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**Early Internationalization in the
Digital Context- A Capabilities-
based Approach**

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Tiivistelmä

Digitalisaatio vaikuttaa yritysten varhaiseen kansainvälistymiseen kansainvälisessä yrittäjyydessä ja kansainvälisessä liiketoiminnassa. Tiedämme, että digitalisaatio kiihdyttää varhaista kansainvälistymistä, mutta emme tiedä tarkalleen, mitkä kyvykkyydet edistävät tätä prosessia. Väitöskirja pyrkii vastaamaan tähän tutkimusvajeeseen kyvykkyyksiin perustuvan lähestymistavan kautta. Lähestymistapa antaa olennaisia näkemyksiä sekä kansainvälisen yrittäjyyden että kansainvälisen liiketoiminnan kirjallisuuteen ja lisää ymmärrystä siitä, kuinka varhain kansainvälistyneet yritykset kehittävät kyvykkyyksiään digitaalisesti siten, että kansainvälistymisen tulokset ovat kestäviä. Väitöskirja koostuu neljästä esseestä. Ensimmäinen essee on kirjallisuuskatsaus, jossa arvioidaan kansainvälisen yrittäjyyden ja kansainvälisen liiketoiminnan digitalisuutta käsittelevää kirjallisuutta ja tarkastellaan missä määrin digitaalisuus määrittää syitä, prosesseja ja kansainvälistymisen tuloksia. Toisessa, kolmannessa ja neljännessä esseessä keskitytään kyvykkyyksiin, jotka toimivat varhaisen kansainvälistymisprosessin sekä kansainvälistymisprosessin tulosten taustalla digitaalisessa kontekstissa. Esseet havainnollistavat, miten varhain kansainvälistyvien yritysten kansainväliset dynaamiset kyvykkyydet ja varhaisen oppimisen etu kehittyvät. Esseissä käsitellään myös digitaalitekniikan toimivuutta tukimekanismina. Esseiden teoreettinen kontribuutio kohdistuu kansainvälisen yrittäjyyden ja kansainvälisen liiketoiminnan tutkimuskenttään tarjoten uusia oivalluksia ja ymmärrystä varhaisen kansainvälistymisen ilmiöstä digitaalisessa kontekstissa kyvykkyyksiin perustuvan lähestymistavan kautta. Väitöskirjassa hyödynnetään kansainvälisen yrittäjyyden, kansainvälisen liiketoiminnan ja tietojärjestelmätieteen näkökulmia lisäämään ymmärrystä varhaisesta kansainvälistymisestä digitaalisessa kontekstissa. Väitöskirja vastaa myös toivomuksiin lisätä tutkimusta digitalisaation vaikutuksesta kansainvälistymiseen sekä kyvykkyyksien kehittämiseen.

Avainsanat: Varhainen kansainvälistyminen, digitalisaatio, kyvykkyyksiin perustuva näkökulma, dynaamiset kyvykkyydet, varhaisen oppimisen etu

Abstract

In the fields of international entrepreneurship (IE) and international business (IB), digitalization influences the early internationalization of firms. While we know that digitalization facilitates early internationalization, we do not yet know the exact underlying capabilities that drive this process. The dissertation attempts to bridge this gap by utilizing a capabilities-based approach. This approach offers relevant insights for both IE and IB literature and provides new understanding on how early internationalizing firms develop their digital capabilities for achieving sustainable internationalization outcomes. The dissertation consists of four essays. The first essay, which is a literature review, evaluates IE and IB literature dealing with digitalization and examines to what extent digitalization underlies the causes, processes, and outcomes of early internationalization. The second, third, and fourth essays focus on the capabilities underlying early internationalization processes and outcomes in a digital context. The essays illustrate how the development of international dynamic capabilities and learning advantage of newness of early internationalizing firms occur; they also open up the functionality of digital technology as a supportive mechanism. Theoretically, the essays contribute to IE and IB research streams by providing novel insights and understanding of the phenomenon of early internationalization in a digital context from a capabilities-based approach. Overall, the dissertation cross-fertilizes perspectives from IE, IB, and information systems to contribute to our understanding of early internationalization in the digital context. It also responds to the calls for more research on the impact of digitalization on internationalization, and capability development studies.

Keywords: Early internationalization, digitalization, capabilities-based view, dynamic capabilities, learning advantage of newness

Today there is no First World, Second World or Third World ... just the Fast World ... and the Slow World.

Thomas Friedman, The Lexus, and Oliver Tree

ACKNOWLEDGEMENT

I came from the West Coast of Africa to Finland literally known as the land of thousands of lakes for a specific purpose: to pursue a high academic honour. The journey that commenced in 2018 has peacefully climax, notwithstanding the good, the bad and the blind ugly experiences. I crossed knowledge and absorbed it; I started writing my dissertation and have finished it. To God be the glory, great things he has done! The success of this dissertation is indebted to the benign and kind supervision of Professor Peter Gabrielsson and Associate Professor Tamara Galkina. Throughout these four years, I worked with them towards the closing years of my studies. I gathered indelible insights on the prevailing dynamics in academia. I describe my supervisors as literati who know and understand the challenges and perils of the academic world; people who are ever willing to support and equip young scholars to achieve the heights they want to reach. Their invaluable counsel and editorial comments are par excellence. I am highly favoured and honoured to have such supervisors. Forever, I will always remember their intellectual support in the past as in the future.

There is an edict that one person is not a repository of knowledge, and knowledge that is not shared becomes sticky. It will therefore be an affront on my part if I relegate the intellectual support from the international business and marketing strategies research group unto the background. Ideas and submissions from members in the group have been of enormous benefit for the writing of this dissertation. All that I will say is more power to their elbows. I thank Professor Brian Chabowski, Fulbright Scholar from the University of Tulsa for acting as an opponent in the pre-defense of this dissertation. His tacit comments were laudable and have helped to improve the novelty of this dissertation. I am also indebted to the reviewers of this dissertation – Professor Alex Rialp Criado and Professor Leppäaho Tanja – for their intellectual comments.

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Finally, I would express my appreciation to my family for their patience, moral and spiritual support. In thick and thin, they have always been there to render their comforting support. I end this note by saying a big thank you to all my kith and kin who in diverse ways have contributed to the success of my academic ambition. If you are young scholar, I encourage you to kill the bogey that persistently haunts you. No race was won without alacrity; do what you would this very instant. Strive hard to be at the top for the bottom is already crowded.

Emmanuel,

Vaasa, 2022

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Abbreviations

BG	Born global
BGs	Born globals
IB	International business
IE	International entrepreneurship
INV	International new venture
INVs	International new ventures
IS	Information Systems
LAN	Learning advantage of newness
MNEs	Multinational enterprises
RBV	Resource-based view
SMEs	Small and Medium-Sized Enterprises
TCA	Transaction cost analysis

Publications

Kusi Appiah, E. and Gabrielsson, P. Digitalization and Early Internationalization-Systematic Literature Review Analyses. Earlier versions presented at 23rd McGill International Entrepreneurship Conference, University of Southern Denmark, Odense, August 28-30, 2019; 16th Vaasa Conference on International Business, University of Vaasa, Finland, August 17-18, 2021. Accepted paper to be presented and published online at the Proceedings of the 56th Hawaii International Conference on System Sciences | 2023, January.

Kusi Appiah, E., Gabrielsson, P. and Gabrielsson, M. International Dynamic Capabilities and Financial Performance of Internationalizing Firms. Presented at AMA Global Marketing Sig Conference, Crete, Greece, May 31-June 2, 2022. Submitted to Academy of Management Journal.

Kusi Appiah, E. (2021). Ambidextrous Learning and Survival of Early International Firms-The Role of Social Media Usage. Published online at the Proceedings of the 54th Hawaii International Conference on System Sciences | 2021. University of Hawaii at Manoa, Shidler College of Business.

Kusi Appiah, E., Tamara, G. and Gabrielsson, P. Liminality and Developmental Process of Learning Advantage of Newness of Early Internationalizing Firms. Earlier versions presented at- 22nd McGill International Entrepreneurship Conference, Halmstad University, Sweden, August 22-24, 2018; Annual AIB Conference, Copenhagen Business School, Denmark, June 24-27, 2019. Submitted to International Business Review.

1 INTRODUCTION

This introductory section delineates the motivation for study, research background and gap of the study, study positioning, study aims and research questions, intended contribution, research process and outline, and definition of concepts.

1.1 Motivation for Study

The aphorism ‘We live in a changing society’ has never been truer than it is today. Countries of the world are putting systems and structures in place to become digital economies. In the same vein, firms are shifting their attention from the conventional way of doing things to digitalized processes. This means that some of the existing international business (IB) and international entrepreneurship (IE) theories and ideas need to be adjusted to suit the digital context. The curiosity to understand how some of the theoretical arguments in IB and IE are applied to the digital context is the major intrinsic motivation for this study.

Another intrinsic motivation for this dissertation emerged from Darwin’s quote—“It is not the most intellectual of the species that survives; it is not the strongest that survives; but the species that survives is the one that is able to adapt to and to adjust best to the changing environment in which it finds itself...” (Megginson, 1964, p. 91). This quote goes back more than a century, yet it is still relevant in contemporary times. Firms, countries, and people are finding ways to cope with digital transformation and other technological sustainability issues. For example, in the automotive industry where long product life cycles have been the norm, BMW has shifted from an annual model cycle to continual improvements throughout the year (McKinsey, 2018). Comparatively, this move has supported it to learn and apply digital technology at a faster pace than some of its competitors. Reflecting on the quote in the context of early internationalization, a novel idea is unfolded to investigate how early internationalizing firms are adapting to the changing environment.

1.2 Research Background and Research Gap

The world today exists in a digital context, where the impact of digitalization is increasing the pace of change, leading to significant transformations in industries (Ghezzi and Cavallo, 2020; Warner and Wäger, 2019). According to Manyika et al. (2016), 50 percent of the services trade in the world are already digitized, approximately 12 percent of the global goods trade is conducted via international e-commerce, and cross-border Skype calls correspond to 46 percent of the total number of traditional international calls. Across 18 countries analyzed by eBay, 88 to 100 percent of the small and medium-sized enterprises (SMEs) that use its platform are exporters (Manyika et al., 2016). Digital platforms such as eBay, Amazon, Facebook, and Alibaba have provided opportunities for small firms to be born global (BG) or international new venture (INV); scholars even termed them born-digital firms (Monaghan, Tippmann and Coviello, 2020; Piqueras, 2020; Vadana et al., 2019). More so, the accessibility of the internet has made the usage of digital platforms appealing to early international firms (Jean, Kim and Cavusgil, 2020).

Due to digitalization, the demands and behaviors of customers keep on changing, as well as the competition terrain. This has led to a paradigm shift in the way firms usually operate (Dillon, Glavas and Mathews, 2020; Grönroos, 2016). Sambamurthy, Bharadwaj and Grover (2003) recommended that firms use digitalization to build three interrelated capabilities to enhance their financial performance: customer agility, partnering agility, and operational agility. Digitalization has compelled firms to be more entrepreneurial and has changed the dynamics of international businesses, allowing firms to scale up and down their operations with ease at a lower cost and faster speed (Autio, Nambisan, Thomas and Wright 2018; Knight and Cavusgil, 1996; Loane 2006; Monaghan et al., 2020). More so, the experiences that entrepreneurs acquire, and leverage have changed. According to Dillion et al. (2020), operating in the digital context has birthed a new type of experience- “digital internationalization experience”-which occurs in the virtual realm, where individuals’ physical location is unknown. In this regard, Petersen, Welch and Liesch (2002) made predictions relating to the influence of the internet on a firm’s foreign market expansion to demonstrate the effects of digital technology on firms’ foreign expansion from limited to rapid. The

predictions made are evident in the foreign expansion of contemporary firms. Digital technology, such as the internet, provides a solution to the risk of market uncertainty, perceived to be one of the challenges associated with entrepreneurial firms' foreign market expansion (Knight and Liesch, 2016; Petersen et al., 2002). In the past, information about foreign markets was difficult to obtain. Firms had to spend huge amounts of money traveling to gather this information; however, the influx of internet-enabled tools, like Google, has alleviated the stress of traveling to gather information by making the information accessible to firms, thereby reducing the risk of market uncertainty. Recent studies also show that the digital context is also providing young entrepreneurial firms with novel ways to forge international business network connections (Kromidha and Robson, 2021; Loane, 2006; Tseng and Johnsen, 2011; Warner and Wäger, 2019; Weill and Vitale, 2001).

On one hand, while digitalization has become a growing trend among early internationalizing firms, it certainly warrants more research attention. This is because substantial anecdotal evidence establishes the influence of digitalization on the emergence of early internationalizing firms (Knight et al., 1996; Loane 2006). Research on how digitalization influences early internationalization among new ventures has not yet been fully the subject of a systematic literature review. For example, how digitalization influences the causes, processes, and outcomes of early internationalization. The related literature review found were conducted by Vadana et al. (2020) on how value chain digitalization affects born digital firms, and Piqueras (2020) on the recurring themes in born digital research. The scope of Vadana et al.'s (2020) and Piqueras (2020) reviews were rather narrow because the focus was on born-digital companies- example of an early internationalizing firm. Generally, over the years, scholarly journals through special issues have encouraged research to broaden our understanding on the impacts of digital technology (Chabowski and Samiee, 2020). For example, special issues have called for the need to develop new theories, modify existing theories, and determine how firms can benefit from digitalization as they do business around the world (Journal of International Business Studies, 2020). Further, scholars in the field of international business (IB) have called for research on how digitalization impacts firm internationalization (e.g., Katsikeas, Leonidou and Zeriti, 2020; Coviello, Kano and Liesch, 2017). Despite these efforts, the very limited extent to which the

digital context impacts early internationalizing firms, and their capability development has been the subject of scholarly investigations in academic journals is surprising. On the other hand, the phenomenon of early internationalization has amassed significant research attention in IB, IE, and other related fields, as reflected by the increasing number of studies from scholars and citations over the years, starting from Oviatt and McDougall's 1994 paper on INVs (see Figure 1 and Table 1)¹. Despite the development of research on early internationalization, considerable work lies ahead to advance our intellectual knowledge (Andersson et al., 2014; Cavusgil and Knight, 2015). Therefore, the first research gap of the dissertation addresses how digitalization shapes early internationalization focusing on the causes, processes, and outcomes.

