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**Internationalisation Approaches - Strategies and Barriers: A comparative multiple case study of
Swedish SaaS and Consumer Goods Tech SMEs**

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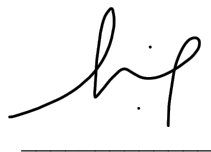
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A handwritten signature in black ink, appearing to be 'EPK', written over a horizontal line.

Esther Prah Koti

Abstract

Tech SMEs are increasing in number and capacity worldwide, and a key characteristic of these firms is their internationalisation approaches. This study investigates the internationalisation strategies of SaaS and hardware (consumer goods-related) tech SMEs in Sweden. Drawing on SME internationalisation research in international business and entrepreneurship literature, the study aims to understand how Swedish tech SMEs approach foreign market expansion, the strategies they adopt, and the challenges they encounter. An abductive methodology is employed through a comparative multiple case study of SaaS and hardware tech SMEs. Findings reveal that tech SME approaches- strategies and barriers are distinguished by business model and offers practical and policy implications for supporting global expansion.

Keywords: Tech SMEs, Software as a Service (SaaS), Consumer tech goods, Hardware products, SME internationalisation, internationalisation approaches, internationalisation strategies, internationalisation barriers.

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1. Introduction

This chapter introduces the background of the research topic, Tech SME Internationalisation Approaches. The research problem is highlighted and the existing gap in research that supports the study's relevance in theory and practice will be discussed. Furthermore, this section will present the research question, the purpose of the research as well as an overview of the delimitations.

1.1 Background

In today's hyperconnected global economy, the internationalisation of small and medium-sized enterprises (SMEs) has emerged as a critical growth strategy and an enabler of innovation and competitiveness (Oviatt & McDougall, 1994). Traditionally, business internationalisation was studied to follow the gradual approach where businesses "going abroad" first started with creating a strong market brand in the home country and expanded to foreign markets in a calculated manner, during which experiential knowledge is crucial (Johanson and Vahlne, 1977 p.23). These internationalisation approaches as studied by Johanson and Vahlne (1977) and Cavusgil (1980, p.278) formed the basis for explaining internationalisation, introducing the concepts such as psychic distance to rationalise how firms choose foreign markets (Evans, Treadgold & Mavondo, 2000 pp.377-378). The gradual internationalisation approach, logically for resource constrained firms including SMEs, does not only limit the speed, but also the scope of internationalisation (Oviatt & McDougall, 1994 pp. 50-51). However, drastic economic, technological changes have influenced the rate of globalisation through economic liberalization and enhanced communication, production, and transportation technologies. These factors have reduced the costs and increased the possibilities of doing business abroad (Porter, 1990 p. 83).

The recent rise of digital technologies has transformed the global business environment even further (Lee, Falahat & Sia, 2019 p.7), and the simultaneous rise of tech SMEs and their important roles in global value chains and economies have pivoted (Lunati, Dembinski & Farinelli, 2008, pp. 81-82). In Sweden, tech unicorns are exponentially growing, making Sweden the "second largest concentration of billion-dollar companies per capita" (Business Sweden, n.d – a, p.12). Recent studies highlight how digitalisation, among other enablers enables tech SMEs to bypass the traditional barriers to access

global markets rapidly through easier acquisition of foreign market knowledge and cross-border communication (Hervé et al., 2020, pp. 12-13). This is especially true for SMEs that sell digital products, whose internationalisation approaches, strategies, and business models have been studied extensively in recent studies (Westerlund, 2020, pp. 53-55; Monaghan et. al, 2020, p.13)

While several studies have investigated the internationalisation of tech SMEs, there is still a need to understand more about tech SMEs producing hardware consumer goods, whose internationalisation approaches and processes may be influenced by their product type, market, industry and regulatory dynamics, unlike digital SMEs. Thus, there seems to be limited theoretical evidence of consumer goods tech SMEs approach internationalisation currently, despite their growing significance in global value chains.

1.2 Problem discussion

Technology SMEs are often treated as a single category in internationalisation research and digital tech SMEs are more investigated, yet the tech business space includes fundamentally different business models. Consumer goods tech SMEs produce tangible products, requiring supply chains, logistics, and regulatory navigation, while SaaS tech SMEs offer intangible, subscription-based services that scale digitally but face challenges such as data compliance and user localisation. These operational contrasts suggest their internationalisation strategies may differ significantly, and yet cross-sector comparisons remain scarce. Studying them together offers a clearer understanding of whether international growth paths are sector-specific or shaped by broader strategic patterns.

To analyse these dynamics, this study applies the five internationalisation approaches identified by Fernandes et al. (2023), a systematic review which summarises the most research internationalisation approaches or factors for SMEs internationalisation. Its flexibility captures both rapid and incremental pathways, making it suitable for mapping diverse SME experiences. Applying it across two contrasting tech sub-sectors not only reveals similarities and differences in strategic choices but also tests the framework's applicability beyond its original context.

Thus, this dual focus addresses two gaps: the lack of comparative analysis across tech SME business models and the limited cross-context application of Fernandes et al. (2023)'s typology, offering both theoretical insight and practical guidance for internationalising SMEs, specifically, Tech SMEs.

1.3 Purpose and Research questions

This study aims to bridge the gaps in tech SMEs internationalisation research by examining and comparing the internationalisation approaches of both consumer goods and SaaS tech SMEs. Drawing on contemporary theories of international new ventures, born globals, born digitals and five of the most researched internationalisation approaches of contemporary SMEs, this thesis seeks to identify the internationalisation approaches, strategies and the barriers thereof. Based on the problem discussion and the purpose, the study explores the following research question:

- How do Tech SMEs (i.e., consumer goods and Software as a Service firms) differ in their internationalisation approaches and what are the key strategies and challenges that shape their global expansion?

1.4 Delimitation

This research is confined to a comparative analysis of technology SMEs operating in the consumer goods and SaaS sectors in Sweden. The study specifically investigates how these two categories of tech SMEs approach internationalisation, with a focus on the unique enablers and barriers they encounter. While the literature on internationalisation encompasses a wide range of firm types and market conditions, this study does not aim to provide a comprehensive account of all possible tech SME subtypes or internationalisation pathways. Instead, it concentrates on the distinct characteristics and strategies of consumer goods and SaaS tech SMEs to generate distinguished insights relevant to these sectors.

The research is further delimited by its methodological approach, which relies on a systematic review of peer-reviewed academic sources published between 1996 and 2021 published by Fernandes et al, (2023). As such, the literature is shaped by the availability and scope of existing literature and may not capture the most recent or unpublished developments in the field. Additionally, the study does not conduct primary empirical research of individual firms in the same industry for a more in-depth comparison, but rather those in different industries based on the accesses granted to me, as the researcher. However, this limitation can also be positive as it helps to identify patterns and themes in different contexts.

Geographically, the analysis is restricted to Swedish tech SMEs, and the literature reviewed may reflect a bias toward Western and digitally advanced markets. This choice enables a niche perspective on internationalisation dynamics in digitally advanced markets while acknowledging the limitations in generalisability to all global contexts. By focusing on these delimitations, the study aims to provide a targeted and in-depth understanding of how consumer goods and SaaS tech SMEs navigate the complex landscape of international expansion.

1.5 Disposition

The thesis is organized into six chapters. The first chapter introduces the study by outlining its background, articulating the problem statement, stating the purpose, and formulating the research questions. Chapter two reviews the relevant literature in the field and presents the theoretical framework guiding the research, including an explanation of how this framework relates to both the literature and the empirical findings. The third chapter details the methodology, covering the study's design, data collection procedures, analytical approach, limitations, ethical considerations, and measures taken to ensure research quality. Chapter four provides the empirical results. The fifth chapter details the analysis and interprets the findings in the context of existing literature. The final chapter summarizes the answers to the research questions, highlights the study's contributions to both academia and practice, and proposes directions for future research.

2. Conceptualisation

Over the past decades, research on internationalisation of SMEs have been in focus, leading to new concepts such as born global and born digitals. For this thesis, I will build on the five most common approaches that theoretically support the internationalisation processes of SMEs as summarised by Fernandes et. al (2023, p. 155). These approaches are classified as (1) internationalisation and networks; (2) internationalisation and venture capital; (3) internationalisation and intrinsic characteristics; (4) internationalisation and transaction costs; and (5) internationalisation and firm resources and capabilities. This literature review discusses these approaches in the context of the study's focus, Tech SMEs and adds on from additional relevant studies in the international business field.

2.1 Internationalisation in business

Since the 1970s, there has been a growing research interest in the internationalisation of business organisations. Johanson and Vahlne (1977, p.23), through their Uppsala Model, defined internationalisation as an incremental step by step commitment to new markets in business growth. However, Johanson and Mattson (1988, p. 309) implied that the earlier definition was not universally applicable and argued that this definition was less valid in contexts where there is high internationalisation of both the firm and the market, both domestic and foreign markets, where the pace and nature of expansion may differ significantly from the sequential model. In contrast to the Uppsala Model's incremental perspective, Welch and Luostarinen (1988, p.36) advanced a broader conceptualisation of internationalisation as "the process of increasing involvement in international operations." This definition shifted the emphasis from the mode and speed of entry to the overall expansion of cross-border business activities, allowing for a more inclusive understanding that accommodates varying paths to international growth.

An attempt to understand and define internationalization of SMEs, and the unconventional internationalisation speed and pathways led to the concepts such as born globals, born digitals and international new ventures which are discussed in section 2.2. However, most of the earlier research that uses the internationalisation concept focused largely on Multinational Enterprises (MNEs) or Foreign Direct Investment (FDI), which were supposedly more commonly involved in

internationalisation at the time. This could be attributed to, among other factors, resource availability and therefore, larger firms in larger domestic markets were commonly associated with this international growth phenomenon (Welch and Luostarinen, 1988, p. 51). In the context of SMEs, studies confirm that the concept is still relevant and applicable to SMEs and that psychic distance at both country and business levels cause challenges for SMEs post- market entry due to lack of market knowledge, which is essential for the right decisions in the new market (Chetty & Safari, 2019, p. 762).

2.1.1 SME internationalisation theories

Young and resource and experience-deficient firms (SMEs) are increasingly internationalisation through other leverages such as networks and relationships (Johanson & Vahlne, 2009, p. 1424; Dunning, 1988, p.12) In addition, the rapid digitalisation and increase in enablers of globalisation have more SMEs to internationalise and the born global and born digital firms' concepts have been incepted. Madsen and Servais (1997, p. 576-578) argued that the manner and order in which firms enter foreign markets no longer correlates with psychic distance and the incremental approach but is characterised as internationalisation motivated by internal and external factors. Research on fast internationalising SMEs, referred to as "born globals", "born digitals" or "international new ventures," depending on the firm's characteristics have drawn attention regarding the importance of business networks for the internationalization process (Chetty & Wilson 2003; Chetty and Campbell-Hunt 2004). While there is no universally accepted definition of high-tech SMEs, they are typically described as small and medium-sized enterprises that possess advanced technological expertise, a highly skilled workforce, and the agility to adapt rapidly to dynamic environments (Crick & Spence, 2005, p.168). For this study, generally SME literature and tech SME literature are merged due to the scarcity of tech SMEs specific literature and because tech SMEs characteristics are reflected in the theories, based on the broad definition above.

2.1.2 International new ventures

Oviatt and McDougall (1994, p. 49) defined an international new venture as “*a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries.*” This definition challenged the prevailing view that internationalisation is a gradual process, instead highlighting that certain firms are born “global” by virtue of their characteristics and internationalise rapidly where those characteristics are present. Madsen and Servais (1997, 562), builds on the earlier studies by Oviatt and McDougall (1994) and Knight and Cavusgil (1996) to critically observe and explain the internationalisation born global firms. Hence, the born global concept can be classified as a subset of the international new venture.

2.1.3 The born global firms

Knight and Cavusgil (1996) defined born globals as firms that, despite their youth and limited resources, achieve significant international sales within a few years of establishment, often deriving a substantial portion of their revenue from foreign markets. Their work, published in *Advances in International Marketing*, argued that many young, entrepreneurial firms bypass the slow, stage-wise internationalisation process described by earlier theories, such as the Uppsala model, instead entering foreign markets soon after founding. To understand and identify key distinctions in born globals’ internationalization processes, Chetty and Campbell-Hunt (2004) conducted a comparative analysis of traditional internationalization models and the emerging phenomenon of born-global firms. They found that traditional firms typically establish a strong domestic presence before expanding internationally, whereas born-global firms, though may be similar in operations, often target international markets from inception, bypassing extensive home market development (ibid, p. 61). Additionally, while traditional firms tend to acquire international experience gradually, born-global firms are often founded by individuals with significant prior exposure to global markets, enabling them to expand rapidly (ibid, p. 62). In contrast to traditional firms used in the Uppsala model of 1977, born global firms leverage networks and technology to manage diverse markets without necessarily being constrained by psychic

distance, through aggressive learning strategies and adaptability in navigating the complexities of rapid global expansion (ibid). Their research has significantly shaped the understanding of how and why some firms internationalise rapidly from inception, rather than following the traditional, incremental internationalisation models.

One critical observation through studies is that most born globals are tech firms and that those firms' internationalisation behaviour is influenced by home institutional characteristics, with small domestic markets are forced to move into the international marketplace after birth (Maden and Servais, 1997, p.578). On the contrary, other studies also propose that these firms may be propelled to internationalise even when the market is large (ibid, 578)

2.1.4 The born digital firms

The term born digital firms refer to businesses which adopt digitalization is a fundamental component of their business model from the outset. As highlighted by Monaghan, Tippman and Coviello (2020, p. 13), born digital firms represent a niche category of tech SMEs that have emerged because of digital transformation and are different from traditional firms that have “gone digital” or are “going digital” by incorporating digital capabilities into the organisation. A defining characteristic of these firms is their ability to offer digital products and services such as mobile applications that enable them to reach international markets efficiently right from the go, and intentionally (ibid). Due to their early adoption of digital technologies, these firms can enter foreign markets with minimal additional costs and commitments (Stallkamp & Schotter, 2019, p.100) and may be able to bypass some geopolitical challenges due to the nature of their product. Their reliance on digital solutions provides them with advantages such as scalability, operational efficiency, cost reduction, rapid expansion, and continuous innovation. Leveraging technology and digitalization, born digital firms seamlessly operate on a global scale, whether from their first year of operation or in later stages (Monaghan et al., 2020 pp.18,20)

In summary, born global, born digital and international new ventures concepts are crucial to this study as they broadly explain the categories of tech SMEs to be studied in this thesis project, tech SMEs with focus on consumer goods and Tech SMEs with focus on Software as a service. The next section will

investigate the five most common approaches to SME internationalisation and the institutional theory surrounding the environments and markets in which these Tech SMEs operate and/or aim to operate. As this study focuses on tech SMEs, these concepts are useful in explaining their internationalisation processes.

2.2 Five Approaches to SME internationalisation

2.2.1 Internationalisation and Networks

In this fast-changing business world, the 1977 Uppsala model of internationalisation has been adapted to explain better, the new internationalisation processes of firms, especially for contemporary SMEs (Johanson & Vahlne, 2009, p. 1423). The 1977 Uppsala model of internationalisation viewed internationalisation as a gradual and experiential learning induced approach, where new market commitments increased with increasing market knowledge from current activities of the firm (Johanson & Vahlne, 1977, pp. 26-31). However, the focus on limitations that necessitate the experiential learning approach for internationalisation has shifted from country barriers and psychic distance to the need for business networks, resulting from later studies that found that firms could not expand due to lack of networks but not necessarily as a result of country barriers or borders (Johnson and Vahlne, 2009, p. 1413). Building on existing knowledge (Johanson & Vahlne, 1977), Welch and Luostarinen (1988, pp. 51-53) viewed lack of resources including foreign market knowledge and experience as a limitation for internationalisation. However, they proposed that this limitation could be overcome by forming communication networks with distributors and customers. Over time, studies included more relevant actors in the network approach of the internationalisation process, adding that a business network encompasses a firm's relationships with not just customers and distributors, but also suppliers, competitors, suppliers or even the government actors (Johanson and Mattsson, 1988, p.312).

