pressures. Starting with the export-related topic of online sales, the number of SMEs making at least 1% of their total turnover with online sales remains constant at 19% for both German and European SMEs. Access to the Internet as a prerequisite for online sales has been widespread throughout all of the European Union, offering a supporting argument for the similarity in data (European Commission, 2024). If you move from the rather simplistic digitalisation aspect of online sales towards the more general perspective of digital intensity[2], one important point to note in the context of SMEs is the fact that digital intensity is higher for German SMEs than for the European average. This is also shown in Figure 18 below. There, the percentage of SMEs with a certain level of digital intensity is shown as part of a bar chart, a darker colour depicting a higher level of digital intensity. The light orange shows a low digital intensity, where the share of SMEs is higher among the EU-27 than in Germany by eight percentage points. The medium orange represents a medium level of digital intensity, which is higher for German SMEs by three percentage points. The dark orange shows

[2] Digital intensity is a comprehensive statistic by the Statistical Office of the European Union designed to serve as a key performance indicator for digital transformation. For more information on the contents and definition, see European Commission, 2024; Eurostat, 2024.

high digital intensity, where German SMEs are also higher by six percentage points. The dark red depicts very high digital intensity, where no differences could be found.

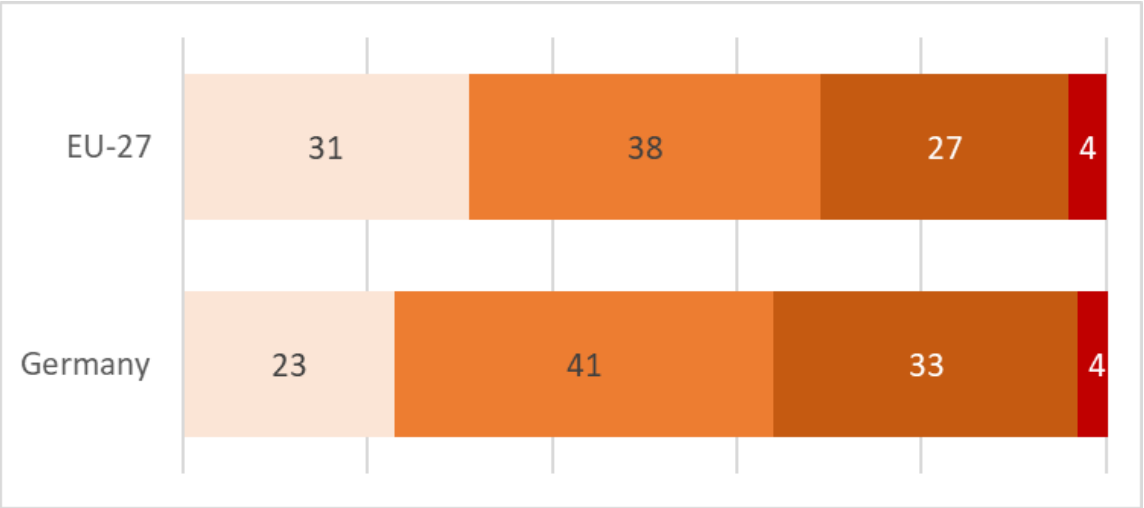


Figure 18 – Digital intensity in the EU by company size (2022)

Source: Eurostat, 2024b.

This Figure also allows to slightly re-evaluate the impact of an argument made above. It has been pointed out that the digitalisation of German SMEs especially in the manufacturing sector has been negatively impacted by scarcity of resources and crisis after crisis. It is, however, important to point out that such a limit of available resources and a more challenging environment have also been a prevalent environmental factor influencing SMEs throughout the EU, as these factors are not limited to Germany. It can therefore be said that in the context of increasing environmental resistance and problems, German SMEs manage to keep their focus on digitalisation above average.

To draw a quick conclusion on the digitalisation aspect of German SMEs, the aforementioned challenges and limits in resource availability have slowed down the digitalisation especially for smaller and manufacturing companies, but a more nuanced view needs to be taken as different aspects of operations have been digitalized to different degrees. Furthermore, German SMEs still have a strong digitalisation position compared to the average of European competitors. All in all, the question of network support and building using digital technologies can be assessed to a high degree when considering a study on German companies.

After the focus has been put on the internationalisation of German SMEs and manufacturing companies under the lens of various specific aspects of business models previously

established in a theoretical context, the aforementioned concept of hidden champions, which has also been described in the same theoretical context before, will be supported by statistics with regard to the specific situation in Germany, as well.

Although the concept of hidden champions has been around for some time and has already been accepted into the academic research, finding a comprehensive overview over the German situation on hidden champions is remarkably more challenging. Simon himself (Simon, 2022) only offers a limited overview, stating that German hidden champions make up 46% of all hidden champions worldwide, averaging a yearly turnover of 467 Mio € and 2.252 employees. Their even distribution throughout Germany is stronger in the areas of former West Germany and concentrates around traditional industrial areas in southern Germany and the Ruhr area. The core industry for German hidden champions is the manufacturing industry, where more than 80% of all companies considered originate from. In this area, most companies come from a background of mechanical engineering with roughly 22%. These numbers show an increase in employees and turnover, as a study conducted in 2015 only gave an indication of less than 300 employees and a yearly revenue of below 100 Mio €. In 2015, the main argument given for these relatively low numbers was the limited size of the markets considered, as nearly 90% of hidden champions regard themselves as operating in a market with a total volume of less than 1 billion € (Rammer & Spielkamp, 2015, 14). Among all companies of a certain industry, the highest density of hidden champions is prevalent in the pharmaceutical industry with 6.6% of all companies being hidden champions (Rammer & Spielkamp, 2015, 15).

If one takes a small step towards the perspective of hidden champions in different company sizes by employee numbers, the percentage of hidden champions increases as the company size increases. The percentage is highest at 500 up to 999 employees with 7.6%, going up from 0,1% for companies with less than 10 employees and even surpassing the 6.6% that big companies of above 1000 employees show (Rammer & Spielkamp, 2015, 16). In comparison to the control group, a simple average comparison shows that hidden champions in Germany managed to beat their counterparts in all economic performance indicators tested. Their market share of 34% was 13 percentage points higher, their revenue growth of 11.3% is 7.9% higher and the export percentage at 64% was more than double of the 29.9% of the control group. The market share also needs to be viewed under the light of fewer competitors, as hidden champions on average see half as many competitors as the control group. However, fewer

competitors do not necessarily mean a less intense competition, this merely shows that hidden champions need to analyse their competitors and the changing markets more directly, especially considering that the reliance on technological leadership increases the potentially devastating implications a missed opportunity or falling a step behind in the innovation race could have. The numbers mentioned of course need to be taken with a grain of salt, as their characteristics of being used to also define hidden champions in the research (Rammer & Spielkamp, 2015, 17) strongly limit their use in an argument to point out the economic advantages hidden champions have. This tautology, however, does not interfere with a different function of the data. Beforehand, hidden champions have merely been defined as being especially successful in their niche markets, but the data above allows for a better understanding of where exactly hidden champions are placed by direct comparison. To conclude the short segment on hidden champions, it can be pointed out that hidden champions combine the aspects of SMEs and manufacturing companies in a remarkable way and that their importance in the academic research is reflected in the importance for the German economy.

To move from hidden champions towards a more general conclusion on the internationalisation of German SMEs considering the business model aspects emphasized in the discussion before, a few aspects are important to highlight. Firstly, Germany as an economy as a whole and specifically SMEs not only, but mostly in the manufacturing sector are heavily focused on internationalisation in general and export in particular. Secondly, the specific characteristics pointed out in Chapter 4.3. all find some level of equivalents in the statistics shown regarding German companies. Thirdly, not only is there some level of equivalent to the characteristics shown, but German manufacturing SMEs – which were the resulting group of companies considered after several perspectives had been discussed – also face various challenges in the changing market environments they operate in which are situated in the same areas identified above. If you take these three points into consideration, it is a valid verdict to conclude that German manufacturing SMEs are a suitable choice to test a research concept that will be defined in the following Chapter.

6. The moderating effects of business model characteristics on the relationship between changes in export dimensions and export performance – a quantitative study

6.1. Analytical framework and research hypotheses

For the formulation of the research concept, a reiteration of the research question and a revisit of the main points illustrated throughout the previous Chapters is in order to ensure that the hypotheses below are comprehensible.

The research question is about the impact of changes in international activity on export performance with the specific perspective of business model characteristics. To firstly establish the theoretical framework needed, the main body of academic research concerning the topics of internationalisation, firm performance, and business models was analysed. The specific focus was sharpened in each topic about export as the easiest internationalisation mode entailing export dimensions for internationalisation, export performance as a subset of firm performance and lastly business model characteristics that influence firm performance. These foci remain as the distilled essence of the theoretical framework.

Afterwards, the characteristics of a certain group of companies were analysed with the aim of establishing a certain range of criteria and characteristics that these companies have in common. There, the specifics regarding different aspects of firms considered were B2B operations about the customer basis, manufacturing concerning the operations and goods provided, and SMEs with regard to the firm size. To close this Chapter, a more detailed look was taken at hidden champions as a mostly German phenomenon that the specifics worked out above apply to.

The aspects identified in the first two Chapters were then applied and supported with statistical data in the context of the German economy. The main takeaway there was that the group of German manufacturing SMEs operating in a B2B market offers enough in terms of academic interest to warrant further empiric research.

After this short synopsis of the previous Chapters, a research model based on a series of hypotheses will be formulated in the following. In each paragraph for a single hypothesis, the main argument contained in the theoretical framework is reiterated. Firstly, the main hypotheses will be developed before the model will move towards the moderating effects. The Chapter closes with an overview of the full research model.

6.1.1. Main effects

As already established above, the relationship between multinationality and performance, in general, is not a clear-cut one, with companies also experiencing a negative effect of further internationalisation when added complexity costs are higher than the additional return on sales gained. We therefore hypothesise that a change in international activity will have an impact on export performance. In this regard, it is important to point out that only considering a change in the absolute value of export performance could lead to a resulting view that is too narrow for multiple reasons. Firstly, the timeframe for this thesis is short-term with only three years, which limits the effect that changes in international activities can already have on the financial and non-financial performance measures that firms use to track and manage their results. Secondly, a reliance on export performance itself as the key dependent variable across a variety of firms does not consider the fact that the aforementioned relationship between multinationality and performance in general can go in different directions for different companies. Therefore, export performance as the dependent variable is not entirely fitting to answer the research question postulated above. Instead of taking a static measure of export performance, a dynamic measure is more fitting to evaluate the effect of internationalisation measures over time. As the overarching idea of such an ambiguous internationalisation effect with low possibilities to control and forecast on a macro level has been prevalent throughout this thesis, export performance change (EPC) will be introduced as a second variable to measure the internationalisation effects in question.

H1: *A change in international activity in either one of the two dimensions of export depth or export breadth has an impact on export performance or export performance change.*

Companies increasing their market share also increase their profits, thereby increasing their overall performance (Gale, 1972). This very basic relationship can be rooted in the resource-based view, which states that companies that control valuable, rare, inimitable, and non-substitutable resources will see a competitive advantage (Kraaijenbrink et al., 2010). However, one must differentiate between a share in an international market and the share of international sales in relation to the total sales of a company. An increase in market share can only be maintained if a company can accumulate enough additional liquidity to cover the increased cost of operations. As the provision of liquidity at the initial point in the form of either equity or debt (Schoen et al., 2009) is linked to expectations of return either as a part of the earnings, e.g. a dividend, or a previously agreed rate of interest, added value creation is

needed to increase the earnings (Lepak et al., 2007). The overall scarcity of resources calls for an optimization of these resources, which in turn will lead to companies choosing a market they will expect most profits from. Exporting can enhance these organizational capabilities, which in turn will generate additional resources that can boost the firms' performance (Bloodgood et al., 1996; Business School et al., 2001; Chen et al., 2016; McDougall & Oviatt, 1996). This generation of additional profit and additional return on invested capital is closely linked to an improved level in sales returns, which in turn can be achieved either by an optimization in the sales portfolio towards more profitable markets (H1a) or by entering new markets. In such a case, the potential return of added internationalisation would more than cover the cost incurred (Rugman & Hoon Oh, 2011). However, this hypothesised link between multinationality and performance has already been intensely debated throughout various academic disciplines, including finance and international business (Kirca et al., 2012). Findings indicate that a simple relationship such as an increase in international sales leading to better performance cannot be found, but that there is a multitude of influences such as firm-specific advantages and country-specific factors that determine and moderate this basic relationship. For the case of Polish companies that newly internationalize Barłożewski and Trąpczyński propose an inverted U-shaped relationship (Barłożewski & Trąpczyński, 2021). Working from this example, the authors argue that newly internationalizing companies from transitioning economies can reap benefits of occasional international sales without needing to invest additional resources.

However, the perspective in this analysis focuses on established German companies that offer B2B products in the industrial compartment. Germany is an established social market economy that includes a high and rising level of export and a relevant number of companies that operate in the sector mentioned. Such an economy leads to a different level of networking, experience, and product specification, putting knowledge-intensive, technological product-selling companies in focus (Audretsch et al., 2018). These hidden champions have already invested resources into internationalisation, therefore profiting from highly specific knowledge of their customer base, their customer needs and a human capital that enables them to meet these needs on a technological level (Audretsch et al., 2018; Barłożewski & Trąpczyński, 2021). If one further sharpens the perspective to B2B-customers, the products in demand are generally more technology-intensive, minimising the competition and shrinking the overall market size (Johann et al 2022). They also limit the number of potential customers,

making needed networks smaller and easier to maintain. The technology-heavy exporters in question can also use their knowledge of their customer base and the technological skills of the employees to better meet the demands for technology-heavy products. This enables German hidden champions to ensure an additional performance due to added international sales, while also keeping the added complexity down.

It can, therefore, be hypothesised that positive changes in the export share and number of export markets served will have a positive impact on export performance for SMEs, so that H1 can be further broken down into:

H1a: *Changes in export activity are positively related to export performance, insofar that an increase in export share leads to higher export performance, while a decrease in export share is related to lower export performance.*

H1b: *A change in the number of export markets served is positively related to export performance, insofar that an increase in the number of export markets served leads to higher export performance, while a decrease in the number of export markets served is related to lower export performance.*

Sticking to the aforementioned need to supplement the static export performance with a more dynamic measure, two additional hypotheses were formulated. Following the argumentation presented above, it is sensible to postulate that an increase in either market share or the number of markets served also has a positive effect on export performance growth and volatility. We therefore hypothesise the following:

H1c: *Changes in export activity are positively related to export performance change, insofar that an increase in export share leads to higher export performance change, while a decrease in export share is related to lower export performance change.*

H1d: *A change in the number of export markets served is positively related to export performance change, insofar that an increase in the number of export markets served leads to higher export performance change, while a decrease in the number of export markets served is related to lower export performance change.*

6.1.2. Moderating effects

To add a further step and to consider business model characteristics, we draw on the resource-based view once again. Whilst the idea of business models cannot directly be derived

from the RBV (George & Bock, 2011), the business model defines the understanding of internal competencies as the basis of a firm's competitive advantage (Morris et al., 2005) This line of thought aligns well with the RBV's definition of the form as a bundle of resources and capabilities (Barney, 1991). We further follow Da Silva (DaSilva & Trkman, 2014) in the argument that a resource per se does not bring any value to the customer. Instead, value is generated through transactions that can be generated through these resources. We therefore argue that a business model is a way for a company to utilize the existing resources of a company to generate as much value as possible. This efficient utilization of resources will in turn allow a company to create bigger value for customers (Miller & Ross, 2003), which will in turn lead to an increase in export performance. We have therefore identified three components of resource utilization through the business model, which allow companies to use their resources more efficiently with the components being product complexity, technological capabilities, and use of Internet technologies. The underlying hypothetical argument linking all moderator hypotheses is that a company characteristic that allows for a more efficient use of resources will lead to a positively increased relationship between changes in export dimensions and export performance.

