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Examination of the new product development of Finnish international new ventures

Study on digital product or service companies

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ABSTRAKTI:

Kansainvälistyvien yhtiöiden varhaista kehitystä on tutkittu aiemmin tätä edistävien tekijöiden kuten verkostoiden sekä yrittäjän osaamisen kannalta. International new venture yhtiöt poikkeavat muista kansainvälistyvistä yhtiöistä siinä, kuinka nopeasti ne kansainvälistyvät. Uusien tuotteiden kehittämisessä, jossa onnistuminen on kriittinen tekijä kyseisten yhtiöiden jatkuvuuden kannalta, on löydetty olevan hyötyä asiakas- sekä markkinalähtöisyydestä. Uusi tuotekehitys prosessi on osa varhaista kehitystä, jota ei olla tarkasteltu näiden yhtiöiden kannalta laajasti. Tästä syystä tutkimuksessa pyritään löytämään tekijöitä, jotka vaikuttavat international new venture yhtiöiden uuteen tuotekehitykseen. Tämän lisäksi tarkastellaan, mikä on verkostoista saatava hyöty sekä kuinka tietyt ulkomaalaisuuteen liittyvät haasteet, kuten resurssien vähäisyys vaikuttavat prosessiin.

Tutkimus on toteutettu kvalitatiivisesti käyttäen monitapaustutkimusta. Tapauskohtaiset tiedot kerättiin käyttäen puolistrukturoituja haastatteluita. Haastatteluista syntyi neljä eri tapausta, jotka perustuivat suomalaisiin digitaalista palvelua tai tuotetta tarjoaviin international new venture yhtiöihin.

Tutkimuksen tulokset osoittavat, kuinka uusi tuotekehitys prosessi on vahvasti sidoksissa yrittäjän arvoihin, sillä heidän tavoitteet ja luonne välittyivät suoraan kehityksen tavoitteisiin. Tulokset viittaavat myös siihen, että verkostoiden hyöty korostuu uuden tuotekehityksen alkuvaiheissa, jolloin ne verifioivat konseptia ja auttavat sen määrittelemisessä. Lisäksi niiden kautta välittyy informaatiota ja jopa mahdollisuuksia.

Kyseiset löydökset edistävät kirjallisuutta nopeasti kansainvälistyvien yhtiöiden varhaisesta kehityksestä. Tutkimus lisää myös ymmärrystä digitaalista tuotetta tai palvelua tarjoavan yhtiön uudesta tuotekehityksestä, jonka merkitys tulee digitalisaation ja yhtiön selviytymiskyvyn myötä edelleen kasvamaan.

KEYWORDS: Internationalisation, international new venture, new product development, net-working

ABSTRACT:

The early development of internationalising companies has previously been studied in terms of the factors that contribute to their success, such as networks and entrepreneurial skills. International new venture companies differ from other internationalising companies in the speed at which they internationalise. In the development of new products, where success is a critical factor for the longevity of these companies, customer and market orientation have been found beneficial. The new product development process is part of the early development process, which has not been considered in a comprehensive way for these companies. For this reason, the study seeks to identify factors that influence the new product development process of international new venture companies. In addition, it will examine the benefits of networks and how certain challenges associated with foreignness, such as scarcity of resources, affect the process.

The research approach is qualitative, using a multiple case study method. Case data were collected using semi-structured interviews. The interview data resulted in four different cases which are based on Finnish international new venture companies offering a digital service or product.

The results of the study show how the new product development process is strongly linked to the values of the entrepreneur, as their goals and character were directly reflected in the development objectives. The results also suggest that the use of networks is highlighted in the early stages of new product development when they verify the concept and help to define it. They also transmit information and can even opportunities.

These findings contribute to the literature on the early development of rapidly internationalising companies. The research also contributes to understanding the new product development of a company offering a digital product or service, which will continue to grow in importance regarding digitalisation and company survival.

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Abbreviations

INV	International new venture
BG	Born global
LOF	Liability of foreignness
RBV	Resource-based view
NPD	New product development
PoC	Proof of concept

1 INTRODUCTION

The rationale for the thesis will be presented in this first chapter. The background of the problem is addressed first, followed by the research gap of the subject. The aims and research questions are presented next. Finally, the thesis's intended contributions, essential themes, and organisation are discussed.

1.1 Background

The importance of digital technology has mainly grown since, in the early 1990s, digitalisation was predominantly linked with the information and communication technology (ICT) industry. Still, it has since evolved into a general-purpose technology (GPT) (Anderson, Kusetogullari & Wernberg, 2021). In the 2020s, digital technologies are a support tool for businesses and a source of entertainment, information, and education. Digitalisation or digital transformation usually refers to digital changes that impact all aspects of human life since information technology is a part of people's work, homes, and hobbies (Stolterman & Fors, 2004). Besides pushing for change, digitalisation provides opportunities for innovation which is an essential element in local and regional growth (Olsson & Bernhard, 2020). These innovations are a foundation for international entrepreneurship, for example, a born global (BG) or international new venture (INV).

INVs offer an exciting area of research because of their agile nature and increasing prevalence as technology evolves. Digital technological advancements portend the emergence of a business environment that will improve young companies' capacity for internationalisation and performance in the global marketplace (Cavusgil & Knight, 2015). While the business environment evolves, the pressure grows on studying what factors contribute to the performance and internationalisation capacity of international new ventures. Godener and Söderquist (2004) state that success in the NPD process is one of the prerequisites for long-term survival.

Contrary to Johnsons and Vahlnes's (1977) suggestion, internationalisation is a process where firms gradually expand their operations across borders. International new ventures are entrepreneurs with an international view of the firm from the founding stage (Oviatt & McDougall, 1994). They invest a large number of resources and sales outputs in various foreign countries aiming to have increased competitive advantage (Oviatt & McDougall, 1994). Although many firms are still internationalising incrementally new, dynamic firms are helping to challenge the theories of internationalisation that emerged in the 1970s and 1980s (Rialp, Rialp & Knight, 2005). Thus, studying INVs is even more critical to understanding these firms and activities that contribute to their long-term success.

The predecessors contributing to this study have investigated hi-tech INV companies by examining their dynamic managerial capacities being the basis of their long-term performance (Oxtorp, 2014). In addition, the early development of hi-tech INVs has been studied in terms of their opportunity development, the development of innovation, and multidimensional exploration (Mainela, Pernu & Puhakka, 2011; Kirwan, Ratinho, van der Sidje & Groen, 2019). Furthermore, Laurell, Achtenhagen, and Andersson (2016) evaluated the role of different networks and critical capabilities in the early development of INV companies. On the other hand, efforts have been made to improve the quality of the NPD process by analysing failed processes (Kim, Park & Sawgn, 2016). Lastly, the topic has been studied from the perspective of Chinese emerging ventures, focusing on the importance of entrepreneurial capabilities converting global network resources into NPD performance (Xiao, Lew & Park, 2021).

1.2 Research gap

This paper aims to offer important contributions to the INV literature increasing knowledge regarding their early development by studying their NPD process. Many studies in international entrepreneurship have focused on entry strategies, internationalisation, and patterns (Mainela et al., 2011; Crick, 2009). In addition, networks and factors related to foreignness have been extensively studied, as they are an integral part of the

literature on INVs (Lu, Ma & Xie, 2021). However, direct support for networks or factors relating to foreignness relevant to the NPD process has not been provided. Nevertheless, more recently, there has been an increasing interest in the changes brought about by digitalisation in the literature regarding internationalisation (Gabrielsson, Fraccastoro, Ojala & Rollins, 2021). Digitalisation has brought a new range of products, services, and sales platforms that entrepreneurs use to do business in international markets, which has contributed to opening the debate on the international activities of digital product or service companies. With these changes brought by digitalisation, the development of new digital products or services should also be studied at an international level. Success in new product development highlights the unique characteristics of the entrepreneur and the importance of networks (Mainela et al., 2011). This is in line with the theory presented of INVs, which makes studying these two theories effective.

Mainela et al. (2011) point out that the emergence of international new ventures should consider at least three aspects: internationalisation, opportunity development, and technology development. The study follows this guideline and includes features from all aspects. Internationalisation is a prominent topic when talking about international new ventures. Opportunity development is integrated into the new product development process when it considers how to turn an idea into a saleable product for the customer. Finally, when talking about digitally product or service company processes, it includes a discussion of their technological development as they carry out digital product development and innovate. From an international research perspective, NPD is an important topic, as its activities have a substantial impact on the long-term survival and success of the company (Godener & Söderquist, 2016).

As argued by Xiao et al. (2021), emerging market ventures with a strong entrepreneurial capability possess a superior capacity to overcome their liabilities of newness, smallness, and foreignness, discovering and exploiting new international opportunities for new product development. As a continuation of this proposition, this study aims to identify trends related to new product development of Finnish INV companies and examine how

networks affect NPD and whether resource scarcity or liability of foreignness is found to have an impact. It is considered whether the above arguments are also valid for INV companies that do not specifically trade in the emerging market region. The originality of the research is based on a new approach to a topic that has been studied before (Ghauri & Gronhaug, 2010). Thus, the research may include previously studied phenomena; the originality comes from the new perspective that the research uses.

1.3 Research objectives

As mentioned, emerging market ventures use entrepreneurial skills to overcome resource constraints and other challenges of international entrepreneurship. The aim is to broaden the understanding of the factors that influence the new product development of Finnish INV companies in international markets. Based on these points, the study's primary objective revolves around the question:

1. What factors affect and give direction to the new product development of Finnish digital product or service international new ventures?

The supporting questions examine how entrepreneurs perceive networks useful for new product development. Also, how do the typical scarcities associated with entrepreneurship affect product development, and have ways been found to address these. With the supportive study questions revolving around:

2. How does the use of networks benefit the new product development of INV companies?

3. How do the common adverse effects of INVs, e.g., scarcity of resources or liabilities of foreignness, impact new product development?

By exploring these questions using theory and methodological tools, the study provides new content on the most critical trends in the new product development of Finnish dig-

ital product INV companies that can be used to support top management decision-making. It also examines how critical the role of networks is for the NPD process and the continuity of development. Finally, understanding how resource scarcity is reflected in the NPD process will be expanded.