In further studies, the concept of networks and how the firm's business network influences its behaviour, its foreign market choice, entry mode and entry process have been in focus (Johanson and Mattsson, 1988; Coviello & Munro 1995; Martin, Swaminathan and Mitchell, 1998; Agndal & Chetty,

2007; Johanson & Vahlne 1992, 2003, 2006, 2009). The concept liability of outsidership has been used to motivate the network approach and is defined as liabilities due to the lack of market-specific business knowledge and relevant network positions (Johanson and Vahlne 2009, p. 1423-1424).

Within the SME context, the effort to conceptualise internationalisation has led to the development of related constructs, including born globals, born digitals, and international new ventures (see section 2.2), each reflecting firms that engage in international markets at an earlier stage in their lifecycle and often through unconventional trajectories. Evidently, it has been studied that Tech SMEs that have limited network relationships tend to internationalise more slowly, while firms with a more diversified network relationship tend to have “radical” internationalisation and innovation (Chetty and Stangl, 2010, p.1739). This confirms that networks are the most common enablers of internationalisation, even for tech firms and thus, a key component of internationalization for SMEs who seek to establish, develop and maintain international business relationships. Additionally, SMEs are also able to leverage networks to access resources such as venture capital (Vatne, 1995, p. 65), further emphasizing the relevance of networks in SME internationalisation.

2.2.2 Internationalisation and Venture Capital

SME internationalisation, especially Tech SMEs require resources as a fast-growing sector and venture capitalists (VC) play a significant role in providing financial capital and fostering their growth (Amit, Brander & Zott, 1998, p. 457). However, the effects of the VC investment on SME growth and therefore internationalisation may vary based on the resources provided to the SMEs and how those resources are provided (Smorlaski & Kut, 2011, pp. 52-53). Venture capitalists play the role of intermediaries, who invest funds, collected from varied sources (including institutional investors) into selected firms like SMEs in exchange for an appropriate return. According to Gorman and Sahlman (1989, p. 287)'s studies, venture capitalists provide more than financial resources. They also monitor the firms in their portfolios, provide critical services even in operational strategies and have reputational benefits that facilitate SMEs' growth, and hence, its internationalisation (ibid, p. 287). Their expertise helps SMEs

identify foreign opportunities and navigate complex environments, particularly when VCs have international experience and networks. As a result, VC backed SMEs are generally expected to exhibit high or significant growth from the early stage. In line with these expectations, studies have found that VC-backed start up often experience accelerated growth (Smolarski & Kut, 2009, pp.52), possibly due to the combination of funding and strategic guidance provided by their investors, particularly when coupled with innovation strategies similar to those employed by larger firms such as risk and control management (Smolarski & Kut, 2011, p.52).

While venture capital provides crucial support for the internationalisation of SMEs through financial investment and strategic guidance, its impact is influenced by firm size, market conditions, and the ability of SMEs to overcome contextual barriers. Finally, it is observed that venture capital is a critical approach as it interlinks with other approaches noted by Fernandes et al. (2023). VC could be accessed by SMEs through their networks and VCs can introduce SMEs to their networks, creating further networks for growth and adds to the SMEs' resources and capabilities through its strategic services. (Smorlaski & Kut, 2011, p. 52; Gorman & Sahlman, 1989, p. 287).

2.2.3 Internationalisation and firms' intrinsic characteristics

Fernandes et. al. (2023), in their systematic review, categorise both firm characteristics and home institutional characteristics such as institutional pressures as intrinsic characteristics. Focusing on firm characteristics, several intrinsic characteristics influence of SMEs (Milevoj et al., p.12). Factors such as firm size, ownership structure, type of activity, access to external finance may have affect the internationalisation process and firms with greater access to external financing or strong business networks are better equipped to overcome barriers to internationalisation (Ruzzier et al., 2014). However, a firm's size, years in operations and other firm specific characteristics alone cannot determine its capacity to scale international markets. (Reuber & Fischer, p.820). A rising school of thought focus of the individual characteristics of founders and managers of SMEs as factors that impact the approach of internationalisation (Ruzzier et al, 2007, p.25). The individual characteristics of SME

founders and managers such as education, international and professional experience, and global mindset are critical determinants of internationalisation strategies and outcomes (Crick & Jones, 2000, pp.71-72; Musteen et al., 2014, p.764). These personal attributes function as unique firm-specific advantages, shaping not only the decision to internationalise but also the speed, scope, and success of internationalisation. Studies from Hashai and Zahra (2022, p.177) concluded that the experience and history of the founder, for example, had a large influence on the appearance of the firms. SMEs often adopt different approaches based on their intrinsic characteristics. While some firms pursue incremental internationalisation by gradually entering foreign markets, others take a more radical approach by rapidly expanding into multiple markets. The choice between these strategies is not only influenced by factors such as resource availability, managerial expertise, and prior experience in foreign trade but also, by the home market's characteristics and demand (Crick & Jones, 2000, p.72).

2.2.4 Internationalisation and transaction costs

Transaction cost approach (TCA) is one of the used frameworks for understanding the internationalisation decisions of both hardware production and service firms (Brouthers & Brouthers, 2003, p.1199). However, it also provides valuable insights into SMEs' behaviour as SMEs are often resource constrained, which influence the speed of their innovation and internationalisation (Woschke et al., 2017, p.210). The theory posits that firms aim to minimise transaction costs, including costs related to searching for information, negotiating agreements, and monitoring compliance. For SMEs, these costs influence the pace of internationalisation, the selection of entry modes such as exporting, joint ventures, or wholly owned subsidiaries (Brouthers & Nakos, 2004, p.242). SMEs face unique challenges with limited funding for transaction costs such as market research costs and negotiating contracts and the complexity of internationalisation processes often requires SMEs to adopt innovative approaches such as digitalisation solutions to overcome financial and institutional barriers (Gawel et al., 2023, pp.33-34). Effective application of TCA findings can help mitigate these challenges by

guiding firms toward cost-efficient entry strategies that align with their capabilities and objectives (Brouthers & Nakos, 2004, p.243-244).

2.2.5 Internationalisation and firms' resources and capabilities

A firm's resource and capabilities are important as internationalisation into foreign markets require a lot of resources for various uses (Johanson & Mattson, 1988, p. 298) and the possession of strategic resources by SMEs can affect their ability to outperform competitors (Barney, 1991; Kocak & Abimbola, 2009, p.448) These resources can be tangible or intangible. For example, SMEs that adopt innovative practices can enhance their competitive advantage by offering unique products or services in international markets or a firm with high marketing capability, responsiveness to market, or with strong technological knowledge, positioned them into global growth(Kocak & Abimbola, 2009, p.445) Thus, the internationalisation of SMEs is significantly influenced by their level of resources and capabilities, which determine their market choice decisions and entry mode choices. Resource based view theory explains these choices by highlighting the importance of firm-specific resources, such as production capability, managerial expertise, innovation and technological capabilities (Rangone, 1999, p.238). These resources enable SMEs to reduce dependency on external intermediaries and pursue direct export strategies, which often yield higher returns but depends on the industry and may require greater resource commitments. The choice between internationalisation modes is influenced by the firm's ability to manage transaction costs and leverage its internal capabilities as direct export modes require robust organizational resources to establish customer relationships abroad without intermediaries (Hofer et. al., 2018, p.160). In contrast, indirect modes rely on external intermediaries to facilitate market entry, which may be more suitable for resource-constrained SMEs (ibid, p.160). Firms with stronger internal capabilities are more likely to opt for direct entry or exports in internationalisation due to their ability to handle complexities associated with foreign markets (Sharma & Erramilli, 2004, pp.12-14).

2.3 The Adopted Conceptual Framework

This conceptual framework illustrates the multifaceted nature of the internationalisation approaches for Tech SMEs and considers the influence of networks, firm resources and capabilities, institutional frameworks, venture capital, intrinsic characteristics, and transactional costs. This study gains a deeper understanding of the factors that drive or hinder the internationalisation of Tech SMEs through this framework, and it serves as a foundation for the data collection for this qualitative research, aimed at exploring these dynamics in greater detail, in the context of Swedish Tech SMEs operating in the Nordic markets and beyond. While the literature review confirms the interlinked nature of the different approaches, the focus on this thesis lies on understanding which of these approaches are more prominent for the cases under study and how they differ based on the type of SME, whether a consumer goods tech SME or digital product (SaaS) SME. Hence, the connections, as portrayed by Fernandes et al (2023) are omitted in this adapted version.

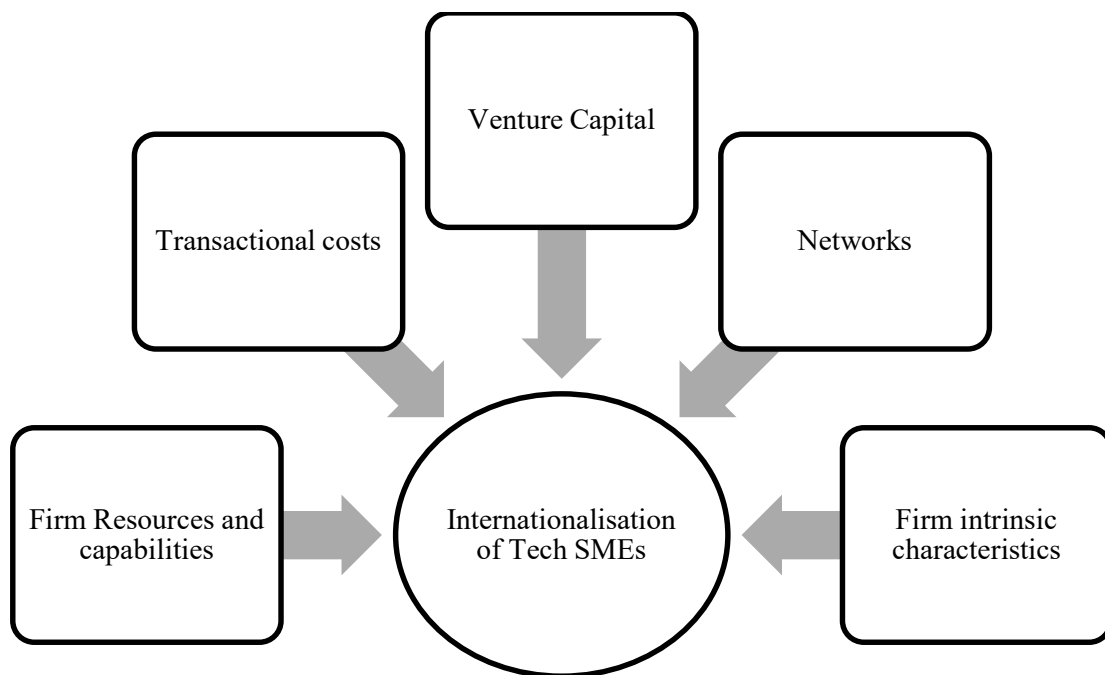


Figure. 1: The Conceptual Framework (Adapted from Fernandes et. al, 2023)

3. Methodology

This section outlines the research approach and the rationale behind choices made, how data was collected and analysed, and the limitations. It also outlines the understanding of requirements for quality research and ethics in research and the measures taken to ensure a quality study.

3.1 Research Approach and Strategy

Bell, Bryman, and Harley (2022, pp. 20–26) distinguish three overarching research approaches in international business studies, deductive, inductive, and abductive, which shape the methodological direction of a study. This thesis employs an abductive research approach, which combines deductive and inductive reasoning by moving iteratively between theory and empirical evidence. The abductive approach was considered most appropriate because the study is grounded in established theories of SME internationalisation while applying them to a less explored context, Swedish technology SMEs. By engaging in this back-and-forth movement between existing theory and new empirical insights, the abductive approach allows for refinement and possible extension of theoretical understandings, thereby overcoming the limitations of applying a strictly deductive or inductive logic (ibid., pp. 25–26). In line with this abductive orientation, the study adopts a qualitative research strategy. Qualitative research is well-suited to situations where the aim is to explore and gain in-depth understanding of complex social processes, which in this case is the internationalisation strategies of Swedish tech SMEs. As Bell et al. (2022, p. 36) note, research strategy shapes the design of the study and the type of evidence collected to address the research questions. Given the study's focus on understanding how and why internationalisation processes unfold in a specific industry context, a qualitative strategy was better suited than a quantitative one, which would risk reducing the richness and nuance of the firms' perspectives.

Within this strategy, a multiple case study design was employed. The case study method was chosen because it allows for close examination of contemporary phenomena within their real-life context (Yin,

2003, p. 4). Multiple cases, rather than a single case, were included to facilitate comparative analysis across different firms. This design supports the abductive approach by enabling both within case analysis, identifying patterns and processes particular to a single firm and cross-case comparison highlighting convergences and divergences across firms (Bell et al., 2022, p. 67). This choice is particularly important given the inherent complexity of internationalisation processes and the variation across sectors and product types, for example, between firms producing tangible hardware products and those offering digital solutions such as Software-as-a-Service. Furthermore, case study research has long been recommended for exploratory investigations in under-researched areas (Eisenhardt, 1989, p. 548). While the internationalisation of SMEs has been widely studied, the internationalisation of tech SMEs, particularly in the Swedish context remains comparatively underexplored. This niche focus makes an exploratory case study design appropriate, as it enables the development of a more nuanced understanding of internationalisation practices in this specific group (Soulsby & Clark, 2011, p. 24). The collection of verbal data through semi-structured interviews was therefore essential, as it allowed for the capture of rich, detailed insights into firm-level strategies, motivations, and challenges that could not be fully understood through secondary or quantitative data alone.

In summary, the abductive approach, qualitative strategy, and multiple case study design were deliberately chosen to align with the study's aim of extending theoretical understanding of SME internationalisation into a specific empirical context. This alignment ensures methodological coherence and provides the depth and flexibility required to capture the complexity of internationalisation among Swedish tech SMEs.

3.2 Choice of case

3.2.1 Choice of Industry

In this study, I utilized a multiple case study approach as this study aims to complement existing research, while studying from a fresh perspective (Eisenhardt 1989, p. 548). This research was empirically focused on Swedish Tech SMEs producing consumer goods (tech products) and those

providing digital solutions (SaaS). This study was not restricted to one industry but open to a variety of industries within tech. This is because I did not get access to enough cases in one sector but also, the use of a variety of industries allows for a richer context and helps us to understand the application cases for each of those, and to compare and identify any differences or similarities in findings. Choosing an appropriate case is essential part of research methodology and should align with the research problem, research purpose, and theoretical framework, ensuring it effectively addresses the research question (Ghauri, 2009, p.32). Hence, the units of analysis (cases) were selected to reflect the research objectives.

Overview of interviewed cases' industries	
Venture Capital Manager	
Business Consultant (Tech SMEs, Consumer Goods)	
Business Consultant (Tech SMEs, SaaS)	
Tech SMEs (Consumer goods)	Case Company C1 – Road Transport Tech
	Case Company C2 – Marine Transport Tech
	Case Company C3 – Clean Energy Tech
Tech SMEs (SaaS)	Case Company S1 – Education Tech
	Case Company S2 –HR Tech

Table 1: Overview of Case Selection

3.2.2 Choice of case companies

Merriam (1998, pp.97-98) underscores the importance of considering where, when, whom and what to observe in qualitative studies. In choosing the “who” this study, I used purposeful sampling. An initial selection of 25+ Tech SMEs, ensuring that they met the EU standard of an SME with less than 50 million Euros in annual revenue and less than 249 employees. While the number of cases in a case study

is influenced by the research problem and objectives (Ghauri, 2004), an initial 25 cases were selected to ensure that enough information was obtained and to cater for the possibility of not having all interviews successfully by the marked period. Out of the initial selection of 25 SMEs, 20 were selected as potential cases for study, as I screened for SMEs that had established international markets penetration efforts successfully. This was done through reading related news about the selected cases, blogs and news from the websites of the initially selected cases as well LinkedIn posts. This process ensured the selected cases had the relevant experiences to share for the purpose of the study.