When looking at the international performance of companies, one has to assess the influence product complexity has on the ability of a company to make the already existing market share as profitable as possible. One important distinction is that whilst the impact of product portfolio complexity, meaning the growing diversification of a larger product variety over the whole product range (Fernhaber & Patel, 2012), would be an interesting point of discussion, product complexity in this dissertation is understood as the number of measurements and distinctions that influence the technology, size, organization, and environment of a product (Zhuo Zhang & Qunhui Luo, 2007). Product complexity in general increases the cost, production time and quality of a product, as additional know-how and resources are needed to ensure a minimum standard (Trattner et al., 2019). The additional complexity also increases the probability of disruption occurrences, which in turn affect the performance (Donadoni et al., 2018). Although this probability can be either warded off or the effects can be reduced by an adaptable and resilient supply chain (Donadoni et al., 2018; Eckstein et al., 2015), the creation and upholding of such a supply chain is significantly harder to coordinate and finance when done internationally (Houlihan, 1985). Furthermore, product complexity has an indirect, but

considerable impact on customer complaints (Abdul Rahim et al., 2019), whilst the management of customer relationships and the simultaneous solving of the complaints can be hindered by different cultures, expectations and other international influences (Ramaseshan et al., 2006). This is directly related to the increased need that foreign partners or end customers might have for direct personal contact, which in turn hinders the positive effects that might be created by the digitalisation. It might also completely bypass Internet communication as international partners can be moved to seek direct contact due to the lower maturity of both the partner and the relationship, which gets worsened by different preferences in terms of contact forms. To sum up the effect of product complexity, it adds a further source of uncertainty to exporters (Solberg, 2008), which is hard to hedge against using the means of communication available especially to SMEs, who mostly rely on the Internet, e.g. a website, as a first means of communication. In this case, the single direction information processing capacity provided by a website might be insufficient to tailor the complex product details to customer needs and could even aggravate the issues caused by the perceived lack in the ability of the firm to fulfil the customer's needs. Adapting these arguments to the value creation and value delivery aspects of business models, one can say that an increase in product complexity might allow a company to create additional value for a customer in the form of new features and new products, but the value delivery gets even more complex as supply chain adjustments and especially the need for better management of the customer experience and engagement make export operations more difficult.

It is hypothesised that an increase in product complexity will lead to an increase in resources needed, either due to a direct increase in cost or due to increased difficulties in creating, moving and managing the product or service. Especially the added challenges of international operations are not optimally suited to solve the difficulties in supply chain or customer management. Therefore, an increase in product complexity will have a negative influence on a company's ability to use its export market share with the highest efficiency, thereby serving as a moderator between export share and export performance (H2a).

Following this line of argumentation, it could also be argued that lower product complexity also enables firms to more easily enter and operate in various foreign markets, as less complex products can be more easily adapted to new customer needs (Yi Li et al.,

2008), making the matching of said customer needs easier. This effect however needs to be specified concerning the subset of SMEs operating in B2B-settings. The main argument for a negative impact of product complexity is an added need for resources in excess of the regular need that international expansion creates. This argument is supported by the fact that a higher export share in existing markets necessitates that SMEs either broaden or deepen their existing niche. This increase in the size of the customer base needs to either be due to an increase in marketing and sales efforts or due to a shift in the ability to satisfy customer needs. Both these avenues are hypothesised to lead to an increase in resources needed that is directly responsible for the lower export performance. In the case of export breadth, however, this line of argumentation needs to be re-evaluated. Although it is correct to assume that the expansion into new markets, in general, is easier when the product can be more easily adapted to customer needs, such a generalisation must be withdrawn if the technological capability and the niche product make up the majority of the appeal the SME has. The need for adjustment of the product to properly tailor it to the demands of new market customers might still exist, but an argument can be made that it is little tweaks and a matter of finding the correct solution among an existing product portfolio rather than the resource-intensive efforts needed in the context of existing market expansion. This difference in the characteristics of expansion towards new markets in contrast to expansion within an existing market heavily influences the way product complexity serves as a moderator. It can thereby be hypothesised that an increase in product complexity will serve as a positive moderator between export breadth and export performance (H2b).

H2a: *Product complexity moderates the relationship in H1a insofar that for lower product complexity it becomes more positive.*

H2b: *Product complexity moderates the relationship in H1b insofar that for higher product complexity it becomes more positive.*

Following the same line of thought that was already employed in the formulation of the hypotheses H1c and H1d, the differentiation will need to be made between export performance and export performance change. Staying in line with the arguments made above, it is comprehensible to hypothesise that product complexity impacts the basic relationships in H1c and H1d in the same manner it impacts H1a and H1b relationships.

H2c: *Product complexity moderates the relationship in H1c insofar that for lower product complexity it becomes more positive.*

H2d: *Product complexity moderates the relationship in H1d insofar that for higher product complexity it becomes more positive.*

Technological capabilities enable a company to either operate more efficiently or to supply products or services that are simply better at meeting the needs of the customer base. This advantage is based on a company's ability to use innovations (Porter, 1985) to strategically exploit the higher speed of change. This speed of change is linked to basic capabilities rooted in the workforce and in a business mindset that enables and encourages the research and development needed. Without a proper supporting structure and an effective leadership that combines a commercialization plan with sufficient managerial resourcefulness, the research of new technology threatens to yield only limited results (Shaker et al., 1995). Existing research shows that in order to increase export performance, the existence of higher R&D capabilities is enough to create these technological capabilities (Lefebvre et al., 1998). Going a step further, research also shows that technological capabilities are a factor that directly allows firms to maintain a certain level of export performance when facing crisis conditions (Massaro et al., 2017). This effect of technological capabilities needs to be re-evaluated as Su et al. (Su, Xie, et al., 2013) found that technological capability has a negative moderating effect on the relationship between product innovation and firm performance which even increases once the company is put under further technological turbulence. This effect cannot be replicated by Su et al. (Su, Peng, et al., 2013), who point out that technological turbulence on the contrary augments the positive performance effect of technological capability. This is in line with research from Ruiz-Ortega et al. (José Ruiz-Ortega et al., 2013), who show firms can more easily exploit emerging opportunities in uncertain environmental conditions if they possess additional technological capabilities. Adapting these arguments to the value creation and value delivery aspects of business models, increased technical capabilities allow for better value creation by the firm with an increased ability to either add new features to existing products to increase customer-demanded functionality or add completely new products while not having a particularly strong effect on value delivery in either direction.

If one connects these results with German hidden champions operating in the B2B-market, the argument becomes even stronger. As already pointed out, the market is characterised by

a heavy focus on technology and innovation and German exporters are especially strong regarding their innovative ability. This combination of a market that highly values technological leadership and a company base that can provide exactly that allows us to hypothesise that technological capabilities will have a positive impact on the relationship between a positive change in internationalisation and export performance, moderating all two basic relationships in H1a and H1b as described below.

H3a: *Technological capabilities moderate the relationship in H1a insofar that for higher technological capabilities it becomes more positive.*

H3b: *Technological capabilities moderate the relationship in H1b insofar that for higher technological capabilities it becomes more positive.*

Following the same line of thought that was already employed in the formulation of the hypotheses H1c and H1d, the differentiation will need to be made between export performance and export performance change. Staying in line with the arguments made above, it is comprehensible to hypothesise that technological capabilities impact the basic relationships in H1c and H1d in the same manner they impact H1a and H1b relationships. This also aligns with the understanding of export performance change as a performance measure supporting the export performance measure itself. We therefore hypothesise the following:

H3c: *Technological capabilities moderate the relationship in H1c insofar that for higher technological capabilities it becomes more positive.*

H3d: *Technological capabilities moderate the relationship in H1d insofar that for higher technological capabilities it becomes more positive.*

The use of Internet technologies enables firms to break down traditional market barriers such as time or place (Overby & Min, 2001). It therefore facilitates the development and maintaining of network relationships, leading to a complementary way of network formation (Jones & Dimitratos, 2004; Mathews et al., 2012). This removes the constraint especially small companies have faced regarding the identification of opportunities, access to distribution channels etc. (Kahiya, 2013), which in turn allows them to speed up and broaden an otherwise narrow and incremental internationalisation process (Johanson & Vahlne, 2009; Katsikeas et al., 2000). The current academic research on the use of Internet technologies mostly focuses on the benefits a mix of Internet technologies can have, taking into account such variables as

the intensity of use (Loane et al., 2006), the functional areas of application or export-related objectives of the use (Moen et al., 2008). Another, albeit more narrow group of scholars puts their focus towards a more single-minded use of websites or e-commerce (Dallocchio et al., 2024).

Developments such as the Web 2.0 further alter the network formation (Okazaki & Taylor, 2013) and ease the cultivation of larger numbers of relationships (Sigfusson & Chetty, 2013) with the capability to use a platform to communicate and foster relationships being rooted in the RBV (Jean et al., 2020). This ease of establishing contact with a relevant customer base and creating new relationships allows companies to potentially grow their customer base, leading to an increase in international market share. Whilst the use of the Internet can also lead to an easier way of contacting relevant domestic customers, domestic networks are characterised not only by a lack of physical distance, but also by a lack of cultural distance (Barkema & Drogendijk, 2007; Johanson & Vahlne, 2009; Shenkar, 2001). Cultural distance increases the feeling of outsidership and contributes to a liability of foreignness (Yamin & Kurt, 2018), which in turn slows and hinders the formation of new networks (Manev & Stevenson, 2001). This liability can be decreased by an experiential learning process (Johanson & Vahlne, 2009), which strongly benefits from Internet technologies (Shang et al., 2011). We therefore hypothesise that the positive network effect of the Internet on the capturing of a growing market share, whilst existing both in domestic and international markets, is significantly larger abroad. This effect gets aggravated by the focus on export, which essentially can be boiled down to international sales. Due to this, the effect that drives our hypothesis formulation at the forefront is a front end effect. This means that the positive impact taken into consideration has to come from improvements to interactions with the customer, as these will have the most immediate effect. Positive effects from different areas of improved digitalisation such as process or manufacturing improvements can also provide a positive effect, but in the dimensions of the business model the natural focus is put into value delivery using technologies such as online communication and e-sales and value capture with online transactions and digital payment methods.

Secondly, the use of the Internet allows a company to employ their existing resources more efficiently by making targeting specific customers, coordinating, and collaborating on innovation efforts easier (Bell & Loane, 2010). This frees up additional resources to be either invested

in the gradual development of a relationship with one company in the market network, which in turn can lead to a market-wide recognition of a new player in the market (Yamin & Kurt, 2018), or used to foster various initiatives to move insiders in the market network to accept forming relationships with an outsider (Johanson & Vahlne, 2009), both reducing the liability of outsidership and foreignness and increasing the positive business impact of the newly formed network.

Thirdly, this line of argumentation also answers a call not explicitly made by the current research. Significant attention has been paid by researchers on the relationship between the use of Internet technologies and performance both on a general firm level and on a specific level of internationalisation. On the general firm level, the emphasis on firm performance was put by numerous articles (Avlonitis & Karayanni, 2000; Glavas et al., 2019; Joensuu-Salo et al., 2018; Moon & Jain, 2007; Raymond et al., 2005; Zhu & Kraemer, 2005). On the specific level of internationalisation, the focus was slightly more widespread with research connecting Internet technology use with export performance (Eid et al., 2019; Jean et al., 2020; Zahoor et al., 2023), the development of export activities and internationalisation speed. Despite such a significant level of research on the topic, there is no coherent conclusion to be drawn from the results.

A variety of studies have postulated the idea that the performance a company can achieve in an export market is directly enhanced by the use of Internet technologies (Caputo et al., 2022; Hultman et al., 2023; Morgan-Thomas & Bridgewater, 2004; Nhat Lu & Julian, 2007; Sinkovics et al., 2013). The overarching arguments connecting these studies are a stronger internal resource base created by a reliance on Internet technologies (Berry & Brock, 2004) and the cost reduction achieved by eliminating the need for physical representation in foreign markets (Nhat Lu & Julian, 2007).

On the other hand, the current level of research also includes studies that did not find any significant relationship between Internet technology use and export performance (Glavas et al., 2017; Sinkovics et al., 2013). Their main argument centres around the assumption that Internet technology use does not immediately affect export performance, but rather indirectly through the creation of new market knowledge (Moen et al., 2008) or an improved market orientation (Tolstoy et al., 2023). This indirect effect has led to the recurring use of mediation models, where the consequence of Internet technology use was labelled through a variety of

competencies and capabilities, most prominent among them being marketing capabilities in general (Mahmoud et al., 2023), marketing competencies (Prasad et al., 2001), and export marketing capabilities (Jean et al., 2020). Taking these arguments into account, it is possible to postulate that an increased use of Internet technologies in an export context enables firms to improve the value delivery to customers by improving communication, therefore making the customer experience and engagement easier and more manageable.

It is to note that even the research discussed in the paragraph above does not deny a positive influence of Internet technologies on export performance. The issue lies rather within the immediacy of the impact. Taking this into account, the following two hypotheses take up the inconclusive findings presented and follow the indirect approach. It is therefore hypothesised that the use of Internet technologies enables a company to use the available resources more efficiently and therefore moderates the relationship between changes in international activity and export performance insofar that a change towards higher international activity leads to even higher export performance. This hypothesis can be maintained throughout the two aspects of export, as they all similarly profit from a more efficient resource utilization.

H4a: *The use of Internet technologies moderates the relationship in H1a insofar that for a higher use of the Internet it becomes more positive.*

H4b: *The use of Internet technologies moderates the relationship in H1b insofar that for a higher use of the Internet it becomes more positive.*

Following the same line of thought that was already employed in the formulation of the hypotheses H1c and H1d, the differentiation will need to be made between export performance and export performance change. Staying in line with the arguments made above, it is comprehensible to hypothesise that the use of Internet technologies impacts the basic relationships in H1c and H1d in the same manner it impacts H1a and H1b relationships.

H4c: *The use of Internet technologies moderates the relationship in H1c insofar that for a higher use of the Internet it becomes more positive.*

H4d: *The use of Internet technologies moderates the relationship in H1d insofar that for a higher use of the Internet it becomes more positive.*

To sum up the creation of hypotheses, they can be combined into the following research model. One important point to reiterate as it pertains to the main driver of the contribution

that this thesis can offer is the fact that the framework aims to answer the question of how business model characteristics can affect export patterns and outcomes.