1.4 Definitions

International new ventures (INV) are firms that internationalise rapidly after being established. The most famous definition is from Oviatt and McDougall (1994), who define INVs as “a business organisation that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries.” What distinguishes international new ventures from other international companies is the age at which they internationalise, not their size. (Oviatt & McDougall, 1994). INVs seize international opportunities in an agile way, using the entrepreneur’s knowledge, experience, and networks effectively (Phillips McDougall, Shane & Oviatt, 1994).

Liability of foreignness (LOF) describes the challenges that companies doing business in a host country face in contrast to domestic companies. It includes the social costs such as unfamiliarity, relational, and discrimination of doing business abroad (Eden & Miller, 2004). For international new ventures, these social costs show through increased resource needs.

The resource-based view (RBV) is a theory that proposes how businesses use their resources and capabilities to gain a competitive advantage (Wernerfelt, 1984). According to the RBV, if a company has many resources and knows how to effectively employ them, it can compete in global markets and achieve objectives in the long run (Sharma & Erramilli, 2004).

New product development (NPD) is developing a new product for the market. It starts with the idea and ends when the product is released for sale. There are several steps

between the beginning and the end, which may vary from company to company. However, the process is considered to include at least: generation, concept selection, development, and launch (Leithold, Woschke, Haase & Kratzer, 2016).

1.5 Delimitations

The research focuses on international new venture companies, which are companies who internationalise at a very early stage after being established (Oviatt & McDougall, 1994). Moreover, the companies are established in Finland, i.e., Finnish international new ventures. Companies may do business in Finland, but most of their sales efforts should be in international markets. In addition, their product or service has mostly involved digital product development. Meaning that an essential part of the product or service is in digital form because software-based products, services, and platforms also represent digital artifacts (Gabrielsson et al., 2021). In addition, products are sold and delivered to the customer through digital methods (Gabrielsson et al., 2021). They are therefore international new ventures selling digital products or services i.e., digital product international new ventures. The companies are not necessarily the same age, so they are at slightly different stages of development. In addition to new product development, the study's results may include the product's post-launch development.

1.6 Structure of the study

The study consists of six main chapters, some of which also include sub-chapters. The structure follows a logical order where the first chapter justifies the study's importance and relevance in the internationalisation research area. The first chapter also includes the study's limitations and critical definitions. The second chapter is a literature review, which reviews previous studies of the most important themes, international new ventures, and international new product development.

The third chapter presents the methodology of the study. The fourth chapter discusses empirical research and analysis. This section presents the case companies and the main

interview findings of the interviews conducted. The fifth chapter discusses the case findings and reflects them on the theory provided in chapter two. The sixth chapter concludes the findings, discusses the limitations and provides ideas for future research.

2 THEORETICAL BACKGROUND

The second chapter provides the theoretical background for the paper by presenting relevant theories regarding international new ventures and new product development. The theoretical sections contain thematic areas relevant to the study, which can be used later to compare methodological results.

2.1 International new ventures

The first observations of international new ventures were made in the late 1980s when it was noticed that there were entrepreneurs who were internationalising from the start (Oviatt & McDougall, 1994). Shortly afterward, Oviatt and McDougall (1994) defined the term for the first time, as presented in chapter 1.1. According to Autio (2003), this article created tension in the existing theory of the internationalisation process and contributed to paving the way for a future theory of international entrepreneurship. Until then, internationalisation was mainly seen as an iterative process, and the rapidly internationalising firms differed significantly from incremental internationalisation. Before INVs and BGs, these phenomena had been studied in the form of international entrepreneurs (Rialp et al., 2005). It has been seen as a precursor to the INV theory, although in modern times, the theory has diverged from this. What distinguishes international new ventures from other international companies is the age at which they internationalise, not their size (Oviatt & McDougall, 1994). As noted, INVs internationalise at the very opening stages of the company, and they have an international view of markets from the get-go. INVs are a part of internationalisation theories. As Cauvugil, Knight, and Riesenberger (2013) say, internationalisation is a systematical process where the goal is to increase the international dimensions of the business. INVs do this, but their pace of internationalisation is very different from classical theories of internationalisation. Terms for rapidly internationalising firms include:

Table 1. List of rapid internationalising firm theories

Name	Authors, year	Theme
International new ventures	Oviatt & McDougall, (1994)	Speed and scope of internationalisation
High technology start-ups	Jolly, Alahuhta & Jeanet, (1992)	Speed of technological internationalising firms
Born Global	Rennie, (1993)	Speed and extent of internationalisation
Global start-ups	Oviatt & McDougall, (2005)	A broader and more radical manifestation of INVs at the global level
Born internationals	Johanson & Martin, (2015)	A more common term for companies that internationalise early, less critical in a time of internationalisation

A clear definition of INVs has emerged, also used when talking about born globals. However, the definition of INV is generally used only as a temporary definition of BGs (Aghazadeh & Zandi, 2022). The speed with which companies go to overseas markets is a common characteristic of quickly internationalising organisations. However, additional study on early internationalisation demonstrates that specific firms might vary regarding the extent and breadth of their foreign activities (Aghazadeh & Zandi, 2022). It has been argued by Cesinger, Fink, Madsen, and Kraus (2012) that comparisons between studies are challenging because the definitions of the phenomenon of early and rapidly internationalising firms differ significantly. For example, while reviewing definitions and development of the term Born Global, many notions about the high level of technology have been made (Rialp et al., 2005). Despite the similarities, this can create differences between the definitions of INV and BG. Despite the method of how internationalising firm

patterns are classified, the overall picture remains unified; thus, they are all talking about the same phenomenon of early internationalising firms (Cesinger et al., 2012). Understanding the context and characteristics of international new ventures is helpful for the topic under study. Still, the comparative studies on BGs provide valuable insights that benefit this paper despite the two being different terms.

2.1.1 Internationalisation of International new ventures

Internationalisation is a widely studied area; theories broadly explore the causes of internationalisation and the means of internationalisation, i.e. the entry mode (Andersen, Ahmad, Chan, 2014). Initially, the internationalisation process was described as a process in which a company gradually increases its international activities (Johanson & Valhne, 1977). These incremental commitments were made based on three factors that are: foreign market knowledge, psychic distance, and foreign operation mode. The process unfolded in such a way that companies initially operated in the domestic market until the market became saturated. This was later categorised as the push effects of the domestic market (Alexander, 1995) and followed by small steps towards nearby markets with a close psychic distance. Later, the commitments are gradually increased, and the operation format is raised to higher levels. Additionally, the company can gradually target markets further afield. (Johanson & Valhne, 1977). However, it was later found that some companies operate domestically and abroad, so they are not mutually exclusive activities, as the previously presented market saturation series of events would suggest (Evans, Bridson, Byrom & Medway, 2008). More recent interpretations have characterised internationalisation as firm-level activities that can be seen as behavior patterns during a particular time (Jones & Coviello, 2005). These patterns should be identifiable but do not necessarily follow incremental expansions, as Johanson's and Vahlnes's (1977) theory suggested.

Historically, it has been considered that companies need to be significant to internationalise (Oviatt & McDougall, 2005). This idea is based on the fact that companies have built economies of scale through R&D that they can exploit in international markets. However,

this assumption has changed considerably, as more accessible communication, market homogenisation, and easier access to financing have lowered the barriers to internationalisation, even for smaller firms (Oviatt & McDougall, 2005). As a result, smaller and smaller companies can internationalise and reduce steps in the traditional internationalisation process.

As mentioned, what distinguishes INV from other internationalisation modes is the speed at which it internationalises. The accelerated pace of internationalisation may be due to several factors, including at least the target niche market, entrepreneurial characteristics, and supply chains (Paul & Rosado-Serrano, 2019). Oviatt and McDougall (2005) highlight the importance of valuable unique assets enabling organisations with more limited resources, like INVs, to enter international markets. These unique assets are being created increasingly as digitalisation and technology evolve. As Oviatt and McDougall (2005) pointed out, international entrepreneurs share the characteristic of identifying and exploiting international opportunities. In addition, digitalisation has also led to the development of distribution channels. As digitalisation accelerates, it is reasonable to expect that the number of digital technology-based INV companies will increase if they pursue opportunity-based internationalisation. INVs and BGs use inexpensive information and delivery techniques to market specialised goods and services to customers spread throughout the globe (Hennart, 2014). For example, widely international online stores such as Amazon, Apple's App Store, and many others have opened the door to international trade on a new level. Merchants have access to international markets from their laptops, which can be seen as a relatively inexpensive delivery technique.

What drives INVs toward international markets? As mentioned before, the basic assumption of the Uppsala model is that a firm internationalises when the domestic market becomes saturated. This is known as the push factor of the domestic market, counterbalanced by the pull factor of the international market as conceptualised by Alexander (1995). Market saturation means that growth slows down considerably due, for example,

to a lack of customers. In such cases, growth is often sought from new sources. In addition to the market size, foreign markets may also have other characteristics that make them more favorable than domestic markets. As summarized by Evans et al. (2008) push phenomenon is generally associated with the negative aspects of the domestic markets.

In contrast, pull factors are the positive factors of foreign markets that attract entrepreneurs to international markets. The above-mentioned online stores act as pull factors as they provide a large marketplace, e.g., applications and games. It can be said that internationalisation is partly the result of the push of the domestic market and the attraction of the target market. These characteristics are not mutually exclusive but can also combine to lead to internationalisation. In addition, the entrepreneur's orientation and attitude towards international markets may accelerate the pursuit of foreign markets.

2.1.2 Resources of International new ventures

The resource-based theory (RBV) proposes how businesses use their resources and capabilities to gain a competitive advantage (Wernerfelt, 1984). According to the RBV, if a company has many resources and knows how to employ them effectively, it can compete in global markets and achieve objectives in the long run (Sharma & Erramilli, 2004). In industry, these resources are not equitably divided across businesses, creating the conditions for acquiring and using them efficiently (Andersen et al., 2014). However, it should be noted that internationalisation requires not only resources (financial and material) but also knowledge and skills, which are human capital (Zahra, Ireland & Hitt, 2000). The extent of skills and knowledge ultimately depends on the staff and their ability to grow these values. Therefore, the growth of technological know-how and innovation through acquiring knowledge can improve the performance of new ventures (Zahra et al, 2000). Thus, human capital is an essential element for the success of digital INV companies, alongside other material resources.