Out of the 20 contacted potential cases, 5 tech SMEs were successfully interviewed for the study. In addition, 3 additional relevant stakeholders were interviewed. This included two business consultants from one of the most renowned consultancy entities for tech SMEs in Sweden, and one Investment Manager from an equally renowned venture capital firm. The availability of the respondents and limited time required a convenience type of purposeful sampling. I used this technique to select participants or cases that offer rich insights and are aligned with the study's overall objectives (Merriam, 2009, p. 78-79). This form of sampling is deemed appropriate for this study, given that for qualitative research, the primary objective is not to produce generalizable findings, but rather to develop a deep, contextual understanding through non-probability sampling (Bell et al., 2022, p. 390). The goal remained to identify diverse cases to investigate recurring patterns or contrasting features within their internationalization process under investigation, thereby contributing to the formulation of a theoretically sound framework (Merriam, 1998, p. 134).

Finally, in terms of demography, cases selected were diversified SMEs from at least three different cities in Sweden; Stockholm, Gothenburg, and Linköping. This caters for potential issues of biased data. Finally, all respondents were in top to middle level management as they had to have been actively involved in the internationalisation efforts of the case company into the Nordic markets and then in other international markets' expansions.

<i>Case</i>	<i>Industry</i>	<i>Type of Tech SME Stakeholder</i>	<i>Founded</i>	<i>Business Model</i>
C1	Transport Tech - Freight	Tech Consumer Goods	2016	B2B, B2C
C2	Transport Tech - Marine	Tech Consumer Goods	2014	B2B, B2C
C3	Clean Energy Tech	Tech Consumer Goods	2016	B2B
S1	Education/Information Tech	Software as a Service	2018	B2B, B2G
S2	HR Tech	Software as a Service	2017	B2B
VC1	Venture Capital for Tech firms	Tech Venture Capital	2009	N/A
BC1	Business Consultancy	Tech Consultancy	2013 (Originally 1979)	N/A
BC2	Business Consultancy	Tech Consultancy	2013 (Originally 1979)	N/A

Table 2: Basic details of Cases (Author's summary)

3.3 Data collection

3.3.1 Secondary data and Literature Review

The literature review process of this study involved investigating the international business and entrepreneurship research fields to find gaps within the existing research, and to also understand what theory there is regarding the study topic, (Tech) SME internationalisation. This process is important in qualitative research as it enables the researcher to understand the theories and concepts that are relevant to the study, while identifying and/or strengthening research opportunities (Bell et al., 2022: 93). The process involved analysing and discussing subject matter, Tech SME internationalisation using relevant scholarly literature and scientific articles accessed from google scholar, EBSCOhost and Web of Science. This process enables the comparison of different perspectives and viewpoints. In this study, the systematic review from Fernandes et al. (2023) and other existing theories have been examined and synthesized to develop a conceptual framework. The literature selected pertains to the fields of internationalization, networks, and marketing, chosen based on prior knowledge during the master

studies, and references cited in the systematic review by Fernandes et al (2023) as well as academic sources. To identify relevant scientific articles, searches were conducted using Google Scholar and library databases with keywords such as Tech SME internationalization, SME internationalisation, international expansion and market entry. Articles were selected based on citation count, relevance of keywords in the title, and an initial review of the introduction. a snowball sampling technique was employed to identify further relevant sources. Additionally secondary data from case companies reports, company websites, and regional reports such as the Nordic innovation reports were used to supplement the research study.

3.3.2 Primary Data Collection

Data was primarily collected through semi-structured interviews, allowing for flexibility and the opportunity to ask follow-up questions. This qualitative method was essential for capturing in-depth insights from the case company's perspective. It enabled the exploration of complex organisational dynamics and provided access to nuanced views across different levels of the company (Ghauri,2004:115). Participants were selected using a combination of purposeful and snowball sampling, based on their roles, expertise, and relevance to the research objectives. This coordinated approach to data collection and sampling aimed to ensure a diverse and information-rich dataset, contributing to the overall depth and credibility of the analysis. (Ghauri, 2004:115; Merriam, 1998:44-48)

3.3.2.1 Choice of Respondents.

The choice of the respondents for this study was important for an accurate and deeper insights for the needed primary data. Hence, the respondents were chosen based on their roles, selecting those in senior managerial roles that played roles in the internationalisation processes of (the) Tech SMEs (Yin, 2018:91). The table below illustrates the range of respondents for this qualitative study.

<i>Overview of interview respondents</i>				
<i>Code</i>	<i>Title of Respondent</i>	<i>Interviewee time at the firm</i>	<i>Duration</i>	<i>Type of interview</i>
C1	Director of public funding and research collaborations	5+ years	35 minutes	In person
C2	Head of PR & Communications	5+ years	40 minutes	Online, via teams
C3	Co-founder and Chief Strategy Officer	From start	45 minutes	Online, via teams
S1	Founder and Chief Executive Officer	From start	45 minutes	In person
S2	Chief Marketing Officer and Partner	6+ years	45 minutes	In person
VC1	Investment Manager Past: CEO of Nordic Tech Fund Group AB	10 years	55 minutes	Online, via teams
BC1	Business Consultant- Consumer Goods	6+ years	40 minutes	In person
BC2	Business Consultant- Digital Solutions Past: Co-Founder of a Fintech startup	3+ years	45 minutes	In person

Table 3: Overview of respondents

3.3.2.2 Interview guide

As a semi structured interview approach was utilised, an interview guide was developed. The interview guide was created based on the purpose of the study and the theoretical framework. To ensure consistency in the data collected from the interviews, the same interview guide was used for the SME

case companies. However, a slightly adapted interview guide, still based on the original, was used to interview the two consultants from Business Sweden and the Investor from Almi Invest as their unique perspectives in their various capacities was different from that of the SME managers. Hence, the same interview guide could not have been used. The general aim of the interview guide was to keep the interview on track for the same purpose, while allowing the respondent to respond freely to the open-ended questions. However, follow up questions were used where necessary to ensure that I understood the respondent clearly or to get more information on an interesting opinion raised by the respondents.

3.3.2.3 Conducting interviews.

After selecting the respondent, initial contacts were made through Tech event meetups, LinkedIn, emails and calls. Interviews were then scheduled both face to face and online, depending on the availability of the interviewees. Prior to each interview, respondents were reminded of the study's subject and consent to record the interviews was sought to ensure accurate data capture (Bell et al., 2019, p.441), and permission was granted in all cases. All sessions were recorded and transcribed, preserving the integrity of the verbal exchanges, providing a reliable basis for subsequent analysis (Bell et al., 2019, p.217).

3.4 Research process



Figure 2: The research process flow by author.

This study was carried out following the research process flow shown above. First, the literature review was conducted, followed by the design of interview guide. The interview guide was adapted for interview of the different interviewee groups, and then, the qualitative data analysis, included data interpretation and validation. This step was followed by a phase of reviewing the empirical findings with theory and vice versa, iteratively moving between the two which was critical to allow an adaptation

of the theoretical lens with which this study is conducted (Bell et al., 2019, p.24). I reviewed the research question and title to better suit the direction of the research. Finally, a revised conceptual framework was developed based on the findings and simplified. The key processes are further discussed throughout the method chapter.

3.5 Data analysis

The methodological choices made in the analysis were guided by two main considerations. First, the need for a systematic yet flexible approach that could accommodate both theoretical framing and emergent insights, and secondly, the recognition of potential sectoral influences that warranted separate and comparative analysis. Thematic analysis, with its capacity for balancing inductive and deductive logics, was therefore particularly appropriate for this study. The interview data were analysed using thematic analysis, as outlined by Bell et al (2019, p. 519-529). First, I engaged in familiarization with the data by repeatedly listening to the interview recordings. During this process, I made detailed notes of recurring words, ideas, and key moments, and logged these with timestamps. This early stage facilitated deep engagement with the material and served as the foundation for the subsequent generating of initial codes. Unlike more rigid coding approaches, thematic analysis is well-suited for studies such as this one, where the research aims to balance pre-defined theoretical categories with openness to emergent themes especially for abductive studies (Ghauri, 2004, p.118). Rather than adopting a line-by-line coding approach, I chose to record themes and key points at the level of meaning units. That is, segments of talk that expressed a coherent idea. This decision reflects the study's focus on patterns of meaning across interviews, rather than micro-level discourse analysis. Summaries of the observed themes were then prepared for each interview, enabling the construction of thematic overviews.

To account for potential contextual variation, the next phase involved comparing themes within the two broad sectors, Software-as-a-Service (SaaS) firms and hardware technology firms. This step was motivated by the recognition that sectoral differences can shape organizational practices and

experiences and thus warranted attention before moving to cross-sectoral interpretation. A cross-sectoral comparison then followed, which allowed broader themes that transcended industry boundaries to be identified. The subsequent reviewing and defining of themes involved situating the emergent themes within the study's theoretical framework. Specifically, themes were organized under the five analytical lenses guiding this research: networks, venture capital, intrinsic characteristics, transaction costs, and firms' resources and capabilities. This represents the deductive dimension of the analysis, in line with the view that thematic analysis can be both theory-driven and data-driven (Bell et al. 2022, pp. 25-26). At the same time, I chose to retain and document themes that did not map directly onto the five categories, aimed for inductive sensitivity to unexpected findings and avoids the risk of forcing data into pre-existing frameworks.

3.6 Quality of the study

3.6.1 Credibility

In qualitative research, credibility pertains to the extent to which the study's findings accurately reflect reality, emphasizing the importance of presenting an authentic account of the phenomenon being examined (Shenton, 2004, p. 63). To strengthen credibility, Lincoln and Guba (1986, p. 77) recommend techniques such as respondent validation and triangulation. In this study, respondent validation was utilized to reduce the likelihood of misinterpretation (Bell et al., 2022, p. 369). Specifically, participants were given access to the finalized transcripts of their interviews, enabling them to review and confirm the accuracy of their contributions. This process not only upholds the integrity of the data but also promotes transparency and trust between me and participants. To enhance the credibility through triangulation, it was essential to further examine the case through the lens of stakeholders who actively support these firms in their growth and international expansion. Two primary stakeholder groups were identified, business consultants (often referred to as bridge makers or industry experts) and venture capital companies. For the consultant perspective, Business Sweden, one of the most prominent and well-established organisations in this domain, was selected. From the investor standpoint, Almi Invest

was chosen to provide insight into of investment in facilitating internationalisation. Additionally, review sessions were conducted to ensure that I had different perspectives through debriefing session with the thesis supervisor, as well as through peer seminars with other thesis groups, where feedback was solicited and incorporated. These measures provided additional perspectives and critical input, thereby further reinforcing the credibility of the research (Shenton, 2004, p. 67).

3.6.2 Transferability

Transferability related to external validity in qualitative research and refers to the extent to which the findings of a study can be applied to other contexts or settings or accurately “reflect the reality” (Lincoln & Guba, 1986, p. 77). In qualitative research, where the focus is typically on depth rather than breadth, achieving transferability can be challenging due to the often-limited number of participants as in this study. This constrains the generalisability of the results. Although the number of the empirical findings from the unit of analysis in this study may not comprehensively represent the broader phenomenon, I provide descriptions of the cases as seen in Chapter 4, under empirical findings which enables analytical generalisation (Merriam, 2009, p. 224). In this regard, empirical findings were described to generate theoretical insights that could potentially be relevant in other contexts. In addition, by providing detailed accounts of the research process and findings, this study provides readers and other researchers with sufficient information to assess the potential applicability of the results in similar or different settings (Lincoln & Guba, 1985, p. 298)

3.6.3 Dependability

Dependability in qualitative research is concerned with the consistency and reliability of the study’s processes and findings over time. Achieving dependability required me to provide a comprehensive and transparent account of the methodological procedures employed, enabling future researchers to replicate the study, even if identical results are not obtained (Shenton, 2004, p. 70). In this study, careful attention was given to documenting the stages of the research process within the methodological chapter, allowing readers and other researchers to assess whether appropriate research practices were implemented (Merriam, 2009, p.220-223). Additionally, a critical reflection on the strengths and

limitations of the chosen methods was undertaken, facilitating an evaluation of how effectively the research objectives were addressed and offering insights and an effective audit into the overall dependability of the study. (Bell et al, 2022, p 371)

3.6.4 Confirmability

Confirmability concerns the degree to which the findings and interpretations of a study are shaped by the participants and the data, rather than by researcher bias, values, or theoretical inclinations (Bell et al., 2022, p. 371). While absolute objectivity is difficult to achieve, I acted in good faith, and deliberate measures were taken to uphold neutrality throughout the research process. I had no prior relationship with the participants or the organizational setting, minimizing the risk of preconceived notions affecting the study.

3.6.5 Ethical consideration

Ethical considerations were integrated throughout the research process, guided by four ethical principles in research as outlined by Bell et al. (2022, pp.113-122): assessing potential harm to participants, ensuring informed consent, protecting privacy, and avoiding deception. Prior to data collection, necessary ethical steps were discussed with the key informants to ensure adherence to these principles. Participants received comprehensive information regarding the study's aims, procedures, and data management policies, including protocols for data usage and disposal, to guarantee that their consent was fully informed and voluntary. At the start of each interview, ethical considerations were reiterated, and recording commenced only after explicit permission was granted by participants. I made efforts to create a comfortable environment during interviews by using the interview medium that the interviewee deemed best, prioritizing participant well-being. All collected data were securely stored, accessible exclusively to me, and transcripts were returned to some participants for review to ensure accuracy and transparency. Identifying information was removed from the final outputs to maintain participant anonymity for those who requested. Additionally, participants were provided with contact information to address any questions or concerns. I also ensured that used sources were properly cited to avoid

plagiarism. Finally, AI was used in accordance with the School of Business, Economics and Law of Gothenburg University's AI policy.

4. Results

4.1 SaaS Case S1

Background

Case S1 is an innovative SaaS company in the information technology industry, founded with the mission to make scientific knowledge freely accessible through partnerships with universities and research institutions. The company emerged during a time when digital transformation and open science movements were gaining momentum. The Swedish information technology enterprise provides software as a service contract to university libraries, research funders and public sector knowledge organisations where their platform solution automates research asset management and open access publishing workflows so that universities no longer pay to publish and then, pay to read. The interviewee, who is also the founder describes this tech firms service an idea transforming the current academia space.

“The idea with [our company] is to help universities and researchers publish all their data and content open to the world without them paying to do that. Right now, they pay to publish and then universities pay to read. Yeah, so we try to get rid of that by offering universities a service to allow the researchers to do it. But on the lining, all of it, we're pretty much like a data asset management. The future of work in academia specifically.” – Interviewee and CEO

Internationalisation Status

Case S1's internationalisation is ongoing, with established users and institutional clients across several countries and entry into more distant markets. It operates in a B2B, B2G business model due to the

nature of its service products. The business model is anchored in progressive annual or multi-year subscriptions indexed to institutional purchasing power.

“Our business model is software as a service, yearly contracts, multi-year contracts because it is B2G B2B”-Interviewee

It has grown internationally by forming long-term partnerships with universities and enabling them to become advocates and entry points into new markets. This method has led to organic and stable international growth. The company’s presence in foreign markets has been largely shaped by user demand and referrals, rather than by deliberate market selection. Case S1’s software is now used in multiple countries, with growing recognition in both European and non-European research communities.