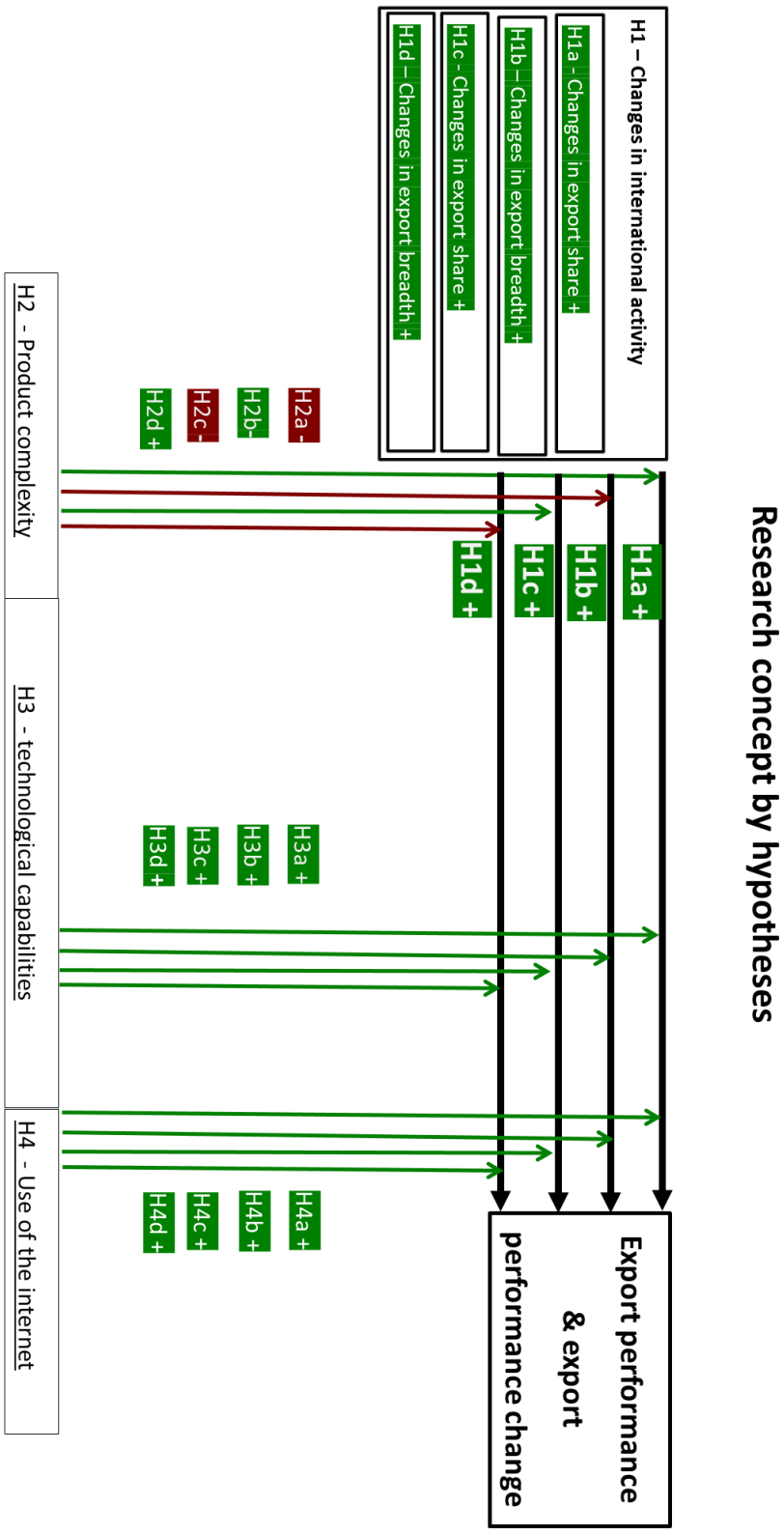


Figure 19 – Research model on export performance and export performance change

Source: The author's own elaboration.

6.2. Research methods

6.2.1. Data collection

To test the research model mentioned above, a survey was developed and conducted among German exporters. In order to identify suitable companies the sales intelligence tool of Dealfront was used to gather a sufficient database of 19,020 German companies that met the following criteria: The company needed at least ten employees, recent financial data of 2019 concerning the operating revenue and public authorities were further excluded. A more detailed cross-check with available secondary data on these companies revealed a total of 5,046 companies that partook in enough exporting and international operations to be relevant for the study. Of these, 177 were directly contacted via personal email, whereas the remaining 4,869 companies were contacted using a mass mailing done using an online survey tool. After initial responses, follow up steps were taken by either contacting the companies via telephone or by reaching out to company representatives using business networks such as LinkedIn or Xing. The target personnel of the companies were higher-level employees with an insight into the overall economic situation of the company as well as the know-how to evaluate the firm in terms of the business model and internationalisation status and position in the market. Notable job descriptions included business executives, heads of sales or export, marketing managers and other commercial managers. Excluding the incomplete surveys, 209 companies answered, which equals a response rate of 4,1%. Companies without available data on the operating revenue in 2019, public authorities and non-manufacturing companies were excluded. The division between manufacturing and non-manufacturing companies was made using the categories of the NACE Rev 2 (Eurostat, 2024a). This set of economic classes, established and used by the European Ministry of Statistics EUROSTAT, categorizes the economic activities of companies and sorts them into different categories according to the main economic activity type. The section C of the NACE Rev 2 is labelled manufacturing/production of goods and contains the categories from 10 to 33. This section includes companies with the following main economic activities (Eurostat, 2024a, 69 - 73).

10 Production of food and animal feed

11 Beverage production

12 Tobacco processing

13 Manufacture of textiles

14 Manufacture of wearing apparel

15 Manufacture of leather, leather products and footwear

16 Manufacture of wood and of products of wood and cork, except furniture

17 Manufacture of paper and paper products

18 Manufacture of printed matter; reproduction of recorded sound, image and data media

19 Manufacture of coke and refined petroleum products

20 Manufacture of chemicals and chemical products

21 Manufacture of pharmaceutical products

22 Manufacture of rubber and plastic products

23 Manufacture of glass and glass products, ceramics, processing of stone and earth

24 Manufacture of basic metals and fabricated metal products

25 Manufacture of fabricated metal products

26 Manufacture of computer, electronic and optical products

27 Manufacture of electrical equipment

28 Manufacture of machinery and equipment

29 Manufacture of motor vehicles, trailers and semi-trailers

30 Manufacture of other transport equipment

31 Manufacture of furniture

32 Manufacture of other goods

33 Repair and installation of machinery and equipment

Companies that operated in these categories were considered as manufacturing companies in the context of this thesis. Furthermore, another additional filter was needed to adjust the given data to the necessities provided by the theoretical framework. As the framework also included a refining of perspective considering the specifics of companies operating in the B2B markets, companies operating in B2C-markets were excluded. Taking all the filters, this survey yielded usable results of 136 German exporters from industrial manufacturing industries that operate in the B2B-market. Of these 136 exporters, 118 answered all the questions to a suitable degree, which means that the results of the survey will be used to calculate a regression model with moderation analysis after verification for biases, reliability, and the preparation of the data for modelling. The research model shown in 6.1. will be empirically tested based on the results of the CAWI survey.

6.2.2. Operationalisation of variables

Before a statistical analysis can be conducted on the model, a closer look will be taken at the operationalisation of the variables used. This operationalisation will be split into the four categories of dependent variables, independent variables, control variables, and moderating variables.

6.2.2.1. Dependent variables

The first dependent variable for the analysis presented in Chapter 6.1, **export performance** was measured through a number of financial and non-financial items, namely sales volume, sales profitability, return on investment in foreign market entries, financial liquidity, increase in foreign markets share, marketing effectiveness, distribution effectiveness, firm reputation from the perspective of clients and an overall satisfaction with foreign markets performance (see e.g. Brouthers et al., 1996, 1999, 2000, 2008). Respondents were asked to evaluate the overall export performance in 2017-2019 on a 7-point Likert scale, with 1 – definitely below expectations, 4 – in line with expectations, 7 – significantly above expectations. The answers were used to form an average which was employed as the export performance variable. The results were tested for their reliability using the Cronbach's alpha test (for a more in-depth analysis of the characteristics and uses of Cronbach's alpha, see Taber, 2018). In the Table below, the mean, variance, item correlation, and Cronbach's alpha for each item are shown. The overall Cronbach's alpha for the category is 0.871.

Table 8 – Statistical values for export performance

	Scale mean	Scale variance	Total item correlation	Cronbach's alpha
Sales volume	32.60	26.080	0.722	0.845
Sales profitability	32.80	26.442	0.699	0.848
Return on investment in foreign market entries	32.81	29.445	0.567	0.861
Financial liquidity	32.68	30.606	0.513	0.866
Increase in foreign markets share	32.68	25.524	0.731	0.844
Marketing effective-ness	32.90	30.360	0.427	0.871
Distribution effective-ness	32.95	28.834	0.467	0.870
Firm reputation from the perspective of cli-ents	32.32	29.317	0.554	0.862
Satisfaction with for-eign market perfor-mance	32.57	24.366	0.788	0.838

Source: The author's own elaboration.

To go a step above the static export performance measurement and accommodate for the highly dynamic nature of international operations, **export performance change** was measured through taking the same financial and non-financial items mentioned above and inquiring about their dynamic change in the period from 2017 to 2019, hereby following e.g. Rose and Shoham or Yang et al. (Rose & Shoham, 2002; Yang et al., 2023). Respondents were asked to evaluate the change in overall export performance from 2017 to 2019 on a 7-point Likert scale, with 1 – definitely below expectations, 4 – in line with expectations, 7 – significantly above expectation. Similar to above, the answers were also used to create an average among them, which was used as the export performance change variable. The Cronbach's alpha for the cat-egory is 0,894, the detailed values similar to the scale above can be found in the Table below:

Table 9 – Statistical values for export performance change

	Scale mean	Scale variance	Total item correlation	Cronbach's alpha
Change in sales volume	33.98	31.725	0.752	0.876
Change in sales profitability	34.44	34.737	0.721	0.877
Change in return on investment in foreign market entries	34.46	37.199	0.657	0.883
Change in financial liquidity	34.37	38.175	0.588	0.888
Change in increase in foreign markets share	34.18	32.847	0.775	0.872
Change in marketing effectiveness	34.40	39.204	0.510	0.893
Change in distribution effectiveness	34.35	37.993	0.497	0.894
Change in firm reputation from the perspective of clients	34.03	37.569	0.614	0.886
Change in satisfaction with foreign market performance	34.20	32.679	0.807	0.869

Source: The author's own elaboration.

6.2.2.2. Independent variables

The independent variables considered in the model were changes in export dimensions, namely in export intensity and export scope, which have already been touched upon in Chapters 2.8.2.1 and 2.8.2.2. Following the academic school of thought already shown by Forte, Hernandes and Peng among others (Forte & Carvalho, 2022; Hernández et al., 2022; M. W. Peng et al., 2008), this operationalization of the variables remains consistent with the overall research model and the theoretical foundations based on the overall research question and focuses on changes in the international activity without excluding activity changes in one direction. In order to achieve this for **export depth** the respondents were asked to provide the

indicative percentage of export turnover related to the total turnover in % for the financial years of 2017 to 2019. These results were then indexed using the following formula:

> Change in export depth = (Export turnover percentage 2019 - Export turnover percentage 2017) / Export turnover percentage 2017.

The process was similar for export scope or **export breadth**. Respondents were asked to estimate in how many international markets their products were sold for the financial years from 2017 to 2019 as a single value for each year. These results were then indexed using the following formula:

Change in export breadth = (Number of international markets served 2019 - Number of international markets served 2017) / Number of international markets served 2019.

By using these indexes, two main advantages were achieved. Firstly, differences in the basic internationalisation status of companies in relation to size, markets served and focus on export sales are somewhat negated, as each company's change is only measured against the backdrop of its previous results. Secondly, indexes give a comparable, understandable, and easily interpretable result, which – by way of its calculation – pays dividends to the dynamic nature of internationalisation processes.

6.2.2.3. Moderating variables

To move along with operationalizing all the variables of the research model, the characteristics of business models used to refine and moderate the basic relationship were already discussed above. These characteristics are the use of Internet technologies, technological capabilities, and product complexity.

Use of Internet technologies

The established perspective of numerous previous studies regularly took a rather narrow perspective on Internet technologies, focusing on e-commerce to accelerate or enhance a firm's internationalisation (Eduardsen & Ivang, 2016; Elia et al., 2021). The broadening of perspective to adopt Internet technologies within the even broader scope of overall digital technologies, as done by e.g. Cassetta et al (Cassetta et al., 2020) allows the present study to explore the interaction between the integration of Internet technologies into the business model of companies and its effect on export performance, resilience and overall reactions to crisis.

Prasad et al. and Gregory et al. (Gregory et al., 2019; Prasad et al., 2001) have laid the groundwork on marketing capabilities and the use of Internet technologies, which we follow in order to gather information on the following: customer-related marketing activities (promotion and advertisement of company's products, services and capabilities, provision of online product catalogue to customers and prospects, answering customer queries about product availability, order status, etc., allowing customers to place online orders), channel members-related marketing activities (providing salespeople with an online access to product/price/performance information, providing salespeople with online transmission of sales call information, enabling online purchase of parts/components from suppliers, providing online support to distributors/dealers), and marketing research-related and management communication activities (gathering market-related information on customers, competitors, and industry, using website visitor information for marketing and prospecting, realising better communication and coordination in managing operations and team). Expanding on these categories, the theoretical and academic groundwork established in 4.4.1.1 and 5.1. was employed to expand the scope of the Internet technologies used to include the following aspects in order to pay dividend to their increased importance and actuality also reflected in recent academic literature. The expansion included the following categories: online payment by customers (Drori et al., 2024), social media communications (Alarcón-del-Amo et al., 2018), and the use of sales platforms such as online marketplaces (Vadana et al., 2019). The respondents were asked to gauge their use of Internet technologies relating to each topic in a 1-7 scale where 1 meant that the technology is not used at all by our company and 7 stood for a significantly extended use in the company. The answers were compiled into an average. The Cronbach’s alpha for the category is 0.871, the detailed values similar to the scale above can be found in the Table below:

Table 10 – Statistical values for use of Internet technologies

	Scale mean	Scale variance	Total item correlation	Cronbach's alpha
Advertising products and services on the website	52.96	264.258	0.404	0.867
Provision of online catalogues and product brochures for customers	53.38	263.408	0.307	0.872
Responding to customer enquiries about product availability, order status, etc.	54.26	254.400	0.477	0.865
Order placement by customers	54.85	249.420	0.513	0.863
Online payment by customers	55.43	258.632	0.378	0.869
Online access to product and price information for sales staff	54.46	251.213	0.467	0.865
Management of customer contacts by sales staff	53.76	245.292	0.593	0.859
Online access to components from suppliers	55.45	256.308	0.510	0.863
Access to product support for dealers or business partners	54.97	243.081	0.699	0.854
Collecting market information about customers and competitors	53.64	261.966	0.408	0.867
Analysing visits to the website for marketing and sales purposes	54.02	250.362	0.603	0.859

Analysing social media activities for marketing and sales purposes	54.25	243.226	0.649	0.856
Maintaining an active profile on social media	53.71	247.525	0.559	0.861
Improving communication and coordination in team projects and operations	53.96	254.680	0.609	0.860
Use of an external sales platform (marketplace)	56.10	268.863	0.346	0.869
Provision of digital exchange and training opportunities (webinars, product training, etc.)	54.57	243.906	0.605	0.858

Source: The author's own elaboration.

Technological capabilities

The next moderating variable to be operationalized is technological capabilities. Technological capabilities as the building block of technological capabilities are already well established as resources that constitute the business model of the firm and can be leveraged into commercial success (Bołoz, 2018; de Reuver et al., 2009). As the evaluation of an advantage by definition needs to be done in contrast to the competition, the respondents of the survey were asked to evaluate their resources in comparison to their most important competitor. They were asked to respond to questions pertaining to the following categories: expenditure on research and development, modern equipment and devices, economies of scale (reduction of standardised fixed costs with an increasing sales volume), effective and efficient production department, patents, and technological expertise. Respondents were asked to evaluate their company on a Likert-scale of 1 to 7 with 1 meaning "significantly worse than our most important (next) competitor" and 7 meaning "significantly better than our most important (next) competitor". Cronbach's alpha for the category is 0,626, which although on the lower end of the scale in comparison to the other variables in this thesis is still within the acceptable range of results (Taber, 2018, 1278). The overall statistical values for the individual items in the category can be found in the Table below.

Table 11 – Statistical values for technological capabilities

	Scale mean	Scale variance	Total item correlation	Cronbach's alpha
Expenditure on research and development	22.27	11.607	0.515	0.516
Modern equipment and devices	21.99	11.889	0.559	0.505
Economies of scale [reduction of standardised fixed costs with an increasing sales volume]	22.41	14.303	0.242	0.623
Effective and efficient production department	22.04	12.339	0.453	0.545
Patents	22.76	13.648	**0.161**	0.676
Technological expertise	21.42	14.201	0.291	0.606

Source: The author's own elaboration.

Product complexity

The last moderating variable that needs operationalization in the context of this research is product complexity. Product complexity as a product characteristic is positively related to the need for additional sales force training, a higher service and maintenance requirement, but also increases the strength of the product patent and its position in the market niche (Cavusgil & Zou, 1994, 9). To gather sufficient information on the product complexity, the following questions were asked:

- Our products are technologically highly developed.
- Our products require trained sales staff.
- Our products are innovative in our industry.
- Our products require a comprehensive service.
- Our products require customisation to the specifics of a particular country (e.g. legal or cultural aspects).
- Our products require a special logistics infrastructure (e.g. special transport requirements).