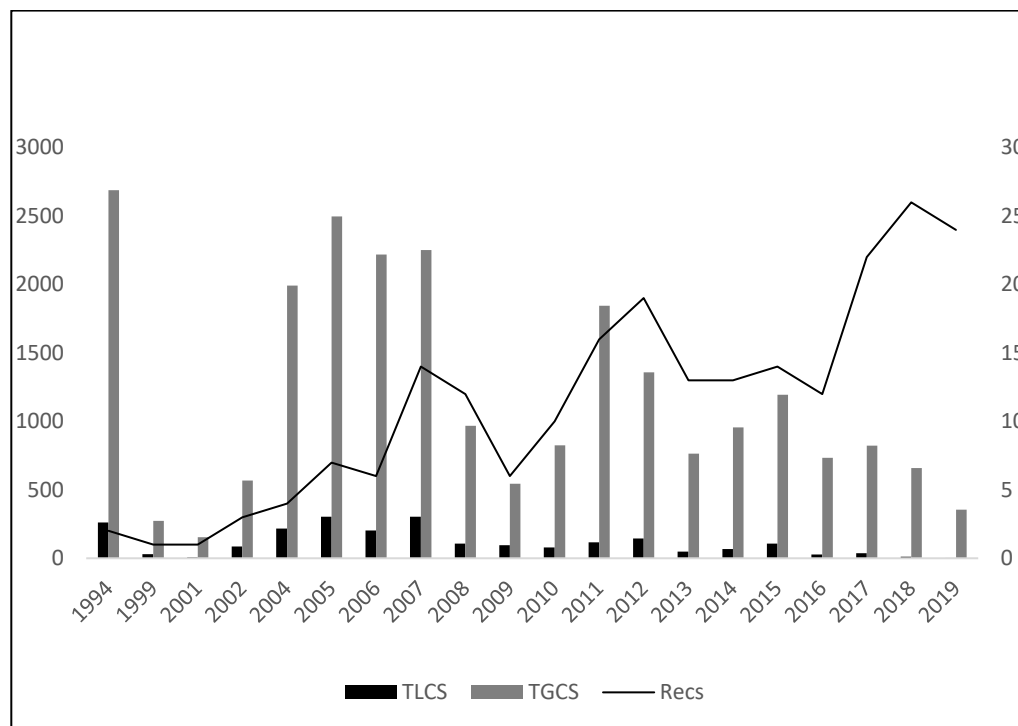


Figure 1. Annual research growth

*TLCS (Total Local Citations), TGCS (Total Global Citations)

¹ Bibliometric Analyses made by HistCite on data collected from WOS database. Keyword search syntax- ("early internationalization" OR "born global" OR "international new venture" OR "early internationalizing firm" OR "early internationalizing SME" OR "instant International firm" OR "rapid internationalization" OR "earliness of internationalization" OR "born international", "born regional" OR "instant internationals" OR "instant exporters" OR "international ventures" OR "infant multinationals" OR "instant internationals" OR "global start-ups" OR "early adopters of internationalization", OR "border firms" OR "borderless firms" OR "infant multinationals" OR "global start-ups" OR "early adopters of internationalization" OR "border firms" OR "gazelles" OR "global knowledge-intensive firms" OR "high technology start-ups" OR "new technology-based firms" OR "geographically focused start-up" OR "export start-up" OR "import start-up" OR "multinational trader" OR "global start-up"). Period: 1994-2019. 225 Articles; ABS 4*, 4 and 3 journals (Selection is anchored on the premise of Bradford's Law, which states that evaluating the top sections of a domain is sufficient to understand the complete domain. Journals- International Business Review, Journal of World Business, International Marketing Review, Journal of International Business Studies, Journal of International Marketing, Journal of Business Research, Industrial Marketing Management, Journal of Business Venturing, Entrepreneurship and Regional Development, Small Business Economics, European Management Journal, Entrepreneurship Theory and Practice, European Journal of Marketing, International Journal of Entrepreneurial Behavior Research, Long Range Planning, Strategic Management Journal, Academy of Management Journal, Academy of Management Review, British Journal of Management, Harvard Business Review, International Journal of Entrepreneurial Behavior Research, International Small Business Journal, Journal of Management, Journal of The Academy of Marketing Science, Technological Forecasting and Social Change.

Table 1. Top 10 impactful authors

#	Author	Recs	TLCS	TGCS
1	Gabrielsson M	7	90	656
2	Zhou LX	7	46	626
3	Ciravegna L	6	51	459
4	Evers N	6	11	320
5	Gabrielsson P	6	51	455
6	Liesch PW	6	81	908
7	Dimitratos P	5	41	370
8	Freeman S	5	96	695
9	Knight G	5	146	1118
10	Martin SL	5	16	318

The second research gap is related to the underlying dynamic capabilities for early internationalization. While we know that digitalization has facilitated early internationalization, we do not yet fully understand how the underlying dynamic capabilities that influence the process are developed or changed over time. Dynamic capabilities are of the essence for early internationalization but scholars (e.g. Zahra et al., 2006; Evers, Andersson and Hannibal, 2012; Tallott and Hilliard, 2016) record that there is a lack of empirical dynamic capabilities studies on new and small ventures. Furthermore, ambidexterity, which according to scholars (e.g. Kahiya and Warwood, 2022; O'Reilly and Tushman, 2007) is a dynamic capability, is sparsely addressed. The early internationalizing literature informs us that founding entrepreneurs and management teams support early internationalization; however, Fletcher and Prashantham (2011) add that the support is augmented by new knowledge obtained from a firm's ongoing activities. Learning from the international experiences of entrepreneurs and management teams is about the exploitation of existing knowledge. In contrast, learning from firms' ongoing international activities is more exploratory than exploitative.

However, there is a lack of studies on how early internationalizing firms maintain a balance between exploitative and exploratory learning abilities, -which O'Reilly and Tushman (2007) termed ambidexterity- and how the process is influenced by digital technology following early foreign market entry. Existing studies are largely MNCs (Han and Celly, 2008; Hsu, Lien and Chen, 2013).

Finally, the research shows that early internationalizing firms have the learning advantage of newness (LAN) that enables them to adapt to emergent environmental changes and respond internally to continual change (Autio et al., 2000). However, there is a lack of processual studies on how LAN is formed and developed into an advantageous capability to influence post-internationalization speed digitally during liminality (Prashantham and Floyd, 2019). Liminality is the transition process from a state of no internationalization to stable foreign market operations (Prashantham and Floyd, 2019). LAN is the advantage due to newness that enables early internationalizing firms to acquire new knowledge to build new capabilities and recombine existing ones to adapt to market changes (Stinchcombe, 1965; Autio et al., 2000). Therefore, the third research gap focuses on the development of LAN.

The above research gaps provide a rich setting for studying early internationalization in a digital context using a capabilities-based approach. The capabilities-based approach suggests that a firm can achieve competitive advantage and superior performance through its distinctive capabilities (Barney, 1991; Grant, 1991; Prahalad and Hamel, 1990). Capabilities are critical for firms to successfully gain entry into the international market early and are valuable for creating a competitive advantage (Hoopes and Madsen, 2008; Kahiya and Warwood, 2022; Knight and Liesch, 2016; von Krogh and Roos, 1995). Capabilities are also difficult to imitate and can be used to create barriers to imitation (von Krogh and Roos, 1995). Understanding the exact processes and underlying dynamic capabilities of early internationalization in a digital context from a capabilities-based approach is a paramount research area that was previously unexplored. This is the focus of this research. The capabilities-based approach offers fascinating insights for both IE and IB literature and provides new information regarding how early internationalizing firms leverage their capabilities whilst they implement digital technology in their internationalization

processes to gain a sustainable international competitive advantage and performance. The capabilities-based approach distinguishes capabilities into two types: substantive capabilities and dynamic capabilities. The focus of this dissertation is on dynamic capabilities (represented as international dynamic capabilities).

1.1 Research Aim and Questions

Based on the research gaps, this dissertation formulates the main research question: *What are the processes and mechanisms that support early internationalization in the digital context?* To provide further support for the analysis of the main research question, this dissertation seeks to bridge this research gap by addressing four sub-research questions. The sub-research questions are related to four essays used in this dissertation. Each sub-research question corresponds to one of the four essays. Essay 1 relates to the first sub-research question; Essay 2 relates to the second sub-research question; Essay 3 relates to the third sub-research question; and Essay 4 relates to the fourth sub-research question. The sub-research questions are as follows:

RQ1: How does digitalization shape the early internationalization of firms?

RQ2: How do international dynamic capabilities and their influence on early internationalization outcomes change over time in the digital context?

RQ3: What is the role of digital technology in driving ambidextrous learning and survival after early internationalizing firms gain entry into foreign markets?

RQ4: How does learning advantage of newness of early internationalizing firms develop in the digital context during liminality to influence post-internationalization speed?

Table 2 shows a summary of the correspondence of the essays to the sub-research questions and the study approaches.

Table 2. Correspondence of research questions to essays

Sub-research questions	Publication	Type of study
RQ1	Essay 1: Digitalization and Early Internationalization- Systematic Literature Review Analyses	Systematic literature review
RQ2	Essay 2 International Dynamic Capabilities and Financial Performance of Internationalizing Firms	Longitudinal survey study (prospective and retrospective with 2-year data points)
RQ3	Essay 3: Ambidextrous learning and survival of early international firms-The role of social media usage	Conceptual
RQ4	Essay 4: Liminality and developmental process of learning advantage of newness of early internationalizing firms	Longitudinal multiple case study (prospective and retrospective with three rounds of data collection)

1.2 Study Positioning

This dissertation falls within the scope of early internationalization studies, one of the main IE research streams identified by Jones, Coviello and Tang (2011). Early internationalization refers to the early leap of firms after their foundation through export or any other entry mode into international markets in their first years of activity (Knight and Liesch, 2016; Oviatt and McDougall, 1994). The dissertation differs from studies that have investigated early internationalization as an outcome of organizational activities; it focuses on the effects of this phenomenon on firms. In complementing the positioning of this dissertation, the author utilizes a capability-based lens focusing on international dynamic capabilities (i.e. sensing, seizing, and transforming), and ambidexterity which are originally from the

strategic management literature (Luzon and Pasola, 2011; Zucchella and Magnani, 2016). The dissertation moves a step further to extend the multi-disciplinary nature of IE by cross-fertilizing ideas on digitalization from information systems (IS) literature. The author argues that just as digitalization has created a medium for firms to internationalize across geographical borders (Knight and Cavusgil, 1996) so have the realities of research changed. Therefore, scholars in IE can neither ignore the power of digital technologies originating from the digital context nor do scholars in IS ignore entrepreneurial internationalization. By this, the dissertation responds to the call for more interdisciplinary studies (Coviello, McDougall and Oviatt, 2011; Cavusgil and Knight, 2015). As noted by Knight and Liesch (2016), “scholars should aim to integrate perspectives from entrepreneurship and IB and span theoretical boundaries and disciplines to create new perspectives or frameworks that improve understanding of...early internationalization” (p. 98). Theoretically, the entire dissertation contributes to the IE and IB research streams, by providing theoretical knowledge and empirical evidence on the development of capabilities of early internationalizing firms and related outcomes in the digital context.

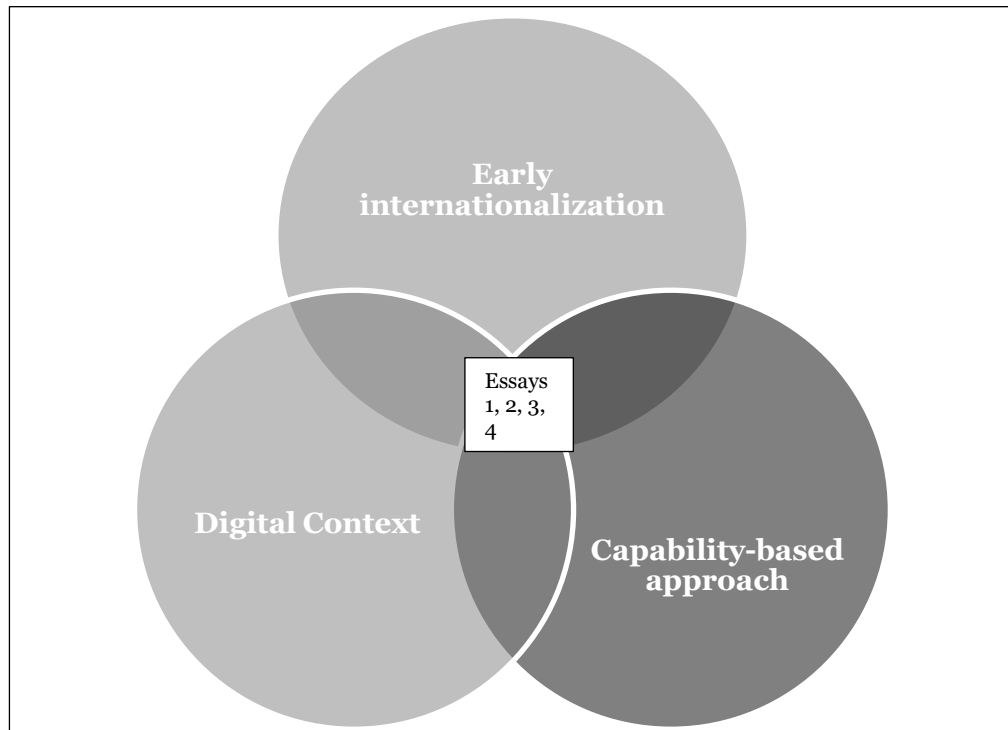


Figure 1. The positioning of the Dissertation

In sum, this dissertation is positioned at the interface of three specific areas (See figure 1): early internationalization, digital context, and capabilities-based approach. Essay 1 is on the nexus of early internationalization, digital context with focus on digitalization and, capabilities-based approach with focus on development of capabilities. Essay 2 is on the nexus of early internationalization, digital context with a focus on digital capabilities, and capabilities-based approach with focus on international dynamic capabilities. Essay 3 is on the nexus of early internationalization, digital context with a focus on social media usage, and capabilities-based approach with focus on ambidexterity. Finally, Essay 4 is on the nexus of early internationalization, digital context, and capabilities-based approach with focus on LAN.

1.3 Intended Contributions

Research on the nexus of early internationalization, digital context, and capabilities-based theoretical approach has significant promise. Answers to the above research questions of this dissertation allow to provide a starting point for such theoretical refinement and advancement. The dissertation makes several contributions that can benefit researchers in IB and IE streams. Firstly, the dissertation cross-fertilizes perspectives from IB, IE, and IS to enhance our understanding of early internationalization in the digital context, which represents a widespread, ongoing trend. In doing this, it responds to the call for more interdisciplinary studies (Cavusgil and Knight, 2015; Etemad, 2017).

Secondly, the dissertation augments the few existing studies on early internationalization and digitalization by investigating this phenomenon from a capabilities-based approach. Therefore, it advances our knowledge in the capabilities literature by suggesting that apart from a new venture's existing resources (e.g. digital resources), early internationalizing firms generate capabilities that support the internationalization process and outcomes in a digital context.

Thirdly, according to Autio et al. (2010), "the literature on international entrepreneurship and organizational capabilities remains largely silent when it comes to the study of emergence of capability in entrepreneurial firms" (p. 11).

Thus, the dissertation responds to calls for more empirical research on capability development processes among entrepreneurial firms (Autio et al., 2011; Drummond, McGrath and O'Toole, 2018; Sigfusson and Chetty, 2013; Zahra et al., 2006). It also responds to the call for more research on the impact of digitalization on internationalization (e.g. Coviello et al., 2017; Hazlehurst and Brouthers, 2018; Vahlne and Johanson, 2017).