Thus, available resources are essential in international business, as their impact and use affect not only competitive advantage but also how internationalisation takes place. The

results of Burgel and Murray (2000) demonstrate that the choice of entry mode necessitates a trade-off between the available resources and the customer's assistance needs. These results are mainly based on technological start-ups emerging in international markets. Additionally, concerns relating to technological innovation and the company's historical experience in its native market are potent entry mode variables. These findings are similar to Okoroafo's contingency theory (1990), which is based on the idea that the choice of entry mode is based on internal and external environmental factors.

In any case, it is recommended that young businesses use a structured resource allocation model, as entrepreneurship often involves chaos (Bingham, Eisenhardt & Furr, 2007). This is because entrepreneurs often have an innate drive, innovativeness, and informality, which can lead to businesses having too many developmental goals simultaneously when available resources are limited. The use of resources also develops through learning and mistakes. However, the consequences of big mistakes can be fatal for young companies compared to larger ones. Thus, Oxtorp (2014) suggests formal mechanisms and decision-making guidelines for allocating R&D resources based on business, technology, and strategy fit. In addition, an external supervisory board can also help to ensure that the focus is on the right things and not on too many things (Oxtorp, 2014). Here, for example, support from the start-up community and advice from investors can be valuable.

2.1.3 Liabilities and benefits of foreignness

As mentioned by Donbesuur, Zahoor, and Boso (2021), some international new ventures have a disadvantage in foreign markets due to the liability of foreignness, newness, and strategic resource limitations. Liability of foreignness (LOF) describes the challenges that companies doing business in a host country face in contrast to domestic companies. The term should not be mixed with liabilities of multi-nationality since LOF is location specific and includes phenomena experienced in a particular country (An & Rygh, 2021). To be more specific, it includes the social costs such as unfamiliarity, relational, and discrimination of doing business abroad (Eden & Miller, 2004). These social costs show through

increased resource needs. The broader term “costs of doing business abroad” includes the social and economic costs of the situation. Liability of foreignness has been measured in various ways, and no established method has yet been found. Studies to date have measured the distance between home and host countries quite extensively, including geographical, political, and cultural variables (Lu et al., 2021). Thus, interpretations in which a company perceives itself to be involved with the phenomenon should always specify how it perceives it. In addition to distance, the variables considered are the foreign investment in the host country and the number of foreign firms in the host country (Lu et al., 2021).

As Zaheer (2002) proposes, the harms of liability of foreignness can be divided into three areas. First of them is hazards relating to being unfamiliar with the host country. For example, a local company can procure for free because of local knowledge or at a lower cost because they know where to look and whom to ask. A foreign company, on the contrary, will have to pay considerably more because it lacks the benefits of localism mentioned above. These local benefits generally stem from the long history and activities that have taken place in the country (Eden & Miller, 2004). As a foreigner, these obstacles can be resolved by learning, networking, or using rather expensive brokers, as noted by Oviatt & McDougall (2005), who can ease the link between the seller and the buyer.

For this reason, it has been suggested that LOF is strongest immediately after internationalisation but may diminish over time and even disappear as companies gain experience (Lu et al., 2021). The second hazard explains the discriminatory behavior of local companies towards foreign firms (Zaheer, 2002). When talking about discrimination, the phenomenon is the result of external reactions and not internal beliefs. The discriminatory attitude shows in the form of stereotypes and higher standards because the host country is unfamiliar with the external company. Here the additional costs mainly arise from trying to achieve external legitimacy in the host country (Eden & Miller, 2004).

Lastly, relational hazards cover the additional internal and external relational costs of a foreign company doing business in other countries (Zaheer, 2002).

While there are difficulties in a multinational environment, there are also opportunities. As mentioned by Zhou, Barnes, and Lu (2009), entrepreneurs are more likely to have specific skills and market knowledge that enable them to find solutions and ways of doing things others might not exploit. In this context, the term learning advantage of newness provides a contrast to the liability of the foreignness phenomenon. The agility and flexibility exploited by international new ventures provide opportunities for market entry and adaptation compared to companies that are slower to internationalise. This advantage has been called an asset of foreignness by Sethi and Judge (2009), who pointed out the benefits that multinational companies enjoy opposing local companies. Some clear benefits of foreignness have been observed in countries with high levels of corruption or lower than normal levels of development, where foreignness is seen as favorable (Lu et al., 2021). However, it should be noted that the company's home country must be more developed and less corrupt than the host country for the benefits to be seen.

2.1.4 Networking of international new ventures

As a response to having few resources and being a foreigner, many studies regarding INVs focus on the networking aspect, which has been seen as one of the primary responses to these issues (Torkkeli, Kuivalainen, Saarenketo, & Puumalainen, 2019; Clavel San Emeterio, Juaneda-Ayensa & Fernandez-Ortiz, 2020). Networks can be seen as groups of people or communities interacting and sharing information. As Mainela et al. (2011) summarise, rapid internationalisation results from business networks and relationships, where businesses learn and use their unique skillsets as entrepreneurs. Thus, networks have been seen as prerequisites for rapid internationalisation, as smaller firms build long-term relative confidence through existing contacts with established network partners (Paul & Rosado-Serrano, 2019). However, there have been mentions of how in knowledge-intensive SMEs internationalising to distant markets, networks don't primar-

ily influence the market entry mode or country, but rather act as enablers when decisions have been made (Ojala, 2009). Thus, the relevance of networks to the entry mode and the target country are partially questionable.

As mentioned in chapter 2.2.1, networking responds to unfamiliarity and discrimination issues because partners and relationships offer information on internal opportunities and provide local market knowledge, initial credibility, and access to distribution channels (Mainela et al., 2011). Hence, it is clear how young companies significantly benefit from networks as they can help to overcome the liabilities of newness, access to resources, information sharing, and other disadvantages related to foreignness and being a small company.

Networks can be divided into two categories: inter-organizational networks (or formal networks/business networks) and personal networks (or social networks/informal networks) (O'Donnell, Gilmore, Cummins & Carson, 2001). Regarding entering foreign markets, networks can similarly be divided into formal and informal networks (Birley, 1985). Thus, networks can exist at both the organisational and personal levels. Furthermore, networks can be originated domestically or abroad, regardless of the origin. Both domestic and external networks have been identified as critically important (Laurell et al., 2016). There have also been mentions of the third form of intermediary relationships, as shown in chapter 2.1.3, where brokers aid sellers by linking them to buyers in external markets (Oviatt & McDougall, 2005). The maximum benefit from networks is achieved when different levels of managers and experts in the company exploit their opportunities with the networks, thus pursuing wider opportunities than when only top management exploits the networks (Oxtorp, 2014).

As presented, networks can be divided into several categories and sources. However, the most important thing is to identify what capabilities they enable and how added value is realised through them. Gabrielsson, Gabrielsson, and Dimitratos (2014) propose that

international networking orientation affects the growth phases of INVs positively. According to the study of Laurell et al. (2016), the most critical networks in the pre-start-up phase are existing local direct networks as they enable technological and regulatory capabilities. This is further supported by research by Kirwan, Ratinho, van der Sidje, and Groen (2019), which found that INV entrepreneurs further use their networks and strategic capital to advance the idea after recognising a foreign opportunity. As a strategic output, these networks can help INVs build preliminary prototypes, data, and international patents.

Regarding digital technology companies, the network benefits focus on opportunity and technology development activities. Opportunity development is a process that consistently modifies, improves, and develops a new venture's idea into an opportunity. Once the strategic objectives of the first phase have been achieved, the start-up phase creates the need to raise finance and improve scientific capabilities (Laurell et al., 2016). This is done through direct local networking and new indirect local and global networks, which help create testing related to the product or service. The network's added value is highlighted at this stage for technology development and resource acquisition. The study of Laurell et al. (2016) was carried out for INV in the pharmaceutical sector, so the third stage and the regulatory emphasis do not fully reflect the situation of technology companies. Thus, the data have been critically applied to technology INV companies, which develop products slightly differently, as there is no need for physical production lines, clinical data, or drug testing. The stages and the most effective forms of networks related to these stages are shown in figure 1. The phenomena that the network forms positively impact are listed below the network forms.

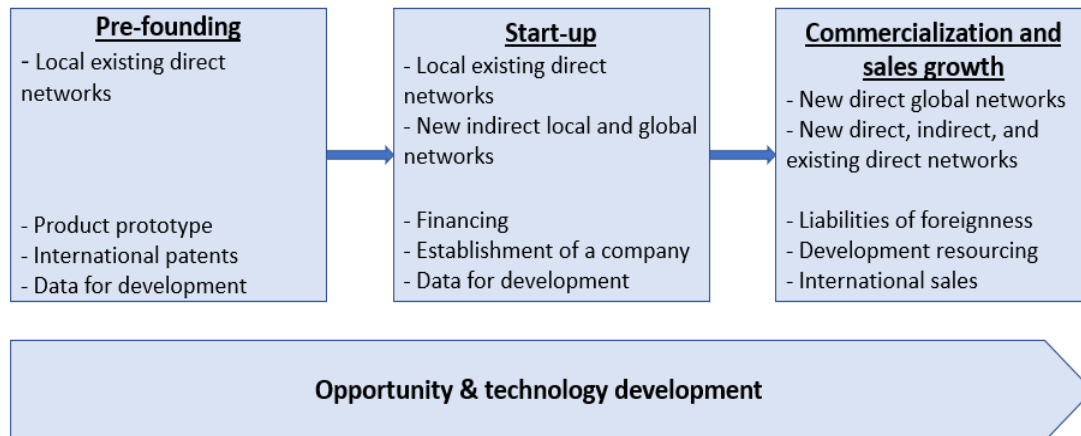


Figure 1. Benefits of various networks at different stages of digital technology INVs

The third and last stage shows how new direct global networking is used to leverage the potential of marketing and sales capabilities. It has been observed that entrepreneurs are trying to establish new direct network links with strategically important global actors (Laurell et al., 2016). Thus, the concrete benefits of networks can be legitimacy and brand-building capabilities, which are linked to the phenomenon of liability of foreignness (Laurell et al., 2016; Eden & Miller, 2004). In addition, these benefits include increased international sales and development resourcing. Throughout, the benefits of networks are wide-ranging and continue to contribute to opportunity and technology development. In addition, the timely exploitation of networks through domestic and global markets enhances INV's critical capabilities.