- Our products stand out clearly from the competition (e.g. through quality, design, functionality, etc.).

The respondents were asked to evaluate these questions on a scale of 1 to 7, where 1 means “Completely disagree” and 7 stands for “Completely agree”. The Cronbach’s alpha for the whole category is 0.757, while the statistical values for the individual items of the category can be found in the Table below.

Table 12 – Statistical values for product complexity

	Scale mean	Scale variance	Total item correlation	Cronbach's alpha
Our products are technologically highly developed.	28.63	33.360	0.533	0.716
Our products require trained sales staff.	28.07	35.544	0.485	0.729
Our products are innovative in our industry.	28.71	32.932	0.665	0.696
Our products require a comprehensive service.	29.51	31.378	0.519	0.717
Our products require customisation to the specifics of a particular country (e.g. legal or cultural aspects).	30.04	31.739	0.404	0.750
Our products require a special logistics infrastructure (e.g. special transport requirements).	30.53	34.518	0.267	0.783
Our products stand out clearly from the competition (e.g. through quality, design, functionality, etc.).	29.48	32.992	0.638	0.699

Source: The author’s own elaboration.

6.2.2.4. Control variables

To round out the operationalization of all the variables, the last step needed is the operationalization of the control variables. Firm age, ownership structure, firm size, export share, family ownership and technology intensity were used as control variables. Firm age was operationalized as the age in years since the creation of the company, which was asked to respondents. Ownership structure was understood in relation to the geographical origin of equity bound in the company. The respondents were asked to evaluate their equity structure in the specific context of German equity along the following four categories:

1 Companies with a 100% share of German capital

2 Companies with a majority holding of German capital

3 Companies with an equal share of German and foreign capital (50/50%)

4 Companies with a minority shareholding of German capital.

The third control variable was firm size, which was understood in relation to the number of employees a firm had in the year of the survey. Respondents were asked to rank their current number of employees in the following four categories:

1 1 to 9 employees

2 10 to 49

3 50 to 249

4 250 and more.

In the case of a ranking in category 1, the survey stopped, as the firm was considered too small for the gathering of sufficient data. The remaining three categories were coded as such: 2 equals small firms, 3 equals medium firms, and 4 equals large firms.

Export share in 2019 was the next control variable, which was simply taken as the percentage value the respondents were asked to evaluate. The last control variable is family ownership, which was understood as a family member or various family members of the founding family of the firm either having a substantial influence on firm operations or owning considerable amounts of equity in the firm. This information was requested by the respondents.

6.3. Empirical results

In order to answer the research questions and test the hypotheses, various statistical analyses were carried out using the IBM SPSS Statistics package version 29. With it, an analysis of basic descriptive statistics, a correlation analysis with Pearson's *r* coefficient, Spearman's *rho*

and a rank-dual analysis were performed. Furthermore, moderation analyses were performed using the PROCESS v4.2 macro. The classical threshold of α = 0.05 was used as the level of statistical significance. In the following, descriptive statistics will firstly be discussed in more depth, before the moderation analysis will be the main topic of the Chapter.

6.3.1. Descriptive statistics

In the first step of the analysis, the distributions of the quantitative variables were checked. For this purpose, basic descriptive statistics were calculated together with the Kolmogorov-Smirnov test examining the normality of the distribution. Outlier observations exceeding the third standard deviation were removed from the analysis, as noted in Table 13.

Table 13 – Basic descriptive statistics with the result of the Kolmogorov-Smirnov test

Variables	*CN*	*MM*	*MMe*	*SSD*	*SSk.*	*KKurt.*	*MMin.*	*MMax.*	*DD*	*pp*
Control variables										
Firm age	1136	773.19	669.00	337.55	--0.02	--1.37	66.00	1121.00	00.15	**<<0.001**
Export share (2019)	1136	551.29	550.00	222.74	--0.03	--1.18	110.00	990.00	00.10	**0.003**
Dependent variables										
Export Performance	1127	44.08	44.00	00.44	00.25	11.43	33.00	55.33	00.20	**Y<0.001**
Export Performance Change	1134	44.25	44.11	00.69	00.52	00.72	22.33	66.22	00.16	**<<0.001**
Independent variables										
Export depth	1118	00.03	00.00	00.10	00.60	11.83	--0.25	00.33	00.21	**<<0.001**
Export breadth	1125	00.01	00.00	00.11	00.24	22.15	--0.29	00.33	00.27	**><0.001**
Moderators										
Use of Internet technologies	1136	33.62	33.59	11.06	10.18	--0.07	11.19	66.31	00.06	00.200
Product complexity	1136	44.88	44.86	00.94	--0.02	--0.40	22.43	77.00	00.06	00.200
Technologically competitive advantage	1135	44.53	44.40	00.71	00.69	00.51	33.00	66.60	00.14	**<<0.001**

Source: The author's own elaboration.

The results of the Kolmogorov-Smirnov test showed that the assumption of a normal distribution was only met for use of Internet technologies and Product complexity. For the remaining variables, the test results are statistically significant, indicating a discrepancy between the tested distribution and the normal distribution. For most of the variables, the skewness

and kurtosis are within the conventional range |2|, which would indicate a slight level of asymmetry of the variable distributions (George, Mallery, 2021). For Export breadth, the kurtosis slightly exceeds the value of 2 but stays within the acceptable range of |7| (Watkins, 2021). Therefore, the analyses were based on parametric tests if the other assumptions of these tests were also met.

6.3.2. Correlation analyses

In order to check whether there were statistically significant relationships between the variables included in the model, correlation analyses in the form of Pearson's *r* were performed between quantitative variables. To test the relationship with at least one ordinal variable (ownership structure, firm size, technological intensity), a Spearman's *rho correlation analysis* was performed. In addition, to test the association with Family ownership, a nominal variable, a correlation analysis with rank-order coefficient was performed due to significant numerical discrepancies for the groups. The results of the analysis are presented in Table 14.

Table 14 – Results of the analyses of the relationships between the controlled, independent and dependent variables and the moderators used in the models

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Export performance	--											
2. Export Performance Change	**00.60***	--										
3. Export depth	00.14	00.00	--									
4. Export breadth	00.13	**00.33***	00.15	--								
5.Use of Internet technologies	**00.26***	**00.39***	--0.04	00.05	--							
6. Product complexity	**00.17^**	**00.18***	**00.28***	00.03	**00.31***	--						
7. Technological capabilities	**00.20***	00.13	00.07	00.09	**00.32***	**00.26**	--					
8 Export share	**00.16^**	**00.20***	00.16	00.05	00.09	00.11	00.11	--				
9. Firm age	00.02	--0.05	--0.04	--0.11	00.00	00.00	00.05	00.05	--			
10. Ownership structure	00.00	00.07	00.00	**--0.19***	--0.06	--0.04	--0.04	**00.20***	--0.04	--		
11. Firm size	00.12	00.07	00.15	--0.04	**00.21***	**00.22**	**00.39***	**00.20***	**00.24**	--0.03	--	
12. Family ownership	00.13	00.11	--0.05	--0.06	00.04	**00.27**	--0.10	00.05	--0.04	00.07	00.10	--
13. Technology intensity	--0.12	--0.04	--0.09	00.09	--0.03	00.04	00.07	**--0.37*****	--0.02	**--0.40*****	--0.09	--0.04

*Annotation. *** - p<0.001, ** - p<0.01, * - p<0.05,^+ - p<0.1.* Family ownership coding: 1 - no, 2 - yes.

Source: The author's own elaboration.

The analysis showed a statistically significant positive correlation between export performance and export performance change. The value of Pearson's r coefficient indicates a strong relationship. With an increase in export performance, the level of export performance change increases. Significant relationships were obtained between export performance and the use of Internet technologies and technological capabilities, while it was significant at the level of statistical trend with product complexity and export share (positive and weak relationships). The higher the level of the use of Internet technologies, technological capabilities, product complexity and export share, the higher the level of export performance.

For export performance change, statistically significant positive correlations were obtained with export breadth and the use of Internet technologies (moderate relationships) and product complexity (weak relationship). A positive and weak relationship at the level of statistical trend was also observed with export share. As export breadth, use of Internet technologies, product complexity and export share increase, export performance change increases.

Export depth, on the other hand, is positively and weakly related to product complexity. The higher the level of product complexity, the higher the level of export breadth. At the same time, export breadth is negatively correlated with ownership structure (weak relationship). The lower the share of German capital in the company, the lower the level of export breadth.

Use of Internet technologies was found to be associated with product complexity and technological capabilities (moderate association) and with firm size (weak association). All these relationships are positive, indicating a simultaneous increase in the use of Internet technologies with an increase in product complexity, technological capabilities and firm size.

Product complexity similarly correlated with technological capabilities, but also with firm size and family ownership (positive and weak relationships). With a higher level of technological capabilities, a larger firm (firm size) and with the firm's status as family owned, product complexity increases.

Technological capabilities were correlated with firm size. This correlation is moderate and positive, the larger the company (firm size), the higher the level of technological capabilities.

Export share co-varied with ownership structure and firm size (weak and positive relationship) and technological intensity (moderate and negative relationship). If there is a smaller

share of Germany capital in a company and with a larger company, the level of export share increases. At the same time, the higher the level of technological intensity, the lower the level of export share.

Firm age was positively and weakly related to firm size: the older the firm, the larger the firm. Ownership structure, on the other hand, was related to technology intensity (negative and moderate relationship). The sign of the relationship indicates that the smaller the share of German capital in the firm, the lower the technological intensity of the firm. No other statistically significant correlations were noted.

6.3.3. Results of regression analyses

6.3.3.1. Moderating effect of product complexity

In order to verify whether there is an interaction of Export depth and Export breadth with Product complexity for the dependent variables Export Performance and Export Performance Change, a moderation analysis was performed. The analysis was performed using the PROCESS v4.2 macro. Assumptions were checked beforehand using linear regression, removing outlier observations based on standardised value >|3| and Mahalanobis distance ($p < 0.0001$). Firm age, ownership structure, firm size, export share (2019), family ownership and technological intensity were controlled in the models. Ownership structure was recoded to a dichotomous variable: firm with 100% German capital vs. firm with less than 100% German capital. Firm size was subjected to dummy coding, with small firm as the reference level. Family ownership was coded as follows: 1 - no, 2 - yes. Also, technological intensity was dummy coding, but high technological intensity was chosen as the reference level. For significant interactions, a split was adopted: below one standard deviation, medium and above one standard deviation (*-1SD*, *M*, *+1SD*).

In a first step, models were tested with Export depth as the independent variable, Product complexity as the moderator and Export Performance and Export Performance Change as the dependent variable. Table 15 contains the result of these analyses.

Table 15 – Regression analysis with the interaction effect of export depth with product complexity for export performance and export performance change

Variables	Dependent variables	
	Export Performance *N* = 112	Export Performance Change *N* = 116
Constant	4.38*** (0.39)	3.99*** (0.61)
Control variables		
Firm age	-0.0004 (0.001)	-0.0004 (0.002)
Ownership structure[a]	-0.07 (0.14)	-0.04 (0.22)
Firm size: medium[b]	0.29* (0.14)	0.11 (0.22)
Firm size: large[b]	0.17 (0.13)	0.13 (0.21)
Export share (2019)	-0.0001 (0.002)	0.005 (0.003)
Family ownership[c]	-0.16 (0.13)	0.04 (0.20)
Technology intensity: low[d]	-0.06 (0.15)	-0.02 (0.24)
Technology intensity: medium[d]	-0.09 (0.09)	-0.09 (0.15)
Direct effects		
Export depth	0.45 (0.50)	-0.59 (0.71)
Product complexity	0.07 (0.05)	0.16* (0.08)
Interaction effect		
Export depth x Product complexity	0.18 (0.46)	-0.96 (0.63)
F	1.26	1.27
df	11, 100	11, 104
R^2	0.12	0.12
ΔR^2	0.001	0.02

Annotation. *** - *p<0.*001, ** - *p<0.*01, * - *p<0.*05,[+] - p<0.1.[a] - coding: 1 - company with 100% German capital; 2 - company with less than 100% German capital; -[b] reference level: small company ;[c] - coding: 1 - no, 2 - yes;[d] - reference level: high technology intensity.

Source: The author's own elaboration.

The model for Export Performance proved to be an inadequate fit to the data ($p < 0.05$). The explained variance was 12%. Among the controlled variables, a significant relationship was only observed between the medium firm (relative to the small firm). The relationship is additive, so the medium-sized company compared to the small one was characterised by a larger Export Performance of 0.29 units. No other statistically significant predictors were noted. In addition, the interaction effect was also statistically insignificant, and this contributed to a non-significant increase in variance of <1%.

For Export Performance Change, the model was also not adequately fitted. This model also explained 12% of the variance in the dependent variable. Among the controlled variables,

there was no statistically significant result. However, the effect of the moderator on the dependent variable was significant (negative relationship). If Product complexity increases by 1 unit, the level of Export Performance Change will be greater by 0.16. There was no significant interaction of Product complexity with Export depth, and the increase in variance when this interaction was added to the model was 2% and not statistically significant.

Analogous calculations were then performed with Export breadth as the independent variable. The results of the calculations are presented in Table 16.

Table 16 – Regression analysis with the interaction effect of export breadth with product complexity for export performance and export performance change

Variables	Dependent variables	
	Export Performance *N* = 117	Export Performance Change *N* = 123
Constant	4.33*** (0.33)	3.94*** (0.47)
Control variables		
Firm age	-0.001 (0.001)	-0.0004 (0.002)
Ownership structure[a]	-0.03 (0.13)	0.09 (0.18)
Firm size: medium[b]	0.23[+] (0.12)	0.06 (0.18)
Firm size: large[b]	0.14 (0.11)	0.08 (0.17)
Export share (2019)	-0.0001 (0.002)	0.004 (0.003)
Family ownership[c]	-0.13 (0.11)	0.03 (0.15)
Technology intensity low[d]	-0.08 (0.13)	-0.21 (0.19)
Technology intensity medium[d]	-0.10 (0.08)	-0.16 (0.13)
Direct effects		
Export breadth	0.55 (0.40)	1.67** (0.52)
Product complexity	0.05 (0.04)	0.12[+] (0.06)
Interaction effect		
Export breadth x Product complexity	0.19 (0.40)	1.55** (0.49)
F	1.31	3.50***
df	11, 105	11, 111
R^2	0.12	0.26
ΔR^2	0.002	0.07**

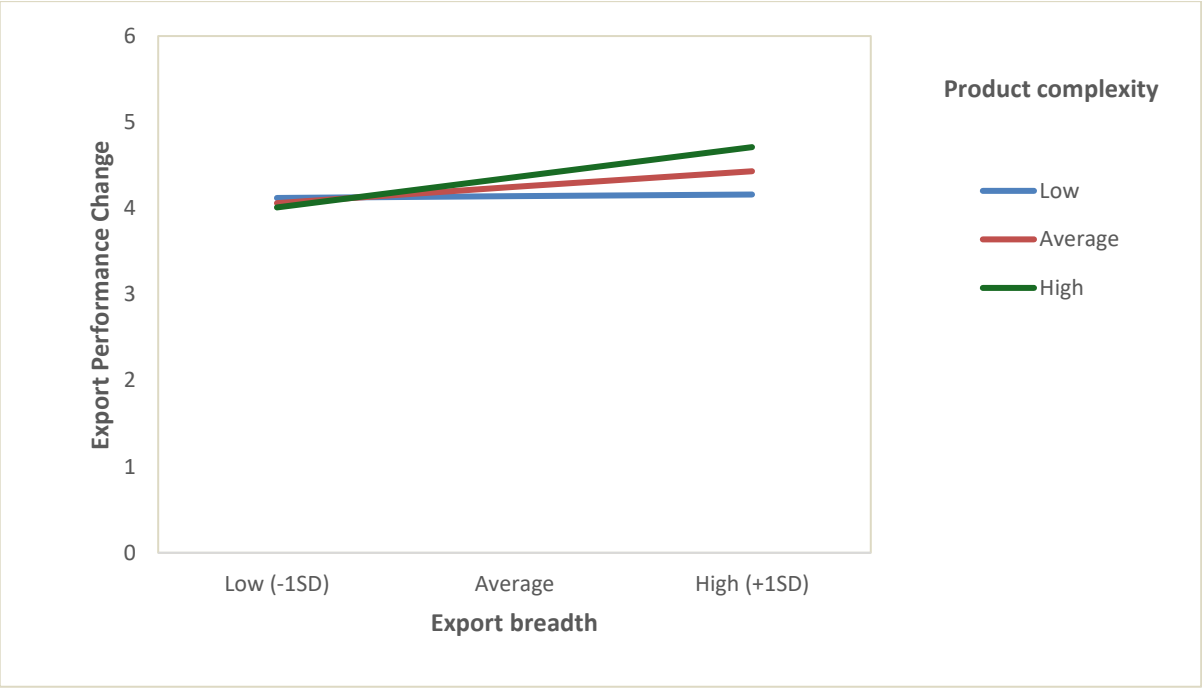
Annotation. *** - *p<0.*001, ** - *p<0.*01, * - *p<0.*05,[+] - p<0.1.[a] - coding: 1 - company with 100% German capital; 2 - company with less than 100% German capital; -[b] reference level: small company ;[c] - coding: 1 - no, 2 - yes;[d] - reference level: high technology intensity.