Fourthly, the dissertation clarifies the underlying capabilities that support the early internationalization process in the wake of digital technology usage. It contributes to our understanding of the survival mechanisms of early internationalizing firms in foreign markets towards the achievement of sustainable performance and related outcomes from a capabilities-based approach. This contribution goes further by providing knowledge of early internationalizing firms that exist in a digital context (Ojala et al., 2018).

This dissertation also has practical implications for early internationalizing firms. It intends to generate insights for managers, entrepreneurs, and firms' key decision-makers on how the capabilities underlying the early internationalization of entrepreneurial firms evolve to influence internationalization outcomes in the digital context. In addition, firms across sectors are exploring and experimenting with digital technologies such as big data, social media, and digital communication systems in their operations. Therefore, this dissertation intends to generate novel insights that will serve as a repository for entrepreneurs, managers, professionals, and policymakers. It highlights potential contributions in the digital context as a conduit for potentially answering challenges faced by international entrepreneurs and managers.

In contributing to both theory and practice, this dissertation considers ethical issues as an important aspect of the research process. It is commissioned and conducted with respect for diversity such as gender, ethnicity, race, culture, religion, organizational differences, and social status. Further, this dissertation holds in high esteem the confidentiality of interviewees' information. In view of this, the consent of the interviewees was obtained before interview scripts were used for further analyses. Finally, all copyright reference materials are properly

referenced, and all the required principles and guidelines stipulated in the EU Code of Ethics for Socio-Economic Research are adhered to.

1.4 Research Process and Outline

This section delineates the process and the entire structure of this dissertation. The dissertation process is summarized in Figure 3. The dissertation process encompasses five stages- namely, research idea development, refinement of ideas, research proposal development, writing and publication. At the research idea development stage, the author conceptualized the idea, embarked on a literature search, and selected the dissertation topic. Next, at the refinement of the research idea stage, the author polished the conceived idea by discussing it with his supervisors and internal international business seminar in his university. Moving further to the research proposal development stage, the author drafted a proposal. The proposal was submitted and presented at the 22nd McGill International Entrepreneurship Doctoral Colloquium at Halmstad University. The author modified the proposal by incorporating ideas from the doctoral colloquium and the supervisor. Finally, at the writing and publication stage, the author drafted and submitted the individual essays for conferences and journals for review.

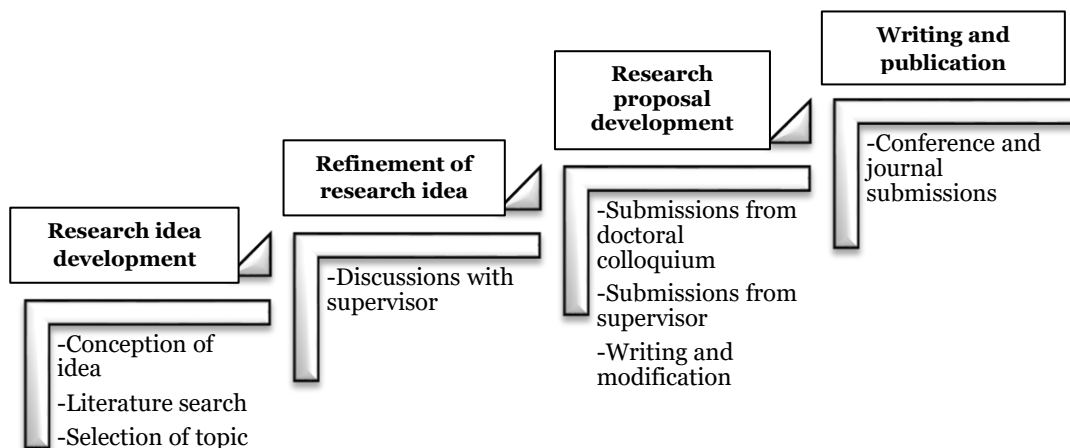


Figure 3. Dissertation process

The remaining chapters of the dissertation are structured (see Figure 4) as follows: chapter 2 focuses on the theoretical background, and the theoretical framework of the dissertation; chapter 3 focuses on methodology and research design, including the methodological approaches, data collection and analysis; chapter 4 focuses on the summary of the essays (i.e. Essays 1, 2, 3, 4) which make up the dissertation; and chapter 5 focuses on the conclusion including the integration of findings, contributions, limitations, and future research direction.

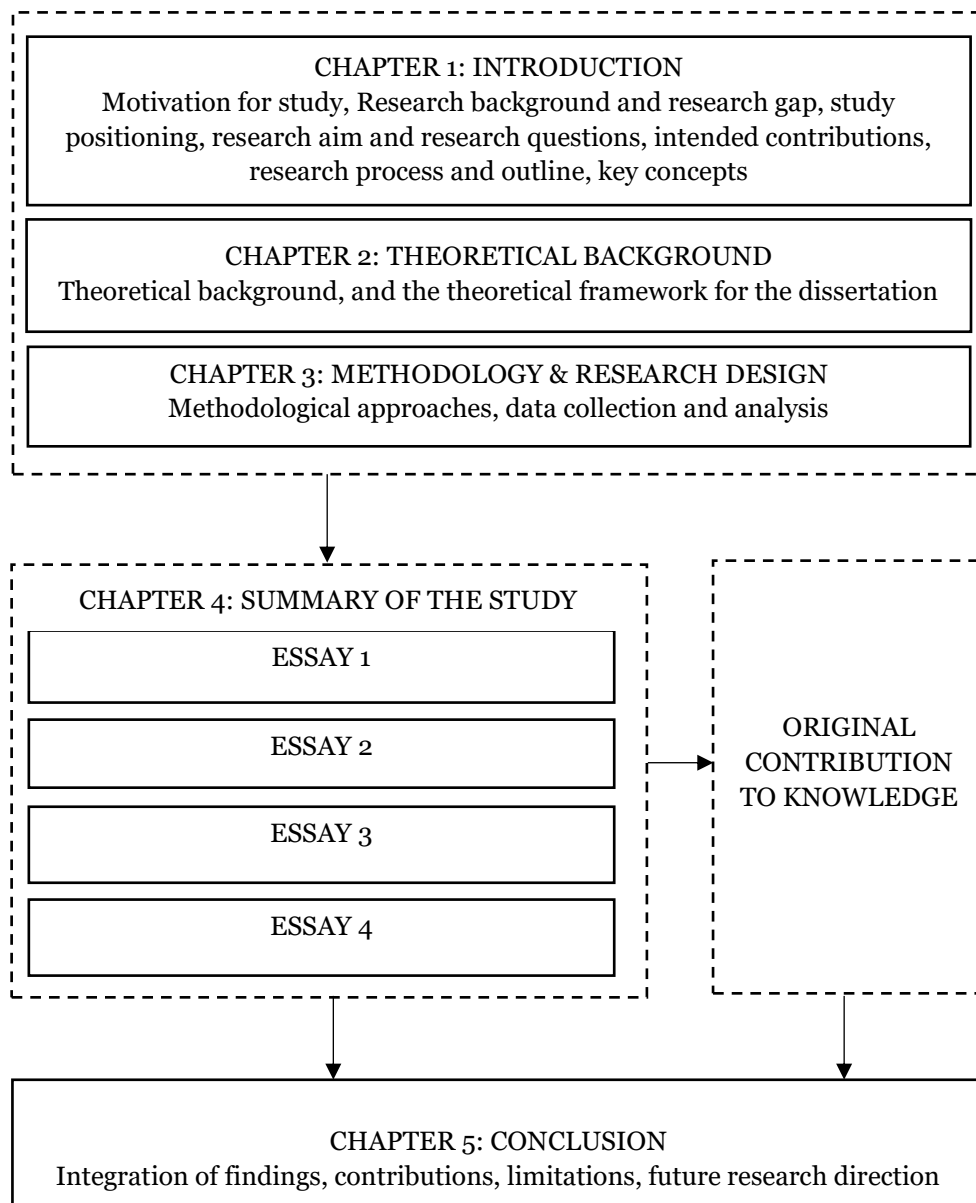


Figure 4. Outline of the dissertation

1.5 Key Concepts Defined

The dissertation is hinged on the following key concepts- 1) Internationalization, 2) Early internationalization, 3) Digital Context, 4) Digitalization, 5) Capabilities-based approach, 6) International Dynamic Capabilities, 7) Learning advantage of newness, 8) Liminality. This section defines the key concepts from the perspective of scholars and extends further to define them in the context of this dissertation.

1.5.1 Internationalization

The concept of internationalization has evolved over the years, and so it needs to be clarified (Chetty, 1999). Wind, Douglas and Perlmutter (1973) isolate internationalization as a process in which specific mindsets (e.g. ethnocentric, polycentric, regiocentric, and geocentric) are associated with successive stages in the evolution of international operations. By this conceptualization, Wind et al. (1973) developed the EPRG framework for international marketing. The underlying assumption of this framework is that the degree of internationalization (e.g. ethnocentric, polycentric, regiocentric, or geocentric) affects the international strategy and decisions taken by firms. Johanson and Vahlne (1977) also consider internationalization as a sequential process in which a firm incrementally increases its commitments to foreign markets based on gradual acquisition, integration, and use of knowledge about foreign markets and operations. From a network perspective, Johanson and Mattsson (1993) define internationalization as a “cumulative process, in which relationships are continually established, maintained, developed, broken and dissolved in order for firms to achieve their objectives” (1993, p. 306). Similarly, Johanson and Vahlne (1990) define internationalization as the “process of developing networks of business relationships in other countries through extension, penetration, and integration” (p. 20). In contrast, from the lens of liminality, Prashantham and Floyd (2019) define internationalization as a transition process from a state of no internationalization to stable foreign market operations. Others such as Calof and Beamish (1995) explicitly define internationalization as “the process of adapting firms’ operations (strategy, structure, resources, etc.) to international environments” (p. 116). This definition explicates that internationalization can also

take the form of de-investment whereby a firm withdraws from its international operations in response to certain factors (Chetty, 1999). The afore-mentioned conceptualizations isolate internationalization as an outward activity. However, Welch and Luostarinen (1988) consider internationalization as an inward-outward process of increasing involvement in international operations. To provide an alternative perspective, in this dissertation, the author captures internationalization as an early transition process whereby a firm adapts its operations to international environments.

1.5.2 Early Internationalization

Early internationalization refers to the early leap of firms after their foundation through export or any other entry mode into international markets in their first years of activity (Knight and Liesch, 2016; Oviatt and McDougall, 1994). Early internationalization is a fundamental characteristic of international new ventures (INVs) and born globals (BGs) (Knight, Madsen and Servais, 2004). Both INVs and BGs are classified as EIFs, and scholars use them interchangeably (Andersson, Evers and Kuivalainen, 2014; Crick, 2009). Some other scholars prefer the terms infant multinationals (Lindqvist, 1991), instant internationals (Preece, Miles, and Baetz, 1999), global start-ups (Oviatt and McDougall, 1994); gazelles (Birch, 2001); early adopters of internationalization (Knight and Cavusgil, 2004) to frame the same idea. McDougall and Oviatt (2003) argue that there are no clear definitional differences between the choices of terms. Between INVs and BGs, some scholars (e.g. Cavusgil and Knight, 2015; Crick, 2009) attest to existing similarities but argue that they are distinctive in some ways. For example, the scholars attest that both INVs and BGs are young firms, but BGs have global focus compared to INVs that have more regional focus. For the sake of theoretical parsimony and consistency, in this dissertation, the author refers to INVs. To relate this research to other studies, the dissertation employs the widely used definition of INVs as firms that from inception seek to derive significant competitive advantage from the use of resources and the sale of output in multiple countries (Oviatt et al., 1994), operationalized as making at least 25% foreign sales out of total sales within three years after foundation (Knight and Cavusgil, 2004; Oviatt et al., 1994; Oviatt and McDougall, 1997).

1.5.3 Digital Context

Context refers to the “situational opportunities and constraints that affect the occurrence and meaning of organizational behavior as well as functional relationships between variables” (Johns, 2006, p. 386). According to Johns (2006), a context can be classified as omnibus or discrete. The omnibus refers to the general implementation setting or the broader context as a whole, whereas the discrete context refers to contextual elements that shape behavior or moderate relationships between variables. In line with John’s (2006) conceptualization, the dissertation defines digital context as a setting marked by the power of digitalization in shaping the capabilities and outcomes of early internationalizing firms. It relates the digital context as the implementation setting (i.e. omnibus) and, digital capability and social media usage as discrete context influencing the behavior of early internationalizing firms.

According to Monaghan et al. (2020), the degree of digitalization of firms operating in the digital context varies. There are firms transitioning to become digital; firms that have digitized part of their operations; and firms that are fully digitalized, having their operations and service delivery online (Monaghan et al., 2020). In this dissertation, the focus is on firms that have digitized part of their operations and those that have fully digitalized.

1.5.4 Digitalization

Though digitization is a requisite for digitalization, most of the time we tend to use digitization instead of digitalization. Digitization is “the encoding of analog information into digital format (Verhoef et al., 2021; Yoo Henfridsson and Lyytinen, 2010). Examples concern the use of digital surveys, the use of digital applications for ordering internal and external documentation processes, and the use of digital applications for financial declarations. According to Verhoef et al. (2021), digitization mainly digitalizes documentation processes but does not change value creation activities.

In this dissertation, the attention is on digitalization. Digitalization is defined in different ways (see Table 3), depending on the context. Building on prior

definitions, the dissertation defines digitalization as the use of digital technologies originating from the digital context to transform a firm's activities such as enhancing the communication interface with customers, suppliers, and channel partners, streamlining operations or creating new business models (Fitzgerald, Kruschwitz, Bonnet and Welch, 2014), which Autio, Nambisan and Thomas (2018) labeled as digital affordances.