2.2 International new product development

International new product development is the process of developing a new product for the international markets. To create new products, as well as to develop operational expertise and technological power, organisations must draw knowledge from sources across national borders (Rogers, Ghauri & Pawar 2005). This process of creatively identifying and seizing possibilities that exist beyond the firm's local markets in search of competitive advantage is made more accessible by entrepreneurial orientation (Zahra &

George, 2002). This means effectively recognising customer wants, creating increasingly sophisticated goods to meet those needs globally, and improving customer service, all while leveraging technology's capabilities (Rogers et al., 2005). These actions are performed to acquire performance and reliability from newly established products (Rogers et al., 2005). Working with customers can identify their needs, highlighting the importance of inter-organisational networks. The above requirements could be summarised by the fact that the effective use of networks is essential in international markets when developing new products, in addition to a high level of entrepreneurial orientation.

As INVs are often based on unique know-how, technology, or processes, markets are often more interested in their products, and competing solutions may be developed quickly on behalf of more prominent players. This phenomenon continues to pressure newly established international companies to maintain a high level of innovation and development despite the scarcity of resources (Oxtorp, 2014). NPD is an essential topic from the perspective of international research, as noted in chapter 1.3, as its actions significantly impact the company's long-term survival and success (Godener & Söderquist, 2004). Financial and non-financial values can measure the success of NPD, but financial measures are more commonly used to measure success (Akroush & Awwad, 2018). It has been mentioned that the NPD process involves at least 13 stages, and the more stages a company goes through, the better its success is expected (Kim, Park & Sawng, 2016). However, due to the limited resources available to INVs, it can be assumed that not all steps can be implemented, and the most important ones should be identified. In identifying these, we return to the essence of managerial capabilities. The goal should be to identify the critical steps in the company's NPD process to maximise the potential for success and long-term success.

Although the NPD stages of companies are highly context-dependent, there are structural similarities between them. There may be as many NPD processes as there are companies. However, there is an understanding that these processes are linked by their stages of generation, concept selection, development, and launch (Leithold et al., 2016).

These steps show how an idea is transformed into a commercial product or service. Simultaneously, all NPD processes involve, at some level, the creation and selection of ideas and possibilities (Leithold et al., 2016). Therefore, NPD is a creative process in which innovation is seen as beneficial.

When products are developed for international markets, they can be sold in many different countries simultaneously, which means that product development must decide whether to standardise for many different markets or a specific country (Rogers et al., 2005). Standardisation involves selling one version of a product regardless of the market, while adaptation involves modifying the product at some level to suit the market. The discussion regarding market standardisation or adaptation originated in the 1980s when authors noted how companies should balance the clashing requirements for new international products (Cavusgil, Zou & Naidu, 1993). However, the relationship between marketing standardisation or adaptation impacting firm performance remains mixed (Mandler, Sezen, Chen & Özsomer, 2021).

Similar product-specific decisions arise in large numbers during the new product development phase. Historically, large international companies, such as Kellogg's, have failed to make the NPD process work abroad (Dubiel, Banerjee, Ernst & Subramaniam, 2018). This is because, for these companies, NPD is still based on understanding and knowledge of domestic operations and markets (Dubiel et al., 2018). Similar problems with INVs are less likely to occur as their business is built from the ground up to fit the global environment. These findings suggest that the international NPD process needs to focus on the target market's characteristics. As Leithold et al. (2016) point out, NPD should also be customer-driven, and companies should reassess the customer perspective at the end of each stage. The goal should be to visualise the product's potential in the relevant market and make informed decisions based on observations and research.

As Harmancioglu, McNally, Calantone, and Durmusoglu (2007) summarise, NPD is an activity that seeks to maximise success by conducting relevant market research. At the

same time, it seeks to minimise costs and maximise time to market. For the optimisation of the NPD process, it has been recommended that the steps be partially overlapping, as this reduces the lead time of the process (Leithold et al., 2016).

2.2.1 Sources for development and testing

This section examines the basis on which a company can make development decisions and how testing results may guide development. When talking about development requirements, it refers to the features that are expected to be included in a product or service. These features can come from internal requirements or outside the company, for example, as a result of market research or proof of concept projects. Leithold et al. (2016) summarise that companies may have up to hundreds of different ideas for a product or service at the idea generation stage, from which they try to select the best options with the help of customers, suppliers, employers, and competitors. Therefore, this idea-generation phase can be considered an essential part of the initial phase of the NPD process. The results the company arrives at are said to be the result of at least the following factors: the likelihood that these new products will meet customer and stakeholder requirements, have a reasonable financial impact, probabilities of successful commercialisation and implementation, and meet the visualised product and market position (Leithold et al., 2016).

As Oxtorp (2014) suggests, observing the business environment, for example, by attending customer visits, conferences, and other events, together with a diverse management team, can provide valuable insights into customer preferences and market trends that are just beginning. Here it is considered that the development is partly derived from the characteristics of dynamic management capabilities. This refers, for example, to the manager's ability to identify opportunities, seize them and allocate resources appropriately (Eisenhardt & Martin, 2000). According to Kirwan et al. (2019), business concepts often come from entrepreneurs and entrepreneurial teams. They also noted that the decision was heavily influenced by their prior professional experiences and network connections. However, this dynamic management is done on a rolling basis as the business

changes. It grows to ensure that the company is structured and resourced to respond to changing circumstances. A diverse team means having the right skills, i.e. having both managers and technical experts. These internal sources are referred to as in-house sources. As noted, in-house development is based on experience, entrepreneurial orientation, and internal operations.

Thus, partnerships and customer involvement can provide requirements for new product development. New product development with external parties can include collaboration with, for example, distributors or customers, which has been proven to improve project performance and product commercialisation (Bahemia, Squire & Cousins, 2017). This positive benefit is through increased learning opportunities. Customer feedback can also guide the decision to adapt the product or go with a standardised version. As in INV theory, accelerated learning and information sharing are also vital to the success of NPD. This makes these factors critical in international new product development. Kirwan et al. (2019) found supporting evidence by noting that external connections contributed to the technology development required to achieve the recognised opportunity before internationalisation.

2.2.2 Further product development

Development does not stop after the release of a new product, but following the launch, a different term must be used. In this study, the development following the NPD process is called further product development. As conceptualised by Kirwan et al. (2019), the development of INVs goes through three stages: foreign opportunity recognition, pre-foreign operation, and post-foreign operation. Foreign opportunity recognition is where initial ideas are developed into business opportunities which show potential in foreign markets (Kirwan et al., 2019). This phase is in line with INVs opportunity development introduced earlier in chapter 1.2. The first phase is followed by a stage where the INV gathers resources, plans for international activities, and determines the sustainability of those activities (Kirwan et al., 2019). As for determining the sustainability of activities and the product or service, external networks such as investors or partners have been

mentioned to be useful (see chapter 2.1.4). The third and final stage includes the operations following internationalisation, where the INV continues to create value (Kirwan et al., 2019). The first two stages are strongly linked to the NPD process, where the idea is developed into a commercialised and workable proposition. The third stage is also highly relevant as it is essential for INVs continuity that development does not stop after the NPD process.

2.3 Linking international new venture and new product development theory

It is crucial for the study to explain how its key themes of international new ventures and new product development are linked. The most significant observation of these two theories is that for INV companies, the success of the NPD process is one of the significant factors that will affect whether it survives in the long run (Godener & Söderquist, 2004). Moreover, as Mainela et al. (2011) point out, the emergence of international new ventures should be examined in the context of their opportunity and technology development functions. To achieve long-term success in international markets, it is essential to understand the factors that influence the NPD process and its practical implementation for INVs. By first understanding what challenges INV companies typically face and what helps to overcome these, we can conceptualise their relevance to the NPD process. The NPD process of international new ventures is understood to be somewhat different from other SME companies, as they operate in a rapidly changing international environment with more uncertainty.

From a theoretical point of view, these general characteristics of INV companies will be addressed extensively, as no such studies have been carried out before. For this reason, three factors believed to influence the NPD process have been selected. The first of these is the role of resources in the NPD process. The development phase is known to consume a considerable number of resources, and INV companies are not known to have an abundance of these. It was mentioned in chapter 2.1.2. that when resources are scarce, a structured model for their allocation is recommended, as the nature of the entrepreneur

is known to include a level of chaos (Bingham et al., 2007). In addition, support from external networks can help INV companies to allocate resources correctly in the NPD process. The study of resource conditions is also significant in that they can be a factor in making critical decisions regarding the NPD process. Figure 2 shows the process flow of NPD and its relevant contributors.

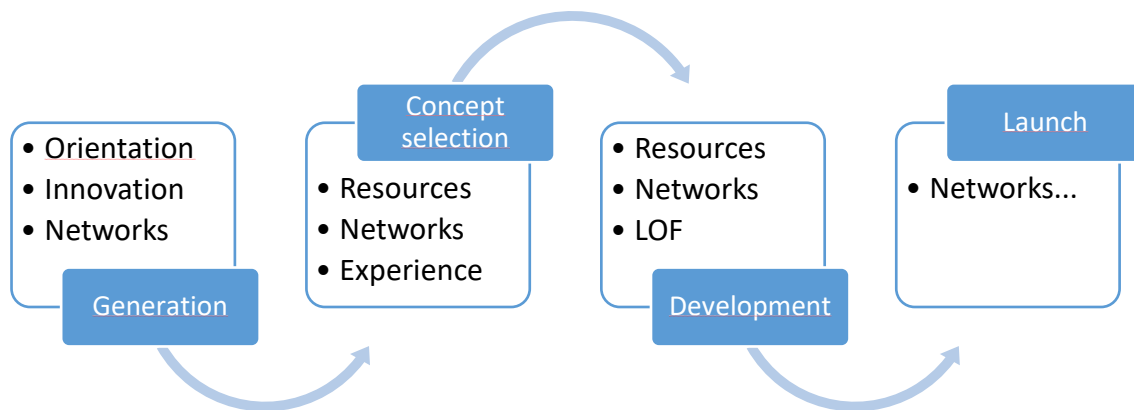


Figure 2. Factors relevant to the NPD process of INVs that contribute to its success

The founding of a high-tech company is frequently motivated by technological innovation, and innovation development is typically viewed as a network-based process, as summarised by Mainela et al. (2012). Although the process steps in figure 2 follow each other, it is essential to remember that they may partially overlap, accelerating the NPD process lead time. The lead period is critical because the company's returns at this point are almost invariably negative. Since high-tech entrepreneurial possibilities need to combine technological diversity with market opportunities and ongoing technology development following customer requirements (Mainela et al., 2012), the role of the customer networks is also highlighted. Proof of concept projects in collaboration with customers and feedback help INV companies in the NPD process for product-specific decisions. Networks thus prove to be of great value for the NPD process in the situation mentioned above, sharing information and the manifestation of resource bottlenecks. As also noted in chapter 2.1.4. in figure 1., different forms of networks have proven to be beneficial in the whole lifecycle of INV development.