Source: The author's own elaboration.

The model for export performance was found to be an inadequate fit to the data, with an explained variance of 12%. Among the controlled variables, only significance at the level of statistical trend was noted for the comparison between a medium-sized firm and a small firm. The relationship is positive, so it can be assumed with a degree of caution that medium-sized firms will have a 0.23 unit higher level of export performance than small firms. No other significant predictors were noted. In addition, the interaction in the model also proved to be insignificant, like its addition to the model. It contributed <1% to the explained variance.

In contrast, the model for export performance change was a good fit. The explained variance was 26%. Of the controlled variables, there was no significant relationship with the dependent variable. However, export breadth significantly predicted export performance change. Due to the positive value, it should be assumed that if export breadth increases by 1 unit, export performance change will be greater by 1.67 units. Additionally, product complexity proved to be statistically significant at the trend level. Considering only the effect at the trend level, we can assume that if product complexity increases by 1 unit, the level of export performance change will increase by 0.12 units. However, it is worth noting that the interaction effect was also statistically significant. Adding interactions to the model resulted in a significant increase in variance of 7%: $_{Exchange}(1, 111) = 9.84$; $p = 0.002$.

In order to examine the effect of moderation, conditional effects were tested. At the low moderator level, there was no effect of export breadth on export performance change: *B* = 0.18; *SE* = 0.77; *t* = 0.24; *p* = 0.814; 95% *CI* [-1.35; 1.71]. However, an effect of influence was noted at the mean product complexity level: *B* = 1.67; *SE = 0.*52; *t =* 3.23; *p = 0.*002; 95% *CI* [0.64; 2.70]. If at the medium moderator level export breadth increases by 1 unit, the level of export performance change will be greater by 1.67 units. In addition, at the high moderator level, there was also a significant effect of the independent variable on the dependent variable: *B* = 3.16; *SE* = 0.63; *t* = 5.05; *p* < 0.001; 95% *CI* [1.92, 4.40]. If for high product complexity export breadth increases by 1 unit, the level of export performance change increases by 3.16 units. The interaction effect is presented in Figure 20.



Graph 1 – Interaction effect for the export breadth relationship with export performance change with product complexity as a moderator

Source: The author's own elaboration.

6.3.3.2. Moderating effect of the use of Internet technologies on the relationship of export depth and breadth with export performance and export performance change

In a further step, analogous calculations were performed. Identical assumptions were made and the same sets of variables were included in the model, only the moderator was changed. This time the moderator was the use of Internet technologies. Table 17 shows the results of the first calculation for Export depth as the independent variable.

A model with export depth for export performance, taking into account the moderating role of use of Internet technologies, was found to fit the data well. The model explained 18% of the variance in export performance. A significant difference was observed in SMEs. Due to the positive value of the *B* coefficient, it should be assumed that medium-sized firms will have a 0.33 unit higher level of export performance than small firms. The remaining controlled variables are not statistically significant. However, a significant effect of the use of Internet technologies on the dependent variable was noted. Again, this value is positive, allowing it to be inferred that with an increase of 1 unit in the use of Internet technologies, the level of export performance will be greater by 0.10 units. The interaction effect, on the other hand, was found

to be statistically insignificant, and adding it to the model contributed to a negligible increase in variance (2%).

Table 17 – Regression analysis with the interaction effect of export depth with use of internet technologies for export performance and export performance change

Variables	Dependent variables	
	Export Performance *N* = 112	Export Performance Change *N* = 116
Constant	4.39*** (0.38)	4.18*** (0.55)
Control variables		
Firm age	0.0001 (0.001)	<0.01 (0.002)
Ownership structure[a]	-0.11 (0.14)	-0.09 (0.20)
Firm size: medium[b]	0.33* (0.14)	0.21 (0.20)
Firm size: large[b]	0.14 (0.13)	0.09 (0.19)
Export share (2019)	0.001 (0.002)	0.005 (0.003)
Family ownership[c]	-0.20 (0.12)	-0.05 (0.18)
Technology intensity: low[d]	-0.07 (0.15)	-0.20 (0.22)
Technology intensity: medium[d]	-0.08 (0.09)	-0.11 (0.13)
Direct effects		
Export depth	0.69 (0.48)	0.51 (0.68)
Use of Internet technologies	0.10* (0.04)	0.29*** (0.06)
Interaction effect		
Export depth x Use of Internet technologies	0.85 (0.57)	1.08 (0.67)
F	1.93*	3.64***
df	11, 100	11, 104
R^2	0.18	0.28
ΔR^2	0.02	0.02

Annotation. *** - *p<0.*001, ** - *p<0.*01, * - *p<0.*05,[+] - p<0.1.[a] - coding: 1 - company with 100% German capital; 2 - company with less than 100% German capital; -[b] reference level: small company ;[c] - coding: 1 - no, 2 - yes;[d] - reference level: high technology intensity.

Source: The author's own elaboration.

For Export performance change, the fit of the model to the data was also demonstrated. The explained variance was 28%. Among the predictors, only use of Internet technologies proved to significantly predict the change in the dependent variable. If use of Internet technologies is greater by 1 unit, the level of export performance change will increase by 0.29 units. However, no significant moderating effect was observed. In this model, the increase in variance when interactions were added to the model was found to be insignificant (2%).

Models were then run for export breadth as the dependent variable with use of Internet technologies as the moderator, which is shown in Table 18.

Table 18 – Regression analysis with the interaction effect of export breadth with use of Internet technologies for export performance and export performance change

Variables	Dependent variables	
	Export Performance *N* = 117	Export Performance Change *N* = 123
Constant	4.31*** (0.32)	3.93*** (0.44)
Control variables		
Firm age	-0.0002 (0.001)	0.001 (0.002)
Ownership structure[a]	-0.03 (0.12)	0.08 (0.17)
Firm size: medium[b]	0.24 (0.12)	0.10 (0.17)
Firm size: large[b]	0.08 (0.11)	-0.06 (0.16)
Export share (2019)	0.0003 (0.002)	0.004 (0.003)
Family ownership[c]	-0.13 (0.10)	0.03 (0.14)
Technology intensity: low[d]	-0.12 (0.13)	-0.32^{+} (0.18)
Technology intensity: medium[d]	-0.10 (0.08)	-0.15 (0.11)
Direct effects		
Export breadth	0.72^{+} (0.39)	2.01*** (0.48)
Use of Internet technologies	0.10* (0.04)	0.29*** (0.05)
Interaction effect		
Export breadth x Use of Internet technologies	-0.01 (0.41)	0.22 (0.44)
F	1.83^{+}	5.57***
df	11, 105	11, 111
***R*^{2}**	0.16	0.36
***ΔR*^{2}**	<0.001	0.002

Annotation. *** - *p<0.*001, ** - *p<0.*01, * - *p<0.*05,$^{+}$ - p<0.1.[a] - coding: 1 - company with 100% German capital; 2 - company with less than 100% German capital; -[b] reference level: small company ;[c] - coding: 1 - no, 2 - yes;[d] - reference level: high technology intensity.

Source: The author's own elaboration.

The Export breadth model for export performance was found to fit only at the level of statistical trend. The model presented explained 16% of the variance in export performance. Direct effects were observed: export breadth was significant at the level of statistical trend, while for the use of Internet technologies the effect was significant at the $p < 0.05$ level. Both values of the *B* coefficient were positive, meaning that for an increase in export breadth by 1 unit, export performance will be larger by 0.72 units. And for an increase in the use of Internet technologies by 1 unit, the level of the dependent variable would increase by 0.10 units. The

interaction effect and the addition of the interaction to the model was statistically insignificant, with an increase in variance of less than 1%.

For Export Performance Change, the model was already adequately fitted to the data. Among the controlled variables, low technological intensity was a significant predictor at the level of statistical trend. The value of the *B* coefficient was negative, so a decrease in Export Performance Change of 0.32 units was observed for firms with low technological intensity compared to firms with high technological intensity. Furthermore, a significant effect of both the independent variable and the moderator in the model tested was obtained. If Export breadth is increased by 1 unit, the level of Export Performance Change increases by 2.01 units. For an increase in Use of Internet technologies by 1 unit, the level of the dependent variable will be greater by 0.29 units. However, the interaction effect of Export breadth and Use of Internet technologies was not statistically significant. Adding an interaction to the model did not result in a significant increase in variance, and the change was insignificant: <1%.

6.3.3.3. Moderating effect of technological capabilities for the relationship of export depth and breadth with export performance and export performance change

The final step of the analyses tested whether the relationship of Export depth and Export breadth with Export Performance and Export Performance Change runs differently at different levels of the moderator Technological capabilities. Initially, the effect was checked for Export depth as the dependent variable, which is shown in Table 19.

The model with export performance as the dependent variable did not fit the data well, with an explained variance of 14%. Among the controlled variables, there was an effect that was significant at the level of statistical trend for medium-sized firms. A positive *B-coefficient* indicates that medium-sized firms will have a 0.27 unit higher level of export performance than small firms. The effect of technological capabilities on export performance was also observed to be significant at the level of statistical trend. If technological capabilities increase by 1 unit, the level of the dependent variable will be 0.12 units higher. The interaction added to the model was not statistically significant and contributed to an insignificant increase in variance <1%.

Table 19 – Regression analysis with the interaction effect of export depth with technological capabilities for export performance and export performance change

Variables	Dependent variables	
	Export Performance *N* = 111	Export Performance Change *N* = 115
Constant	4.39*** (0.40)	3.86*** (0.61)
Control variables		
Firm age	-0.0002 (0.001)	-0.0003 (0.002)
Ownership structure[a]	-0.06 (0.14)	-0.10 (0.22)
Firm size: medium[b]	0.27[+] (0.14)	0.20 (0.22)
Firm size: large[b]	0.10 (0.14)	0.25 (0.22)
Export share (2019)	0.0002 (0.002)	0.01[+] (0.003)
Family ownership[c]	-0.16 (0.13)	0.05 (0.19)
Technology intensity: low[d]	-0.09 (0.15)	-0.04 (0.24)
Technology intensity: medium[d]	-0.12 (0.09)	-0.22 (0.14)
Direct effects		
Export depth	0.54 (0.49)	-0.74 (0.69)
Technological capabilities	0.12[+] (0.06)	0.06 (0.10)
Interaction effect		
Export depth x Technological capabilities	0.25 (0.64)	-1.00 (0.88)
F	1.41	1.19
df	11, 99	11, 103
R^2	0.14	0.11
ΔR^2	0.001	0.01

Annotation. *** - *p<0.*001, ** - *p<0.*01, * - *p<0.*05,[+] - p<0.1.[a] - coding: 1 - company with 100% German capital; 2 - company with less than 100% German capital; -[b] reference level: small company ;[c] - coding: 1 - no, 2 - yes;[d] - reference level: high technology intensity.

Source: The author's own elaboration.

The model results for export performance change showed a lack of fit of the model to the data and an explained variance of 11%. Of the controlled variables, export share was significant at the level of statistical trend. If export share increases by 1 unit, the level of export performance change will be greater by 0.01 units. The independent variable, moderator and their interaction were statistically insignificant. Adding the interaction to the model did not improve the explained variance (non-significant change of 1%).

In the second part, analyses were performed for export breadth as an independent variable, technological capabilities as a moderator and export performance and export

performance change as dependent variables, together with a fixed set of controlled variables. Table 20 shows the result of these analyses.

Table 20 – Regression analysis with the interaction effect of export breadth with technological capabilities for export performance and export performance change

Variables	Dependent variables	
	Export Performance *N* = 116	Export Performance Change *N* = 122
Constant	4.51*** (0.33)	3.95*** (0.50)
Control variables		
Firm age	-0.001 (0.001)	-0.001 (0.002)
Ownership structure[a]	-0.06 (0.12)	0.04 (0.19)
Firm size: medium[b]	0.22^{+} (0.12)	0.15 (0.19)
Firm size: large[b]	0.07 (0.12)	0.15 (0.18)
Export share (2019)	-0.001 (0.002)	0.003 (0.003)
Family ownership[c]	-0.16 (0.11)	0.05 (0.16)
Technology intensity: low[d]	-0.12 (0.13)	-0.23 (0.20)
Technology intensity: medium[d]	-0.11 (0.08)	-0.22^{+} (0.12)
Direct effects		
Export breadth	0.35 (0.42)	1.34** (0.57)
Technological capabilities	0.11* (0.06)	0.05 (0.09)
Interaction effect		
Export breadth x Technological capabilities	-0.92^{+} (0.51)	-1.23 (0.74)
F	1.81^{+}	2.29*
df	11, 104	11, 110
R^2	0.16	0.19
ΔR^2	0.03^{+}	0.02

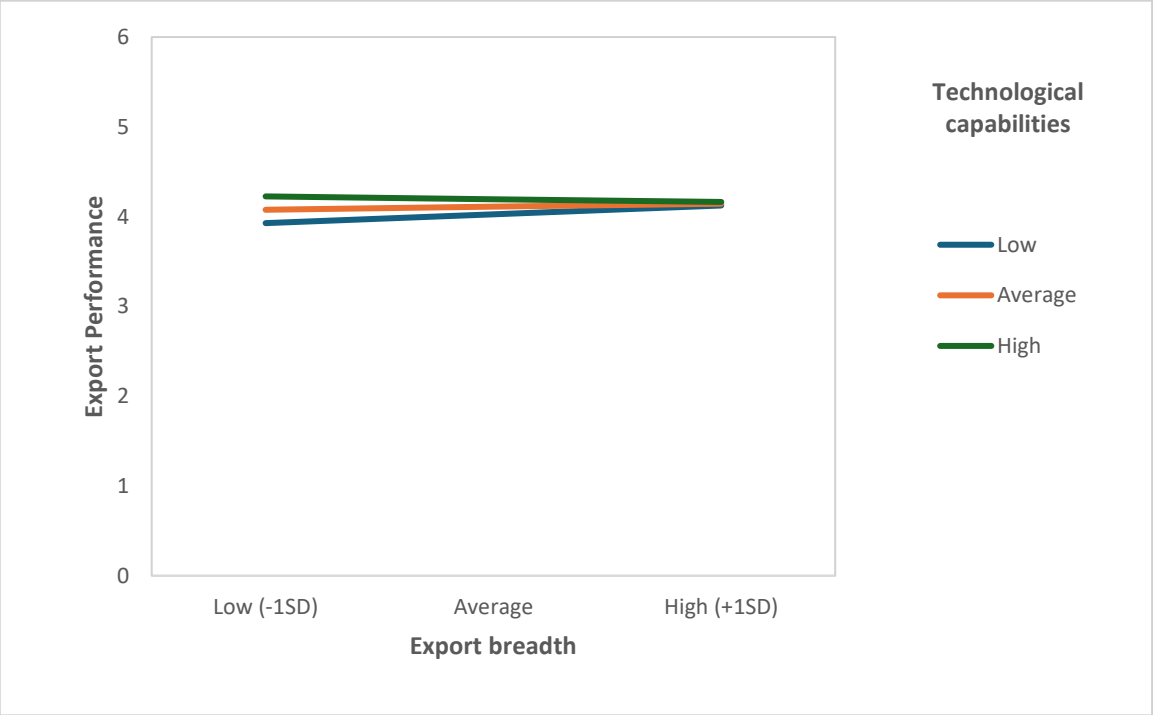
Annotation. *** - *p<0.*001, ** - *p<0.*01, * - *p<0.*05,$^{+}$ - p<0.1.[a] - coding: 1 - company with 100% German capital; 2 - company with less than 100% German capital; -[b] reference level: small company ;[c] - coding: 1 - no, 2 - yes;[d] - reference level: high technology intensity.