Internationalisation Approaches

Case S1’s internationalisation process has been non-linear, emergent, and highly relationship driven. Instead of targeting specific countries through market research or commercial forecasts, the firm’s expansion followed the pathways created by existing users, word-of-mouth, and institutional collaborations. This approach reflects a network-based internationalisation model, where social capital and trust are key enablers.

Network mobilisation rather than outbound marketing.

The founder emphasised that the nature of the product meant not every marketing strategy would succeed. In fact, the company undertook almost no traditional marketing in its early years: “We did not do any marketing [initially] ... I must have sent like 20 cold emails over the six years.” Instead, Case S1 relied on partnerships with early adopter universities, whose successful implementations became springboards for further growth. Customers themselves became the firm’s strongest advocates: “Our customers went to conferences and started talking about us... Then other universities wanted the same.

They take the risk [to sign up to use the product] ... and then they go to a conference and talk and then all of a sudden, twenty others are there. Our customers made our brand.”

This advocacy occurred primarily through academic conferences, webinars, and peer-to-peer recommendations, creating what one librarian called a “mountain of trust.” The firm attends events only when formally invited, deliberately avoiding paid advertising, aggressive sales tactics, or heavy investment in market research. By leveraging trust-based academic networks, Case S1 reduced customer acquisition costs and enhanced its credibility in new international markets. Case S1 also took a critical step in initiating the creation of a network (consortia), when they had difficulties in entering the existing one in one international market. The CEO of S1 hashed that after this bold move, other stakeholders who also had difficulty in joining the bigger consortia joined the newly created network and the now big network got advantages. Case S1’s then started getting customers in this market who had previously declined their offers. These patterns reflect research on small firm internationalisation, showing how Swedish tech SMEs use relational ties and customer knowledge to offset size-related disadvantages.

International resources; international market

In Case S1’s case, the company emerged at the end of 2019 when its founder, a Caribbean-born researcher educated in the United States, Germany, the United Kingdom and Sweden, identified an opportunity to build a born-digital alternative to the legacy, paper-based systems that dominate scholarly communication. A proof of concept was released in mid-2020 and by November of that year approximately thirty Swedish universities had subscribed. The international nature of the founder served as a motivation and advantage for a quicker international scaling. In addition, the solution offered by this tech company, is centred on internationally shared knowledge amongst universities. In short, the more international coverage, an even better tool it will be, which was a motivation to scale across countries quickly.

.... A university in Guyana can have the same software as Stockholm University, but they pay as they move on". This equitable pricing logic aligns efforts to promote open science, which call for infrastructures that "support and guide the transition to open science. Technologically, the platform is "born digital" and designed for "what beyond 2030 will be," distinguishing it from competitors that have merely digitised analogue journal processes.

Leveraging Home market's institutional leadership.

Sweden is described by the founder as "quite radical ... in terms of transparency," a stance that made domestic universities natural early adopters but initially created a mismatch with Finnish stakeholders whose policy trajectory was more incremental. The episode prompted Case S1 to break its onboarding into modular steps so that institutions at varying readiness levels could "jump onto" the platform, demonstrating sensitivity to foreign market institutional frameworks (Johanson & Vahlne, 2009).

Resource-efficient virtual sales and customer success processes.

Case S1 substituted in-person visits with short online demonstrations years before virtual selling became a norm, thus lowering psychic and financial distance. Strategically, the company has not pursued aggressive venture-capital-driven scaling, choosing instead to bootstrap and remain profitable early. This restraint has preserved autonomy over pricing and feature roadmaps, although it has occasionally limited the capacity to customise for large prospects, as in the postponed Finnish deal. Operating costs are kept low through a fully distributed workforce with staff located in Sweden, Spain, the United States and other regions. Remote collaboration has been the default since the firm's inception, predating the COVID-19 pandemic. The sales process, refined during pandemic lockdowns, is entirely virtual and typically concludes in a fifteen-minute demonstration followed by an instant contract signature.

Challenges

Institutional misalignment.

For instance, during the company's initial attempt to pilot into Finland, there were some challenges, including bureaucratic blockers, given that the nature of sales is typically B2G and B2B. The Finnish postponement underscored that Sweden (the home market)'s relatively more rapid policy push could not be assumed elsewhere.

“We did not realise how radical Sweden is in terms of transparency ... we did not have a good grasp of what problems in that country they had. failure helped us improve our product for everyone.” - S1 interviewee.

Case S1 began systematically mapping institutional needs across countries and adapted its product accordingly to lower entry barriers. The firm invested in understanding regulatory and cultural nuances and developed software flexible enough to accommodate different institutional workflows. Moreover, sales strategies were redesigned to be low-friction and technology-driven, born out of the necessity.

External shocks.

Pandemic-related budget cuts and geopolitical crises such as the Israel-Hamas war delayed sales and decision cycles of their clients. The COVID-19 pandemic, despite causing financial and logistical difficulties, accelerated digital adoption in higher education, indirectly boosting the relevance and demand for Case S1's offering. While Covid-19 increased awareness of open access in their industry, which was an advantage, the CEO also indicated that the effect of covid on sales “The impact [of covid] was actually negative ... they [the universities] lost a lot of money and buying new services was not so easy”. However, the pandemic also positively affected their sale strategy, and the firm went from prioritising large in person fair demos to simple online demos. The interviewee and CEO said: “They book a meeting with me - 15 minutes. The meeting doesn't even take more than 15 minutes. Sales done... “We just had to do this during COVID... you have no choice. You cannot fly, so we had to make it work.”

Liquidity constraints typical of bootstrapped SMEs.

Early operations were shaped by resource scarcity, a strong commitment to transparency, and deep sector knowledge. As the CEO noted: “We did not have the money to go to webinars unless we were invited... I let our work speak for itself, and our customers became our brand.” Rather than pursuing traditional marketing or investor-driven growth, the company focused on solving practical problems for its core users, that is, university libraries and research administrators. This approach prioritised sustainable value delivery, user trust, and credibility built through reliable service and product performance. However, the absence of external investment sometimes forced the firm to relinquish lengthy tenders and forego entry into promising international markets where satisfied customers could have helped establish a foothold.

4.2 SaaS Case S2

Background

Case S2 operates in the HR tech and recruitment industry, offering a digital platform that automates and optimizes talent attraction through social media. By distributing tailored job ads across platforms such as LinkedIn, Facebook, and Instagram, Case S2 helps companies increase visibility, improve candidate quality, and reduce time-to-hire. The platform integrates with existing applicant tracking systems (ATS) and supports real-time performance analytics. Case S2 is founded by entrepreneurs that have experience in the industry optimization, and a deep understanding of how social media behaviour intersects with recruitment.

“...our Co-founders are quite known entrepreneurs in general, not in the industry only but like. They are, yeah, they're doing very well for themselves and they're very knowledgeable and a lot of people respect them”. - interviewee

While the platform is fully digital, Case S2's offering also includes strategic consulting and onboarding support, ensuring alignment with the client's employer brand and recruitment goals. The interviewee cited that "The technology that we offer [requires that] CSM support because our clients are not that tech savvy, they are often behavioural Psychologists. They are not like marketing or salespeople and therefore, they expect hands-on help".

Internationalisation status

Initially focused on the Swedish market, Case S2 began its international expansion in 2017, targeting neighbouring Scandinavian countries, Denmark and Norway. This regional expansion was followed by moves into larger European markets, such as Germany and the UK, where the demand for data-driven and automated recruitment solutions was growing. Case S2's approach to internationalization has been focused on forming strategic partnerships with recruitment agencies and large-scale employers. Case S2's business model is B2B, primarily serving large organizations and recruitment teams looking to modernize and scale their talent acquisition efforts.

Internationalisation Approaches

Organisational resources and efforts

From the outset, human resources played a foundational role in Case S2's global scaling strategy. The company's early-stage success was driven by salespeople with deep experience in go-to-market strategies and cross-border customer acquisition. The interviewee, one of the company's first hires, recounted, "*My career started in literally building GTM strategies for Nordic countries going into Europe,*" reflecting the internalisation of valuable international sales expertise from day one. As the company grew, leadership made deliberate hiring decisions to extend this capability. Notably, "*We hired journalists, researchers, and copywriters*" to power their thought leadership and marketing engine, transforming LinkedIn posts and research into a structured content strategy that built trust across

multiple markets. This experiential base which she then applied at Case S2 supplied the firm-specific advantages (FSAs) highlighted by resource-based scholars as critical for early internationalisation (Oviatt & McDougall, 1994; Johanson & Vahlne, 1977)

Equally important was Case S2's capacity for strategic leadership and vision. The recruitment of a new CEO with experience at Microsoft and Bing introduced global ambition and market intelligence. As the interviewee noted, "*Our CEO then, said if you tackle the UK, you get the US,*" highlighting how leadership's prior exposure shaped strategic decision-making. Even though Brexit later complicated this route, the vision demonstrates how leadership capabilities can act as a resource that guides internationalisation pathways. Case S2 also relied heavily on knowledge-based and digital capabilities. The team built scalable systems that allowed them to operate internationally without the need for physical presence or large financial outlays in each new market. By publishing industry insights, hosting livestreams, and staying active on LinkedIn, the team generated visibility and trust in markets unfamiliar with S2's brand. The interviewee explained, "*We built an entire inbound machine on personal branding,*" referring to a robust system of online content, livestreams, and digital thought leadership that attracted clients globally.

Network-Centric growth

Case S2's approach to internationalisation offers a compelling example of how digital enterprises can strategically leverage networks, partnerships, and personal branding to expand globally. A central driver of S2's international expansion was its ability to scale with existing enterprise clients. "*A lot of our clients came with us into other countries,*" the interviewee explained, highlighting a client-led expansion model through its networks, who are existing clients in this case. The firm therefore exhibits the "client-follower" pattern often observed among Nordic business-to-business technology providers (Majkgård & Sharma, 1998, pp. 24-25). S2 also strategically integrated itself into external networks and platforms. For instance, the company benefited from being listed on partner marketplaces and being invited as keynote speakers at recruitment and HR events. These activities served as both credibility

boosters and lead-generation mechanisms. While explaining how the inbound leads came in which they actively reaching out to them, she said: *“That could be the effect of partners that we are on their marketplaces... or if I’m a keynote speaker somewhere.”* To deepen engagement with their audience and add value beyond sales, Case S2 hired journalists and researchers to produce summaries and insights from major recruitment events and industry reports. *“We said, ‘Hey, we just read Gartner’s new recruitment report. Here’s the takeaways,’ and people loved that,”* the interviewee recounted. This positioned Case S2 not just as a vendor, but as a trusted knowledge source within the HR tech ecosystem.

Selective Market Commitment and Transaction-Cost

Attempts to establish native sales teams in Norway and Denmark were abandoned when management concluded that “it takes longer to understand Case S2’s value and onboard new people than to get [existing] good ones to sell to other markets”. Instead, the company serves those markets remotely, minimising fixed costs.

“...I think our [foreign] offices didn't really help or wasn't necessary, like in Norway. So, we changed the strategy where we believe the Swedish teams could operate in those countries.”- interviewee

Building the international brand

To overcome host-country institutional barriers, Case S2 employed a trust-building strategy based on long-term content creation, knowledge sharing, and social proof. This was critical in the HR tech sector, where professional credibility is highly valued and newcomers are often distrusted. They further circumvented institutional legitimacy in foreign and home markets by positioning themselves through non-traditional media, such as LinkedIn Live, and building legitimacy via associations with respected global thought leaders.

“From day one I had the biggest names in our industry from the US on my show... people were like, ‘Whoa.’ “We had to earn the trust of our audience... if we only started to ask without having trust, nobody would have cared.”- interviewee

This reflects how firms can engage in institutional settings, proactively shaping perceptions and norms in their host markets to support their entry and legitimacy. On the other hand, the institutional environment in the Nordics where Case S2 first started expansions was not only psychically close, but a mature market in innovation and digital entrepreneurship, which contributed to its early success. The interviewee highlighted that: “The Nordics are really educated when it comes to social media... we didn’t need to educate the market.”

Challenges

Institutional instabilities and geopolitical events

While certain markets were favourable, other markets are not as advanced and usually needs education of the firm’s offering before successful market entry. “Social media is not as trusted as a job marketplace ... we have to sell social media before we even introduce Case S2,” the interviewee noted, highlighting institutional distance in HR practices across countries.

In addition, geopolitical events in the institutional landscape affected its internationalisation plans. For instance, entering the UK proved more complex than anticipated due to geopolitical changes: “*Brexit happened, and we were stuck,*” which implies that some constraints, particularly institutional and regulatory, may overpower even the best internal resources if not properly mitigated.

Industry rigidness

Case S2 operates within the HR Tech and recruitment marketing sector, which has traditionally been slow to adopt new technology. The interviewee emphasised a cultural and trust barrier when entering this space:

“HR, especially in recruitment, they hate that these tech companies [are] coming into the industry and just want to make money... We had to earn the trust of our audience.”

In addition, talent-acquisition managers often struggle shifting the budget from job boards to social media which necessitates data-driven business-case support from Case S2’s customer-success teams. “There are very traditional ways internally with organizations how budgets are approved and where budget goes. So, a lot of TA managers have struggled to find budgets for social media. They even struggle shifting the budget from job boards to social media. And indeed, or LinkedIn because they're so traditionally yeah ...stuck”

4.3 Case SaaS Business Consultant – BCS2

Background

Business Sweden is the Swedish Trade and Invest Council, jointly owned by the Swedish Government and private industry. Through their international offices and a domestic regional network, it “offers qualified consultancy to facilitate the establishment and growth of international business” (Business Sweden, n.d.-a). Within that mission the organisation operates a portfolio of subsidised services for firms with fewer than 249 employees and annual turnover below EUR 50 million, helping them “analyse their next market, find international customers and partners” (Business Sweden, n.d.-b). The organisation aims to position Swedish software and platform ventures on “the global tech stage” and orchestrates partnerships with key actors abroad as their Catalyst and Go Global scale-up programmes provide bespoke commercialisation coaching in priority markets.

The interviewee is a Programme Manager in the Digital Technologies team where she has worked with SaaS and digital SMEs on cross-border growth since 2018. Her practitioner background, previous entrepreneurial experience positions her as a resourceful informant for this study.

Perceptions and motivations for SaaS Tech SME internationalisation

BCS2 begins by noting that through her experience, Swedish startups are better at scaling than many other firms in Europe, “so they are doing something right”. The interview confirmed the established theme from the interviewed SaaS startups that domestic demand is too small to sustain venture-capital return thresholds, compelling founders to regard foreign sales as integral rather than sequential to their growth model. However, motives are not always purely proactive. The most cited pull factor is customer follow-on “they go with the clients...there’s a lot of trial and error before they quit”. The interviewee also mentioned that Venture capital also exerts pressure; abundant funding in 2020-2022 “made the firms braver and wanting to take on more,” accelerating foreign launch timetables when investors demanded steep month-on-month revenue expansion.

From the interviewee BCS2’s perspective on market selection, B2B-oriented Swedish tech SMEs the “default corridor” remains Norway followed by the United Kingdom, Germany, the Netherlands and occasionally the United States. Norway appeals through historic trade ties, ease of travel and perceived linguistic proximity: “We tend to understand Norwegian and Norwegians understand us”. Yet the interviewee emphasises that firms often over-index on proximity and under-estimate structural frictions. Norway’s non-EU membership introduces separate VAT registrations; setting up a local entity is mandatory for certain public contracts. Denmark and Finland expose similar under-appreciated barriers, while Denmark in particular exhibits a “not-invented-here” purchasing preference that disadvantages Swedish suppliers. The empirical pattern therefore extends Johanson and Vahlne’s psychic-distance logic: initial choices are still guided by mental closeness, but cumulative founder experience and opportunity-cost calculations quickly override geography when the ratio of effort to reward proves unfavourable.