Table 3. Definitions of Digitalization

Definition	Reference
It is the usage of algorithms and digital data structures for the performance of control, communication, and execution of tasks.	Autio, Mudambi and Yoo (2021)
It is the usage of digital technologies to change existing business processes.	Verhoef et al. (2021)
It is the process of digitizing a firm's activities and integrating phone, Internet, mobile technologies to transform the communication interface with customers, suppliers, and channel partners.	Wang (2021)
It is the process of transforming an organization's outputs and processes into Internet-compatible data packages for marketing, sales, and distribution.	Banalieva and Dhanaraj (2019)
It "is the use of digital technologies to innovate a business model and provide new revenue streams..." (p. 6)	Parida, Sjödin and Reim (2019)
It is the exploitation of digital opportunities. For instance, using different technologies to develop new products, services, and business models.	Rachinger, Rauter, Müller, Vorraber and Schirgi (2019)
It is the use of digital technology, and digitized information, to create and commercialize value	Gobble (2018)

1.5.5 Capabilities-Based Approach

Capabilities, as a concept, have attracted diverse meanings. According to Dosi, Winter and Nelson (2000), “the term capabilities float like an iceberg in a foggy Arctic Sea, one iceberg among many, not easily recognized as different from several icebergs nearby” p.1. In line with Collis (1994), this dissertation defines capabilities as the embedded socially constructed routines that support firms to amass efficiency in operational activities. Collis (1994) classified capabilities into three categories. The first category is those that reflect an ability to perform the basic functional activities of a firm; the second category of capabilities is linked to a central theme of dynamic improvement to a firm’s operational processes; the third category is linked to a firm’s ability to develop uncontested strategies, and it is closely related to the second category (Collis, 1994). The capability-based view of firms’ scholars (e.g. Teece, 2017; Winter, 2003) has refined these descriptions into two main capabilities- namely- substantive capabilities also known as ordinary capabilities, and dynamic capabilities. Teece (2014; 2017) explains that substantive capabilities perform an operational task and can be bought, for example, accounting, administration, and sales. On the contrary, dynamic capabilities govern the rate of changes in ordinary capabilities and cannot be bought but built (Teece, Peteraf and Leih, 2016; Teece, 2007). Dynamic capabilities align a firm with its environment to reach “evolutionary fitness” (Helfat, 2007). It provides an understanding of how firms attain and sustain competitive advantage in turbulent environments by responding to changing conditions based on what they learn from sources in the market, their network of relationships, and the learning that is harnessed internally within them (Teece, et al., 1997). In early internationalization research, Sapienza, Autio, George and Zahra (2006) report that early exposure to internationalization creates a dynamic capability imprint for adaptability to emergent environmental changes and internal responsiveness to continual change. This dissertation focuses on dynamic capabilities. To relate this study to existing internationalization studies, international dynamic capabilities are adopted to represent dynamic capabilities.

1.5.6 International Dynamic Capabilities

Scholars in early internationalization research have identified various kinds of international dynamic capabilities that support the internationalization of early internationalizing firms. For instance, Kahiya and Warwood (2022) found absorptive capacity, ambidexterity, dynamic managerial, dynamic learning, and dynamic social capabilities. In this dissertation, the focus is on international dynamic capabilities, and ambidexterity. Following Teece (2007), the dissertation identifies international dynamic capabilities as the capabilities which a firm uses to sense, seize, and transform internal and external competencies to address opportunities emerging from a rapidly changing foreign environment. Regarding ambidexterity, the dissertation defines it as the international dynamic learning capabilities that enable early internationalizing firms to attain a balance between exploitative and exploratory learning choosing either to focus on differentiation tactics or on integration tactics to increase their international performance. Differentiation tactics involve a firm engaging in a knowledge development process focusing on either exploitation or exploration. That firm can switch from one to the other to suit its strategy at different times. Integration tactics, in contrast, involve a firm concurrently utilizing exploratory and exploitative learning in its knowledge development process (Birkinshaw and Gibson, 2004; Karafyllia and Zuchella, 2017).

1.5.7 Liminality

Rooted in social anthropology, liminality is the process of potential change between an old and new period (Turner, 1969). In the context of early internationalization research, this dissertation defines it as a threshold between the state of no internationalization and stable internationalization where a firm progressively adapts to the conditions prevailing in the foreign market. In the state of liminality, it is assumed that early internationalizing firms encounter deficiencies such as liability of newness, liability of size or smallness, liability of foreignness that challenge their survival and growth (Zahra, 2005; Zhou, Barnes and Lu, 2010). At the same time, evidence shows that early internationalizing firms are more innovative and can benefit from a LAN to attain stable

internationalization foreign operations (Autio, Sapienza and Almeida, 2000). The next section provides a detailed explanation of LAN.

1.5.8 Learning Advantage of Newness

In early internationalization research, one of the dominant organizational learning theoretical frameworks utilized by scholars is Huber's (1991) organizational learning framework (De Clercq, Sapienza, Yavuz and Zhou, 2012; Tuomisalo and Leppäaho, 2018). According to the framework, knowledge acquisition is derived from five different forms of organizational learning- namely, experiential learning, vicarious learning, searching, grafting, and congenital learning. The ability of early internationalizing firms to acquire knowledge from these forms of learning is built on their LAN (Autio et al., 2000). Building on the Oviatt and McDougall's (1994) insights on the advantages of new ventures in learning about foreign markets, and on Penrose's (1959) resource heterogeneity assumption where experiential knowledge is a key resource, Autio et al. (2000) conceptualized LAN as the advantage due to new ventures to learn and acquire new knowledge from the foreign market compared with existing firms (Autio et al., 2000). Following Autio et al. (2000), this dissertation defines LAN- a counterpoint to the liability of newness- as the market-focused advantage that newer firms have in learning new competencies necessary for commercialization, long-term survival, and value creation in foreign markets (Autio et al., 2000).

2 THEORETICAL BACKGROUND

2.1 Internationalization Process

Scholars have used a plethora of theoretical perspectives to explain the internationalization process of firms. Among the most established theoretical perspectives are 1) the traditional process perspective, 2) the network perspective, and 3) the international entrepreneurship perspective (Costa, Soares, and de Sousa, 2017). First, the traditional process perspective, also known as stages models of internationalization, according to which firms should internationalize like “rings in the water” is rooted in the behavioral approach of firms (Andersen, 1993; Kocak and Abimbola, 2009; Madsen and Servais, 1997). Upon this came forth the Uppsala model (Johanson and Vahlne, 1977, Johanson and Wiedersheim-Paul, 1975), the Helsinki model (Korhonen, 1999; Welch and Luostarinen, 1993; Luostarinen, 1979), and the innovation model of internationalization (Bilkey and Tesar, 1977, Cavusgil, 1980).

The Uppsala model is one of the much-cited and much-criticized theoretical assumptions (Welch, Nummela and Liesch, 2016; Niitymies and Pajunen, 2020). The model provides a vivid explanation of why firms initiate internationalization processes later in their developmental stages and why such processes proceed gradually from inception (Johanson and Vahlne, 1977; Johanson and Vahlne, 2009). It assumes that firms begin internationalizing by ad hoc exporting. As they begin to amass legitimacy, they formalize their operations through agents, and as sales upsurge, they set up their subsidiary or manufacturing plants in the foreign market. It is also underpinned by the notion of psychic distance whereby these firms target operations in firms that have short psychic distance. Psychic distance in this context relates to differences in culture, economic, financial, political, administrative, demographic, connectedness, and geography. According to Johanson and Vahlne (2009), the underlying assumptions of the process model are uncertainty and bounded rationality associated with two change mechanisms. The first change mechanism described by the authors is the change by experiential learning from foreign markets. The second mechanism is the change through decisions to be committed to investments in foreign markets. The innovation

model of internationalization, on the other hand, assumes internationalization as a step-by-step developmental process: at the initial stage firms tend to be uninterested in exporting but later in the developmental stages, they become experienced in exporting to close physical distant countries and explore the possibility to export to further distant countries (Bilkey and Tesar, 1977; Czinkota, 1982).

Finally, the Helsinki Internationalization model is based on a concept called lateral rigidity. Firms are rigid towards new international alternatives (countries, operations modes or products), but through learning they are able to reduce the uncertainty and progress to new alternatives (Luostarinen, 1979). Like the Uppsala model, it assumes that firms begin internationalization from nearby countries with simple structures and operational modes; however, the firms can skip some of the stages of the internationalization process to speed up the process (Chetty, 1999). According to the Helsinki model, a firm can de-internationalize and re-internationalize in the internationalization process (Korhonen, 1999; Welch and Luostarinen, 1993; Luostarinen, 1979).

The traditional internationalization process models maintain that firms internationalize in a stepwise fashion. They may be SMEs or larger firms when they start internationalization, but over time they may develop into well-resourced multinational enterprises (MNEs) (Knight and Cavusgil, 2004; Knight and Liesch, 2016). Managerial empirical studies have confirmed the importance of the traditional process perspective in internationalization research (Chetty, 1999; Welch and Luostarinen, 1988). Notwithstanding, it has also attracted criticism. Critics of the traditional process perspective of internationalization state that they are episodic rather than holistic (Fletcher, 2008). The reason is that it fails to explain entrepreneurial firms that make the early international leap into foreign markets (McDougall, Shane and Oviatt, 1994; Oviatt and McDougall, 1997; Autio, et al., 2000; Fletcher, 2008) and ignores the role played by the entrepreneur or founding members (McDougall et al., 1994).

Second, the network perspective focuses on the cumulative process of relationship building through gradual learning and development of market knowledge for firms to achieve their objectives (Johanson and Mattsson, 1993; Johanson and Mattsson

1988). The underlying logic behind this perspective is that firms depend on networks for their successful internationalization, for example, in activities such as foreign market selection and mode of entry, product development, and market diversification (Johanson and Mattsson, 1993; Coviello and Munro, 1997). Based on the network perspective, Johanson and Vahlne (2009) revised the Uppsala internationalization process model. The revised model brings to light that business networks are important for firm internationalization, particularly on the role of outsidership increasing the lack of critical network relationships in foreign markets (Johanson and Vahlne, 2009; Niitymies and Pajunen, 2020). Johanson and Vahlne (2009) contend that networks have implications on the learning process, trust, and commitment levels of firms toward the quest of creating and exploiting network-related opportunities. Likened to the 1977 model, the revised model (2009) is characterized by two state variables and two change mechanisms. On one hand, the two-state variables are knowledge opportunity and network position. On the other hand, the two change mechanisms are relationship commitment decisions, and learning and trust-building. The revised model assumes that relationships are associated with certain levels of unevenly distributed knowledge, trust, and commitment among network parties, which may cause diversity in how they promote successful internationalization (Johanson and Vahlne, 2009). The network perspective has become a dominant theoretical framework in internationalization process research (Johanson and Kao, 2010). For example, Coviello (2006) used it to explain the dynamic process of early internationalization. However, it has attracted critiques. Scholars (e.g. Björkman and Forsgren, 2000) criticize that its strength as a tool for understanding internationalization is limited because it provides superficial predictions (i.e. provides less precise conclusions about the empirical manifestations of internationalization) (Björkman and Forsgren, 2000). Scholars have used the network perspective and the traditional process perspective extensively in an array of studies. This dissertation makes a deviation by focusing on the international entrepreneurship perspective of entrepreneurial internationalization.

Third, the international entrepreneurship perspective, which explains the process of opportunity recognition outside the domestic market of a firm (Knight and Liesch, 2016), perceives entrepreneurial internationalization to be early and rapid. It has brought the notion of speed to the forefront of academic debate, challenging

the incremental and slow internationalization process described by the traditional process of internationalization (Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975; Korhonen, 1999; Welch and Luostarinen, 1993; Luostarinen, 1979). Early internationalization has attracted a wide growing interest and its ideas are prominent in management literature, business and textbooks press, entrepreneurship, IB, business consulting press, and others (Knight and Cavusgil, 2004; Knight and Liesch, 2016). It refers to the early leap of firms into foreign markets (Oviatt and McDougall, 1994; Knight and Cavusgil, 2004; Wu and Zhou, 2018). Such firms have been named differently but the most used ones are INVs (Oviatt and McDougall, 1994) and born globals (BGs) (Rennie, 1993; Knight and Cavusgil, 1996).

2.1.1 Early Internationalization

Historically, McDougall's (1989) paper where she compared domestic and international new ventures marks a starting point for the usage of the term "INV". However, the theoretical explanation of the term was clarified by Oviatt and McDougall (1994) by presenting a framework built on internalization theory from international business and the resource-based view (RBV) from strategic management. Oviatt and McDougall (1994) define INV as a firm that from inception, "seeks to derive significant competitive advantage from the use of resources and the sale of output in multiple countries" (p. 49). This definition theorizes early internationalization based on the age of firms when they become international, rather than on their size. According to their framework, four salient elements underpin the formation of INV. Namely, (1) organizational formation through internalization of some transactions to overcome high economic market prices, for example, transaction costs of constructing and executing contracts, and the cost in the monitoring of the performance of the contracting parties (2) due to resource poverty, they have minimal use of internalization and the greater use of alternative transaction governance structures such as licensing, networking, and franchising. (3) greater mobility of knowledge promoting the establishment of foreign location advantages over indigenous firms in foreign locations (4) control over unique resources through patenting, licensing, protection with secrecy, and networking (Oviatt and McDougall, 1994). Following prior case studies, Oviatt and McDougall (1994) explain that these elements manifest themselves in a variety of

ways, which lead to four different types of INVs. They used two dimensions to identify these four types- coordination of value chain activities (few vs. many) and the number of countries involved (few vs. many). The four types of INVs are export/important start-ups (focused on few activities and few countries), multinational traders (focused on few activities and many countries), geographically focused start-ups (focused on many activities but few countries), and global start-ups (focused on many countries and many activities) (Oviatt and McDougall, 1994). In contrast, the term “born global” was first adopted by McKinsey & Company in studying early internationalization among 300 Australian manufacturing firms that expand rapidly into global markets without having an established domestic base (McKinsey & Co., 1993; Rennie, 1993). Cavusgil (1994) highlighted the results of this study in the first scholarly article about BG published in Marketing News Journal. BG is a firm that decides to internationalize at or near its founding to derive revenue from the sale of products, typically exporting to foreign markets (Knight and Cavusgil, 2004; Cavusgil and Knight, 2015). BGs “view the world as their marketplace from the outset and see the domestic market as a support for their international business” (McKinsey & Co., 1993, p.9). They embark on foreign direct investment in important markets that have a global vision and strategy from inception (Crick, 2009).

2.1.2 Research on Early Internationalization

The research on early internationalization is multifaceted and fragmented in terms of unifying themes or paradigms (Keupp and Gassmann, 2009). Firstly, there is no consensus in the literature on the starting time of foreign initiation, and the scale of internationalization. McKinsey & Co. (1993) find that the starting time of foreign initiation ranges from *within two years of inception*. To Zahra, Ireland and Hitt (2000), it is *within six years*; Jolly, Alahuhta and Jeannet (1992), *within seven years*; Oviatt and McDougall (1994), *within six years*; Chetty and Campbell-Hunt (2004), *within two years*; Servais, Zucchella and Palamara (2007), *within three years*; Luostarinen and Gabrielsson (2006), *from the time of inception*. About the scale of internationalization, McKinsey & Co. (1993) find *75% export intensity within two years of inception*, Servais et al. (2007) find *at least 25% of foreign sales within three years*; Knight and Cavusgil (1996) find *at least 25% of foreign sales within two years*; Luostarinen and Gabrielsson (2006) find *over 50% of*

sales outside the home continent. According to Liesch and Knight (2016), these criteria are arbitrary because they fail to factor in the nature of the founding of the firm and surrounding activities, and do not consider context. In this dissertation, the author operationalized early internationalizing firms as making at least 25% foreign sales out of total sales within three years after foundation (Knight and Cavusgil, 2004; Oviatt et al., 1994; Oviatt and McDougall, 1997).