Finally, the LOF phenomenon is thought to influence how easy or challenging both external and internal interactions turn out during the development phase of the NPD process, bringing more of a cultural and social angle to the research.

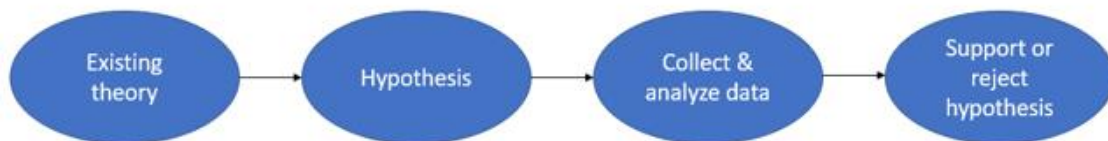
3 RESEARCH METHODOLOGY

The chapter outlines the key research features of the study and the reasons why they are appropriate to the topic. This section also discusses and explains the data collection and analysis methods used in the study.

3.1 Research approach

The research approach explains how the literature review is connected to the empirical study. Studies can be conducted using inductive or deductive research methods or a combination of both. Both methods are used in this study, with hypotheses drawn from existing theories. These hypotheses are then compared with the data to determine whether the hypotheses hold. This is called the deductive research method. Evaluating the second and third research questions, which are based on theory and therefore are easier to answer using the deductive research method. The study also aims to identify general patterns in the interview data that can be used to draw general conclusions on the topic. This method is, in turn, inductive. The inductive research method is particularly suited to the first research question, which is explanatory. Both research methods are introduced in figure 3. below.

Deductive research method



Inductive research method



Figure 3. The flow of deductive and inductive research approaches

As Coviello and Jones (2004) suggested, the study takes the approach of inspecting international new ventures and the behaviors of the involved individuals in the international networks. In this study, a qualitative approach has been chosen to fit the aim of the study and the research questions. In qualitative research, the focus is on finding insights, and generating explanations or theory (Ghauri & Gronhaug, 2010). The first question is an open-ended "what" question, so numerical answers from a quantitative survey are not appropriate. When the phenomena are open to interpretation, qualitative research is an appropriate research method (Ghauri & Gronhaug, 2010). In addition, the study seeks to understand how individuals perceive the NPD process to be affected by certain variables; comprehensive results would be difficult to obtain with a quantitative study. Qualitative research is described as more rational, explorative, and intuitive than quantitative, with an emphasis on the social skills of the interviewee (Ghauri & Gronhaug, 2010). The aim is to understand phenomena based on experience, emotion, and observation, rather than to generalise them numerically.

3.2 Research design

The research design explains the data collection methodology. This study is structured so that theory is used to lay the foundations for the research questions, which are answered by the empirical research method. The aim is to answer the explanatory primary research question by delving into the semi-structured interview results.

1. What factors affect and give direction to the new product development of Finnish digital product or service international new ventures?

In addition to the main research question, two supporting research questions are more specific.

2. How does the use of networks benefit the new product development of INV companies?

3. How do the common adverse effects of INVs, e.g., scarcity of resources or liabilities of foreignness, impact new product development?

If resources are sufficient, it is recommended to favor multiple case studies rather than single case studies (Yin, 2003). Therefore, this study uses multiple cases. The multiple case study approach was chosen because the research question requires an explanatory approach. It also provides the means to present complex business problems or trends in an accessible format (Eriksson & Kovalainen, 2016). Eisenhardt (1989) argues that a multiple case study gives the researcher a chance to find patterns that are shared by the cases and the theory being applied. With the study including four case companies, comparing them will produce further, broader findings. It is also more convincing and comprehensive, as the case data are based on several empirical sources (Eriksson & Kovalainen, 2016). In this study, case companies are named to match the alphabet A, B, C, and D.

In style essential for a case study, the findings are first collected case by case, after which their results can be compared in table 3 in chapter 5.1. The case study results are analysed by summarising the relevant findings from the interviews in chapter 4. This allows the researcher to become familiar with each case and to find cross-case patterns, which facilitates the comparison of research results (Eisenhardt, 1989). The interviews of the cases are followed by a comparative discussion phase, where actual cross-examination occurs. The aim is to constantly compare the findings with those presented in the theory section to confirm or advance the findings (Eisenhardt, 1989). Additionally, a summary of findings is presented to find cross-case patterns, allowing for similarities or differences between categories and dimensions between the cases (Eisenhardt, 1989). Finally, the results are summarised in chapter 6, which also shows if the findings are consistent with the presented theory.

3.3 Data collection and sample

Data collection discusses how the data has been collected for the research. The study includes primary data, whose role is to explore phenomena at a more detailed level that have not yet been explored in previous studies (Eriksson & Kovalainen, 2016). In this study, primary data is collected through semi-structured interviews, which are qualitative by nature. Structured and unstructured interviews are combined to produce semi-structured interviews. Some of the questions are predetermined, but not all of them. The advantage of semi-structured interviews is that the data is systematic and comprehensive, although the discussion is mostly informal (Eriksson & Kovalainen, 2016). Systematic setting helps to achieve cross-examining while gathering qualitative data.

The theoretical context, the research question, and the objectives served as the foundation for the interview guide. Most interview questions start with either “how” or “what” so the nature of questions is both positivist and emotionalist (Eriksson & Kovalainen, 2016). Thus, the questions seek to elicit emotional as well as factual responses, concerning the nature of qualitative studies. There is also no order to the questions, which makes the discussion flow naturally and allows for more in-depth questions in addition to the predetermined questions.

The research also applies secondary data, which includes articles, books, journals, and websites (Ghauri & Gronhaug, 2010). In short, secondary data is gathered by the researcher but not conducted by them. The purpose of secondary data is to formalise and explore phenomena. To achieve triangulation, primary and secondary sources are used from multiple sources to allow for cross-checking (Eriksson & Kovalainen, 2016). Secondary data was helpful in conducting the interviews as, to get ready for the interviews, information about the case companies was found online. Additionally, after the interviews were conducted, final fact-checking was completed. The following table 2. summarises the conducted case companies and interview dates.

Table 2. Conducted interviews

Company & segment	Product or service	Interviewee	Date	Other data
A. Lifetimely.io, e-commerce analytics	Customisable analytics and data for e-commerce	Co-founder & CEO	15.9.2022	Website
B. Valosan, media management tech	Digital PR management tool	Co-founder & CEO	14.10.2022	Website
C. medical tech	Digital diagnostics process	Co-founder & CEO	18.10.2022	Website
D. Enfuce, financial tech	Card as a service (digital platform)	Co-founder & Co-CEO	23.11.2022	Website

The case companies have been selected based on suitability and consent. Out of the four interviews, one interviewee was found through the personal network, who fitted the description of INVs presented by Oviatt and McDougall (1994) and the paper's delimitations. A preliminary survey was conducted on companies to gauge their suitability for the study. From the 13 survey respondents, three other case companies were selected who met the criteria. In the selection process, emphasis was placed on a specified population and a theoretical selection method, which limits external variation and makes the findings theoretically useful (Eisenhardt, 1989). Of the criteria presented below, one and two are based on the study's delimitations of Finnish digital product or service companies. The third criteria is from the description of INVs as Oviatt and McDougall (1994) describe.

- The company is Finnish and does international business
- The product or service being is based on the digital artefact, and can be sold, marketed, and delivered digitally (Gabrielsson et al., 2021)

- Internationalization took place rapidly after the company was established

The duration of the interviews varied between 30 and 40 minutes. The aim was to keep them short and concise to allow entrepreneurs to fit them into their day. The interviewees did not know anything about the interview other than the topic, so they had little opportunity to prepare for it, as the aim was to get spontaneous responses.

4 EMPIRICAL RESEARCH

This chapter will present the empirical research and analysis of the thesis. The qualitative data will be analysed and reflected on the theory reviewed in chapter 2. All of the case companies are discussed in separate chapters.

4.1 Company A

Company A was founded in 2020 by the interviewee and his American co-founder. The interviewee had previously worked with e-commerce at another company, where he identified reporting needs that were challenging to solve. This gave them the idea to set up a company that provides data, analytics, and reports to the companies that run an online shop on Shopify. The platform's benefit is that it can grow without external funding or sales force input. The product, which falls under the category of "store management," can be bought by online retailers from Shopify's app store as they become aware of their increasing analytics and reporting needs. As of 2022, their team consists of about ten people who work worldwide, some contractors and some permanent employees.

The business goal is to provide additional analytics for entrepreneurs or companies operating their online stores based on the popular e-commerce platform Shopify. Shopify offers Software as a Service (SaaS) solutions, meaning that companies worldwide can build and customise their online stores without coding skills. These online stores are entirely cloud-based and hosted, so the customer does not have to deal with software maintenance or server upgrades. ("What Is Shopify and How Does It Work? (2022)," n.d.). The solutions of company A offer customised dashboards and reports where companies can measure the key performance indicators (KPIs) of their online store.

Additionally, the solution provides insights into customer behavior, daily profit/loss informatics, and forecasting tools that use AI to predict monthly sales. The services are offered in four different subscription packages, from which the customer can choose the content that suits their needs. The first of these packages is free and contains essential

profit and loss statistics information. The price of the packages increases as the offering increases. The fourth comprehensive package includes historical data, forecasting, and integrations to ensure that the service works seamlessly with other systems. These solutions aim to enable retailers to make more profitable business decisions and changes based on data rather than instinct.