Emerging trends

First, a pan-European strategic identity is replacing a purely Swedish lens with rising founder interest in EU digital-government tenders and German or UK localisation plays, reflecting both regulatory

harmonisation and geopolitical risk diversification. Second, AI diffusion is reshaping cost structures on both supply and demand sides, potentially displacing standardised SaaS offerings and magnifying the importance of domain-specific functionality.

Internationalisation approaches and challenges

Entry modes, Networks and social capital

According to BCS2, most SaaS firms begin with remote sales, then layer in partners or subsidiaries as traction emerges, depending on the industry or product. A recurrent script is to recruit one senior salesperson from the target international market into the Swedish headquarters before committing to a stand-alone office: “You need to recruit local talent...they should have experience of selling to that specific industry [in] Norway...cannot just be any Norwegian [for example].” BCS2 also noted that, network leverage ranks among the “top three things” for SaaS startup success. Founders “call a friend...or a friend of a friend” for lead generation, recruitment, and regulatory advice, accelerating experiential learning and lowering search costs. The Business Sweden ecosystem institutionalises this relational capital by brokering introductions to foreign distributors and investors through its global offices.

Venture capital and strategic finance

BSCS2 remarked that there has been so much inflow to Swedish Tech SMEs in recent years. Domestic VC supply expanded sharply during 2020-2022 and in 2023 Swedish startups doubled aggregate valuation despite macro headwinds (Dealroom, 2024, p.5) In addition, Sweden tech firms rank in top 10 in receiving funding (ibid. Pp.27-29). In line with this, BCS2 observes that some funding access had specific attachments. For example, United States entry “requires US investors,” whereas Nordic expansion can be financed locally. Also, strategic investors provide both runway and tacit market know-how.

Firm-specific resources, AI, and digital capability

Resource deployment concentrates on flexible product architecture, data-driven marketing, and AI-enabled experimentation. SaaS SMEs already employ generative AI for market research, multilingual customer support, and automated LinkedIn outbound campaigns that A/B-test value propositions at scale. Yet BCS2 cautions that AI's effects are still incremental: "Market research is faster, definitely, but that's marginal to an extent." Looking forward she anticipates that cheap AI tooling may tempt enterprise customers to replace standard SaaS with custom builds, eroding the classic subscription model.

Institutional frameworks and transaction costs

The consultant confirmed that regulatory specifics, principally VAT registration, data-protection regimes, and public-procurement rules can dominate market choices in cost calculus. For example, one of the most frequent inbound queries from Tech SMEs to Business Sweden's desk is "How do you deal with VAT in country A or B?". Transaction-cost anxieties therefore motivate engagement with Business Sweden's Export Advisory and Catalyst services.

4.4 Consumer Goods Case C1

Background

C1 is a Swedish "freight-technology" scale-up founded in 2016 by a former Volvo Trucks engineer. The founder, having witnessed the limitations of incremental innovation within legacy truck manufacturers, identified a major opportunity for new entrants to drive radical change in freight transport. C1 develops and integrates battery-electric, autonomous heavy-duty vehicles alongside the digital infrastructure that manages them. Its flagship product is a cab-less, battery-electric truck equipped with sensors, a drive-by-wire chassis, and a 5G control system designed for fully driverless operation. Notably, C1 was the first company worldwide to obtain a public-road permit for such a vehicle. The company's business

model is built on “freight as a service.” Customers sign multiyear contracts and pay a kilometre-based fee that covers vehicle use, electricity, charging, maintenance, and access to Saga-OS, which is a SaaS platform that manages routes, charging, schedules, and carbon reporting. Hardware serves as an enabler of this service model rather than the core focus. To avoid the high capital demands of full-scale manufacturing, C1 positions itself as a system integrator, sourcing chassis from suppliers and combining them with its proprietary technology.

Internationalisation Status

C1 has grown rapidly from its Swedish base into multiple international markets. Its first international expansion took place in 2019, targeting European countries with strong sustainability agendas, including Germany and the Netherlands. Partnerships with major logistics firms such as DB Schenker and Oatly supported this initial growth. By 2021, C1 expanded further into the United States and Australia, while also strengthening its presence in the UK, Norway, Austria, and the UAE. The company’s global deployment is enabled by its remote vehicle operation model, which reduces the need for extensive local infrastructure, and by its digital platform, which is accessible worldwide. C1 continues to consolidate its position in the Nordic region, with operations in Norway and exploration of opportunities in Finland and Denmark. Its international growth is driven by both the founders’ global ambitions and strong partnerships with multinational clients.

Internationalisation Approaches

Network-led market selection and strategic partnerships.

According to the interviewee, C1 expands with rather than to multinational shippers - “The approach has been to grow together with our customers ... Instead of going into a market and trying to find customers, we talk to our existing customers: ‘Do you have anything in Germany or Norway?’” Interviewee. Customers such as Oatly, Electrolux, Heineken, Mars and DP World thus acted as

springboards into Germany, Benelux, Austria and the UAE respectively. The mechanism is consistent with the network-internationalisation view where an SME leverages dyadic ties with global buyers to leapfrog psychic-distance barriers. C1 continually recombines digital and physical resources. In this light, they established a partnership with a quantum-computing firm IonQ , which aims to develop quantum-enhanced fleet-routing algorithms”, illustrating the utilisation of partnerships to enhance products for international markets. They also attend tech expos to show the automobile product at exhibitions, a strategy that allows them to proactively invite potential customers to have a feel of the industry changing innovation.

Venture capital and the U.S. markets

The first overseas launch the United States was chosen primarily for financing rather than other motivations. The interviewee cited that: “A big reason for our market entry into USA was the venture-capital market in the U.S., because ... it requires a lot of venture capital to build this type of solution”. By embedding itself in the San Francisco and New York VC ecosystems, C1 raised a USD 500 million Series-C/E debt-equity package in 2022 and a follow-on USD 150 million growth loan in 2024, enabling capital-intensive charging-hub construction in Los Angeles.

Institutional frameworks at play.

For C1, regulatory and subsidy asymmetries informed their international market entry strategies. For example, they targeted markets where it was easier to get permits for their type of innovation: “It is easier to receive a permit to operate on public roads in the U.S.” These lower bureaucratic friction offsets the firm’s need to carry liability risk internally. In addition, subsidies by governments in foreign markets for their type of innovation were leveraged in deciding which markets to enter. C1 timed its German launch to coincide with a federal subsidy that covers “up to 80 % of the price difference between a diesel and an electric truck”, which shaped demand. Finally, the Nordic markets,

characterised by early carbon taxes and clean-power grids, reduce the total cost of ownership gap between battery and diesel trucks and thus quickening the customer adoption for C1.

Resource configuration and selective non-actions

Strategically, C1 has pursued markets which have the needed support and logistics such as subsidy visibility or anchor shippers (e.g., Denmark, Finland) for its product. In addition, they did not attempt full-domain autonomous driving at a go. Instead, the interviewee noted that their approach is not to build a system that can handle all environments ... but to start with a simpler environment so you can get the product out early". These omissions can be read as deliberate choices to minimise transaction costs abroad.

Challenges

Challenges that the interviewee of C1 noted in their industry included challenges in finding the right partners. He noted that "It takes a lot of time to find the right carrier partners and build trust with them". This relational hurdle is magnified in markets where C1 lacks brand familiarity (e.g., UAE). In addition, going to a market, getting salespeople and creating a subsidiary where needed, requires intensive. "Expanding to a new market is associated with ... a lot of investments; you need to set up offices and hire people" The firm therefore now requires a "scale-up potential" threshold in potential international markets before entry. Thirdly, traditional industry hindrances are a significant challenge where having dominant domestic truck OEMs is "both a blessing and a curse ... they have a very strong voice in society ... sometimes hindering our development [with our heavy tech]". Fourthly, competitive imitation is common in their field as in the tech space. Electrification barriers are falling and the interviewee added that "there are a lot of other companies deploying electric trucks now," which pushes their making of the differentiation via Saga optimisation and autonomy crucial. Finally, regulations on liability and infrastructure gaps of potential huge markets are a challenge. For instance, U.S. permit speed comes at the price of the operator bearing full accident liability, elevating insurance costs and

outside northern Europe and California, public megawatt-class charging remains sparse, forcing C1 to pre-finance chargers or delay entry.

4.5 Consumer Goods Case C2

Background

Case C2 is a Stockholm-based manufacturer of electric hydrofoil leisure craft and passenger ferries. Founded in 2014 by engineer-turned-chemicals-CEO, the venture originated from a personal “fuel shock”. The interviewee recounted that: “The founder summed up fuel bills [for his boat] and realised that the boat used fifteen times more fuel than his family car per kilometre.”

Seeking a sustainable solution, the founder assembled a small R&D team that combined aerospace-grade carbon-fibre hulls with computer-controlled hydrofoils, a one-hundred-year-old naval concept revitalised through modern sensors and software. The firm’s business model couples high-margin vessel sales with proprietary flight-control software, positioning it closer to a hardware–software platform than a conventional shipyard. Serial production started with their first flying boat in 2019, which later became the bestselling electric boat by 2020 (Candela Technology AB, 2025), followed by the C-8 in 2021 and the P-12 Shuttle in 2024, the latter hailed as “the world’s first electric hydrofoil ferry” (Rivero, 2025). Unlike many Swedish cleantech or manufacturing start-ups, Candela remains vertically integrated where the composite hulls and battery modules are produced at Lidingö outside Stockholm, while final assembly and sea-trials occur at the company’s lakeside factory on Ekerö Island.

Internationalisation Status

Although manufacturing is still wholly Swedish, Case C2’s customer base is global. According to Interviewee, the customer base for the P-12 stood across four continents at the time of the interview. Some recent markets mentioned by the interviewee includes, Saudi Arabia (Turner, 2024), United States

(Lake Tahoe) (WorkBoat, 2025), Germany (Berlin) with an intra-city Spree shuttle (Candela, 2024), New Zealand and India (Mumbai pilot) with the eco-taxi project endorsed by Maharashtra's port minister (The Times of India, 2025). In the Nordic home region, Case C2 currently operates the P-12 Nova trial within Stockholm's public-transport network, carrying commuters between Ekerö and the city centre. Independent evaluation found a 95–97 % CO₂ reduction versus the incumbent diesel ferry while halving travel time (Giaume, 2025). The interviewee remarked that internationalisation for them, was critical as the product solves a global sustainability issue. In addition, the international markets such as US and Australia had achieved more sales than the home market, Sweden or the neighbouring Nordic markets at the time of interview which confirms that internationalisation steps were key in its growth.

Internationalisation Approaches

Opportunity-Driven Market Entry and network leverage

According to the interview insights, Case C2 does not follow a staged internationalisation path as was the pattern observed for manufacturing firms in years past (); instead, as a tech manufacturing hardware firm, it pursues opportunity-driven entry wherever fast-moving markets are. This includes markets where private-sector operators can bypass slow public procurement cycles.

“Our main focus group now is private operators... they can just set their own rules, and they do not have to adhere to or follow the old stuff.” - Interviewee

This explains why the first fleet order came from NEOM a green-field megaproject able to specify novel technology without legacy regulation. In addition, the interviewee emphasized that there is a focus on industries where such technology is more likely to be adopted such as tourism and hospitality, and residential developers. With limited marketing budgets, Case C2 relies heavily on network effects, through ambassadors and resellers to scale sales internationally. The interviewee added: “We have a large network of ambassadors and resellers... and customers that are ambassadors in the sense they sell our products.”

Digital Lead Generation & Public relations

The interviewee noted that public relations were a big part of their marketing, expansion and internationalisation approach, being featured on huge media news websites such as Forbes. The firm organizes high-profile world-record voyages e.g., Malmö–Copenhagen and Stockholm–Åland crossings, which generates stakeholder interests, citing them as “world-record machines” that substitute for social media advertising spend.

Limiting transaction costs and selective product adaptations

For Case C2’s boats, retractable foils mean a finished 12-m ferry fits on a standard trailer, minimising export transaction costs and negating the need for foreign shipyards. The interviewee commented that: “The P-12 fits on a flat-bed trailer, so within Europe [and globally for now] there’s no need to produce outside Sweden.”. The firm adapts when regulation demands but resists unnecessary localisation. For example, in Norway, maritime code requires a toilet for both skipper and passengers hence, Case C2 redesigned the cabin to accommodate two lavatories. In Saudi Arabia interiors received “a little bit of different styling” to match regional aesthetic preferences while Nordic leisure buyers prefer the “minimalistic Nordic” design language, so no changes were made to the product.

Challenges

Stringent Public-Procurement Rules in markets

The most frequently cited obstacle is outdated tender frameworks. While governments are working towards sustainability goals, the company does not feel incentivised enough through the old legal restrictions yet. While this is gradually changing, the pace is too slow for a typical tech firm like Case C2. The interviewee cited: “The procurement rules are written for vessels that are minimum ninety passengers... zero incentive for electrification.” Because tender criteria focus on hull material and seat count rather than cost-per-passenger-kilometre or emissions, Case C2’s 30-seat shuttles are technically

and currently ineligible for many Nordic and worldwide contracts. This regulatory mismatch delays public adoption despite its strong and relatively better environmental performance.

Conservative Industry Culture

Maritime stakeholders prioritise safety and old proven designs; one Stockholm commuter ferry entered service in 1871. As the Interviewee observed: “It is being done like it has been done for a hundred years... product cycles are slow.” Demonstration pilots therefore play a critical legitimization role in showing that the firm’s products are safe to use, though unconventional and innovative.

4.6 Consumer Goods Case C3

Background

Case C3 is a Swedish cleantech startup founded on groundbreaking research in printed organic solar cells, dedicated to innovating in the field of sustainable energy solutions, particularly optimized for indoor environments. The company’s mission centres on addressing the environmental impact of disposable batteries in IoT devices by offering a self-sustaining energy source. The company’s origin lies in a collaboration between scientists and entrepreneur, the interviewee, who brings experience in global tech ventures and impact entrepreneurship. The company spun out of research at the Physics Institute in Linköping, focusing on the underutilized potential of printed solar cells.

“There were maybe 10 companies globally that had started to try to print organic solar cells and they all. Only everyone did it the same way and they only reached a fraction of the potential. When you're going from conventional manufacturing to printing solar cells. And he was like, what? What is happening! This is such a great paradigm. Why isn't someone doing it for real where you get the potential of printing? So, he applied for money to do research, not only in materials, but all also in manufacturing methods...”- Interviewee/ Co-founder

The founders also started this project out of not just a need for the product, but also to contribute to sustainability. The C3 interviewee highlighted: “I was for a period more investing and coaching different startups and scaleups with the focus on Impact entrepreneurship, which is a big interest and after a while I wanted to kind of be part of or do some other great journey with something I believed in and that and that. That was when I found the research results and breakthroughs happening in the region within printing organic solar cells where we decided to split this out together in 2016”. “... and I was very fascinated by the opportunity to kind of not doing. The world the worst during your work time and then trying to fix it with some kind of spare time activities but making full time positive impact really like that.”

Internationalisation Status

Although headquartered and manufacturing in Linköping, Sweden, Case C3 has internationalized its operations across several European countries and into Asia. Its first market entry was in Europe, especially through the prop tech (property technology) segment: “We decided to focus 100% on something called Prop Tech... for the two first commercial activities, we focused only on prop Tech and started in Europe.” Initial traction came from both Swedish and wider Northern European firms, including early partners in countries like France and Germany. “We had some customers in the lower than Europe or upper half of Europe like in France... and some of those countries.” While Sweden remains a testing ground, larger volumes are found abroad, especially in Asia. He noted: “When the Nordics are selling electronics, quite often, it is manufactured in Asia... we ship our modules to the place where the electronics manufacturing happens.”