Source: The author's own elaboration.

The model for export performance was fit at the level of statistical trend and explained 16% of the variance in the dependent variable. Average company size was a significant predictor at the level of statistical trend among the controlled variables. As in previous models, medium-sized firms will be characterised by 0.22 units higher export performance than small firms. Technological capabilities proved to be a significant predictor in a positive relationship with the dependent variable. With an increase in technological capabilities by 1 unit, the level of export performance will be higher by 0.11 units. A moderating effect that was significant at

the statistical trend level was also observed. Adding an interaction to the model increased the explained variance by 3%.

Conditional effects for the moderation tested were checked. It was found that at the low level of technological capabilities the effect was statistically significant: *B* = 1.01; *SE* = 0.46; *t* = 2.18; *p* = *0.*031; 95% *CI* [0.09; 1.92]. At the low moderator level, an increase in export breadth by 1 unit was associated with an increase in export performance by a similar amount: 1.01 units. In contrast, at both medium: *B* = 0.34; *SE= 0.*42; *t = 0.*82; *p* = 0.413; 95% *CI* [-0.49; 1.18] and at the high moderator level: *B* = -0.32; *SE = 0.*64; *t* = -0.49; *p = 0.*622; 95% *CI* [-1.58, 0.95] Export breadth had no effect on export performance. The interaction described is shown visually in Figure 21.



Source: The author's own elaboration.

Graph 2 – Interaction effect for the association of export breadth with export performance and technological capabilities as moderator

The last model tested was a good fit to the data. The explained variance in this model was 19%. Of the controlled variables, only the average level of technological intensity was found to be significant - moreover, it was at the level of statistical trend. A negative *B-coefficient* value means that companies with medium technological intensity will have 0.22 units lower

Export Performance Change than companies with high technological intensity. Additionally, Export breadth was a significant predictor in a positive relationship with the dependent variable. With an increase in Export breadth of 1 unit, the level of Export Performance Change will be greater by 1.34 units. The interaction of Export breadth with Technological capabilities was found to be statistically insignificant, and its addition to the model was associated with a non-significant increase in explained variance of 2%.

6.3.4. Summary of hypotheses testing

Proceeding from the results of the statistical analysis, it is necessary to take these results and utilize them in order to answer the hypotheses postulated in the research model. To start with the basic hypotheses, H1a predicted that an increase in export share has a positive impact on export performance, while H1b predicted a similar increase for the case of an increase in the number of markets served. H1c and H1d formulate the corresponding hypotheses for the effect of the export dimensions on export performance change. The independent variable of export depth was found to have a notable, but not statistically significant effect on the dependent variables of export performance with 0.14 and export performance change with 0.0 and while the control variable of export share has a statistically significant impact on export performance change with 0.20, the difference in statistical evaluation lies in the dynamic nature of export depth in contrast to the static nature of export share. Export share as a control variable only considers the percentage of turnover created with export sales in the last year of data available, whereas export depth considers the dynamic nature of the internationalisation processes already discussed multiple times across this thesis and is calculated as the change in export share throughout the three years of available data. **H1a** is therefore **not supported**, although the notable effect and the support of the control variable point towards the assumption that the general relationship assumed between the variables exists but might not be as strong or significant as previously suspected. In contrast to that, **H1c** is **supported**. The independent variable of export breadth, similarly considered as the change in export markets served throughout the three years of available data, is found to have a statistically significant effect on export performance change with 0.33*** and a notable, but not statistically significant effect on export performance with 0.3. It is worth pointing out that for the variables of export depth and export breadth, export breadth also has a small positive effect on export depth with 0.15, supporting the notion of a small degree of interlocked effects fitting the

connected view of international operations presented so far. **H1b** and **H1d** are therefore **supported**.

After the basic hypotheses have been examined, the next step needs to consider the moderators. Following the same structure as above, the first moderator considered is product complexity. H2a stated that product complexity moderates the relationship between export depth and export performance insofar as that a lower product complexity leads to a higher effect of export depth on export performance, while H2c postulates the same effect on export performance change. The data did not offer any results supporting this hypothesis, so that **H2a** and **H2c** are **not supported.** H2b as the export breadth equivalent of H2a stated that the basic relationship between export breadth and export performance is moderated in the opposite way, so that a higher product complexity leads to a higher effect of export breadth on export performance. The data showed a significant result, pointing out that an increase in export breadth of 1 unit will increase export performance change by 1.67 units, a relationship which is positively moderated by an increase in product complexity. An increase of product complexity of 1 leads to a higher increase in export performance change by 0.12 units, which also means that the interaction effect is statistically significant with an increase in variance of 7% and p=0.002. **H2b** is therefore **not supported**, but **H2d** is **supported**.

The second moderator in the research model is technological capabilities. H3a states that technological capabilities moderate the relationship in H1a so that for higher technological advantage, a higher export depth has a more positive impact on export performance and export performance change. Although the statistical results show a direct positive effect of technological capabilities on export performance, there is no support for the moderating effect on export performance. Furthermore, no statistically significant interaction effect was found for export performance change. Therefore, **H3a** and **H3c** are **not supported**. Along the same lines of H3a, H3b postulates that the basic relationship in H1b is moderated by technological capabilities so that higher technological capabilities increase the positive effect an increase in export breadth has on export performance and export performance change. An increase in export breadth by one unit increases the export performance by 0.35 units, an effect which is partly moderated by technological capabilities. A statistically significant moderation effect going in the same direction as hypothesised was only found for **low** levels of technological capabilities, where an increase in export breadth of one unit led to a nearly identical increase in

export performance of 1.01 units. Such an effect could not be found for medium or high levels of technological capabilities. Furthermore, it was found that high technological intensity and a higher level of technological capabilities both positively influence export performance change. This effect, however, did not lead to any statistically significant interaction effects between technological capabilities and export performance change, which means that **H3b** was **partly supported**, whereas **H3d** was not supported.

The third moderator discussed is the use of Internet technologies. H4a states that the use of Internet technologies positively moderates the relationship in H1a. The higher use of Internet technologies by one unit has a positive impact on the level of export performance by 0.10 units, which however did not lead to an interaction effect with an increase of export depth. The story for export performance change is similar, as a higher use of Internet technologies by one unit leads to an increase in export performance change by 0.29 units. This also does not imply a moderating effect, as any interactions only provided a statistically insignificant increase in the variance. Therefore, **H4a** and **H4c** are **not supported**. H4b postulates that the use of Internet technologies positively impacts the basic relationship between export breadth and export performance and export performance change. For export performance, both independent variables of use of Internet technologies and export breadth show a positive effect on export performance by 0.10 units and 0.72 units respectively. However, similar to H4a, no statistically significant interaction effect was found. For export performance change, the results differ by value with an effect of 2.01 by export breadth and 0.29 by use of Internet technologies, but the overall statistical analysis remains the same. There is no statistically significant moderation effect. Therefore, **H4b** and **H4d** are **not supported**.

Before these statistical results are discussed in the context of the theoretical frame established for the research model, all confirmations for the hypotheses are aggregated in the familiar Graphics already shown above. For clarity purposes, all confirmed hypotheses are shown in green, while hypotheses that are not confirmed are shown in red. If a hypothesis is partly confirmed, it will be yellow.

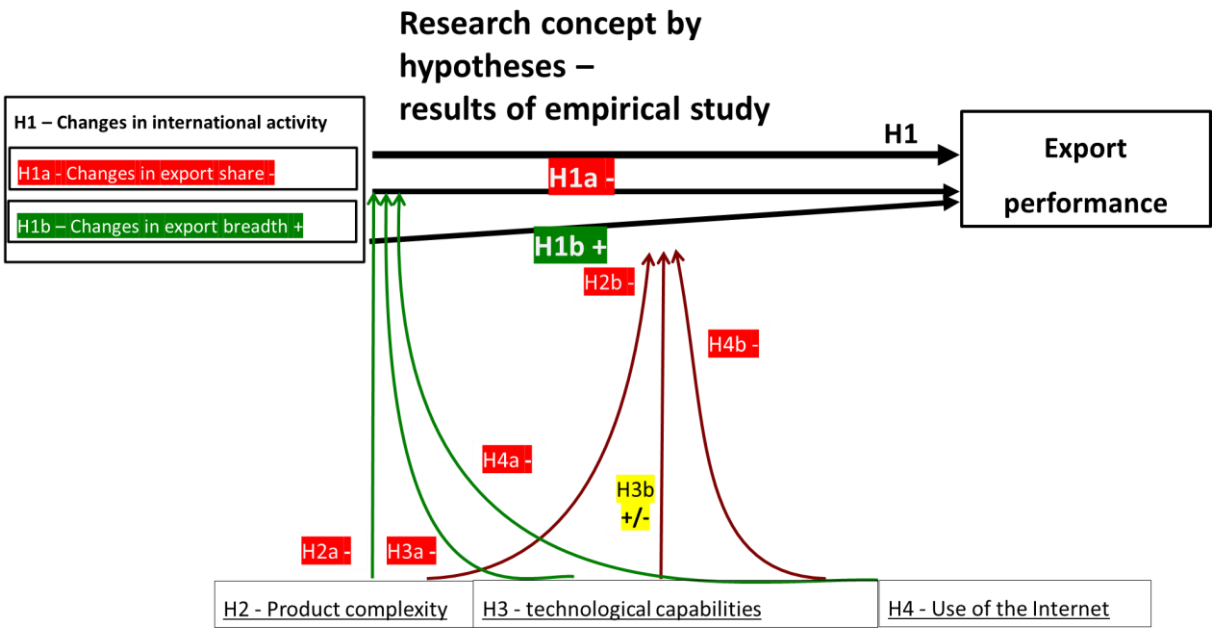


Figure 20 – research model results for export performance

Source: The author's own elaboration.

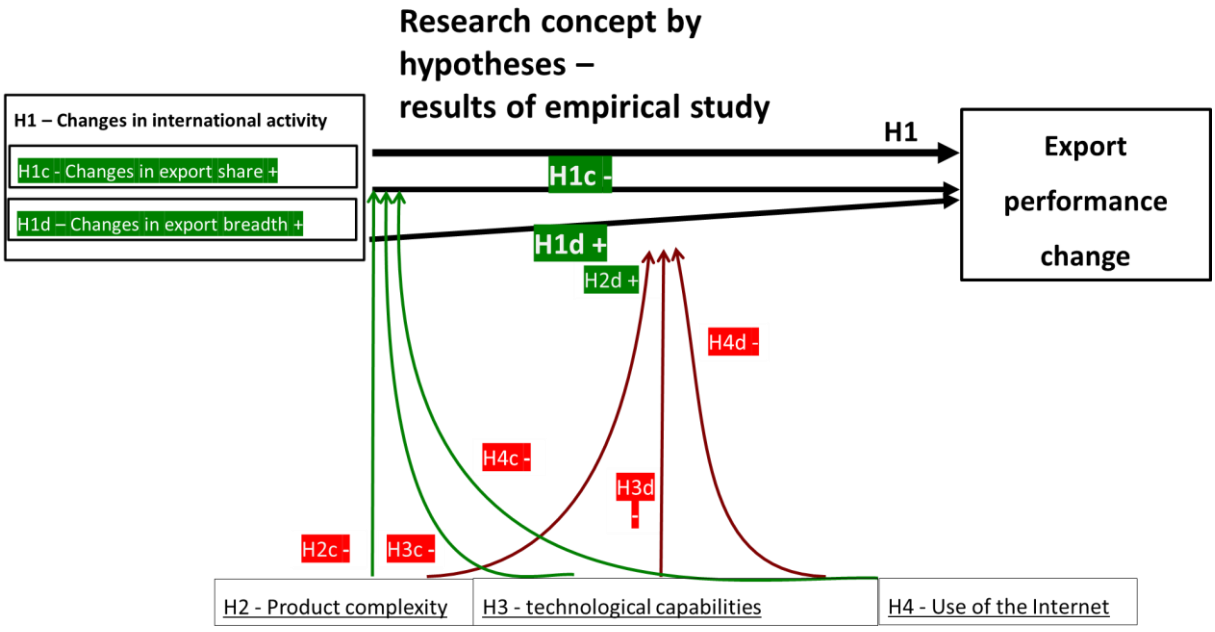


Figure 21 – research model results for export performance change

Source: The author's own elaboration.

6.4. Discussion

The empirical results have been evaluated in Chapter 6.3. above, but in the context of this thesis it is important to discuss the results within the existing body of academic literature and research. In order to achieve this, Chapter 6.4. will start with a discussion of the results in the light of earlier research referenced in the creation of the research model. Therefore, the discussion will be modelled along the contributions that this thesis has been able to make in four areas. These areas are internationalisation research, export performance research, business model research, and research regarding the role of the use of Internet technologies in firm internationalisation.

6.4.1. Contributions to internationalisation research

To start the discussion regarding the contributions this thesis is able to make regarding internationalisation research, one needs to take a small step back and reconsider the status of internationalisation research and the literature cited in Chapter two. To refresh the key points, internationalisation research through its various iterations has been a mainstay of academic international business literature with various definitions centred around the outward movement of company operations and their adaptations to international environments being used. Based on such an understanding, the topic branches out into various different motives, forms and dimensions of internationalisation, as described in detail in Chapter 2. In this case, the research fits the complexity of international firm operations and utilizes concepts such as the OLI model or behavioural economics to explain why firms choose international operations in the first place. This intricacy gets exacerbated when looking at the various ways that firms can choose to enter markets or change running operations. The established concept of modes of operation gets softened in terms of the rigidness of single operations, as firms will likely choose a mix of different operations suitable for them.

But firms are not limited regarding the direction of international operations. The constraint of internationalisation has been that it is only geared towards an increase of foreign operations and although the research in this direction is more scarce and younger than the contrasting story of international growth and thereby success, phenomena such as de-internationalisation and even re-internationalisation have found their way into academic research. The focus in both de- and re-internationalisation research has been put on antecedents forcing companies to adapt their international strategy and consequences of said actions, putting

the firm in the centre of analysis, but in a passive way as if forced by external and internal factors. Internationalisation, however, presents itself as a highly dynamic and fluctuating field driven by individual decisions in companies. This dynamism is further shown in the variety of different dimensions used to analyse international expansion. From two-dimensional up to six-dimensional concepts, different frameworks focus on different dimensions. This thesis, however, follows the simplifying work of Fletcher (Fletcher, 2001) who acknowledges the dynamic instead of incremental nature of international operation modes and does not limit his research to internationalisation.