4.1.1 Internationalisation and motivations of company A

The motivation to trade abroad came indirectly from finding a platform to grow, as the activity was initially a sideline business. From the beginning, it was clear to the founders that it was impossible to build a substantial business for this e-commerce function in the Finnish market. It was then natural to focus on more international e-commerce, where the boundaries are much broader. Just as Williams (1992) highlights factors such as niche opportunities, growth prospects, market size, and the uniqueness of retail supply as motives for internationalisation, in this context, niche opportunity, and growth prospects best describe company A's internationalisation motives. Thus, the pull factor of the international market was identified as a motive for the internationalisation of company A. Operating domestically would have required very different pricing and product even to begin to meet the targets. In the domestic market, e-commerce analytics markets would have saturated too quickly, so internationalisation was the solution right from the start.

The internationalisation process of company A was reasonably straightforward. The product was developed mainly in Finland before launch, which happened in November 2019 on the Shopify app store. After the development was finished and the product was launched, it was available on the international market. As is typical of INVs, they internationalise quickly, and the process does not involve several steps. Currently, more than 90% of their customers are from outside Finland. The internationalisation process emphasises the combination of innovativeness, proactiveness, and risk-seeking behavior mentioned by Gabrielsson et al. (2014) to seize the international opportunity.

4.1.2 Development of company A

The two founders of the company are responsible for product development. This task includes the definition of future development needs and activities. They are also responsible for ensuring that maintenance functions are taken care of. The company outsources coding to contractors in over four countries who perform tasks on demand. It was clear from the initial product development that the product was going to be on the international market, so its features were considered at an early stage. As a result, company A has not had to modify the product afterward, relating to being international. The company's product development at this stage is focused around 50% on maintenance, but they are also developing some new code. Most of this new development is the addition of new features and integrations to an existing product rather than creating new products.

The development requirements arise directly from the Shopify platform and the company's goals to add features or integrations. Once the product is built on Shopify, changes made by the company may open or close development opportunities. The interviewee mentioned that there is no long-term strategy for development. They prefer a relatively flexible approach to development. To some extent, customer feedback through the app store and other channels can also guide development, being the third source. For feedback, they have a dedicated channel, "Feature requests," through which customers can request new features. Other people's requests can be voted up and commented on. In addition, the status of feature requests is public, i.e. suggestions that have been put into development can have a status of the plan, work in progress or live. It is up to the founders to analyse these development requests and take them forward. The initial ideas and plans on which the generation, concept selection, and development were carried out were so thorough and precise that there was no need for a formal development model. This is partly because the experience and implementation of the entrepreneurs were already at a very high level at these stages. The product was developed from an identified gap in Shopify's analytics. However, the interviewee mentions internal information

sharing and some level of learning through feedback from customers and specialists, as Oxtorp (2014) describes it.

“Due to the nature of the SaaS product, it is less likely to require large investments to develop once it reaches a certain scale. Consequently, the development consists mostly of maintenance activities.”

The interviewee characterises that development as generally either sales or product related. Talking further about the nature of development in company A, it became clear that on the sales side, the development requirement is very stable, as sales are based on the app store rather than on variable sources. Shopify contributes to the customisation needs of its customers, so there is no need to standardise the associated applications. Thus, their products are standardised, and no different versions are produced for each market. On the other hand, he describes product-related development as more adaptive, i.e., reacting to emerging needs, and creating the conditions for development according to these needs. On a general level, NPD and development processes have been easy for the company, as the sales platform, internationalisation, and product development were predefined. In this situation, dynamic development is less critical, and the focus can be on calmly emerging ideas and problems.

“At the international level, the product is equally suitable for everyone, so internationality does not impose any development requirements.”

The benefits of networks in development have been almost non-existent in current operations. The benefits of networks were generated at the beginning of the product's life cycle, in new product development, when it was verified and developed through feedback with the support of networks. It was also mentioned that efforts had been made to cooperate with other SaaS service providers operating in Shopify's online store. The purpose of this cooperation could be, for example, to share features between applications. The main challenge in implementing these has been the physical distance and time zone differences. The time difference delays communication and makes it more challenging

to organise meetings. The same problem also applies to collaboration agreements with influencers, which are relatively numerous in the Shopify ecosystem.

The main challenges for development at an international level are related to the growing demand for skills. In particular, the demand for developers who speak good English is very high, contributing to the rise in wages.

4.2 Company B

Company B was born as a spin-off of an agency that needed an efficient public relations (PR) management tool but could not find one for its increasing needs. According to the interviewee, PR means earned media demand. So, the co-founders decided to develop their tool for this purpose. The product was already used internally by the San Francisco Agency before Valosan, which was founded in 2022 to allow other companies to buy their service. There are five nationalities working in the whole group in which company B is involved. Their mission is to help communications professionals from all sectors understand how to build meaningful, mutually beneficial relationships with the media based on trust, respect, and compelling storytelling (Valosan, 2022). They aim to combine Pi Valley's bold global thinking and brand with Nordic values, which are more humane.

Their product is a Media Relationship Management (MRM) tool, which serves PR teams aiming to work efficiently utilising the best practices (Purosto, 2022). It is provided in three different packages from their website, ranging from small to large. The tool makes it easy to manage one or more PR campaigns, depending on the package. They aim to support the growth of companies with PR objectives, which he lists in three different levels. The first is the level at which the company determines whether it wants to engage in PR and decides not to. The second level is where a company decides to engage with PR and outsources the needs and actions relating to it. Lastly, the third and most crucial level is where the company decides to manage PR in-house. This is the sweet spot of company B, where they offer their services.

4.2.1 Internationalisation and motives of company B

The interviewee explains that he started practising international business early in his career, has lived abroad, and has an international mindset. This means that he looks at the market at a global rather than a national level. From a very early age, the orientation has then firmly based on entrepreneurship and internationalism. An essential part of the motivation was that they had been in the PR business in Finland, where they had already reached the desired level. This was followed by setting their sights higher and aiming for international markets. These markets contain many new opportunities and potential to reach for. He also stresses that the direction is strongly guided by values, although at the same time, business objectives run parallel.

4.2.2 Development of company B

The concept for the SaaS product was defined at the agency three years before launch, and the actual product development started two years prior. When talking about development, the interviewee broadly divides it into two categories: initial development and operational work. The initial development (NPD) phase involves developing strategy, and processes, selecting tools, and testing. Once it is established where the correct variables have been found, the process moves into the operational phase, where the function is used. The operational phase also includes development, which can be intermittent or continuous by nature. Initial development is, therefore, a prerequisite for any operational activity. In theory, initial development is, in other terms, new product development, and the subsequent post-release development is product development. In the case of company B, new product development took about six months before the product could be tested for operational use. Concerning the product roadmap, the interviewee can see up to five years ahead. During this period, new features would be added to the product, although he describes this as a somewhat complicated process. In this timeframe, objectives are constantly living as new ideas emerge, and old ones expire.

The interviewee explains that development is less affected by language or cultural differences at the international level. Cultural differences may mainly manifest in how things are presented to internal or external networks; entrepreneurs need to consider the presentation style. Instead, he stresses the importance of social proximity. For their part, they have justified product development partially based on feedback from businesses. This is particularly easy with global companies with an office in Finland, where social proximity is relatively strong. This means that things happen quickly, and networks are very close. On the other hand, the further away from home, you go, the more challenging it is to get direct feedback. Increasing distance contributes to ideas of trust issues and prejudice, which harm openness.

He talks about the benefits of internationalisation in development, in the sense that when you have a multinational team, you have relationships in more directions. This facilitates market intros, for example, when conducting surveys. When introduced to a company you know, you are more likely to succeed in your goals when compared to “cold” contacts. Thus, their NPD has worked based on a wide-reaching environmental scan, meeting clients and getting their development ideas (Oxtorp, 2014). However, this has been found easier to implement in places with closer social proximity. They have also involved more people at different levels in the scanning process, further strengthening product development. From the beginning, the product was developed for in-house use, with internal requirements driving product development, but the situation has changed.

Development, therefore, takes the form of an inner vision and external feedback. External feedback is facilitated by an international network of employees, as the number of leads is more comprehensive. When talking about niche SaaS solutions, communicating and solving the problem areas communicated by the major players in the industry is critical in terms of product success. This is where the importance of networks is highlighted. Internal development ideas are the result of professionalism, vision, and discussions. The

concrete implementation of these ideas is a specialty of the other co-founder, and development is not externalised. The roadmap is constantly discussed with the whole team, but product-specific decisions are sought from product owners.

The interviewee mentioned that the advantage of international development compared to other development is that all materials and activities are designed to be international from the outset. This means there is no need to invest in internationalisation later, for example, if internationalisation were done incrementally. All products are developed to work internationally, so that, for example, the language is English. Operating in English opens new doors to the international market. A personal network has also supported technical specifications. The interviewee also mentioned that young entrepreneurs get a significant boost from their communities to help them with the problems that arise during early development. This support is partly emotional but also support in practical matters. Experience certainly plays a role in determining how much support is needed. Longer-established entrepreneurs can also easily find help from personal networks, but newer ones may not find it so easy. They are more likely to find help from a start-up network. Start-up networks in Finland, for example, are good places to discuss development problems with investors and experts. Despite their local character, the networks are very international.

4.3 Company C

Company C focuses on improving medical technology and processes. Its goal is to innovate technologies anticipating remarkable technological breakthroughs with a global impact on healthcare and diagnostics. The technology aims to improve an existing process, making it better and faster.

4.3.1 Internationalisation and motives of Company C

Their current product idea came to the company with an employee, while their previous business went out due to a competitor buying out their customers. Like the other companies interviewed, Company C had the idea of an international market right from the start. Consequently, internationalisation took place immediately. To compare, firm-level activities that can be seen as behavior patterns during a specific time did not occur in their case regarding internationalisation (Jones & Coviello, 2005). Documents and functions were made international from the start. The international orientation of the company and the founders is solid, partly because the main markets are outside the home country. The concept of gradual internationalisation seems old-fashioned to them.

"Internationalization is not a state to which you move, but a state to which you go as soon as you set up."

For them, the best solution was to aim directly at the American market, where most significant players operate. In this situation, it did not make sense to proceed incrementally, for example, via Europe. That would have been a waste of resources and potential. In addition, it was even easier to approach prominent players in the industry for cooperation or development than local or European companies. Internationalisation identifies a clear vision and potential for a product that can only be achieved where the market is largest. This, of course, was not the case in the home market.