Internationalisation Approaches

Case C3’s approach to internationalisation leans on a combination of networks, innovation expos, digital marketing, and selective market targeting. The firm began its expansion by identifying key verticals such as prop tech and attending expos in Sweden, which helped map out relevant European

firms. The interviewee mentioned that it is still important to visit the right expos and conferences., both to visit and to walk around and learn to know how to contact stakeholders. These events allowed Case C3 to build connections and trust, which are central to their expansion. An early milestone was participation in a tech conference in Sweden, a program connecting startups with corporates where they got their first client even before official production started. Strategically, they have opted not to work through distributors and instead manage direct client relationships and shipments, retaining control over value chains: “So far, we are shipping directly to all our customers, so no distributors.” However, Case C3 reflects establishing ground contact in foreign markets is critical to the success of their internationalisation approach and that its initial sales staffing strategy may have been too centralized and is currently adapting its approach for each unique market: “We should have started to have salespeople out there in the world much more outspread from start.” “Of course [in China] we need... web information in Chinese and a contact person that speaks perfect Chinese.”

From a resource and capability perspective, the firm’s cutting-edge IP in manufacturing gives them leverage: “We are enabling self-powered green electronics... with efficiency in low-light indoor environments where others fail.” Also, the company’s early focus on its brand identity also played a central role in building market presence. “We have been trying to do some first steps on having an identity as a company,” said the interviewee, emphasizing that Case C3’s marketing has always aimed to create understanding and intellectual interest among stakeholders. Central to the company’s internationalisation efforts, it has positioned itself not merely as a supplier, but as an expert in light-powered technologies. The interviewee explained a critical step in being a strong voice in the industry, which has been an approach for international recognition and opportunity for expansion through legitimacy. He cited that: “We have tried to establish ourselves as thought leaders within self-powered electronics... not just by products, but also by culture and vision and who we are.” This positioning reflects their broader ambition to influence industry discourse, not merely to commercialize a product. A critical component of this strategy is Case C3’s messaging architecture, which aligns marketing content with stakeholder-specific concerns.

“We have made different parts of our message architecture compiled for different types of personas... sometimes we even found out their home addresses and used geo-mapping,” “We understood that there is a big hesitation and uncertainty when it comes to light... so thought leadership could be very helpful,” - the interviewee emphasized.

In terms of intrinsic characteristics, Case C3’s origin in Sweden, an innovation-forward and sustainability-driven nation, helps its brand credibility abroad. As the interviewee explained, “Sweden... overall understands digital transformation and IT very, very well.” Rather than innovating on materials alone, Case C3 differentiates itself through its patented manufacturing processes: “Our strength is not unique materials, but it is unique and patented manufacture methods... leveraging much, much more of the potential of printing solar cells than anyone else.” The company focuses on providing solar components for self-powered indoor electronics which is a niche with high sustainability relevance and scalability. Its business model is based on in-house manufacturing and supplying core components. As the interviewee stated, “Right now... it seems more probable that we will own all factories that are using our methods on printing solar cells.”

In terms of institutional frameworks, the company noticed stark contrasts between the Nordic markets and larger European players: “Some of the super big companies within the building automation still do not really know how to handle communication over IP... It feels like the 90s quite a lot.” In contrast, Nordic customers are seen as open, innovation-driven, and easier to collaborate with.

Challenges

A significant challenge has been managing investor expectations in a deep-tech industry with long development cycles: “Most investors have built their experience in IT... it is super easy to build an app compared to developing new materials and manufacturing methods.” They also face market education and shaping challenges, needing to convince clients that self-powered, indoor solar electronics are viable: “What we are doing is trying to make the industry and end consumers aware that it is possible... but the market shaping takes time and makes investors nervous.” Additionally, there have been

challenges in market localization, particularly in China and Germany, prompting a need for multilingual content and region-specific marketing platforms: “Germany is a very important country for us... we needed to do some other communication in German.” For China, they are just beginning but acknowledge a vastly different digital ecosystem. As a tech SME, they did not have adequate capital for speed in expansion as they would have preferred “If it would have been possible, we would have raised more money over the years if we could... we have had a little lower speed.”

4.7 Case Consumer Goods Business Consultant

Background

Business Sweden is a public-private organisation mandated by the Swedish government and industry to “help Swedish companies grow global sales and international companies invest and expand in Sweden.” It maintains more than forty offices worldwide and runs a portfolio of subsidised services aimed at SMEs, including free Export Advisory, multi-client accelerator programmes and market-specific counselling (e.g., dedicated desks for Japan, Denmark, Finland and Iceland). Within that structure, the interviewee for this study, BCC1, works as a market adviser in Stockholm, specialising in consumer goods, including tech-enabled consumer goods. Over the past five years she has coached more than sixty Swedish start-ups and scale-ups.

Perceptions and motivations of internationalisation

BCC1 observes that first-time exporters often assume that closer markets are quasi-domestic. She cited: “Before getting into the data, their pre-conception is that it would be easier than what it really is, because there are more cultural differences, there are regulatory differences that they do have to keep in mind.” For the Swedish Tech companies, this optimism is rooted in geographical proximity, the Schengen travel area, and broadly similar consumer purchasing power. Over the past years, however, SMEs appear more aware of specific international market dynamics: “Companies have become more aware... trying to

prepare the best they can if they want to target the market specifically.” Additionally, the interview suggests that typical key drivers for internationalisation for hardware consumer goods are market size and spending power.

Internationalisation approaches and challenges

In practice, BCC1 observes that Swedish SMEs follow a three-step ladder of commitment when they cross the border. Many start with pure export, because, as BCC1 observed, “if they just want to sell something to the country it is easier [to export], depending on your area than to create a subsidiary”; once volumes or customer-service expectations rise, founders typically install a local sales agent or part-time consultant, securing cultural insight and basic compliance without heavy fixed costs. Only a minority, usually those backed by venture capital move on to set up a subsidiary or even a production site, and here BCC1 is explicit: “If you have the resources to go... of course it will be best if you can open a subsidiary ... and have a local team there, but that is of course not many that have as SMEs.”, re-echoing funding as a limitation for tech SMEs. BCC1 also shared the view that with a good network and connections founders can go much further than without, indicating that networks and social capital are important strategies for founders who aim to scale internationally. Foreign institutional frameworks and transaction costs such as Norway’s EEA status means customs declarations and VAT differ from the EU or Denmark, which offers simpler EU procedures but fierce retail competition. BCC1 indicated that these factors either enable or limit tech SME internationalisation activities. In relation to firms’ resources, BCC1 added that many firms now rely on generative AI for first-cut website translations, regulatory checklists and use multilingual chatbots, exemplifying how Swedish scale-ups utilize AI to lower service costs and accelerate cross-border growth.

Challenges

Swedish SMEs that venture beyond the domestic market confront a layered mix of cultural, regulatory, logistical and financial barriers. As Elina explained that for some types of products consumer use-

patterns diverge more sharply than founders expect while other patterns are generic. These minor differences can force costly product and marketing adaptations especially if those markets are huge and high product fit markets. Regulatory hurdles quickly follow. She added that “Of course, if you just want to sell something to the country it is easier, but once you set up a plant there are many more permits... the import duties, VAT and the recycle system in [in some international markets] all must be nailed down. Because “SMEs are naturally financially restrained,” every move depends on funding availability, prompting founders to delay physical subsidiaries or deep localisation until volumes justify it.

4.8 Case Venture Capitalist

Background

Almi Invest is the state-owned venture-capital arm of Almi Företagspartner and Sweden’s most active early-stage investor, managing about SEK 3 billion across eight regional funds and a national GreenTech vehicle. The interviewee joined the Almi Invest a decade ago after C-suite roles in both domestic and export-oriented firms. In his role, he “allocates the fund’s money into new companies and then [works] on the board strategically... until [they] exit.”. His dual experience as manager inside scaling firms and as VC board member and previously, a founder of the Nordic Tech Startup makes him a privileged observer of SME internationalisation.

Internationalisation perceptions and motivations

Global potential as an investment pre-condition

From the perspectives of VCs, international scalability is not only a growth option but an entry ticket to funding for startup. The interviewee remarkets that: “All the companies we invest in have to be global potential, meaning there is sooner or later a time where they’re going to move out of Sweden.”

This aligns with the organisation's mandate to "bridge the gap to private venture capital" and deliver outsized societal impact.

Founders' ambition and the investor reality

According to the interviewee, startup founders' ambition to grow as quickly as possible is a motivation for internationalisation and thus, applying for funding. Entrepreneurs routinely present "hockey-stick" revenue curves. Boards, fully aware of optimism bias, apply an internal heuristic: "We have a secret multiple... three times harder, three times more expensive and three times longer. Are we still going to do it? If yes, we proceed." This so-called π -rule (≈ 3.14) encapsulates the gap between founders' expectations and investor reality yet also illustrates investors' tolerance for uncertainty when global potential is evident.

Market-selection logic

Contrary to gradualist models, fewer than half of portfolio firms choose a closer Nordic country as their first international market target. Instead, boards and founders ask "Where is the market ready for this technology?" Technical readiness is weighed against factors such as the presence of an anchor customer or distribution partner, competitive voids or, conversely, entrenched incumbents that have already "done the hard work" as well as regulatory fit (e.g. EU membership) and transaction costs

Internationalisation approaches and challenges

VC1 emphasizes network and partner-led expansions as key internationalisation approach from his experience. The dominant pattern is to piggy-back on existing partners rather than set up subsidiaries. Their startup founders would typically say that "We found someone at a conference; they were really interested... They are going to become our sales partner in the new market." He also added that another was a funding-triggered "step-change", where a new foreign entry is usually synchronised with a

funding round where founders present the idea that they are going to scale their proven innovation and “that’s the story for the new investors.”

Some common challenges emphasised were regulatory friction, especially in the non-EU markets, shifting geopolitical landscapes including Brexit, USA policy changes, China geopolitical risks and others.

4.9 Summary of Empirical Findings

<i>Type of product</i>	<i>Case</i>	<i>Market</i>	<i>Business Idea and Context</i>	<i>First market abroad</i>	<i>Internationalization trigger</i>	<i>Number of active markets</i>	<i>Key internationalisation approaches</i>
Consumer tech goods	C1	Transport	Develops & deploys electric autonomous freight transport solutions to reduce carbon emissions and digitize the shipping industry	USA	Founder vision Access to VC in foreign market Pioneer advantage	8+	<ul style="list-style-type: none"> • Grow with existing customers • Target countries with favorable institutional support e.g., subsidies • Set up in foreign countries to access funding opportunities

	C2	Transport	Manufactures electric hydrofoil boats and ferries that combine high speed, long range, and exceptional energy efficiency for both leisure and commercial use	New Zealand	Internal zeal to capture market Unique flagship product	12+	<ul style="list-style-type: none"> • Strategic press and public branding • Organisation of events to attract customers
	C3	Clean Energy	Produces printed organic solar cells that harvest indoor light to power electronics, eliminating the need for disposable batteries and cables		Through Network	10+	<ul style="list-style-type: none"> • Grow with existing clients. • Recruiting local professionals in host market • Networks and events • Position as global thought leaders in field

Digital Services – SaaS	S1	HR-tech	Leverages AI-driven social recruiting technology to automate and optimize talent attraction through targeted social media campaigns		Grow with existing customers Strategic branding to attract inbound	Global	<ul style="list-style-type: none"> • Grow with customers • Strong corporate branding • Position as global thought leaders in industry
	S2	Ed-tech	Has an edtech platform that streamlines academic publishing and peer review to make research papers freely		Founder's nature and vision	Global	<ul style="list-style-type: none"> • Word of mouth • Attending strategic events by invitation only

			accessible and foster collaboration in academia		<p>Nature of product requires it to be sold internationally</p> <p>Already got a large client base in Sweden in first year and needed to expand.</p>		<ul style="list-style-type: none"> • Leverage in founder's and team skills • Resourceful approach due to limited funds. • Adaptation to institutional differences • Creation of networks
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Table 4: Basic summary of empirical findings

5. Analysis and Discussion

Using a comparative multiple case study approach to understand how Swedish small and medium sized enterprises in technology-intensive industries navigate international growth in various strategies in approaches, I examine Hardware (consumer goods) and Software as a Service (SaaS) tech firms' case separately before turning to cross sector comparisons. This structure allows for capturing sector-specific trends and logics while identifying patterns that transcend business model or type. The analysis is conducted under the six themes (internationalisation approaches), five of which are conceptualised in the chapter 2.

5.1 Analysis

This section is organised under 5+1 key internationalisation approaches connected to the conceptual framework: Networks, Venture capital, Intrinsic characteristic, Transaction costs, Firms' resources and capabilities and Host market institutional frameworks, as well as the research question in focus. These themes allow for a detailed cross comparison between and among the different categories under study, hardware and software tech firms, using the obtained rich empirical data for understanding the respondents' insights in context.

5.1.1 Networks

A recurring theme throughout the interviews was the use of network as the most common approach to internationalisation for both hardware products tech firms and software as a service firms in this study. This falls in line with studies radical internationalisation and innovation of software firms have been studied by many and this has been attributed the impact of high and diversified networks (Chetty and Stangl, 2010, p.1739).

For the SaaS technology firms, network-building is a deliberate strategy for accelerating internationalisation as studied by Kenny and Fahy (2011, p.542 -544), whose studies confirmed a positive relationship between the network human capital resource and internationalisation. S1 sought legitimacy by establishing connections through the building of a consortia within a foreign market, while S2 used social media events to attract international stakeholders and gain recognition from leading HR industry actors. These strategies require specific networking characteristics of the management as studied by Kenny and Fahy (2011). Despite the differing approaches, both firms emphasised that trust is fundamental to their business model. This reflects broader challenges for SaaS SMEs, where concerns about data privacy and disruption of established industry practices make trust-building through networks essential. This is consistent with studies which show that trust is an important factor for SMEs that want to internationalise faster (Schweizer et al., 2010, p.364; Mohamad et al., 2021, pp.3-4).

Existing successful partnerships were identified as a key mechanism for international growth. S1 reported that positive collaborations led to repeated invitations into new networks, while S2 highlighted that partnerships often resulted in referrals to other subsidiaries across different markets, enabling a less resource intensive but rapid scaling abroad, than when they tried to sign new clients through other approaches. At the same time, S2's failed attempt to establish an office in Norway through a local personnel illustrates that some network strategies are not always effective. Instead, cultural and linguistic proximity with Sweden allowed direct engagement to substitute for local intermediaries. These cases show that networks serve not only as gateways to markets but also as platforms for credibility, trust, and knowledge transfer as Johanson and Vahlne (2009, pp.1423-1424) explain through the concept of liability of outsidership. As Consultant BCS2 noted, networks are among the most critical resources for entrepreneurs in international markets, offering efficiency in learning, recruitment, and client acquisition, amongst other benefits and Business Sweden also rates informal networks that one of the top five factors for startup success (Business Sweden n.d, -a p. 13).

On the other hand, the hardware tech firms also deemed networks as significant in their internationalisation approaches. All three hardware tech firms attended international tech events to showcase their products and how they work, where they met potential partners, potential and existing clients as well as other important stakeholders such as government organisations, having conversations that catapulted them in their foreign market entries. C3's first ever and still one of the biggest clients was met about two years before the first prototype came out, at an international conference for tech startups and innovators. However, these physical events are always not enough as it is costly to travel to certain international markets for tech expos, especially in the case of C1 and C2, whose products are in automobile tech. C2's network includes "ambassadors" which includes resellers and customers, confirming studies that point out the actors comprising businesses' networks (Johanson & Mattson, 1988, p.312). BCC1 expressed that especially for consumer goods, networks in form of suppliers and other stakeholder were clearly important. In addition, all hardware cases reflected a client follower pattern into international markets, supporting that by Majkgård & Sharma (1998, pp. 24-25) that confirm the client follower nature of SMEs going abroad.