Secondly, some of the studies on early internationalization focused on the factors that facilitate the early internationalization process (Ciravegna, Kundu, Kuivalainen and Lopez, 2018; Marinova and Marinov, 2017; Stucki, 2016; Nadkarni and Perez, 2007). For instance, Ciravegna, et al. (2018) uncovered unsolicited orders, the existence of underutilized capacity, and the behavior of competitors as three distinct combinations of antecedents that are linked to the early internationalization of small firms. Thirdly, others focused on the inherent contents of the early internationalization process by highlighting the underlying mechanisms contributing to internationalization performance (Falahat, Knight and Alon, 2018; Zhou, Wu and Barnes, 2012; Zhou, Barnes and Lu, 2010). For example, Zhou et al. (2010) show knowledge capability upgrading and network capability upgrading function as mediating mechanisms that link entrepreneurial proclivity and learning advantage-related performance of early international firms.

Finally, others focused on early internationalization and outcomes (Wu and Zhou, 2018; Autio et al., 2000). Autio et al. (2000) demonstrate how early internationalization and greater knowledge intensity confer to faster international growth. The afore-mentioned research areas are supporting evidence to Jones' (1999) conceptual stance on the holistic nature of early internationalization. Despite the research development of research in early internationalization, much work is needed to advance our knowledge (Cavusgil and Knight, 2015). Scholars have called for research on the impact of digitalization on internationalization, which includes early internationalization (Coviello, Kano and Liesch, 2017).

2.2 Capability-Based Approach

Studies have succeeded in documenting the early internationalization phenomenon from a capability-based approach. This section takes a review of analyses on how the extant capability-based view studies have addressed international dynamic capabilities, ambidexterity, and LAN.

2.2.1 International Dynamic Capabilities

Early internationalizing firms develop international dynamic capabilities to survive and grow in foreign markets (Sapienza, Autio, George and Zahra, 2006; Weerawardena, Mort, Salunke, Knight and Liesch, 2015). International dynamic capabilities involve higher-level activities that require integrating, building, and reconfiguring a firm's internal and external competencies to address and shape the rapidly changing business environment (Teece et al., 1997). It provides a firm with the means to provide the right service or product that addresses the changing demands of new and existing markets. Studies (see Table 4) have shown how early and rapid international firms develop international dynamic capabilities. According to Prange and Verdier (2011), international dynamic capabilities emerge from a combination of explorative and exploitative knowledge. In the same line, according to Autio et al. (2000), early international firms have learning advantages due to newness that enable them to acquire new knowledge to build new capabilities, and recombine existing ones in order to adapt to market changes; however, as the firms get older, they develop internal rigidities resulting from existing routines and capabilities that hamper the development of their dynamic capabilities. Finally, Pehrsson et al. (2015) also isolate the organizational stability of an early international foreign unit to moderate the development of international dynamic capabilities. They conclude that the more organizationally stable periods of the early international foreign unit, the stronger the positive relationship between product and market knowledge transferred from the parent firm and the foreign unit's international dynamic capabilities.

The extant studies apply both conceptual and empirical methods to illustrate the development of international dynamic capabilities. The empirical methods consist

Table 3. Studies on International Dynamic Capabilities Development

Researcher	Method	Theory used	Focus	Firms	Key Constructs	Findings
Monferrer, Blesa and Ripollés (2015)	Quantitative (Survey, and structural equation modelling)	Ambidexterity approach	studied the influence of network market orientation on Spanish born globals' adaptation, absorption and innovation dynamic capabilities and their influence on performance	Born globals (SMEs across industries)	Network market orientation, Adaptation capability, Absorption capability, Innovation capability	Network market orientation facilitates the development of dynamic, and exploratory capabilities (adaptation and absorption capabilities) in born globals
Andersson and Evers (2015)	Conceptual Paper	Dynamic capabilities framework	focused on the emergent perspective of dynamic managerial capabilities	International new ventures	International dynamic capabilities, Entrepreneur's dynamic managerial capabilities, International opportunity recognition	It illustrates a framework explaining how international dynamic capabilities of the firm can be created and enacted through the entrepreneur's international dynamic managerial capabilities
Tallott et al. (2015)	Qualitative (longitudinal single case study over a ten-year period)	Dynamic capabilities framework	examined the development process of dynamic capabilities (sensing, seizing, and transforming)	Irish SME	International dynamic capability development (sensing, seizing, transforming)	International dynamic capabilities are developed intentionally by managers through strategic decision making and deliberative learning

Researcher	Method	Theory used	Focus	Firms	Key Constructs	Findings
Pehrsson et al. (2015)	Qualitative (longitudinal study built on analyses of event histories)	Dynamic capabilities framework	utilized dynamic capability to explain the mechanisms behind the relationship between level of internationalisation and performance of new ventures	Swedish international new ventures	International dynamic capabilities relying on knowledge from the parent firm, International dynamic capabilities relying on local knowledge	It shows that a foreign unit may fail to build effective international dynamic capabilities during early periods if it lacks connection from headquarters
Kumar and Yakhlef (2014)	Qualitative (longitudinal single case study over a two-year period)	Dynamic capabilities framework	examined the mechanism through which the international-related capabilities emerge and are acquired as born global firms leap into foreign markets	Born global firm from the knowledge-intensive service industry in India	Capability building	International dynamic capabilities emerge from a combination of experiential and deliberate learning processes
Evers (2011)	cross-sectional: multiple case study design and critical incident technique	Dynamic capabilities framework, and resource-based view (RBV) of the firm	focused on dynamic capability development	Irish INVs operating in a traditional low technology sector	International dynamic capabilities building process	It shows that entrepreneurs' objective and subjective capabilities are the key resource managing and developing the dynamic capabilities of the firm in areas of research and development, logistics and production

Researcher	Method	Theory used	Focus	Firms	Key Constructs	Findings
Prange and Verdier (2011)	Conceptual Paper	Dynamic capabilities framework	the paper focused on differences in firms' growth and survival rates	Internationalizing firms	Explorative and exploitative capabilities	International dynamic capabilities emerge from the combination of explorative (development of new knowledge) and exploitative (utilising existing knowledge) form of internationalisation process

of quantitative and qualitative studies from across industries such as the traditional low technology sector and the knowledge-intensive service industry. Among the empirical studies, longitudinal approach is the dominant. As used by the scholars (e.g. Kumar and Yakhlef, 2014; Pehrsson et al., 2015), this approach advances our knowledge on the mechanism underlying the emergence of international dynamic capabilities. Theoretically, most of the extant studies have the dynamic capabilities theoretical framework as the underpinning theory. Despite the theoretical advancements, our understanding of how international dynamic capabilities change at specific points in time during internationalization is treated as a marginal issue. This limits a more complete understanding of the development of international dynamic capabilities. Arguably, we believe that a firm's dynamic capabilities are essentially a behavioral process, and behavior is represented as an accumulation of actions that change over time or have to be modified to meet present conditions (Covin and Slevin, 1991; Jones and Coviello, 2005; Winter, 2003). Furthermore, few studies have incorporated the role of contingencies. Sapienza et al. (2006) incorporated age at internationalization, managerial experience, and resource fungibility into the development of international dynamic capabilities. Pehrsson et al. (2015) also incorporated organizationally stable time periods. Regarding the foregoing gaps, this dissertation considers it appropriate to evaluate the development of international dynamic capabilities in the digital context.

2.2.2 Ambidexterity

From an ambidexterity perspective, scholars (e.g. March, 1991; Katila and Ahuja, 2002; Monferrer, Blesa and Ripollés, 2015) propose the need to balance the trade-off between capability exploration and capability exploitation. The outcome, according to these scholars, is the possibility for firms to achieve competitive advantage and performance. Ambidexterity as a dynamic capability has attracted attention across different academic disciplines (Luzon and Pasola, 2011) but few studies have centered on small and new firms (e.g. See Table 5), largely on MNEs. In connection to early internationalization research, little is known about how early internationalizing firms employ ambidexterity in their learning in foreign markets. The study by Escandon-Barbosa, Salas-Paramo and Rialp-Criado (2021) is one of the few ones that highlighted ambidextrous learning among early

internationalizing firms. They found that the relationship between ambidextrous learning and corporate sustainability is positive in the short- and long-term and is moderated by cultural orientation. On one hand, most of the early internationalization studies are skewed towards ambidextrous innovation (see Table 5). On the other hand, notwithstanding the power of digitalization on the activities of early internationalizing firms, there is a lack of study on the influence of the digital context on either ambidextrous learning or ambidextrous innovation. We propose that both research gaps are crucial missing links in the research conversation on learning ambidexterity. Resolving both problems requires the consideration of social media adoption. The reason is that the usage of social media for marketing, building customer relationships, and accessing information provides data from the market that can be used to explore and exploit knowledge digitally (Benitez, Castillo, Llorens and Braojos, 2018).

The theoretical foundation of the research domain of ambidexterity and early internationalization encompasses theories from the fields of strategic management, organizational learning, and entrepreneurship. Theories include resource-based view, dynamic capabilities framework, competitive advantage theory, and effectuation and causation decision-making logic. For example, Evers and Andersson (2021) employed effectuation and causation decision logic from the field of entrepreneurship to investigate the management of opportunity exploration and opportunity exploitation processes in international new ventures creation. The cross-fertilization of theoretical perspectives enhances our understanding of the research domain and extends further to respond to the call for more interdisciplinary studies (Cavusgil and Knight, 2015; Etemad, 2017). With respect to methodological approaches, received studies are either quantitative or qualitative focusing on early internationalizing firms from both the high-tech and low-tech industries. This shows that the concept of ambidexterity is not limited to early internationalizing firms from a particular industry. Furthermore, the related studies sprang from single country setting to cross-country settings. This improves our understanding of the generalizability of findings to other contexts. However, our conceptual understanding is limited because there is no conceptual study on ambidexterity in the context of early internationalizing firms.

Table 5. Studies on ambidexterity among early internationalizing firms

Researcher	Method	Theory used	Focus	Firms	Key Constructs	Findings
Escandon-Barbosa et al. (2021)	Quantitative (Survey, longitudinal data over an 8-year period, used panel dynamic structural equation modelling)	Learning ambidexterity	It analyzes the moderation effects of Hofstede's Cultural Dimensions in the relationship between ambidextrous learning and corporate sustainability in born global firms	Born global firms	Ambidextrous learning and corporate sustainability, and cultural orientation (power distance and uncertainty avoidance)	It shows that the relationship between ambidextrous learning and corporate sustainability is positive in the short- and long-term, and is moderated by cultural dimension's power distance and uncertainty avoidance
Evers and Andersson (2021)	Qualitative (longitudinal multiple case study approach)	Effectuation and causation decision-making logic	It explores the opportunity exploration and opportunity exploitation processes and how to manage exploration of innovation and exploit it through international new ventures creation	High-technology international new ventures (INVs) operating in the medical device sector based in Ireland and Sweden	Exploration and exploitation of international opportunities	The study shows that at the pre-start-up and start-up stages of INVs, sequential ambidexterity applies to how the subject firms manage the exploration and exploitation of opportunities in the delivery of their innovations to global markets

Researcher	Method	Theory used	Focus	Firms	Key Constructs	Findings
Hsieh et al. (2019)	Quantitative (Survey, regression analyses)	Entrepreneur-centered view of internationalization strategy	The study investigates the influence of entrepreneurial characteristics – experience, rationales, and innovation strategies – on multiple dimensions of internationalization speed.	Early internationalizing firms from the clothing, software, and biotechnology industries the Arab Middle East, China, Denmark, India, Poland, and the UK	Speed of internationalization, entrepreneurs' characteristics	Ambidextrous innovation contributes to early internationalization
Martin, Javalgi and Cavusgil (2017)	Quantitative (Survey, cross-sectional research design, used structural model estimation)	Competitive advantage theory	It explores the role of a balanced innovation approach, the ambidextrous innovation of born global firms.	High-technology born global firms from Mexico	Marketing capabilities, competitive strategy, positional advantage, export venture performance, and ambidextrous innovation	Moderation effect of ambidextrous innovation strengthens the link between marketing capabilities and positional advantage
Monferrer, Blesa and Ripollés (2015)	Quantitative (Survey, and structural equation modelling)	Ambidexterity approach	The study considers adaptation, absorption and innovation dynamic capabilities analysing their interrelationship considering their exploration/exploitation duality	Spanish born globals (SMEs across industries)	Network market orientation, Adaptation capability, Absorption capability, Innovation capability	Network market orientation facilitates the development of dynamic, and exploratory capabilities (adaptation and absorption capabilities)

Researcher	Method	Theory used	Focus	Firms	Key Constructs	Findings
Hughes, Martin, Morgan, and Robson (2010)	Quantitative (Survey, cross-sectional research design, used structural model estimation procedure)	Resource-based view	It examines the role of ambidextrous innovation in the strategy performance of INVs	High-technology INVs from Mexico	Competitive strategy, Innovation, realized positional advantage and export venture performance	The study finds that innovation ambidexterity codetermines both marketing differentiation and cost leadership advantages, and together these link to export venture performance gains
Han and Celly (2008)	Quantitative (Survey, regression analyses)	Dynamic capabilities framework	The study attempts to theoretically and empirically link ambidexterity and INV performance.	Canadian INVs	INV performance, standardization, innovation, and international strategies	The study proposes that INVs that have the capability of strategic ambidexterity can achieve superior performance
Barkema and Drogendijk (2007)	Quantitative (Survey, regression analyses)	Ambidexterity approach	The study uses exploitation/exploration lenses to evaluate two alternative sets of strategies – moving to a new cultural bloc or expanding within a cultural bloc – using contractual modes or FDI.	Dutch companies entering Central and Eastern Europe	International experience, FDI performance	The study suggests that sequential internationalisation strategies do still matter, and that companies must balance exploitation and exploration in internationalisation

In light of international dynamic capabilities and ambidexterity, scholars have studied the driving forces leading to the development of both exploratory and exploitative learning capabilities and adaptability. One of such is the advantage due to newness known as LAN (Autio et al., 2000). It enables early internationalizing firms to acquire new knowledge to build new capabilities and recombine existing ones to adapt to market changes. The next section provides insight on LAN.

2.2.3 Learning Advantage of Newness

Rooted in the knowledge-based view of the firm, LAN focuses primarily on the learning attention and effort that are devoted to acquiring new market knowledge (Autio et al., 2000; Sapienza, Autio and Zahra, 2006). Introduced by Autio et al. (2000), LAN emphasizes the advantages that early internationalizing firms have over incumbent or late entrants for acquiring new knowledge in foreign markets. The rationale is that early internationalizing firms tend to possess fewer deeply embedded routines, and face less cognitive complexity and structural rigidity (Autio et al., 2000; Fernhaber and Li, 2010; Zahra, Zheng and Yu, 2018). The LAN's theoretical logic has been used in a number of studies (see Table 6).