4.3.2 Development of Company C

A commercial plan has been drawn to prepare the ground for development and avoid wrong decisions. The interviewee mentioned that they have plans at weekly and monthly levels that are constantly being carried out. When the need arises, the plans are also modified. This planning is also partly what external investors require. As of the end of 2022, Company C is analysing large amounts of data for validation and will soon be ready to do "Proof of Concept" (PoC) projects with customers. The initial technological development is at the end of the line. PoC will allow them to test the functionality of

their innovations with customers. PoC is implemented by first testing on a small sample. Once it is established that a small sample works, the testing will be incrementally extended until the whole service chain has been tested and the parts that work and need to be improved have been identified. This testing will also provide customer feedback and valuable data for further development. This method gives the company external confirmation that it is doing the right things. Overall, the nature of the development process is described as reasonably flat between feature improvement and testing. However, this may be subject to sudden changes in the environment, in which case the pace and requirements of development increase considerably. This is characteristic of their development work, which waves intermittently.

In addition to external determinants for development, requirements also arise internally within the company. However, the interviewee stresses that development must first and foremost have its direction and vision. Of course, the external world contributes to internal development, which is why he describes the development as a hybrid model. The internal requirements for development are partly determined by their experience, which has enabled them to envision the future of the product and its features. They have a strong internal belief in the product and its potential. In the vision, the need to focus on the most productive means and leave the less productive developments for later is vital. This is precise because growth companies are resource constrained, having to engage in “cherry-picking”.

In the international development environment, the emphasis was on focusing on the company’s activities as much as possible, even though competitors may be doing different things. In development, the disadvantages of internationalisation cannot be explicitly mentioned. On the other hand, the location of the market and the ease of access to the parties operating there are advantages. After all, cooperating is challenging if one party cannot be reached by the other. An external network of actors can be used to run development-relevant PoC campaigns.

Culturally, it seems Americans are giving more direct feedback, which is favorable for development. Thus, the general atmosphere there seems to be better than in Europe. Creating networks is the key. Internal relationships and good recruitment decisions can open more intros to external companies.

4.4 Company D

The fourth case company provides innovative card and payment solutions for fintech, banks, and merchants. As of 2022, the company employs more than 150 people in four countries, a significant growth since its founding in 2016. Of the company's four core values - think big, collaborate, excellence, and sustainability - research highlights collaboration, which aims to break down silos and promote information sharing. It is interesting to note that the topic at the core of the study has been chosen as one of the company's core values. The value company D offers its customers is based on a cloud-based, faster-than-traditional solution that allows them to sell payment cards to their customers. Company D aims to solve their card issuing and transactional needs to enable these corporate customers to focus on their core competencies as merchants, banks, or other operators. The service promise on their website is that instead of months, the customer could issue cards to their customers only over a matter of weeks.

The company was set up when the founders identified an opportunity in a tender for which they would have to provide a service. To this end, a product was developed, and it was only later that they realised that what it offered was unique and contributed to pioneering the industry. It was partly by chance that the business was set up in the cloud, as resources were limited initially. They note that company D was the first to take processing to the public cloud (Enfuce, 2022). It was seen as a way to achieve goals by being better, faster, and more scalable. Another critical turning point is mentioned, "Card as a service," which opened up the potential for them to achieve great things in the international market (Enfuce, 2022). This was a concept understood and desired by the market. They have a diverse portfolio of clients in international markets and Finnish companies. Among the international clients are the Icelandic bank indó and the Danish b2b fintech

company Pleo, which has also expanded to Finland. Through these customers, they have more than 16 million end-users. Solution-enabling partners include globally renowned pioneers Visa, Mastercard, and AWS, among many others.

4.4.1 Internationalisation and motivations of company D

The same trend as in other INV case companies is repeated in that the Finnish market was seen as too small, making it natural to seek growth in international markets. In addition to the small market size, the interviewee mentions that the mindset in Finland is also somewhat cautious and unfavorable. They have also observed that, for some reason, Finnish actors prefer to buy from foreign actors, even though the domestic supply might be better. The entrepreneurs' orientation and vision were very international right from the start. Internationalisation was a rapid process that took place quickly after the company's establishment. The interviewee mentions that a critical success factor in the early stages was the choice of language, with all documentation being in English. This makes it easier to onboard new employees, for example.

“If I had ever focused only on the Finnish market, company could have gone bankrupt in 2017.”

Introductions are more accessible at the international level, with a typical lack of knowledge about the players. Hence, people go there to get to know them and hear them without prejudice. She mentions that Finns still have the potential to improve co-operation and that attitudes and ambitions could be set even higher. However, these are partly cultural characteristics, so attitude change is slower.

4.4.2 Development of company D

The interviewee explains that the service was developed from the outset and focused on being a premium solution. The initial focus was on identifying the service's required capabilities. From the beginning, it was essential to identify what capabilities were avail-

able and what segments could be served. These findings allowed the product to be developed in the right direction with the right features with the most significant potential. They thought about the segments where an agile player like them could find significant enough market shares. Development at this stage was described as opportunity based, which lasted about four years. This means seizing opportunities that present themselves, which contain more uncertainty, but also great potential if successful.

In the new product development phase, the focus was mainly on which countries to target; later, they moved on to which customers were big enough to open new doors. The interviewee mentions that there has been a massive development of technical capabilities, but even more, different use-case purposes can be solved with these capabilities. At this stage of development, it is essential to package these use cases into more specific saleable packages. The resources of the external financing round will partly drive this growth and development. In terms of product development, areas that are trending are also monitored. The ability to react to trends and the market situation is essential for development. Keeping abreast of trends through market research can help identify new scenarios in which to invest resources. The interviewee reacts to challenging situations by saying, *"This too shall pass"*, which is a vital characteristic of the experience of running a business. As noted, INVs require abilities to adapt to the emerging situation and agility, which have been noted in assets of foreignness (Sethi & Judge, 2009). Agility has also helped company D to succeed when opportunities and challenges arise.

The interviewee says that the role of networks has been very critical in the new product development phase. New product development was partly fuelled by the entrepreneurs' experiences of success and failure, which gave them a better understanding of the problem they were tackling and by getting to know the good and bad actors. Knowing these actors helped know whom to contact when issues arose to move things forward. Even if the personal network could not always solve problems directly, they might know someone who could help, which contributes to widening the network. The network has been key to sharing information and solving problems.

The interviewee says it is critical to building the network as early as possible, as it would not have been possible to achieve similar results at a younger age when the network was still relatively small. Even after the NPD phase, networks have played a significant role, as they have become partnerships. The trust built up through networks is critical, as it is assumed that the counterpart will do their job and may even do a little extra to maintain continuity. When dealing with an unknown party, there is still no such trust, and these parties typically lose if they compete head-to-head with a network member.

5 DISCUSSION

This chapter discusses the results of the case studies in relation to the theoretical premises presented in chapter 2. The findings are presented in three sections in line with the research questions.

5.1 Emerging themes in the NPD process of International new ventures

As mentioned by Mainela et al. (2012), success in new product development highlights the unique characteristics of the entrepreneur and the importance of networks. Based on this, the aim was to determine which factors are most prominent in the activities of INV companies and entrepreneurs who have undergone or are in the middle of the NPD process. When interviewing entrepreneurs, a strong desire to do business internationally was highlighted, as they offer a broader and more attractive target market. They were also united by an ability to visualise the potential and life cycle of the product over a considerable period. They showed a clear international and entrepreneurial orientation which led to the finding that the entrepreneurial personality has a significant impact on the NPD process of the company through its goals, experience, and vision. The entrepreneurs were confident when talking about international business. Table 3. summarises the critical points regarding NPD as noted by the interviewees.

Table 3. Summary of findings

	Nature of development (NPD)	Sources for development (NPD)	Development objectives
A. Lifetimely E-commerce analytics, Past NPD stage	Short-term, flexible, adaptive	Internal vision, external verification	Predefined goals
B. Valosan Media management tech, NPD stage, launch	Long-term, agile	Internal needs, external feedback/verification	Long-term objectives, value-based goals, best practises
C. Medical tech, NPD stage, launch	Structured, agile, oscillating	Internal vision and direction, external PoC/verification	Internal objectives, focus on most productive enablers
D. Enfuce Financial tech, past NPD stage	Opportunistic, agile, bold	Internal vision, seized external opportunity, external verification	Clear objective, high-end product, respond to trends

For companies A and D, the conceptualisation of the product started with the identified market gap where they saw the potential for a new company. Company C found the concept from a recruit and steered away from the old business idea to a new one, which was perceived as more productive. For company B, the idea was born out of an internal need that was later decided to be significant enough to be separated into a new company. These, alongside the characteristics of the entrepreneurs, support the findings that prior knowledge and personal characteristics shape the path to identifying opportunities (Kiran et al., 2019). For companies A and D, the initial plan on which the generation, concept selection, and development were carried out was so thorough and precise that there was no need for a formal development model for NPD. On the other hand, company C. periodically monitors the development on a weekly and monthly basis, which is also partly carried out at the request of external investors.

Regarding the decisions on product-specific features mentioned by Leithold et al. (2016), the study identified the following factors affecting decision-making: the likelihood that these new products meet customer and stakeholder requirements, have a reasonable financial impact, and correspond to the visualised product and market position. Additionally, for all case companies, it was from the beginning clear to the founders that it

was impossible to build a substantial business based solely on the Finnish market. Thus, the requirements of the NPD process were set at an international level from the beginning, which in practice means the documentation and infrastructure were done in English. It was done even though the company could initially only have Finnish-speaking employees. This early attention saves future resources, as changing languages afterward is a substantial task. English as a primary language also enables international recruitment which is advised by Zaheer et al. (2000) for increasing knowledge.

An exciting change occurred with the company D interviewee when they mentioned that during the NPD process, the business focused on which countries to expand into. After the NPD process, the growth has shifted from countries to customers that enable expansion. This shift in selection heuristics, as Bingham et al. (2007) define them, would be an interesting research topic for future studies. In addition, it was fascinating to note the competitive pressure on INV companies, as Oxtorp (2014) presented in chapter 2.2. was not conveyed in the interviews, which could also be covered in future research.

5.2 Networking benefits for new product development

Almost without exception, when the interviews shifted to talking about networks, interviewees became enthusiastic and perceived them as central, especially in the early stages of development, i.e., NPD. Each company stressed the importance of networks in the early stages of NPD, especially in verifying the product or service and sharing information. Company A leveraged networks through internal information sharing and some level of learning through feedback from customers and specialists. Company B, on their part, justified product development partially based on feedback from businesses. Company C implements PoC projects for product development through a network. The interviewee of company D said that it would not have been successful if they had done the same company when being younger, as the network was still relatively small.