While both sectors use traditional means like attending conferences to meet and engage stakeholders and potential clients from new markets, SaaS firms frequently use conventional tools such as social media to network, while hardware tech firms emphasize more on the traditional physical networking approach. However, hardware tech firms are now heavily investing in international branding online and are placing themselves as thought leaders in their industries.

5.1.2 Venture capital

Another recurring theme across the interviews was the issue of restricted access to capital for technology-based SMEs. For SaaS SMEs, respondent S1 emphasized that limited funding, particularly as a young and relatively unknown start-up was a key factor influencing operational decisions, contract negotiations, and international market entry choices. This result suggests that these firms' internationalization strategy is shaped by the need to expand into multiple markets simultaneously to achieve rapid scaling, rather than pursuing a gradual, sequential approach, which is more costly according to S1. However, this strategy is constrained by financial limitations, which is essential for growth and internationalisation (Smorlarski & Kut, 2011, p.52). This limitation forces the firms, like S1 to prioritize starting entry into a few large markets that could then serve as leverage points for further expansion, supporting studies that tech SMEs choose markets where there are market readiness and the opportunity for growth for their products (Crick & Jones, 2000, p.74). In contrast, S2 did not highlight funding or investment as central to their internationalization challenges.

For Hardware product tech firms, funding was described as particularly critical due to the resource-intensive nature of product development and testing. For example, interviewees described funding as particularly critical due to the resource-intensive nature of product development and testing. For example, C2 noted that early-stage venture capital financing was essential for sustaining their lengthy R&D phase. Similarly, C1 highlighted that establishing operations in the United States was a deliberate strategy to gain access to American investors, which is similar to finding from studies by (Nisar et. al., 2012, p.233), that firms' market entry choices are motivated by the need to access some resources. By

contrast, C3 reflected on the difficulties of scaling quickly with inadequate funding, particularly in the cleantech sector, where venture capitalists often lacked specialized knowledge, where access to capital could have removed barrier to technical innovation and thus, growth (Idrawati, Caska & Suarman, 2020 p.558). The co-founder explained that many investors were unfamiliar with the firm's Deeptech and cleantech innovations, which made it challenging to align with VC expectations and build effective partnerships.

From the perspective of the investment community, VC1 noted that Swedish tech SMEs they supported were often "selectively born-global," since growth and international ambition was considered a prerequisite for funding. Nonetheless, VC1 acknowledged that successful internationalisation execution depended also on factors such as technology–market fit, the availability of strategic partners, and the quality of management and board-level governance.

5.1.3 Intrinsic characteristics

Across all interviewed tech SMEs, founder and top management characteristics emerged as critical drivers of internationalisation, consistent with proposed theories (Schweizer et al., 2010, pp.366-367). For SaaS firms, S2's co-founders were described by the interviewee as well known and respected within the European HR tech industry. This reputation, as highlighted as an advantage in securing opportunities, fostering growth, and enabling rapid scaling. Similarly, S1's CEO and founder emphasized her inherently "international" orientation, shaped by having lived, worked and studied across three continents and maintaining a diverse global network. She viewed these experiences as naturally positioning both herself and the company's product for international scalability from the outset. This is confirmed through the studies by (Milevoj et. al, 2021, p.10), that a firm's CEO's international experience influences its internationalisation.

In hardware tech firms, founder experience was also central to internationalisation strategies (Hashai & Zahra, 2022, p.177). C3's co-founder, a serial entrepreneur, drew on extensive prior experience in scaling technology ventures and sustainability-related projects. He recounted earlier entrepreneurial

journeys, including co-founding a Swedish company that was successfully scaled to global leadership and later acquired by Motorola (then Google-owned). He explained that this background provided him with strong expertise in taking Swedish innovations global, which is consistent with the findings of Reuber and Fischer (1997, p.820). Similarly, C1's founder, a former Volvo executive, leveraged deep industry knowledge of the automotive sector. Having observed the limitations of incremental innovation within legacy truck manufacturers, he identified opportunities for disruptive change in freight transport. His established connections with industry stakeholders further supported the firm's international growth.

Comparing both sectors, these cases demonstrate that managerial characteristics and prior entrepreneurial or industry experience significantly influence internationalisation approaches across both SaaS and hardware sectors, confirming studies that firm specific characteristics alone such as firm size, years in operations and others cannot determine its capacity to scale international markets. (Reuber & Fischer, p.820). In addition, home market institutional environment and markets also play a significant factor in the internationalisation approaches used by these SMEs. S2 emphasized that the Swedish market's readiness for tech was a critical characteristic for growing, refining the product and scaling internationally, supporting arguments that firms in high tech markets tend to internationalise quickly (Crick & Spence, 2004, p.168). Furthermore, domestic institutions in Sweden also play a facilitative role by providing grants, export and import support, and advisory services through government-backed agencies such as Business Sweden and Almi Invest. These mechanisms are instrumental in reducing barriers and creating pathways for internationalisation, reinforcing the importance of home-market (intrinsic) institutional support in shaping global expansion strategies (Idrawati, Caska & Suarman, 2020, p.556).

5.1.4 Transaction costs

For SMEs, transaction cost economics influence selection of entry modes such as exporting, joint ventures, partnerships or wholly owned subsidiaries (Brouthers & Nakos, 2004) and even the timing of entry. For this study, the SaaS firms, S1 and S2, adopted hybrid-to-fully remote work structures, employing staff across different countries, consistent with studies that show that digital platforms are enablers of internationalisation (Gawel et. al., 2023, p.33). To reduce operational costs, S2 strategically outsourced routine tasks to independent consultants via platforms such as Upwork. This approach allowed the firm to avoid the financial commitments associated with hiring full-time employees, whether domestically or abroad. Additionally, S2 closed its Oslo office after concluding that it was not generating sufficient value. Instead, employees based in Sweden began serving neighbouring markets through digital platforms. This shift not only reduced overhead costs but also enhanced flexibility, reflecting recent findings that digital platforms lower transaction costs for small knowledge-intensive firms (Da Rocha, Da Fonseca & Kogut, 2024, p. 21).

In the case of S1, efforts to manage transaction costs took a different form. Rather than developing entirely new add-ons for each market, the firm invested in building a customizable base product that could accommodate country-specific requirements. The firm's approach was grounded in the belief that markets share the same basic needs, with variations primarily shaped by local institutional and cultural characteristics. Moreover, transaction costs arising from lengthy contract negotiations were also influential. These delays often determined whether the firm pursued opportunistic international expansion or opted for a more structured, deliberate approach.

For hardware tech firms, strategies differed. C2 deliberately avoided offshore manufacturing until sales volumes would justify setting up localized assembly lines. Currently, the company manufactures exclusively in Sweden and ships its electric boats worldwide, capitalizing on their portability via trailers. C3 invested heavily in a large-scale manufacturing site in Sweden, where all production is currently based, with no immediate plans for international manufacturing. Similarly, C1 produces its electric trucks domestically but disassembles components prior to international shipment to facilitate transport.

In comparison, these cases reveal that while SaaS SMEs focus on reducing transaction and operational costs through digital solutions, outsourcing, and flexible product architectures, hardware SMEs prioritize manufacturing strategies that balance scalability with cost efficiency, often centralizing production in Sweden during early internationalization phases. These are generally consistent with studies by Brouthers and Brouthers (2003, p. 1199) that transaction costs are applicable to both hardware and service focused SMEs in market entry decisions, however the effect is influenced by industry and product type. BCS2 emphasizes that transaction cost economics plays a key role in determining which markets to go next, in tech SMEs internationalisation strategies.

5.1.5 Firm resources and capabilities

A tech firm's resources and capabilities play a decisive role in shaping whether it can innovate and scale early, late, incrementally, or across multiple markets simultaneously (Welch and Luostarinen, 1988, pp.51-53). For SaaS firms, S2 demonstrated deliberate intentionality in recruiting key employees with expertise in both the technology and HR industries. This strategic accumulation of human capital was leveraged to overcome barriers in innovation and to support growth (Idrawati, Caska & Suarman, 2020, p.557). In parallel, the firm was highly selective about communication channels, prioritizing LinkedIn as its primary platform, given its centrality within the HR sector. S2's guiding principle – "to be successful at one thing so much well than all" shows a focused and intentional resource application, marketing and scaling approach. Similarly, S1 emphasized the importance of specialization, positioning itself as a company that "stands for something and not everything" within the InfoTech sector.

For hardware tech firms, investments in marketing and public relations were identified as key components of their internationalisation strategies. C2 highlighted the importance of visibility through features in prominent international outlets, such as Forbes, alongside experiential branding activities like organizing international boat races, both of which contributed to building credibility and accessing clients abroad. C3 adopted a more targeted approach, employing digital advertising campaigns tailored to specific audiences. These not only promoted the product but also served an educational function,

raising awareness about the environmental benefits of their cleantech solutions. Moreover, C3 planned to complement these strategies by hiring local staff in markets such as China to support partnership development with clients and on-the-ground operations, which is consistent with theories supporting that resources support its market entry choices in internationalisation (Sharma & Erramilli, 2004, p.14).

Together, these cases show that both firms rely on resources beyond capital, including leveraging human capital and digital platforms to market and scale, firms also utilise digital resources for international visibility, brand credibility, and targeted international outreach. Finally, while hardware tech firms often focus on supplementing internationalisation strategies by localized hiring strategies in foreign markets, SaaS firms do not prioritise this unless service demands, or market potential justifies the cost.

5.1.6 Host market institutional frameworks.

The institutional environment, comprising formal regulations, industry standards, and support mechanisms, plays a critical role in shaping the internationalisation of tech SMEs. While Fernandes et al. (2023) focus primarily on home-market institutions as intrinsic firm characteristics, the cases studies illustrate that both home and host institutional frameworks are central to growth strategies and simultaneously present challenges.

For both SaaS firms, rigid industry norms, customer conservatism, and local cultural attitudes towards adopting innovative solutions created frictions in foreign expansion. Both firms therefore recognised trust-building as essential for legitimacy and acceptance in new markets. S1's failed entry into Finland, based on the mistaken assumption of institutional similarity, underscores the importance of prior contextual understanding. Although the setback prompted strategic adjustments and service improvements, it highlights the risks of underestimating institutional differences. Consultant BCS2 reinforced this view, stressing that cultural intelligence and awareness of institutional frameworks are decisive for international success, yet often underestimated by tech SMEs. She also noted that institutional impacts vary by business model and industry, shaping the degree of vulnerability to regulatory and cultural constraints.

Institutional change further complicates internationalisation strategies. For example, S2's expansion to the UK was initially successful, but Brexit shifted the institutional landscape, reducing opportunities for non-UK firms and diminishing the expected advantages of a UK presence. BCS2 observed that less SMEs were targeting UK after the Brexit, a critical institutional framework impact for tech SMEs. Additionally, S2 viewed the UK as one of the most conservative markets, where deliberate trust-building was particularly necessary in the HR sector.

In the hardware tech sector, firms such as C2 leveraged subsidy availability from governments in international markets like Germany and relatively more ease of funding access in their industry in the USA through a subsidiary establishment, to expand into those markets. C3 emphasized that market adaptation was critical to their product to access international markets. They for example, created a German version of their website to integrate better and are considering a Chinese version as well, considering the increasing business relations. VC1 emphasised that per observation, cultural adaptation beyond website translation remains an under-resourced blind spot for startups that are likely to resurface in later growth stages. He emphasized that most tech SMEs do not prioritise investing in cultural intelligence and adaptation when entering the new markets but mostly do in mergers or acquisitions.

These findings suggest that institutional frameworks are not only external constraints but active determinants of how SaaS SMEs must structure their entry strategies, build legitimacy through networks, and sustain international growth. The findings also support the studies Torkkeli, Kuivalainen, Saarenketo, S., & Puumalainen (2019, p.45), which show that network capabilities of the firm can help them in internationalising successfully into a market, against institutional forces. A comparison of the two sectors reveals that while institutional frameworks influence both SaaS and Hardware tech SMEs, the nature and intensity of the approach as an enabler for strategies or as a challenge differ based on customer type, business model, the industry or even the type of product. For hardware firms such as C2, institutional frameworks functioned as enablers, with government subsidies and funding opportunities through permanent establishments facilitating international expansion or challenges through regulatory rigidity. By contrast, SaaS firms like S2 often experienced institutional factors such

as industry conservatism and trade changes through Brexit for example, as barriers that required deliberate trust-building and adaptation strategies.

5.2 Discussion

In this study the main results indicate that both SaaS and hardware product tech firms' internationalization approaches differ in some approaches based on their different business models and the product type. Though networking was important for both parties, the hardware tech firms found physical events are more helpful as it gave them the opportunity to showcase their products to international stakeholders, including potential partners and clients. SaaS tech firms on the other hand, did not see these as yielding much result and hence preferred to invest heavily in social interactions in order to join relevant networks in their industries. S1 recalled paying for and setting up a booth at a startup tech expo and making only one sale out of all the discussions and S2 did not get returns on organising physical events. These directed them to focus more on social network building which yields better for their product type. All interviewed cases in Hardware tech firms have begun to invest heavily in building brand presence and establishing themselves as thought leaders in the field, allowing them to be internationally recognized in their industries.

An established theme from the study of both SaaS and Hardware tech SMEs, that domestic demand is too small to sustain venture-capital return thresholds, compelling founders to regard foreign sales as integral rather than sequential to their growth model. Similar results from studies indicate that most born globals are tech firms and that those firms' internationalisation behaviour is influenced by home institutional characteristics, with small domestic markets are forced to move into the international marketplace after birth (Maden and Servais, 1997, p.578). On the contrary, other studies also propose that these firms may be propelled to internationalise even when the market is large (ibid, 578). The role of institutional frameworks also aligns with previous work (Fernandes et al., 2023), which identifies home-market institutions as intrinsic to internationalisation. However, this study demonstrates that both home and host market frameworks are critical. For example, S1's failed entry into Finland underscores

the risks of assuming institutional similarity, while S2's Brexit-related setbacks reveal how macro-level shifts can fundamentally reshape tech SMEs' strategies. This finding adds to earlier studies that tend to underplay host-country institutions in (tech) SME contexts, instead highlighting their importance as determinants of legitimacy and scalability. Given the results on institutional shocks such as cultural and regulatory bottlenecks resulting in market entry failure for both SaaS and Hardware tech SMEs studied, this study confirms that this is relevant and commonly applicable to SMEs. Safari and Chetty (2019, p. 762) posit that that psychic distance at both country and business levels cause challenges for SMEs post-market entry due to lack of market knowledge, which is essential for the right decisions in the new market. On the other hand, host market institutional characteristics such as relative ease of funding access and availability of subsidies are enablers for internationalisation, supporting the studies that resource constraints in home markets are a motive for establishing abroad (Hessels, 2008, p.6).