The existing studies focus on the triggers of LAN. Fewer studies tend to investigate the process involved in the development of LAN. One study that stands out among them is the study by Fuerst and Zettinig (2015). The researchers utilize a process model to explain how international new ventures (INVs) create new knowledge through interaction with network partners. On the whole, the existing studies on LAN provide novel insights on the implications of how early internationalization influences learning and subsequent performance. The studies also attest to the non-serendipitous nature of LAN-, which means that the occurrence of LAN is contingent on organizational, environmental, and strategic contextual triggers (Zahra, Zheng and Yu, 2018; Autio et al., 2000; Sapienza et al., 2006). For example, Sapienza et al. (2006) propose that early internationalizing firms have flat organizational structures and are free from core rigidities that enhance the development of LAN.

Table 6. Studies on Learning Advantage of Newness

Authors	Method	Theory used	Focus	Firms	Key Constructs	Findings
Bai, Liu and Zhou (2020)	Quantitative (Survey, and structural equation modelling)	social capital theory	It explores the role of internal social exchanges in contributing to the international performance of young entrepreneurial firms	Internationalizing SMEs from India	Internal social capital, international learning effort, international alignment, international performance	It shows that internal social capital linked to the underlying learning advantages of newness and opportunity influences early and rapid internationalization
Fuerst and Zetting (2015)	Qualitative (diary research combined with periodic follow-up interviews, used visual mapping strategy analyses)	Effectuation theory combined with process research methods	It examines the dynamic process of knowledge creation of the international new venture (INV) through the interaction with network partners.	INVs in Colombia and the city of Medellin	Knowledge creation, interaction with network partners	The analysis shows that different pathways of knowledge acquisition through congenital learning, searching, vicarious learning and grafting interact with each other.
Schwens and Rudiger (2011)	Quantitative (Survey, and structural equation modelling)	Learning theory	Focuses on how young technology firms (YTFs) learn about foreign markets when they venture abroad for the very first time.	German technology firms	Foreign venture performance, prior foreign market analysis, network learning, imitation, age at internationalization	Results show that prior foreign market analysis leads firms to postpone the first internationalization, but network learning and imitation lead to earlier international venturing

Authors	Method	Theory used	Focus	Firms	Key Constructs	Findings
Bruneel, Ylclarysse and Clarysse (2010)	Quantitative (Survey, and regression analyses)	Organizational learning theory	It examines how young firms may compensate for their lack of firm-level international experience by utilizing other sources of knowledge	Young technology-based firms in Flanders, Belgium,	Experiential learning, congenital learning, interorganisational learning	The lower a firm's experiential learning, the more significant the effects of the start-up team's prior international knowledge base and the knowledge and skills acquired through key partners.
Zhou, Barnes and Lu (2010)	Quantitative (Survey covering a 2-year period, and structural equation modelling)	Entrepreneurial proclivity, and network dynamics of reconfiguration	Focuses on how INVs acquire learning advantages and avoid the liabilities of newness and foreignness to achieve LAN-related performance from early internationalization	Young INVs from China	International performance of newness, knowledge capability upgrading, network Capability upgrading, entrepreneurial proclivity	Knowledge capability upgrading and network capability upgrading – serve as mediating mechanisms that link entrepreneurial proclivity and LAN-related performance
Carr, Haggard, Hmieleski and Zahra (2010)	Quantitative (Panel data, and regression analyses)	Liabilities of aging perspective	It focuses on the moderating effects of firm age on postinternationalization survival and growth	INVs from Compustat	Decision to internationalize, age at internationalization, firm size, short-term sales growth	Due to flexibility to learn vicariously, postinternationalization, younger firms experience higher rates of short-term growth than older firms

Authors	Method	Theory used	Focus	Firms	Key Constructs	Findings
Fernhaber and Li (2010)	Quantitative (Panel data, and regression analyses)	Neoinstitutional and learning theories	The study focuses on the impact of interorganizational imitation on new venture international entry and subsequent performance	US-based publicly held new ventures across industries	New venture international entry, new venture performance, interorganizational imitation	According to the findings, interorganizational imitation moderates the relationship between new venture international entry and profitability
Blesa, Monferrer, Nauwelaerts, and Ripollés (2008)	Quantitative (Survey, and structural equation modelling)	Internationalization theory (early internationalization)	It focuses on how INVs acquire market knowledge from foreign markets and develop sustainable positional advantages	Spanish and Belgian INVs	Market orientation, early international commitment, international positional advantage	It demonstrates that market orientation provides information, knowledge and the means that INVs need to compete in foreign markets
Autio et al. (2000)	Quantitative (Panel data, and regression analyses)	Knowledge-based theory	Focuses on international growth in entrepreneurial firms	Internationalizing firms from the Finnish electronic industry	Age at entry, knowledge intensity, imitability, international sales growth	Results show that earlier initiation of internationalization and greater knowledge intensity are associated with faster international growth

In terms of methods, scholars have approach LAN from both quantitative and qualitative perspectives utilizing different kinds of theories. From a quantitative point of view, Bai, Liu and Zhou (2020) utilized social capital theory to explore how social capital linked to the underlying LAN contributes to the international performance of young entrepreneurial firms. Qualitatively, Fuerst and Zettinig (2015) utilized effectuation theory combined with process research methods to explore the dynamic process of knowledge creation through the interaction with network partners. Scholars (e.g. Blesa, Monferrer, Nauwelaerts, and Ripollés, 2008) have also strove to explore LAN from a cross-country setting to improve its generalizability. Finally, the received studies have approached LAN across industries focusing on several outcomes such as growth and survival trade-off, growth and profitability, international positional advantages, and positive performance outcomes (De Clercq et al., 2012). This demonstrates that the development of LAN is not limited to a specific kind of industry. Amid all the theoretical developments, most of the studies are inclined to a quantitative perspective. This makes our understanding of the underlying mechanism in the formation of LAN limited to some extent. There is a paucity of scholarly attention in exploring the underlying mechanism of the development of LAN from a process-based perspective, and the mechanisms that link it to post-internationalization. It is of no surprise that Oviatt and McDougall (2005) noted “the learning advantages of newness represent a counterpoint to the widely accepted concept that there is a liability of newness for young firms...and deserve additional empirical testing and conceptual development” (p. 549).

2.3 Early internationalization in the Digital Context

Adopting a capabilities-based lens, scholars have addressed the research on early internationalization in the digital context from three areas. The first area is antecedents; second, inherent activities of early internationalization process; third, outcomes. The underlying studies forming the three levels are geared toward the discrete context focusing on specific situational digital variables that influence the behaviors of INVs directly or moderate the relationships between variables. Studies on the antecedents of early internationalization are mainly related to the influence of digital capability on early internationalization. For instance, Tabares et al. (2015) find that digital capability is an example of a firm’s intellectual capital

that supports early foreign market entry. Tabares et al. (2015) also see it as an entrepreneur-related feature. That is, how an entrepreneur utilizes digital capability in early and rapid internationalization. For example, focusing on entrepreneurs' use of online social media networks, Maltby (2012) found that an entrepreneur uses social media networks to increase his/her tacit knowledge for rapid internationalization. At both the entrepreneur's level (e.g. Maltby, 2012) and the organizational level (e.g. Nowiński et al., 2016), social media is recognized as an important digital tool that induces early internationalization.

Regarding the inherent activities of the early internationalization process, capabilities-based studies cover a range of areas such as knowledge acquisition, international opportunity recognition, business model development, product development, channel strategy selection, etc. The studies that fall in this category highlight the importance of digital technology and capabilities, as critical discrete components influencing the early internationalization process. Mostafa, Wheeler and Jones (2005) linked a firm's digital capability to its entrepreneurial orientation. They found that early internationalizing firms are more likely to use the internet to develop their export market opportunities. This leads to their better export performance than less entrepreneurial firms with low entrepreneurial orientation. Jean and Kim (2019) also explain that early internationalizing firms utilize their platform and web capabilities to support their marketing capabilities, which then translates into export performance. Finally, research on early internationalization outcomes is focused on either performance or internationalization speed. It highlights the contingent factors that influence the abilities of early internationalizing firms to generate positive international outcomes. Zhang and Tansuhaj (2007) argue that the ability of digital technology to enhance performance depends on the internationalizing firm's digital capability. Similarly, Mostafa et al. (2005) also find that using digital technology to amass market performance depends on the level of a firm's entrepreneurial orientation. While these studies have succeeded in taking the first steps in documenting the early internationalization phenomenon from a capabilities-based approach, past work is undermined by some limitations to a certain extent. First, we do not know how the capabilities are developed or change over time in the digital context. Second, there is limited understanding of how the digital context influences the capabilities. These pertinent issues warrant research attention. This

dissertation capitalizes on both issues and brings to light how certain capabilities and characteristics of early internationalizing firms such as international dynamic capabilities, ambidextrous learning, and LAN, are developed and influenced by the digital context. The following section evaluates the existing theoretical perspectives that scholars have used to study early internationalization.

2.3.1 Theoretical Approaches

The overt research on early internationalization in the digital context has leveraged theoretical approaches including but not limited to the following. First, is the resource-based view (RBV) (e.g. Kotha, Rindova and Rothaermel, 2001; Glavas, Mathews and Russell-Bennett, 2019). The RBV contends that the success of a firm's internationalization operations does not wholly depend on external factors alone but also on its internal make-up, i.e. the firm's core competencies, capabilities, organizational evolution, physical resources, human skills, and other related resources (Barney, 1991; Prahalad and Hamel, 1990). Barney (1991) proposed four theoretical conditions needed to make a firm's resources a competitive advantage within a market. He framed these conditions into a framework known as VRIN Framework. VRIN stands for the value of resources, the rareness of resources, the inimitability of resources, and the non-substitutability of resources. Scholars in the research stream of early internationalization in the digital context utilizing the RBV theory have focused on internet-enabled capabilities (e.g., Jaw and Chang, 2006; Tabares, Alvarez and Urbano, 2015). The RBV clarifies how the digital capabilities and the nature of the resources they are built on influence the entry strategies of early internationalizing firms and their sustained performance (e.g., Jaw and Chang, 2006).

Second, is the knowledge-based view of the firm (e.g. Prashantham, 2005). Originated from the RBV, the knowledge-based view considers knowledge as the most important "firm-specific resource" that drives early and rapid internationalization (Autio et al, 2000; Zander and Kogut, 1995). Knowledge within the domain of internationalization can be international market knowledge, technological knowledge, localization knowledge, or prior experience (Eriksson, Johanson, Majkgard, and Sharma, 1997; Riviere, Suder and Bass, 2018). The application of the knowledge-based view of the firm in the research stream of early

internationalization in the digital context contributes to our understanding of the efficacy of digital technologies in knowledge creation in early international firms. For example, according to findings from a study conducted by Prashantham (2005), the application of internet technology influences internationalization, in terms of knowledge dissemination, acquisition and sharing, and the achievement of social capital.

Third, internationalization theories (internationalization process model, INV/born global) (e.g. Wentrup, 2016). According to the INV/BG theoretical model, from their inception, internationalizing firms from inception, seek to derive significant competitive advantage and revenue from the use of resources and the sale of output in multiple countries (Oviatt and McDougall, 1994). In response to the several calls for the application of internationalization theories in the digital context (e.g., Hazlehurst and Brouthers, 2018; Coviello et al., 2017; Vahle and Johanson, 2017; Tarutèa and Gatautisa, 2014), scholars in the research stream of early internationalization have integrated some of the internationalization theories to study early internationalization in the digital context. For example, using the internationalization process model and born global phenomenon, Wentrup (2016) provided a clear understanding of how online service providers skip sequential steps when entering foreign markets.

Fourth, is the transaction cost analysis theory (TCA) (e.g. Gabrielsson and Gabrielsson, 2011; Sinkovics, Sinkovics and Jean, 2013). The TCA, which is based on the early work of Coase (1937), and later Williamson (1975, 1985), focuses on alternative modes of organizing transactions, and governance mechanisms that minimize transaction costs in early internationalization (Williamson, 1975). Scholars have applied the TCA theory to enhance our understanding of how digital technology supports the minimization of coordination costs associated with foreign market entry and how early foreign entry is organized. For example, Houman (2005) found that the internet has the possibility of changing the traditional way of organizing international activities. Also, Gabrielsson and Gabrielsson (2011) used this theory to explain how the internet is used as a common sales channel among early internationalizing firms.

Finally, the theory of entrepreneurial opportunity recognition (e.g. Glavas et al., 2019). This theory explains INVs' formation as a process of entrepreneurial opportunity discovery and exploitation (Oviatt and McDougall, 2005). Extant studies utilizing the theory of entrepreneurial opportunity recognition provide anecdotal evidence of the power of digital technology in enabling early internationalizing firms to realize opportunities (Glavas et al., 2019; Reuber and Fischer, 2011). Examples include the creation of new businesses in digital and internet-based environments, and the discovery of information about buyers to support the buying process.

2.3.2 Theoretical Framework for the Study

In reflecting on the IE and IB field from the past, present, and the future, Zucchella (2021: p) posed a question: "Is the digital transformation delivering us new phenomena which deserve academic inquiry? If so, should scholars look for new theories or stretch the existing ones?" This question creates an avenue on how to analyze IE and IB at the interface of digitalization from different theoretical lenses. In response to Zucchella's (2021) question, this dissertation argues that indeed digital transformation has delivered us new phenomena that deserve an academic inquiry, which therefore calls for the need to adjust existing theories to suit the digital context. Based on this premise, the dissertation uses the capability-based perspective as a theoretical lens (Jie, Harms, Groen and Jones, 2021; Weerawardena, Mort, Liesch and Knight, 2007). The rationale for selecting the capability-based perspective is that it can better explain the intersection of early internationalization and digital technology. More so, scholars in the field of early internationalization research have used it to offer significant insights (Jie et al., 2021). The capability-based perspective distinguishes capabilities into two types- namely- substantive capabilities and dynamic capabilities. The development of the dissertation's theoretical framework focuses on dynamic capabilities (represented as international dynamic capabilities in this dissertation). International dynamic capabilities in this dissertation focus on Teece's (2007) conceptualization (i.e. sensing, seizing, and transforming capabilities), and ambidexterity (i.e. a balance between exploratory and exploitative learning). The theoretical framework acknowledges the LAN of early internationalizing firms to drive the development of international dynamic capabilities (Autio et al., 2000; Jie et al., 2021).