Thus, the organisational networks (or formal networks/business networks) and personal networks (or social networks/informal networks) mentioned by Laurell et al. (2016) both

prove to be necessary for the NPD process. This confirms that networks are a critical success factor or a prerequisite for a successful NPD process (Paul & Rosado-Serrano, 2019). On the other hand, as mentioned in section 5.2, it is not always easy to reach networks at the international level. This variability in the reach of networks may be due to many factors, such as culture or industry, which provide an exciting research topic for future studies.

5.3 Resource scarcity or LOF affecting new product development

As mentioned, according to the RBV, if a company has many resources and knows how to employ them effectively, it can compete in global markets and achieve objectives in the long run (Andersen et al., 2014). In addition, the company needs to succeed in the NPD process to prosper in the long run. This is critical, as this is usually the stage where resources are at their lowest because the business is just starting. Companies generally spoke very little about the scarcity of resources, indicating that international business involves more resource-related risk, but it is an acceptable quality. Two of four companies mentioned that Finland is a favorable location for entrepreneurs, as they offer start-up financing against certain conditions that ease initial resource constraints.

If information is considered a resource, almost without exception, companies responded that there were always people in the network who could help. Another important consideration in terms of resources is that most of the companies interviewed are part of the Finnish start-up community, which contributes to lowering the threshold for sharing information, learning, and discussing with investors. The impact of start-up communities on young companies' NPD process is an exciting topic that has not yet been widely studied.

When the interviews were carried out, it was found that two companies preferred to develop solutions that required fewer resources. With company A, the benefit of the Shopify platform is that it can grow without external funding or sales force input. In addition, company C decided to use a cloud-based solution because it was cost-effective.

This later proved to be critical for their business. Thus, it can be concluded that in a resource-constrained environment, inexpensive delivery methods mentioned by Hennart (2014) contribute to the first stage of the NPD process in addition to prior knowledge and personal characteristics. In particular, concept selection was strongly linked to the resources available in two out of four cases. Burgel and Murray (2000) presented how the choice of international entry mode necessitated a trade-off between the available resources and the customer's assistance needs. In addition to entry mode, it impacts the concept choice, as this study suggests.

Regarding the development phase, it was mentioned that the availability of programmers on a specific stack at the international level is increasingly challenging and expensive. Programmers are an essential resource for digital technology companies, especially if the founders do not know how to program. Still, it was seen as irrelevant which country the programmers come from, the skills are equally good, and in a digital international team, staff can be hired regardless of location. Thus, at the international level, assuming that the company's infrastructure is in English, the availability of programmers is better. Hiring Finnish programmers can often be more expensive, so it is worth looking for international expertise, as mentioned by the interviewee. In summary, there is an increased demand for specific programming skills, but the general market for programmers is better internationally.

The aim was also to understand how physical distance, the LOF phenomenon, or other cultural factors affect the NPD process of companies, which relies heavily on feedback from customers and partners. Company B stressed the importance of social proximity. Feedback is straightforward with global companies with an office in Finland, where social proximity is vital. This means meetings and following actions happen quickly when networks are relatively close. On the other hand, the further away from home, you go, the more challenging it is to get direct feedback. This finding supports the disadvantage of unfamiliarity, resulting in lower confidence levels (Zaheer, 2002). Direct feedback is es-

stantial because it helps verify a product's characteristics, as mentioned by the interviewee of company C. Increasing distance contributes to ideas of trust issues and prejudice, which harm openness. Company C, on the other hand, emphasised how partners in the USA were more accessible to approach than Finnish or European partners. Thirdly, company D mentioned that introductions are more accessible at the international level, with a typical lack of knowledge about the players. Hence, people get to know them and hear them without prejudice.

Consequently, two out of three mentioned that it is easier to connect with networks abroad than in Finland, referring to the possibility of assets of foreignness. Company A found the location to be inconclusive. When the interviewees were asked directly about the effects of the LOF mentioned by Zaheer (2002) in the form of unawareness or discrimination, among other things, mentions of these did not emerge.

6 CONCLUSIONS, LIMITATIONS, AND DIRECTIONS FOR FUTURE RESEARCH

The final chapter summarises key findings which emerged from the data relevant to the selected themes of the paper. This is done by reiterating the purpose of the research and the research questions. Once the findings are presented, the associated limitations, managerial and theoretical implications, and suggestions for future research are presented.

6.1 Conclusions

This research provides significant findings on factors affecting the opportunity development of INV companies (Mainela et al., 2011) and on the role of networks in early development (Laurell et al., 2016) by studying their NPD process. Based on qualitative analysis the study suggests how the entrepreneur's experience, networking, and vision are a strong basis for the NPD process. It also complements the literature on factors relating to foreignness by understanding how LOF or scarcity of resources can affect the NPD process. These findings can be used to outline best practices for management in the NPD process of internationalising companies. Finally, it contributes findings to the literature on companies providing digital products or services (Gabrielsson et al., 2021) by answering the following research questions:

1. *What factors affect and give direction to the new product development of Finnish digital product or service international new ventures?*

Companies' NPD process has been mentioned to be positively influenced by entrepreneurial orientation, identification of customer needs, use of technological capabilities, focus on target market characteristics, and following the process thoroughly (Zahra & George, 2002; Leithold et al., 2016; Rogers et al., 2005; Dubiel et al., 2018; Kim et al., 2016) and its success is essential as it affects the long-term survival and success of the

firm (Godener & Söderquist, 2004). This study concludes that the nature of the NPD process varies across companies, however, it is strongly linked to the values of the entrepreneur, as the personal goals and nature of the entrepreneurs were aligned with the NPD goals of the firm. However, interviewees agreed that new product development should be flexible and agile as the business environment changes rapidly. The trend in the sources of development (concept selection) turned out to be company internal, while external networks were necessary for verification and improvement through feedback.

2. How does the use of networks benefit the new product development of INV companies?

Networks have been mentioned to be helpful for INVs as they can help in overcoming: limited resources and disadvantages relating to foreignness (Torkkeli et al., 2019; Clavel San Emetario et al., 2020; Laurell et al., 2016), enabling rapid internationalisation (Mainela et al., 2011; Paul & Rosado-Serrano, 2019) and enable technological and regulatory capabilities (Kirwan et al., 2019). This study's results suggest that networks play a critical role, especially in the early stages of the NPD process, for two reasons. The role of formal networks and business networks is relevant to product verification to validate product market fit. The benefits of informal and social networks are highlighted when help is needed in problem-solving. In this case, the benefits are emphasised through information and knowledge sharing.

3. How do the common adverse effects of INVs, e.g., scarcity of resources or liabilities of foreignness, impact new product development?

It has been mentioned that scarce resources affect the competitiveness, long-term survival, and entry mode of INV companies (Sharma & Erramilli, 2004; Burgel & Murray, 2000; Donbesuur et al., 2021) and hecticness can be eased by creating a structured model for their deployment (Bingham et al., 2007; Oxtorp, 2014). Liability of foreignness can show in the form of discrimination, unfamiliarity, and increased costs (Eden & Miller,

2004; Zaheer, 2002). The interviews did not reveal any significant impact of these phenomena on the NPD process. Comments about the scarcity of resources were noted once in the development scope, which therefore had to be limited. No evidence of a structural approach to resource allocation was found in the interviews. For two companies, the scarcity of resources led to a critical choice of concept in the NPD process, which later proved excellent. Thus, by chance, scarcity of resources can also lead to positive outcomes and sound business decisions in the long term. No reasoning was found for the LOF phenomenon, but on the other hand, social proximity was critical in reaching partners and receiving honest feedback. However, the results were mixed when evaluating the accessibility of networks by distance.

6.2 Directions for future research

To better understand the implications of these results, future studies should address the findings on a larger geographical scale as this study focused solely on Finnish international new ventures. Entrepreneurial values could have significant country-specific differences in the NPD process, for which this study serves as a foundation. The study also showed the importance of different networks, especially in the early stages of the NPD process, but their role in later product development was limited. Consequently, further research on this topic is recommended. Furthermore, the findings provide limited evidence on how resource constraints affect the NPD process at the concept selection stage, suggesting that this is an area that could be further explored.

6.3 Limitations

The aim of the study was to examine international new ventures in terms of their NPD process using the qualitative multiple case study method. Firstly, the nature of the multiple case study as the methodological choice includes some limitations. The sample size including only four case companies make drawing definite conclusions for larger populations difficult. In addition, when collecting data through semi-structured interviews, the interviewer is subject to the interviewer and the observer bias. In such cases, the

interviewer's expectations or opinions may interfere with his objectivity, which may distort the answers.

Secondly, the research focused on a specific target group of Finnish digital product or service INVs. Thus, the results cannot be generalised geographically. Moreover, the research was limited to digital service or product companies, no industry nor sector was defined. The study was further limited to the network benefits and general factors related to foreignness (LOF & scarcity of resources) on the NPD process. In addition to these factors, there may be many additional factors that influence NPD process that were not included in the scope of the study. The companies were also not restricted by age, so they could be at different stages of the NPD process while the research was conducted.

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Appendixes

Appendix 1. Semi-Structured Interview Guide

Semi-Structured Interview Guide	
Part 1.	Introduction (1-2min)
Briefly introducing the interviewee to the subject of the interview	
Part 2.	Background (5-10min)
<ol style="list-style-type: none"> 1. Background of the company 2. Interviewee's current position in the company and work history 3. What motives were there to internationalise rather than stay local? 4. Where does the company stand now? 	
Part 3.	Basic information on development in the international firm (5min)
<ol style="list-style-type: none"> 1. What is the current state of development? 2. How has development changed after internationalisation? 3. Who has the responsibility for development in the firm? 4. Are there goals for development, and how are they measured? 	
Part 4.	Development in international new ventures (5-10min)
<ol style="list-style-type: none"> 1. Is development characterised as standardised or adaptive relative to the operating environment? 2. How does the international environment affect developmental operations? 3. How would development be different if you only operated in your home country? 	
Part 5.	International barriers and strengths in development (5min)
<ol style="list-style-type: none"> 1. Is there any lack of resources in development? 2. Has the business network been helpful in your development? 3. Does the international environment offer strengths for development? 	
Part 6.	Closing the interview