With increased investments in attaining internationalisation via digital means, a firm's resources and capabilities also play a key role as much as its transaction economic choices. Both SaaS firms pursued internationalisation through lean strategies, including remote or hybrid structures, outsourcing via platforms such as Upwork, and developing adaptable core products to reduce transaction costs. Both groups highlighted the importance of trust, given data privacy concerns and the disruptive perception of SaaS in traditional industries. Their entry strategies also relied on strategic human capital, founder experience, leveraging networks, successful partnerships, and digital platforms for visibility. However, all the hardware tech firms relied heavily on securing significant capital for product development and scaling. Their internationalisation approaches are resource-intensive, often involving large-scale manufacturing decisions, relocation to investor-rich markets (e.g., C1 in the USA), or deliberate avoidance of offshore production until volumes justified it (C2), given the nature of key expenses such as logistics and the need for an on-ground sales partner in foreign markets. A key addition to existing literature is the role of digitalisation in shaping SaaS SMEs' internationalisation. Much of the SME internationalisation literature predates the wide adoption of cloud platforms, outsourcing marketplaces (e.g., Upwork), and digital branding strategies such as LinkedIn-based events. While some studies

investigate this impact, this study shows that SaaS firms now rely heavily on digital infrastructures not only to lower costs, but also, to build networks, and accelerate global reach, a dynamic not fully captured in earlier studies.

Founder and managerial characteristics also significantly influenced internationalisation in this study. Entrepreneurial experience, industry reputation, and international orientation often determined the pace and direction of expansion. While SaaS founders leveraged global networks and cultural fluency to position their firms internationally from inception, hardware founders relied on technical expertise, industry experience, and established relationships to navigate resource-heavy scaling. Another difference lies in capital access and investor knowledge. While previous research highlights funding as a general barrier, this study shows that hardware firms face sector-specific VC challenges, particularly in cleantech and Deeptech (C3), where investors may lack technical expertise, leading to challenges in expectations and expectations management. This misalignment between investor expectations and technological realities emerged as a novel barrier, less discussed in traditional internationalisation literature.

The findings are broadly consistent with the born-global and international new venture literature (Oviatt & McDougall, 1994; Knight & Cavusgil, 2004), which emphasizes the role of networks, founder characteristics, and market knowledge in enabling SMEs to expand rapidly. However, this study extends prior work by differentiating between SaaS and hardware firms. While earlier research often treats tech SMEs as a homogenous category or focus solely on software SMEs, these findings demonstrate that business model characteristics, that is, digital versus physical product delivery influence the distinct internationalisation pathways.

5.3 Summary of key discussion findings.

	Hardware Consumer Goods Tech SMEs		Software as a Service Tech SMEs	
Approach	Strategies	Barriers	Strategies	Barrier
Network	<p>Skip intermediaries to access customers directly.</p> <p>Utilise resellers and clients as ambassadors</p> <p>Attending expos</p>	<p>Challenges with attending expos with huge products, such as electric trucks and boats</p>	<p>Create network.</p> <p>Use social media to invite stakeholders to gain trust.</p> <p>Follow clients' expansion into new markets and get referrals</p> <p>Attending invite only events as key speaker.</p>	<p>Limited network access in foreign market.</p> <p>Lack of trust in traditional industry</p>
Host Institutional frameworks	<p>Enter foreign market to access favourable regulatory support and subsidies for products.</p>	<p>Outdated regulatory and policy for innovative products.</p> <p>China trade tensions</p> <p>Industry rigidity for innovative products.</p>	<p>Created and uses a consciously created catalogue of relevant international markets' details, including regulatory changes and industry updates</p>	<p>Close markets, e.g., Sweden and Finland, do not share similar characteristics as presumed.</p> <p>Brexit affected strategies to base on the UK subsidiary to expand to the US and other British friendly markets.</p>
Firm resources and capabilities	<p>Firm creates website translations and special websites for certain key markets</p> <p>Organisation of events to attract relevant stakeholders</p>	<p>Resource intensive R&Ds</p>	<p>Hiring of key and industry experienced employees</p> <p>Promoting employee branding as a strategy to build firm's international brands</p>	<p>Firms overestimate their resources and underestimate the true cost of scaling abroad</p>

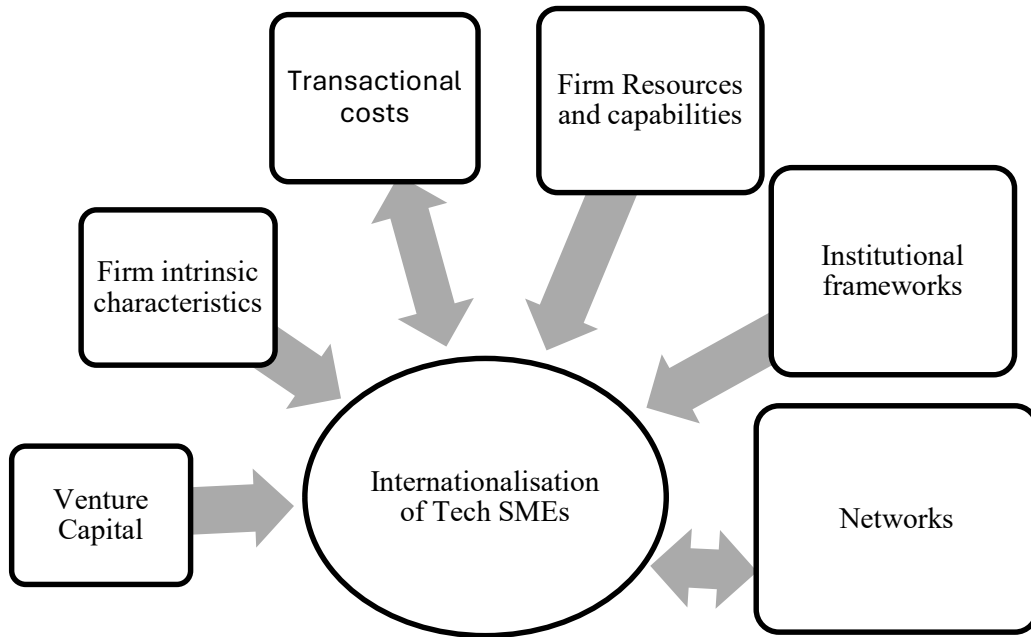
	<p>Engagement with key media outlets like Forbes for branding</p> <p>Establishing a thought leader profile in industries</p>		<p>Selective digital tools and use of industry specific social media (e.g., LinkedIn), instead of all.</p>	
Transaction costs	<p>Export only until volumes justify.</p> <p>Skip intermediaries to reduce costs.</p>	N/A	<p>Use of remote teams</p> <p>Use of digital tools for marketing</p> <p>Enter large markets and scale to other markets after success</p>	N/A
Firm intrinsic capabilities	<p>Founder with previous experience as serial entrepreneur</p> <p>Nature of product (electric boats) allows for organised water races which are fun and attract media attention</p>	N/A	<p>Founder international background, characteristics and reputation in industry as a supporting strategy.</p> <p>Strategic hiring of resourceful employees</p> <p>Utilising remote work as nature of product does not necessarily require in person teams.</p>	N/A
Venture capital	<p>Enter international market to access funding.</p>	<p>Lack on specialised VC understanding for specific industries</p>	N/A	<p>Not enough available funding</p>

Table 5: Author's Summary of key findings

5.4 Revised conceptual framework

The revised conceptual framework is based on findings discussed in the analysis chapter and illustrates the key factors identified as influencing the internationalisation of Tech SMEs, highlighting six thematic areas: venture capital, firm resources and capabilities, institutional frameworks, networks, transactional costs, and firm intrinsic characteristics. The size of each box reflects the relative importance of each factor for the studied SMEs: networks, institutional frameworks and firm resources and capabilities are the top three most common approaches overall, indicating that they play a more central role in shaping international expansion, while venture capital, firm intrinsic characteristics, and transactional costs, the next three, are smaller, representing secondary but still important influences.

The arrows indicate the direction and influence of each factor on internationalisation. Most arrows point directly towards the central theme, suggesting a primary influence on SME internationalisation strategies. The two-way arrow between networks and internationalisation and emphasizes a reciprocal relationship. For example, networks both facilitate and are shaped by international activities. This revised conceptual does not distinguish the approaches per SaaS or Hardware Consumer Goods tech firms as measuring the different approaches per industry requires more data and perhaps, quantitative data support. Overall, the basic framework highlights an interconnected approach to global expansion for Swedish tech SMEs, with relational, institution and capability-driven factors being particularly influential.



6. Conclusion and Contribution

6.1 Concluding Summary

This study has investigated the approaches, including the strategies and challenges that come up with Hardware product and Software product focused SME's internationalisation. The study was done under the lens of five main key internationalisation approaches as investigated as the most popular in literature and arguably, the five of the most regular approaches in practice. Findings show that tech SME's, i.e., consumer goods and SaaS firms have similar internationalization approaches yet differ based on their product and industry. Some key approaches that these firms use are networks, firm branding, leveraging venture capital to scale or scaling to access venture capital. Some key challenges that were recurring with the SaaS firms are that there was industry rigidity in accepting their innovation which took significant level of brand positioning and trust building with clients over time. On the other hand, the hardware firms mainly face regulatory and industry standard rigidity as challenges. In addition, all tech firms face issues with funding access as startups as well as heavy impact of external shocks.

Out of this study, a sixth and very important approach is uncovered, i.e., *Host market institutional frameworks*, which requires further studies. While this study has its limitations such as limited number of interview respondents, it provides valuable insights into the study's aim and provides a solid foundation for further research into how internationalisation approaches affect Tech SMEs' internationalisation strategies, the challenges they face due to these approaches and how the changing tech industry space affect these internationalisation phases. Other geopolitical and external shocks such as Covid-19, trade tensions with China and Brexit are also uncovered in this study as factors that influence tech SME internationalisation approach. While institutional impacts such as Brexit are widely recognized in macroeconomic studies, their firm-level consequences for SMEs have been underexplored. This study highlights how institutional shocks reshape the trajectory of small firms, either constraining expansion or forcing strategic adaptation. Regardless, internationalisation of all Tech SMEs is observed to oscillate between structured scaling and opportunity-driven leaps, moderated by networks, institutional frameworks, firm's resources and capability, transaction-cost calculations, firm's intrinsic characteristics, and VC funding and mentorship and evolving even geopolitical constraints with different extents based on business model and product type. In this study, findings indicate that these approaches do not only overlap, but they also present unique challenges to tech SMEs, based on sector and industry. This study therefore supports the proposition of Crick and Spence (2005, pp.179-181) that no single internationalisation approach theory can explain entrepreneurs' choices but rather, a web of the approaches.

6.2 Contribution to Literature, Policy Makers and the Tech Industry.

This study contributes to the SME internationalisation literature by focusing on a niche and rising group, tech SMEs. This study adds to existing literature, the strategies and challenges that these SMEs face as they go abroad, which focus on possible differences and similarities between the SaaS and Hardware Tech SMEs. One key finding demonstrates that trust is a more central theme for SaaS firms than typically emphasized in the literature. While trust has been noted in global business network studies (Schweizer et. al., 2010), this study illustrates how SaaS SMEs actively construct trust to overcome

scepticism in conservative or rigid industries. Another key finding emphasizes the importance of institutional frameworks for tech SME internationalisation and the varying degree of effects, based on whether the firm operates as a SaaS or hardware tech SMEs

To policymakers, the Tech SMEs as represented in this study are on a mission to revolutionize traditional approaches, some of which contribute significantly to sustainability. However, a key challenge raised during this study is the slow and or unfavourable government response to the innovation. While it is understood that some of these outdated laws are for the sake of the nation, the tech companies need support beyond funding, subsidies and summits. This includes reviewing legislations that prevent the tech firms from operating for the greater benefit of the people in these international markets. Finally, to the industry and tech stakeholders, this study opens the strategies and challenges on ground for tech SMEs. The results of this study can serve as a guide for startups with similar structures who aim to internationalise successfully.

6.3 Limitations and Future Research

First, the study is based on a qualitative approach with a limited number of SaaS and hardware firms. Although this allowed for in-depth exploration of internationalisation strategies and challenges, the findings cannot be generalized across all tech SMEs. Future research could build on this work through large-scale quantitative studies that test the relationships identified here across broader contexts. Second, the research primarily draws on interviews with founders, managers, and consultants, which means the perspectives reflect the interpretations of key actors. While this provides valuable insider viewpoints, it may also introduce bias, as participants may overemphasize successes or understate challenges or vice versa. Future studies could triangulate such data with more sources to capture a more holistic picture of tech SME internationalisation.

Again, future research should conduct an in-depth examination of host-market institutional frameworks to assess their implications for the internationalisation strategies and challenges of both hardware and Software-as-a-Service (SaaS) technology SMEs. Particular attention should be given to comparing the strategies adopted by hardware and SaaS firms, identifying which approaches offer the greatest enablers

and which present the most significant barriers. Although this study did not focus on interrelationships between different internationalisation approaches, several notable connections emerged. For instance, networks not only facilitate access to market knowledge but also to critical resources such as venture capital (Vatne, 1995, p. 65). In turn, venture capital can enhance a firm's resources and capabilities through mentorship and strategic guidance. Such interdependencies suggest that SMEs rarely employ internationalisation strategies in isolation. Future studies should explore these linkages between internationalisation approaches in greater depth to capture the complex, interconnected nature of internationalisation approaches. Finally, longitudinal studies could track how tech SMEs continue to adjust strategies over time, offering a deeper understanding of resilience and adaptation in internationalisation, based on their product type, whether SaaS or Hardware product focused.

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Appendices

Appendix A – Interview guide for Tech SMEs

Introduction

1. The role of the interviewee in the company and its internationalisation.
2. A brief introduction company's history, business operations and model, and its current position in the domestic market from interviewee's perspective.

General understanding of internationalisation approach and set up

3. Let's talk about the story of your company's internationalisation. What motivated your company to explore international expansion in the first place?
4. Which foreign country did your company enter first and what were the main factors for choosing this specific market?
5. How would you describe your company's current international business set up?
6. How would you describe your company's overall approach or strategy to internationalization?
7. What are some key milestones in your company's journey towards international expansion?

Challenges and Adaptation in internationalisation approach

8. What were the most significant challenges your company faced when entering foreign markets in general?
9. What strategies has your company used to build brand presence in foreign markets and attract customers?
10. Have you had to adapt your marketing capabilities and strategies for international markets and what are examples of these instances?

Enablers of internationalisation

11. As an innovative tech company, how has your company leveraged technology and innovation in expansion efforts?
12. What roles have networks and partnerships played in your company's international expansion?
13. Follow up questions: based on specific approaches and strategies mentioned by interviewee

Appendix B – Interview questions to Tech Business Consultants and VC Investment managers.

Introduction

1. The role of the interviewee in the company and its background.

General understanding of internationalisation approach for Swedish Tech SMEs

2. Based on your experience, how do you perceive the current landscape of international expansion for Swedish SMEs, particularly in the tech sector?

3. What do you see as the most common motivations driving Swedish tech SMEs to expand internationally? What is the case within Nordic markets and beyond the Nordic markets?

4. What are some of the approaches or strategies that Tech SMEs commonly apply for successful international market entries?

5. How different are these strategies, based on business model and mode of expansion?

Challenges

6. What are some of the challenges you see Swedish Tech SMEs face in expanding internationally?

7. Do these challenges vary from entry into Nordic markets vs other international markets?

8. From your perspective, how different are these challenges, based on business model and mode of expansion?

9. In your view, how do cultural challenges differ when Swedish SMEs expand to nearby markets (e.g., Nordic countries) versus more distant or culturally different regions (e.g., Asia or North America)?

Enablers of tech SME internationalisation

10. What has been the role of networks and partnerships in internationalisation of Swedish Tech SMEs?
11. In the rising matters of sustainability, do sustainability related requirements affect the success of internationalisation of Swedish SMEs?
12. What other enablers of internationalisation are SMEs leveraging to expand internationally?

Future trends and outlook

13. Are there any upcoming trends or challenges in Nordic markets that you believe Swedish SMEs should prepare for considering international expansion?
14. Final comments about how Swedish SMEs can ensure success in internationalisation into the Nordic markets and all other international markets.
15. Follow up questions, based internationalisation approaches mentioned by interviewee.