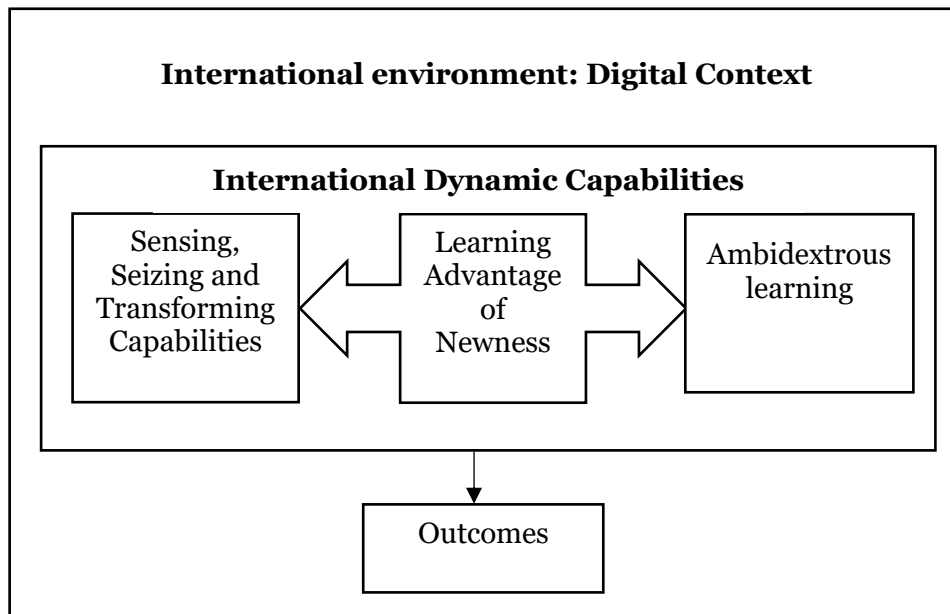


Figure 5. Theoretical framework of the study

Received literature shows that the internationalization of small firms is influenced by context (Child, Karmowska and Shenkar, 2022; Laufs and Schwen, 2014). In line with this, the theoretical framework of this dissertation is perceived from the digital context (see Figure 5). The digital context provides an important setting to analyze the dynamic capabilities of internationalizing firms because studies have shown that digital capabilities play an important role in the development of different organizational capabilities. For example, using digital technology for internal activities positively influences adaptive capabilities; using digital technology for collaboration positively influences networking capabilities; and using digital technology for communications positively influences both adaptive and innovation capabilities (Parida et al., 2016). Building on Autio et al.'s (2000) argument that early internationalizing firms have the LAN that enhances their international dynamic capability to adapt to emergent environmental changes and respond internally to continual change, the opposite directional arrows in the framework show the influence of LAN on the two types of international dynamic capabilities- namely 1) sensing, seizing and transforming capabilities, and 2) ambidextrous learning. Finally, the one-sided arrow pointing from international dynamic capabilities to outcomes represents the linkage with international dynamic capabilities and early internationalization outcome.

3 RESEARCH METHODOLOGY

The description of the research methodology of this dissertation follows the structure of the “research onion” (Saunders, Lewis and Thornhill, 2016, p. 124). It proceeds with the explanations of the following “layers”: research philosophy, approaches to theoretical development, methodological choices, research strategy, time horizons, data collection, and analysis techniques.

3.1 Research Philosophy

The research philosophy comprises the assumptions and beliefs about the development of knowledge and how it relates to research (Saunders et al., 2016). Researchers use a diversity of philosophical paradigms to structure their work such as positivism, critical realism, interpretivism, postmodernism, and pragmatism (Creswell, 1994; Guba and Lincoln, 1994; Saunders et al., 2016). However, they share the same philosophical elements. The first element is *axiology*. Axiology refers to the roles of values, ethics, and biases in molding our understanding of the research process (Saunders et al., 2016). The second element is *ontology*. This includes assumptions about the nature of reality (Saunders et al., 2016) – the objectivist position versus the subjectivist position. The third element is *epistemology*. This encompasses assumptions about what should be considered acceptable knowledge in a field of study, how we gain that knowledge, how it can be disseminated, and the relationship between the knower and the known (Kaushik and Walsh, 2019; Saunders et al., 2016). The fourth element is methodology. This is the shared understanding of the means of collecting information for the study. The fifth element is rhetoric (informal versus formal). It refers to the shared understanding of the language of research (Kaushik and Walsh, 2019). However, the perspective of each philosophical paradigm underpinning each element is different (Kaushik and Walsh, 2019). Table 7 is a comparison of the philosophical paradigms in terms of ontology, epistemology, axiology, methodology and rhetorics. Because this dissertation aims to address conceptual and empirical research gaps in improving our understanding of early internationalization in the digital context, it follows a pragmatism paradigm.

Table 7. Research Paradigms

Philosophies	Ontology (reality)	Epistemology (ways of understanding reality)	Axiology	Method	Rhetorics
Positivism	One true reality (universalism)	Realities can be measured using scientific method Observable and measurable facts law-like generalisations Causal explanation and prediction among variables as Contribution Replications of findings are true but could be falsified	Value-free research Researcher is detached, neutral and independent of what is researched, and maintains objective stance	It is deductive, and usually use highly structured, large samples, measurement. It uses quantitative methods of analysis	Formal based on set of concepts. It is also objective and emotionally neutral
Critical realism	Realities are stratified/layered (the empirical, the actual and the real) Objective structures Causal mechanisms	Epistemological relativism Knowledge historically situated and transient Realities and knowledge are social constructions Historical causal explanation as contribution	Value-laden research Researcher acknowledges biases and tries to minimise all biases and errors Researcher maintains objective stance as possible	It is retroductive, and usually employs in-depth historically analysis of pre-existing and emerging structures	Informal based on evolving decisions. It entails a personal voice of the researcher

Philosophies	Ontology (reality)	Epistemology (ways of understanding reality)	Axiology	Method	Rhetorics
Interpretivism	There is no single reality Reality is socially constructed Multiple meanings, and interpretations of realities	Focus on narratives, stories, perceptions, and interpretations of realities New understandings and worldviews as contribution	Value-bound research Researchers are part of what is researched Subjective stance Researcher interpretations key to contribution	It is inductive utilizing small samples. It uses qualitative methods of analysis	Informal based on evolving decisions. It entails a personal voice of the researcher
Postmodernism	Reality is nominal Socially constructed through power relations Some meanings, interpretations, realities are dominated and silenced by others	Reality and knowledge are decided by dominant ideologies Focus on absences, silences and oppressed/repressed meanings, interpretations and voices Exposure of power relations and challenge of dominant views as contribution	Value-constituted research Researcher and research embedded in power relations	It deconstructs meanings from texts, involving vivid investigations of anomalies, silences and absences. It uses qualitative methods of analysis	Informal based on evolving decisions. It entails a personal voice of the researcher

Philosophies	Ontology (reality)	Epistemology (ways of understanding reality)	Axiology	Method	Rhetorics
Pragmatism	Reality is the practical consequences of ideas	Practical meaning of knowledge in specific contexts The best method or theory is one that solves a problem Focus on problems, practices, and relevance Problem solving and informed future practice as contribution	Value-driven research Research initiated and sustained by researcher's doubts and beliefs	It uses a range of methods such as mixed, multiple, qualitative, quantitative etc. The focus is on the research questions and the consequences of the research	May employ both formal and informal rhetoric

Note: Adapted from Saunders, Lewis and Thornhill (2016) and Creswell (1994)

Pragmatism is a paradigm that offers an alternative worldview to those of positivism/postpositivism and constructivism and focuses on the problem to be researched and the consequences of the research. The underlying logic behind this assumption is that the researcher should use the philosophical stance and methodological approach that are suitable to address a particular research problem. It embraces plurality – that is, combining methods necessary to solve a research problem (Kaushik and Walsh, 2019). The dissertation is article-based, encompassing both qualitative and quantitative publications, making pragmatism appropriate for the philosophical assumption. Pragmatism assumes that reality (ontology) encompasses the practical consequences of ideas. Thus, a concept is only relevant when it augments an action (Saunders et al., 2016). Acceptable knowledge (epistemology) in pragmatism includes knowledge that has practical meaning in specific contexts and knowledge that can drive a course of action or solve problems. Therefore, in as much as this dissertation contributes to theory, it also provides practical contributions for entrepreneurs and corporate managers. Further, because pragmatism allows researchers to use their values and interpretations to reflect on the research process, the author engages in reflexivity in the dissertation by recalling the context, content of observations, and interpretations (Sunders et al., 2016).

3.2 Theory Development Approaches of the Dissertation

There are two broad methods of scientific inquiry. According to Sunders et al. (2016), they are inductive and deductive approaches. Deduction moves from theory to data seeking themes by testing hypotheses that emerge from the theory (Cho and Lee, 2014), whereas induction moves in the opposite direction, from data to theory. In research, scholars have linked quantitative analyses to deductive, and qualitative analyses to inductive (Sunders et al., 2016). This dissertation intends to interconnect theory and practice; therefore, it combines both inductive and deductive approaches- which Dubois and Gadde (2002) labeled abductive. Abductive researchers constantly move back and forth between theory and empirical observations to expand their understanding of both theory and observed phenomena (Dubois and Gadde, 2002; Suddaby 2006; Sunders et al., 2016). The Abductive approach also allows the researcher to compare empirical evidence to existing ones and interpret it according to the new research context. Given this, the

author considers the abductive approach as the right choice because the dissertation evaluates early internationalization phenomenon and interprets it in a digital context. Furthermore, the pragmatic philosophical assumption underpinning this dissertation supports the adoption of the abductive approach. Pragmatism allows the usage of different kinds of knowledge, and the methodological approach to discovery combines deductive and inductive reasoning (abductive) (Kaushik and Walsh, 2019). In sum, Essay 2 is deductive. In contrast, Essay 4 adopts an abduction approach. Essay 1 is a systematic literature review, and the author uses content analysis to generate meanings and insights from texts. Hsieh and Shannon (2005) reported that qualitative content analysis is "a research method for subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (p. 1278). Unlike the former approaches, Essay 3 is a conceptual study.

3.3 Methodological Approaches

Regarding methodological approaches, the author employs mixed methods (qualitative and quantitative). This is appropriate given the novelty of the phenomenon under investigation and the research philosophy. Referring to the qualitative-quantitative continuum propounded by Johnson et al. (2007), this dissertation is termed qualitative-dominant mixed methods research. From a broader perspective, it relies on a qualitative view to analyze quantitative data. One of the author's objectives is to improve the generalizability of the study, replication, and advancement of theory development and testing. As a second objective, the author seeks to identify divergence and commonality (Turner, Cardinal and Burton., 2017). Divergence in this context means utilizing the uniqueness of both the qualitative and quantitative approaches to compensate for each approach's vulnerabilities to facilitate theoretical development and advancement. In line with this, this dissertation comprises different publications (i.e. essays) with either a qualitative or quantitative methodological underpinning to ensure that the weakness of one is compensated by the other to aid in addressing the research problem. Concerning commonality, the case firms used by the author for Essay 4 were part of the sample firms for Essay 2.

3.4 Research Strategy

According to Turner et al. (2015), selecting similar research strategies is not beneficial in mixed-method research. Given this, the first publication (Essay 1) is a theoretical literature review. The article systematically collates and synthesizes literature in which digitalization underlies the causes, processes, or outcomes of early internationalization. The second publication (Essay 2), which is quantitative is a survey of early and gradually internationalizing firms in Finland. It focuses on how the relationship between international dynamic capabilities and international financial performance of early internationalizing firms and gradual internationalizing firms changes over time and the moderating role of digital capability. The third publication, which is conceptual, focuses on how the usage of social media influences ambidextrous learning and the survival of early internationalizing firms. The fourth publication (Essay 4), which is qualitative, is a multiple-case study of early internationalizing firms from Finland. It focuses on the developmental process of LAN. It intends to build on the theory of LAN by combining existing theoretical knowledge with new empirical insights (Yin, 1994). The utilization of the mixed approaches in this dissertation provides a deeper understanding of the underlying mechanisms that support early internationalization process. Thus, it combines both the strengths of both quantitative and qualitative data.

3.5 Time Horizons

In designing research, researchers have at their disposal two-time horizons to choose from depending on the research problem: cross-sectional (i.e. snapshot time horizon) or longitudinal (i.e. diary perspective; Saunders et al., 2016). To address the longitudinal time horizon specifically, Caruana, Roman, Hernández-Sánchez and Solli (2015) reported that there are three main types of longitudinal studies. First, there are repeated cross-sectional studies which employ study samples that are largely or entirely different on each sampling occasion. Second, there are prospective studies that rely on the same sample over a period. Finally, there are retrospective studies that focus on events that a sample has already experienced by enquiring about the past (Caruana et al., 2015).

This dissertation adopts a longitudinal perspective for Essays 2 and 4. Essay 2 employs both prospective and retrospective with 2-year data points. Essay 4 also employs both prospective and retrospective but with 3-year data points. In contrast, Essays 1 and 3 are conceptual. The utilization of longitudinal time horizons in this dissertation provides novel insights on how the inherent behavioral dynamics of early internationalization develop or change over time. It broadens our understanding of longitudinal studies on early internationalization (Coviello and McAuley, 1999; Welch and Paavilainen-Mäntymäki, 2013).

3.6 Data Collection and Analysis Techniques

Essay 1 is a theoretical systematic literature review. Theoretical literature reviews can be broadly classified based on two main parameters, namely- the approach to the review (systematic, semi-systematic, or integrative) and the focus of the review (domains, theories, methods, or the research streams and interrelations among articles) (Akhmedova, Manresa, Escobar and Bikfalvi, 2021; Bahoo, Alon and Paltrinieri, 2020; Kontinen, T. and Ojala, 2010; Paul and Criado, 2020; Snyder, 2019). Also, Essay 1 is a systematic literature review approach (Paul and Criado, 2020; Akhmedova et al., 2021). It systematically collates and synthesizes literature in which digitalization underlies the causes, processes, or outcomes of early internationalization. The literature review follows Tranfield, Denyer and Smart's (2003) process. The process involves planning, conducting, reporting, and dissemination. In planning for the present review, the author conducted scoping studies across business, management, entrepreneurship, technology, and social sciences disciplines to assess how early internationalization has been addressed. Scoping studies aim to explore the literature available on a research area and to identify underpinning key related concepts (Arksey and O'Malley, 2005). The assessments from the scoping studies confirm the relevance of the phenomenon within the domains of IB, marketing, management, innovation management, information management, and IE. Following a review protocol², the author used

² Keywords: "early internationalization", "rapid internationalization", "earliness of internationalization", "born global", "born international", "born regional", "international new venture", "instant internationals", "instant exporters", "international ventures", "infant multinationals", "instant internationals", "global start-ups", "early adopters of internationalization", "border firms", "borderless firms", "infant multinationals", "global start-ups", "early adopters of internationalization", "border firms", "borderless firms", "gazelles", "global knowledge-intensive firms", "high technology start-ups", "new technology-based firms", "geographically focused start-up", "export start-up", "import start-up", "multinational trader", and "global start-up". We used secondary keywords such as "digitalization", "digitalisation", "digital technology", "digital orientation", "digital capability", "ICT capability", "ICT orientation", "IT capability", "IT orientation", "Internet", "Internet-of-things", "cyberspace", "blockchain", "social media", "social networking", "born digital", "1-business", "e-business", and "e-commerce".