Taking the complexity of international research into account, a nuanced approach in future research is needed (Kirca, Roth, et al., 2012). The thesis accommodates this multifacetedness of internationalisation by focusing on the dynamic nature of both internationalisation dimensions and directions. Regarding the dimensions of internationalisation, this thesis makes a distinction concerning the change in export turnover achieved. Taking the idea at the basis of portfolio theory that a portfolio aims to combine the optimal choices of diversification and revenue (Koumou, 2020) and adjusting it to international operations, changes in the number of foreign markets served were considered differently to a simple change in the export share. Regarding the directions, the firm is placed in the centre of the decision-making process and, also sticking to the portfolio theory concept of an optimal portfolio, decisions to change international operations in either way are understood as the firm following internal or external indicators to move more towards an optimal arrangement of international operations leading to optimal international performance.

To reiterate, the empirical study shows that an increase in export share does not have a significant impact on export performance while an increase in the number of markets served has a significant positive impact on export performance. H1a was not supported, while H1b was supported. The first result fits with the overall state of academic research on export, where various authors have pointed out that the relationship between multinationality and performance is reliant on a variety of factors and influences both internal and external (Kirca, Roth, et al., 2012).

If you go further into the details, however, there is a need to re-evaluate the assumptions made when sharpening the overall perspective to German manufacturing firms selling highly technological products to B2B customers globally. The assumption was that the existing

technological knowledge and the gathered know-how in international operations combined with a limited number of competitors in a niche market allows these companies to more easily leverage their product adaptability to meet customer needs (Audretsch et al., 2018; Barłożewski & Trąpczyński, 2021). Although a slightly positive effect for an additional export share was found, the hypothesis itself was not confirmed. There are various possible avenues of explanation, the first one being that established exporters have already saturated their easily accessible customer base in existing international markets and additional sales by adding new customers do lead to a higher addition of complexity than previously assumed. This in turn would eradicate the additional earnings generated by raising costs as well, which can be interpreted as a suboptimal allocation of resources according to the RBV. It could also be noted that simply operating internationally as a German B2B exporter does not necessarily lead to adopting the characteristics of hidden champions, making the market positions these firms already operate in not as strong as assumed, which in turn makes the leveraging of using allocated resources to enhance revenue and earnings more expensive.

Similar assumptions were also made for the expansion into new markets, as it was supposed that the existing knowledge in terms of product and customer base would allow companies an easier market entry while the niche nature of the product already described above would lead to a relatively low level of adaptations needed for new markets. This combination of factors was hypothesised to allow companies to outgrow their cost rise due to added complexity by improving revenue and earnings even faster in new markets (Rugman & Hoon Oh, 2011). The hypothesis was confirmed, which establishes the need to delve a bit further into the differences that occur between entering a new market and deepening operations in an existing market.

Expanding sales in an existing market faces dangers of market saturation, where most potential customers can already be reached, making growth challenging especially keeping a high level of existing competition in mind that can induce price wars. This saturation and existing market constraints may limit the potential for significant expansion, which can further be hindered by the market share already occupied by competitors, making growth strategies difficult and costly. The introduction of new products or services into an existing market can tire out existing customers, leading to diminishing returns, while the pressure to keep being innovative may reduce the effectiveness of innovation and risk the cannibalization of the existing portfolio for the new product. In contrast to that, entering a new market can allow a company to tap

into formerly unknown growth potential, profiting from a first mover advantage and gaining a position as a market leader in an underserved market. This can be based on the formation of new strategic partnerships and allow a company to further diversify their revenue streams, reducing dependence on a singular market and the subsequent exposure to different economic cycles and market dynamics. This diversification further reduces the risk and allows companies to free themselves from economic conditions and changes in singular markets. Such an increase in potential revenue base allows firms to be able to more easily weather any market-specific challenges. The positive diversification effect is, however, not limited to heightened revenue chances, but also positively insulates the company from adverse regulatory changes or negative policy impacts.

To draw a quick conclusion, there is a variety of differences between expansion in existing markets and entering new markets, which means that the results of the empirical study are well in line with the aforementioned unclear direction of multinationality and performance. Taking a step beyond the basic relationship, the more complex moderating influences depicted in the research model and especially their results in the empirical study need to be interpreted in the light of the current body of academic literature, as well. This discussion can be found later in subchapter 6.4.4.

6.4.2. Contributions to export performance research

After the contributions to internationalisation research have been discussed, the next open step is to more closely depict which contributions to export performance research this thesis is able to make. To reiterate from Chapter three, export performance proves to be a heavily argued topic with the main points being the factors influencing this performance. Firm characteristics and firm capabilities among the internal antecedents of export performance are close to the border to business model characteristics, which will be discussed later, while an overwhelming multitude of influences and factors have already been researched. While the current level of academic research has already been delved into deeply in Chapter three, two areas can be found where this thesis might be able to provide some meaningful contributions. These two areas are firstly a dynamic perspective on the previously static and mostly one-dimensional view on export performance and secondly the analysis at the level of total export performance in contrast to single market entry and performance research conducted so far.

With regard to the dynamic perspective, the current standard for academic research is to employ a – mostly economic – singular measure of export performance (Chen et al., 2016) with export profitability being the most commonly used measure. The issue with sticking to a static measure, however, when not employed in any kind of longitudinal study, is that it only offers a snapshot at a given point in time, thereby failing to illuminate the underlying patters and temporal dynamics that are necessary to be evaluated to understand the sustainability of the success and the progression of export activities. Without such light being shed on the growth trajectory of a firm's foreign market sales, the identification of performance drivers and barriers is significantly hindered. The evaluation of variations in performance allows researchers to pinpoint factors contributing to success or failure and leads to a more granular understanding and a more nuanced analysis. This more nuanced approach proves additionally useful when the effectiveness of strategic measures is evaluated. When firms try to implement initiatives or innovations aimed at improving export capabilities, the impact of such initiatives will not occur instantly, but will instead take time. A more dynamic performance measure allows researchers to track the impact of such policies, determine their effectiveness and adjust possible recommendations for future decision-making. In order to ensure that the positive effects of a dynamic measure were also reflected in this study, the thesis adopted export performance change in addition to export performance.

There is, however, a second level to moving away from a singular measure of export performance. Apart from the dynamic measure of export performance change, this thesis switches the focus more towards the firm as a hub of decision-makers and therefore a decision-making entity. The direct result of such a shift of focus is that behavioural economics can be taken more into account, allowing for the consideration of a more subjective and biased self-assessment of export performance and export performance change instead of a single perspective measure such as export profitability. This thesis uses a self-assessment of companies to see how they rate their export performance. Although a certain bias to overrepresent the firm's success will be included in the assessment, the benefits of such an alternative were deemed more important in the case of this research. A self-assessment can offer a more holistic perspective on export performance, as it can encompass a broader range of performance dimensions beyond financial metrics. This allows the research to more correctly reflect the individual emphasis that the firms place on different performance measures without the need

to compile them themselves. Furthermore, it also allows the research to account for the unique contexts firms find themselves in and puts the weight and responsibility to include situational factors affecting the export performance on the reporting entity, in this case most likely the decision-making positions in the company.

The third contribution this thesis makes concerning export performance is the level and scope of analysis. The prevalent level of analysis in current export performance research is dominated by a clear allocation of a singular decision to a single market entry leading to distinct results (Freeman et al., 2012; Freeman & Styles, 2014; He et al., 2016; Schu & Morschett, 2017). This does, however, not properly reflect that companies do not make individual decisions, but instead need to manage a portfolio of foreign operations, as already described above. This thesis therefore acknowledges that firms are able to make individual export decisions concerning different markets or different customers simultaneously, thus leading to firms prioritising separate avenues of internationalisation. As a direct result, the perspective taken further improves the ability of this thesis to show a more realistic reflection regarding the export location choices firms make to adjust their overall international portfolios (Acikdilli et al., 2022; Monteiro et al., 2019).

To draw a quick conclusion on this subchapter, this thesis aims to advance the current research on export performance in three aspects by adding export performance change as a key perspective, utilizing self-assessment as a performance measure and adopting a total export portfolio approach instead of a single market approach.

6.4.3. Contributions to business model research

As stated before, the dissertation does not only advance the academic research regarding the independent and dependent variables in internationalisation change and export performance, but also answers the direct call from Hennart (Hennart, 2014) to contribute to answering the question of which business model characteristics add to and which distract from export performance.

The first result that will be interpreted in this context is the moderating effect high product complexity has on the influence of changes in export breadth on export performance change. A statistical significance was found concerning hypothesis H2b, which stated that a higher product complexity would increase the effect of export breadth on export performance.

However, no statistical significance was found for H2a, which stated the reserve effect for export depth. The theoretical assumption was rooted in the RBV and postulated that a lower product complexity would allow firms to easier allocate resources and adapt the product more quickly to the customer needs (Donadoni et al., 2018; Yi Li et al., 2008) when adapting in a singular market. This assumption, however, was adjusted to be more fitting for the specific case of B2B SMEs in the manufacturing industry, where a certain niche and complexity were deemed a necessity to ensure a successful branching out into new markets.

Considering both the statistical significance of H2b and the fact that an overall positive relationship between a change in export depth and export performance has been found, the overarching similarity between these two hypotheses is the fact that demand in this field is highly product-driven with specific attention being paid to the ability of firms to tailor technical and mechanical solutions to the problems their customers have (Simon, 2012). This finding therefore does not follow the current line of research showing added product complexity as an overall source of uncertainty (Solberg, 2008), calling for a heightened need for after-sales support (Abdul Rahim et al., 2019) or generally giving out a variety of reasons why product complexity is a detriment to performance (Donadoni et al., 2018). The main conclusion to draw from this hypothesis is that although added complexity might well increase the complexity of operations or the know-how needed to ensure a certain level of product quality (Trattner et al., 2019), there is a certain subset of firms whose specific characteristics and the market portfolio and customer demands they operate in and under lead to the benefits of product complexity outweighing the drawbacks. The focus on the product also allows for two conclusions to be drawn that also serve as a possible explanation for the supported hypothesis. The first aspect is that in such cases the incorporation of added product complexity allows SMEs to differentiate their products in international markets. When a distinction via price or marketing is hardly possible, the way towards product leadership and an even more specialised product allows for a competitive advantage that can attract additional customers who value exactly this innovative excellence and are willing to pay a premium for a more sophisticated product. Subsequently, a consequent and prolonged product portfolio can in turn influence the way the company is seen by customers. It can improve the perceived value and customer satisfaction by meeting customer standards for quality and innovation and thereby building up to a stronger personal relationship based on a positive reputation. This ties the differentiation and distinction via successful implementation of product complexity for single products

together with an overall advantage gained. In a small niche market, the name a company can make for themselves can very well lead to repeat business and long-term loyalty from customers that do not only differentiate by price, but also by their supplier's ability to constantly deliver the solutions to their problems at a high level of quality.

The question remaining open after this argument is why H2a hypothesising a vice-versa relationship for product complexity and export depth was not only not supported, but did furthermore not generate the same result H2b did. To repeat the original argument, the main point for a decrease in export performance for companies changing their level of export depth being higher for higher levels of product complexity was the increase in resources needed, either due to a direct increase in cost or due to an increased difficulty in creating, moving or managing the product. This was assumed to negatively affect the company's ability to use their market share with the highest efficiency. The arguments made for a positive impact on complexity for new markets or export breadth – differentiation of products against competitors, increase of a perceived value and long-term network and customer retention impact – can still be made for companies looking to expand on a given market. However, these effects have already lost some of their possible impact, as especially the beneficial talk about the company products and their positive reputation will already be prevalent among an existing customer base in an existing country. The means of differentiating themselves in a market that is already more intimately familiar with the product portfolio and solutions the company offers cannot solely be sought through innovative excellence and more complex technical solutions. In such a case, the additional resources needed and the challenges occurring can hamper the progress a company makes. As the main argument for H2b was not that there was no added complexity in operations due to additional product complexity, merely that the benefits of complex products outweighed the drawbacks, this balance is not tipping in favour of the benefits for existing market expansion.

Relating the findings back to Hennart's call, product complexity can have a positive impact on the ability of a firm to increase export performance by entering new markets when this complexity of the product is one of the differentiating and demand-driving factors of the product portfolio, which is the case for B2B SMEs in the manufacturing sector.

This finding does, however, open the door to a variety of directions for future research. As the balance between the benefit and cost of added complexity seems to be a fine line, the first question to ask is which companies benefit from product complexity. The nature of

product complexity as a distinct business model characteristic to be used on the one hand and a resource-intensive cost driver on the other hand calls for more research to more accurately pinpoint influences that show when and how product complexity can be used. The case of B2B SMEs that by nature operate more in niche markets might be leaning more towards the benefit, but the replication of such a study in a different kind of economy could lead to interesting results. The second possible direction of future research does not turn towards the company as the centre of the evaluation but towards the perceived usefulness for the customer. Among different studies showing both a positive and a negative effect of complexity, the question remains why customers are willing to pay a premium for certain purchases. One possible avenue of research could move the complexity issue from a physical product manufactured – as in this thesis – towards services, as the missing physical component could lead to companies being more hesitant to pay the premium without a lasting product to show for.

For the second business model characteristic, a closer look needs to be taken with regard to the current academic discourse considering technological capabilities. To reiterate the arguments at the basis of the hypotheses, the main focus was put on the combination of a technology-heavy niche market and the direct impact that technological capabilities can have on export performance (Ruiz-Ortega et al., 2013; Massaro et al., 2017). Due to these factors, it was hypothesised that an increase in technological capabilities serves as a positive moderator for both export depth and breadth.

Hypothesis H3a was not supported, meaning that an increase in technological capabilities did not allow firms to better translate a change in export share into higher export performance. An expansion or a withdrawal decision will be influenced by the expected ease of gaining or regaining the market share which points towards an expansion into new international markets where the customer saturation is low or lower, enabling the company to utilize some kind of first mover advantage profiting from a slightly better product instead of needing to tailor the product to exactly fit the niche. The alternative way towards a product which is positioned more in a market niche that can saturate an existing market and eliminate the immediate need to go to other markets and combat the market entry barriers is barred by the need for a higher R&D capability, which is hard to achieve in the short term and costly both in terms of resources and opportunities in the long term.

Without such a first mover advantage, achieving additional market share at a profitable rate is not only reliant on a firm's ability to create the necessary R&D capabilities paramount

for technological capabilities but also on the innovative abilities to shift resources and the business model accordingly (Teece et al., 2016). Lacking such innovative capabilities, the firm cannot bridge the gap between the creation of new products and solutions and the proper market introduction, thereby not benefitting from the technological advancements made. It is important to also consider the specific context of German manufacturing SMEs in B2B environments to properly contextualize the missing support for the hypothesis. As already stated above a few times, the market environment is characterized by expansion towards a niche product (Hennart et al., 2021) and the firms place their focus on international operations, drawing their competitive advantages from a high level of technological capabilities and offering customers specialized solutions for complex problems. Taking this into account, one can assume that for a market where a firm already operates, a certain level of technological capabilities is prevalent and also supported by the firm's ability to adjust operations accordingly. This level of technological capabilities in turn means that any additional gains made in this area have to contest with a raised level of competition, making innovative progress and change harder to achieve. This also means that the innovative capabilities needed in this market to translate additional technological capabilities into economic success are even higher, further hampering the positive effect of technological capabilities hypothesised.

Hypothesis H3b was supported for low levels of technological capabilities, where it was hypothesised that a higher R&D capacity would allow firms to gain a competitive advantage by their added ability to innovate (Porter, 1986). It is interesting to note that the additional efficiency in the allocation of resources gained by the competitive advantage and the gained resources by the improved market position only allowed firms to more easily translate their change in international operations towards export performance when the number of markets was changed.

This firstly underlines the argument already made previously, that entering a new market allows companies to profit more from themselves and their product portfolio to be perceived as innovative and from their availability to a new customer base. No big important arguments can be added here, market oversaturation versus diversification remains as the basic dichotomy. The more interesting question is why H2b was only supported for low levels of technological capabilities. For high levels of technological capabilities, it can be assumed that even when entering a new market, the firm faces a certain level of technological prowess already prevalent in the market, as entering a new market and thereby creating a completely new

niche instead of readjusting an existing market niche will be the exception rather than the norm. This contest therefore calls for a similar level of innovative resources to serve as the underpinning bridge to allow firms to draw additional export performance from the market entry. As mentioned above, this level of innovative capabilities is not related to the technological capabilities and might well explain the missing positive effect.

A lower level of technological capabilities on the other hand could point towards a generally lower R&D capability in contrast to competitors, which also limits the resources available to allocate towards adapting the product to be more fitting to customer needs. Such a limitation hampers the company's ability to expand its market share in existing markets as such an expansion would mean taking over a competitor's market share, which is harder without technological supremacy. This potential issue in gaining or regaining additional market share might also translate to a certain reluctance to give up market share in existing markets. This is further supported by taking another look at the specific situation of the firms in the quantitative analysis. As mentioned in the discussion of H2a, the market niche for the firms in the survey is characterized by a generally high level of technological intensity and a similarly high level of experience in export. In such an environment, new market entry for firms with lower technological capabilities cannot be achieved by technological leadership, but customers have to be gained by e.g. price. The argument in this case is that an increase in technological capabilities can still positively influence the customer perception of a firm and product portfolio even when it is not the defining factor. It needs to be supported with other arguments and such an influence can only be subsumed if the technological capabilities are not the main driver of customer satisfaction.

To draw a quick conclusion, the unclear relationship between multinationality and performance was confirmed, while contributions were made in understanding the moderating role of business model characteristics. Here, product complexity was not found to have a moderating impact, but simply an impact on the volatility of export performance, while the use of Internet technologies was shown to have no significant effect, likely due to the enhanced basic level of Internet availability and use in all companies. Lastly, the case of technological advantage was only confirmed when it can be translated into shifting the market portfolio accordingly.

6.4.4. Contributions to research regarding the role of Internet technologies in firm internationalisation

The last moderating factor that will be interpreted in the light of current academic discourse is the use of Internet technologies. The original hypotheses were rooted in the groundwork laid by Kahiya and Johanson and Vahlne (Johanson & Vahlne, 2009; Kahiya, 2013) and postulated that the removal of constraints that using Internet technologies allows companies to conduct will improve their internationalisation processes and operations by allowing for a faster and more efficient allocation of resources, in this regard sticking to the RBV. This line of argumentation follows a variety of researchers that postulate the direct enhancement of export market outcomes by the use of Internet technologies (Caputo et al., 2022; Hultman et al., 2023; Morgan-Thomas & Bridgewater, 2004; Nhat Lu & Julian, 2007; Sinkovics et al., 2013). Their arguments centre around a stronger base for internationalisation, an easier shift in the culture of the firm towards internationalisation and the cost reduction aspects of Internet technologies.

The results of the empirical study conducted above contradict this direct effect and are in line with various streams of research that note a necessity to take a step towards more specificity by going from the overall use of Internet technologies towards a more singular tool approach (Nieto & Fernández, 2005) or argue for a more indirect impact through various intermediaries (Glavas et al., 2017; Moen et al., 2008; Sinkovics et al., 2013).

It seems legitimate to assume that the rejection of the hypotheses shows that the use of Internet technologies does not enable companies to more easily navigate the challenges of changes in international operations. This deduction, however, is based on a reasoning which does not pay dividends to the more complex nature of the firms in question. To reiterate, the sample includes German manufacturing companies operating in the B2B market, which means that the companies operate not only in a well-established economy, but also in a country used to and well versed in exporting. This is further supported by the firm age, where the mean is 73 years and the median 69 years, both pointing towards companies that have already established some sort of international operations and a certain degree of knowledge in the field. Based on these facts, one can argue that the basic level of Internet technologies currently in use in these companies is already relatively high when viewed from the perspective of a decreasing marginal benefit of added Internet technology use. One can draw the conclusion that companies already need to employ Internet technologies in a globalized world to function at

all and therefore do not benefit in a statistically significant level from additional use of Internet technologies or rather do not gain enough tools to combat the added complexity from changes in international activities efficiently enough for it to translate into a higher export performance. A mean of 3.62 and a median of 3.59 combined with a standard deviation of 1.06 allows for the deduction that the majority of companies lies within the range of 2.56 and 4.68 (Darling, 2022, 733), both of which are levels of the use of Internet technologies that support the assumption of a relatively high base level. To add a second point to the interpretation, it is certainly possible that a company can use too many Internet technologies when interacting with other market participants, as the additional complexity of adding e.g. an additional mandatory tool can also hinder the communication. This point however does only hold true to a certain extent as no statistically significant interaction between a high use of Internet technologies and lower export performance was found. Neither was a moderating influence found. The last and most important point to round out the subchapter and the contributions to research in general is to circle back towards the original focus of this thesis and to reiterate that the main research topic is not internationalisation and company operations in general, but the specific challenges of export. As already pointed out repeatedly throughout this thesis, export operations are by their nature sales-related and thereby necessitate direct contact with the customer. This contact with the customer means that additional positive effects of the use of Internet technologies are especially prevalent when they are related to the front end. Gaining a positive effect from a higher level of the use of Internet technologies above the diminishing returns of Internet technology already used and above the negative impact of additional complexity however is even harder when one considers that not only the operations of the firm, but also the way that customers operate influence such a positive impact.

6.4.5. Limitations and directions for future research

After the discussion of the results and their implications, it is necessary to also point out the limitations of this study to properly assess the benefits it can provide. The first limitation comes with the sample size and representativeness. The total number of companies whose answers were eligible for the study was 118, which as a small sample size limits the generalizability of the findings. The companies constituting the studied population furthermore only represent a small subset of firms operating from a well-established export economy, making the generalization of the findings or the adaptation to a different set of companies or a different country in a non-similar economic situation challenging.

It is further important to note that such a sample might be non-representative of the whole population, while the factor of possible biases in the sampling methods also needs to be considered. The next limitation comes from the measurement of the data itself and the data quality that is a direct result of this. As the study was conducted using Likert scales, the self-reporting of managers may be subject to various respondent biases (Wetzel et al., 2016), such as a self-serving bias or a confirmation bias. It might also be the case that even though the scales were labelled in detail, different respondents might have interpreted different scale points differently, leading to inconsistent results. Apart from biases in the response process, it needs to be considered that there is a bias involved in the way that participants chose to respond to the study in the first place. The self-serving bias of respondents might have led to contacted individuals only responding to the study if they felt that their company would be portrayed in a positive light. The data quality itself needs to be reassessed, as well. Firstly, it is essential to note that the data studied was a self-evaluation of the respondents and therefore subjective and, secondly, that the data does include the years 2017 to 2019, which means that the big external economic shocks such as the COVID pandemic have not been included. This can also be seen as an advantage but needs to be mentioned nonetheless. Apart from the factors relating to the contents of the data sample, the model itself makes it seem that the contents of business models are distinct features that have an equally distinct impact on the business, but the reality is a lot muddier, and identifying clear effects might not be as easy as the study made it seem. To quickly summarize the limitations, the typical set of potential biases needs to be taken into account, as well as the fact that any adaptations or generalizations of the findings can only be done carefully and with a change in the assumptions made in this thesis.

After the limitations of this thesis have been discussed, the last remaining avenue of research to discuss pertains to the directions of future research. Similarly to the contributions to various research areas, potential future research directions will also be focused in the four aforementioned categories of internationalisation research, export performance research, business model research, and research regarding the role of Internet technologies.

The trajectory of future research in the context of internationalisation, following the insights derived from this thesis, will undoubtedly build upon the granular analysis of the antecedents and consequences of de-internationalisation and re-internationalisation, examining

how internal capabilities and external pressures interact to influence these strategic shifts. For instance, the role of firm-specific assets, such as technological capabilities and international experience, in facilitating re-internationalisation efforts warrants further exploration (Dimitratos et al., 2014). Additionally, the impact of external market conditions, including economic instability and regulatory changes, on the propensity to de-internationalize could provide valuable insights into the strategic recalibrations firms undertake in response to external shocks (Trąpczyński & Banalieva, 2016).

Additionally, the empirical findings related to German manufacturing firms exporting high-tech products to B2B customers highlight the need to reassess market-specific assumptions and strategies. Future research could investigate how niche market characteristics and competitive dynamics influence the scalability of international operations in these contexts (Rugman & Hoon Oh, 2011). Comparative studies across different industry sectors and geographical regions could further refine our understanding of how sectoral and regional specificities impact the effectiveness of internationalisation strategies and allow for a more resourceful generalization of empirical findings from the German context. The interaction between market entry strategies and innovation capabilities also presents a fertile ground for future inquiry. Exploring how firms balance the introduction of new products with the need to sustain existing market positions can shed light on the optimal allocation of resources in international markets (Lages et al., 2008). This line of research could benefit from the application of portfolio theory to international business, assessing how diversification across markets and products influences overall firm performance and risk mitigation (Koumou, 2020).

In conclusion, advancing the field of internationalisation research further will require a multifaceted approach that integrates various theoretical perspectives and methodological approaches. By building on the insights of this thesis, future studies can contribute to a more comprehensive understanding of the complexities and dynamics of international business operations, ultimately enabling firms operating in the global marketplace to make more effective and informed strategic choices.

Concerning the field of export performance research, three major areas of future research come to mind. Firstly, future research should continue to develop and refine dynamic measures of export performance. This includes not only tracking changes in export

profitability but also incorporating other performance indicators such as market share growth, customer satisfaction, and brand recognition over time. Longitudinal studies could provide invaluable insights into how export strategies evolve, the factors that drive sustained export success, and the impact of external shocks or internal strategic shifts on export performance (Freeman et al., 2012). This approach will allow for a more nuanced understanding of the temporal dynamics and sustainability of export activities, thereby offering more comprehensive and actionable insights for practitioners and policymakers.

Another critical area for future research is the incorporation of behavioural economics into the study of export performance. The self-assessment approach used in this thesis highlights the importance of subjective perceptions and strategic priorities of decision-makers. Future studies could delve deeper into how cognitive biases, heuristics, and decision-making processes impact export strategies and outcomes. This could involve experimental research designs to isolate the effects of specific biases or longitudinal surveys to track how decision-makers' perceptions and strategic priorities evolve over time (He et al., 2018). Understanding these behavioural factors enables researchers to enhance the predictive power of export performance models and provide more tailored recommendations for exporting firms.

The third branch of possible research concerns itself with expanding the scope of analysis to encompass a total export portfolio perspective which remains a crucial direction for future research. This approach acknowledges that firms do not make isolated decisions about individual markets but rather manage a portfolio of international operations. Future studies could investigate how firms balance their resources and strategic priorities across different markets, the synergies and trade-offs involved in managing a diverse export portfolio, and the impact of portfolio diversification on overall firm performance (Monteiro et al., 2019). This holistic perspective can provide a more realistic and comprehensive understanding of export strategy and performance.

To draw a quick conclusion, all three avenues mentioned above have not been exhaustively discussed in export performance research and allow for fresh and promising perspectives to be considered in future research. This would not only advance academic knowledge but also provide more robust and actionable insights for firms seeking to enhance their export performance in an increasingly competitive global marketplace.

As business models and their moderating influence on the relationship between changes in export dimensions and export performance have been the focal point of this dissertation, accounting for the majority of hypotheses and the discussion of empirical results, the directions of future research can show a more specific subset of questions that remain unanswered and are more closely related to the individual business model characteristics that were empirically tested.

Future research should explore the conditions under which product complexity enhances export performance, particularly in niche markets. Investigating how different industries and sectors leverage product complexity to gain competitive advantages can provide deeper insights into this phenomenon. For instance, comparative studies between high-tech and low-tech industries could reveal sector-specific factors that influence the benefits of product complexity. Moreover, cross-country analyses could help determine whether the advantages observed in certain economies, like Germany, are applicable globally or if they depend on specific market conditions and institutional frameworks (Donadoni et al., 2018; Solberg, 2008). Such studies could inform researchers how firms across various contexts can effectively manage product complexity to enhance their export performance.

Another promising direction involves examining the customer perspective on product complexity. Future studies could investigate why and under what circumstances customers are willing to pay a premium for complex products. This line of inquiry could extend to service industries, exploring whether the absence of a tangible product affects the perceived value of complexity. Understanding customer preferences and perceptions can help firms better tailor their product offerings to meet market demands. Additionally, exploring the role of after-sales support and customer education in mitigating the perceived drawbacks of product complexity could offer practical insights for firms looking to enhance their competitive edge (Abdul Rahim et al., 2019).

Future research could also delve deeper into the interplay between technological capabilities and export performance. While this thesis found mixed results regarding the impact of technological capabilities on export depth and breadth, further studies could investigate the specific types of technological advancements that drive export success. For example, research could differentiate between incremental and radical innovations and their respective impacts

on export performance. Additionally, examining the role of complementary assets, such as managerial expertise and organizational processes, in leveraging technological capabilities for export growth could provide a more nuanced understanding of this relationship (Massaro et al., 2017; Teece et al., 2016).

Finally, the influence of technological capabilities on export performance warrants a closer examination of the competitive landscape and market entry strategies. Future studies could explore how firms with varying levels of technological capabilities navigate competitive pressures in international markets. This could involve assessing the effectiveness of different market entry modes, such as joint ventures, strategic alliances, or wholly owned subsidiaries, in leveraging technological strengths. Moreover, longitudinal research tracking firms' technological investments and their subsequent export performance over time could provide valuable insights into the long-term benefits and potential pitfalls of technological advancements in export contexts (Hennart et al., 2021; Ruiz-Ortega et al., 2013). This research could ultimately guide firms in making more informed decisions about their international expansion strategies.

Apart from these very concrete research suggestions, this thesis also offers a more high-level approach to future academic contact with business models in an export context. While only a certain subset of business model characteristics has been considered and adjusted to the sales-related nature of export and the customer-driven characteristics of B2B markets, an overall impact of business model characteristics on export performance could neither be fully supported nor denied. Further research to try and either replicate the results or find an even more clearly defined relationship in a changed environment of different business model characteristics, different markets or different countries is needed to clarify and properly integrate and interpret the findings.

The last area of contribution where this thesis can potentially show a direction for future research is the role of Internet technologies on firm internationalisation. In this context, future research can firstly expand towards the impact of specific Internet technologies on various aspects of firm internationalisation, moving beyond a generalist approach to a more granular analysis. For example, studies could investigate how specific digital tools such as customer relationship management systems or advanced data analytics impact export performance. By isolating the effects of these technologies, researchers can identify which tools provide the

most significant benefits and under what circumstances they enhance internationalisation processes. This targeted approach aligns with the findings of Nieto and Fernández (Nieto & Fernández, 2005), who emphasize the need for specificity in understanding technology impacts.

Another promising avenue for future research involves exploring the indirect effects of Internet technologies on export performance through mediating variables such as organizational learning, innovation capabilities, and network relationships. By focusing on how Internet technologies facilitate knowledge acquisition, improve innovation processes, and strengthen international networks, researchers can provide a more nuanced understanding of the pathways through which digital tools contribute to export success (Glavas et al., 2017; Moen et al., 2008). Longitudinal studies tracking the evolution of these mediating variables over time and their impact on export performance could offer valuable insights into the dynamic interplay between digital technologies and international business outcomes. This more generic approach can then be tailored even more towards the export specifics of international operations, as the interaction between Internet technologies and customer behaviour warrants further investigation. Future research could explore how customer digital literacy, preferences, and behaviour influence the effectiveness of Internet technologies in export contexts, thus moving from a general to a more granular approach also when looking at the department within the firm where Internet technologies see a higher or lower level of use. Understanding the extent to which customers in different markets and industries engage with digital tools can help firms better align their digital strategies with customer expectations and needs. This line of inquiry could also examine the potential for over-reliance on digital tools, which might complicate interactions and reduce the overall effectiveness of export operations. By aligning digital strategies with customer behaviour firms can enhance the positive impact of Internet technologies on export performance (Morgan-Thomas & Bridgewater, 2004; Nhat Lu & Julian, 2007).

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