Emerald, EBSCO, Science Direct, and ProQuest databases to source articles. These databases contain one of the world's largest electronic collections of journals with searchable cited references. The review spans from 1994 to 2021. In 1994, Oviatt and McDougall's highly influential paper on INVs appeared (Oviatt and McDougall 1994) when digital technologies started to become more common in the form of personal computer and internet use, and importantly when Netscape (later followed by Microsoft) had introduced graphical web browsers at the beginning of the 1990s. Therefore, it could be expected that firms began using such digital technologies when internationalizing from 1994 onwards. In all, 97 relevant articles were used for the review. In contrast, Essay 3 is a conceptual study, and no empirical data were gathered. Relevant articles for the conceptual study were culled from early internationalization, ambidexterity, and social media literature. It employs exploratory and exploitative learning theoretical lens to conceptualize and explore ambidexterity. Reviewing contents from the selected relevant articles, the author identifies concepts and equates them with each other to ascertain their similarities and differences. The concepts are arranged in groups in terms of their likeness to provide critical explanation about their causes and effects.

Essays 2 and 4 are empirical and select Finland as the country context. Finland is selected for the following reasons. First, Finland is a small-sized open economy with a tradition of firm internationalization; majority of its SMEs operate in foreign markets (Luostarinen, 1994; Knight and Liesch, 2016). According to the Statistics of Finland's database, Finnish enterprises had business activity in 5,430 affiliates located in 139 countries in 2018, with most investments concentrated in the European Union area compared with the previous years (Official Statistics Finland, 2020). Second, Finland has embraced the concept of a digital economy. According to Digibarometer³ survey results (see Figure 6), Finland ranked second in the degree of digitalization for three consecutive years (i.e. 2020, 2021 and 2022). Finally, this dissertation chose Finland so that we can better understand how the theoretical constructs of interest influenced firms' behavior when the country and related sector-specific variations are kept to a minimum.

³ Digibarometer is a study which evaluates how well countries utilize digitalization and how they compare to one another in this respect.

Concerning Essay 2, the data collection is a two-wave survey. The first wave of the survey was in 2016, and the second wave was in 2018. The questionnaire for the survey was developed in English language and then translated to Finnish using a back-and-forth procedure. With this procedure, the questionnaire was first translated to the Finnish language and then back into English language, to determine whether or not each question was properly translated correctly. The preliminary version of the questionnaire was pretested with experts in the international business research field. The sample frame included 2608 independent Finnish internationalizing firms across industries with international

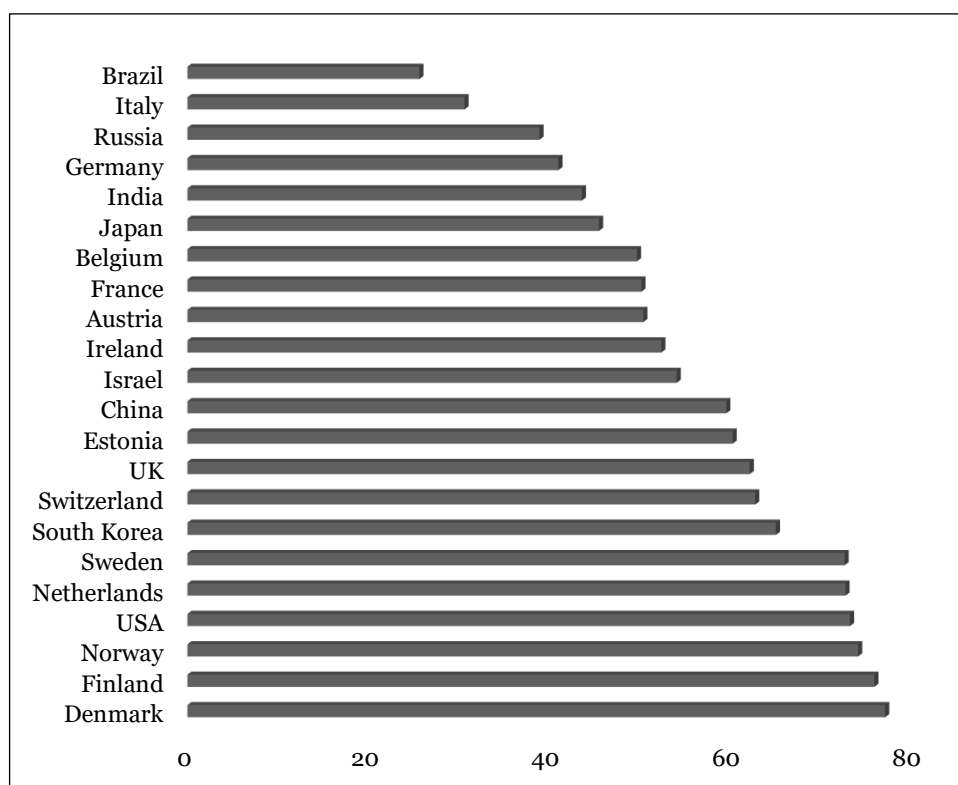


Figure 6. Overall ranking of digitalization utilization among countries (Year 2022, adapted from ETLA)

sales established since 1985. The contact information of the firms was retrieved from the Bisnode and Fonecta databases (two reliable service providers). The author employed research assistants to contact the key stakeholders of the 2608 firms that were expected to be knowledgeable about the study topic. After the contacts, 1052 companies that qualified were invited to participate in the study. Of them, 493 firms agreed to participate and were sent a web link to the survey questionnaire. The research assistants made follow-up telephone calls to remind

the respondents after two weeks. In the end, the author received a total of 352 completed answers (33.5% response rate). During the second wave, the same questions were sent to the same firms that responded in the first wave. With this, the author obtained 203 completed answers out of 352 (57.7%). Out of the 203 completed answers, the author dropped 9 responses because of blank spaces and missing information and utilized 194 answers. In the analyses, the author utilized answers from the firms that responded to both surveys. In view of this, 158 answers from the first wave were not utilized. In sum, there were 194 completed answers from each survey, which the author argues is the ideal sample size for maintaining the reliability and validity of the research because they exceed a half of the total number of responses (Krejcie and Morgan, 1970).

With respect to Essay 4, it follows a purposeful sampling principle for the selection of the case firms. The main reason is to minimize validity issues related to recall bias and prejudices. Purposeful sampling is a sampling technique that utilizes specific criteria or purpose to select a particular sample (Fletcher and Plakoyiannaki, 2011; Patton, 2015; Yin, 2014). Before proceeding to the selection of firms, the author made sure that the firms selected have already initiated internationalization in the early years of their establishment, have achieved at least 25% foreign sales within 3 years from their establishment and are in an unstable state, trying to stabilize operations in the foreign market. Upon preliminary investigations regarding suitable firms, the author approached 7 of them and 4 agreed to be part of the study. This number of cases selected corresponds with the recommendation of Eisenhardt (1989) who suggests a minimum of four cases in a multiple case study, and Creswell (2002) who also suggests at least 3-5 cases. Eisenhardt (1989) posits that this usually provides a good basis for generalizing results back to theory. The selected firms were from Finland and the cleantech sector to ensure homogeneity across the case firms. The cleantech sector encapsulates firms that produce products and services that are unharmed to the environment (Souza et al., 2019). The author collected data from both secondary and primary sources. Secondary data included information on the firms' foreign operations culled from webpages, social media platforms, and blog sites; they were used for the interview preparation and verification of facts obtained during the interviews to ensure the credibility and validity of the research. Primary data included data from in-depth face-to-face semi-structured interviews. To en-

Table 8. Summary of Research Methodological Issues

	Essay 1	Essay 2	Essay 3	Essay 4
Research philosophy			Pragmatism	
Approaches to theoretical development	Qualitative content analyses	Deductive	Conceptualization	Abductive (deductive and inductive)
Methodological choices (mixed method)	Theoretical literature review	Quantitative	Conceptual paper	Qualitative
Research strategy	Systematic	Survey	Conceptualization	Multiple-case study (four Finnish INVs)
Time horizons	1994-2021	2-year longitudinal study	Not applicable	3-year longitudinal study
Data collection	Follows a review protocol (97 articles)	-Survey (493 internationalizing Finnish Firms) -Two rounds of data collection -352 responses (1 st round) -203 responses (2 nd round)	No empirical data	-Face-to-face interview -three rounds -285 transcribed pages
Analysis techniques	Content and thematic analyses	Linear regression	Conceptual analyses	Cross-case analyses

sure the trustworthiness of the study, the author made sure that interview questionnaires were correctly designed and piloted to check for inconsistencies before the actual interview process was conducted. In the interview process, the author paid rapt attention to the interview protocol to ensure that he asked the right question, and continued by revising the protocol with probing questions when needed at certain intervals. The interview process encompasses three rounds. The first round was conducted in 2018, second round in 2019, and the third in 2020. The interviews were audio-recorded and subsequently transcribed verbatim. In the analyses, the author employed both deductive and inductive analytical approaches supported by cross-case analyses. Applying a deductive approach, the a priori codes derived from the literature were assigned to some of the interview data. Concerning the inductive approach, the author assigned open codes, letting the raw data suggest emerging codes on a case-by-case basis, and reviewing the interview extracts line-by-line (Gioia, Corley and Hamilton, 2013).

Table 8 provides a summary of the methodological issues that have been discussed in the preceding sections. The summary delineates how the methodological concepts relate to the four essays and the entire dissertation. However, a detailed summary and results of the four essays are provided in the next section.

4 SUMMARY OF THE STUDY FINDINGS

The following sub-sections of this chapter provide a summary of the findings of the four essays that collectively form the dissertation.

4.1 Essay 1

Essay 1 is captioned- *Digitalization and Early Internationalization- Systematic Literature Review Analyses*. It aims to answer the sub-research question on how digitalization shapes the early internationalization.

4.1.1 Background and Objective

Notwithstanding the burgeoning interest in early internationalization at the interface of digitalization, the research advances do not provide a full understanding of how the studies have progressed over time. To our knowledge, there is a lack of review on which researchers can depend to develop future research. The literature reviews found were conducted by Vadana et al. (2020) and Piqueras (2020). Vadana et al. (2020) investigated how value chain digitalization affects born digital firms whereas Piqueras (2020) focused on the identification of recurring themes in born digital research. Essay 1 is more holistic than the prior studies in terms of scope and analyses. The focus of both reviews was narrow. Vadana et al.'s (2020) review focused on only value chain activities, and that of Piqueras (2020) focused on the description of the conceptual domain of born digital research. Essay 1 takes a step further to provide a holistic picture of the early internationalization phenomenon. The main purpose of this paper is to systematically collate and synthesize literature in which issues of digitalization feature as the main construct underlying the causes, processes, and outcomes of early internationalization. It aims to synthesize and identify the research themes, methods, and theories used to investigate the phenomenon in the reviewed studies. It also aims to provide suggestions for further study and future directions based on information extracted from the articles reviewed.

4.1.2 Results and Contribution

The authors conducted the review process utilizing related articles published in academic journals in English language from 1994 to 2021. The analyses capture early internationalization via a processual lens focusing on the antecedents, inherent activities of the process, and outcomes.

The underlying constructs of the antecedents focus on three levels: environment, firm, and entrepreneur. The environment level focuses on digital technology as an environmental force, and advances in technology in the business environment. This research category contributes to our understanding of how technological advances in the form of digital innovations (e.g., blockchain technology, e-business, the IoT, etc.) in the environment offer opportunities for early internationalization rather than merely presenting a challenge to be overcome. The firm level focuses on digital capability and firm types. It outlines how digital resources, digital capabilities, investment, and commitment to digital technology, information intensity, and the embeddedness of digital technology in firms drive early internationalization. Finally, the entrepreneur level points to how the entrepreneur utilizes digital capability to drive early internationalization. Studying digitalization and internationalization at the entrepreneur level contributes to existing studies on the entrepreneur's role in the internationalization of an SME. On the inherent activities of early internationalization process, the authors obtained evidence on the role of digital technology driving entrepreneurial activities. Entrepreneurial activities include opportunity recognition, creation of entry strategies, the emergence of business models, management of foreign transactions and communication, international knowledge acquisition, and overcoming of liabilities of foreign market entry. Lastly, on the outcomes of early internationalization, anecdotal evidence from the review showed the importance of digital technology in enhancing efficiency and effectiveness in early internationalization. For example, among early internationalizing firms, the use of digital technology has a positive impact on export performance in terms of sales growth, market share, the achievement of strategic objectives, and profitability.

The paper also proposed important research areas that call for more attention by scholars. The first area is on the improvement of theoretical approaches,

particularly focusing on mixed methods which is scarce in the research domain. The second area is on the improvement of methodological approaches. The authors found the inability of generalization as a drawback in the research stream in the sense that most of the studies focused on small samples. In view of this, they proposed for more multiple qualitative case studies. The third area is on research themes. The authors acknowledged a lack of research on the role of digital technology as a feature of the business environment and how it influences early internationalization. They therefore proposed research to investigate on how the accessibility of digital technologies in digital economies influences early internationalization. This would promote an understanding of the ongoing digital transformation processes in territories and the extent to which those processes contribute to the internationalization of ventures.

4.2 Essay 2

Essay 2 is captioned- *International Dynamic Capabilities and Financial Performance of Internationalizing Firms*. It aims to answer sub-research question 2 on how international dynamic capabilities for early internationalizing firms change over time and the possibility to influence internationalization outcomes in the digital context. It is a longitudinal survey study covering two years, responding to the call for longitudinal studies (Coviello and McAuley, 1999; Welch and Paavilainen-Mäntymäki, 2013).

4.2.1 Background and Objective

Overt early internationalization literature reports that internationalizing firms rely on dynamic capabilities - which in the paper is termed as international dynamic capabilities - to manage uncertainty and shocks in foreign markets (Autio et al., 2000; Gabrielsson and Gabrielsson, 2013; Haarhaus and Liening, 2020; Sapienza et al., 2006; Weerawardena et al., 2015). International dynamic capabilities involve higher-level activities that require sensing, seizing, and transforming capabilities to address and shape a rapidly changing business environment (Teece et al., 1997; Teece, 2007). Extant studies demonstrate how early internationalizing firms and gradual internationalizing firms develop international dynamic

capabilities and influence financial performance. However, how the relationship between international dynamic capabilities and financial performance changes over time is sparsely addressed. Consistently with the few prior studies that have incorporated the role of contingencies into the evolution of dynamic capabilities, the paper incorporates the role of digital capability into the international dynamic capabilities-international financial performance relationship of both early internationalizing and gradual internationalizing firms. It seeks to answer the following research questions: “How do international dynamic capabilities influence the international financial performance of early internationalizing firms and gradual internationalizing firms, and how does this relationship change over time?” and “What is the moderating role of digital capability in the process?” The paper contributes to the contingent perspective of dynamic capabilities and the performance relationship literature.

4.2.2 Results and Contribution

The study shows that international dynamic capabilities have a positive influence on financial performance for both early and gradual internationalizing firms, but over time this effect changes. Among early internationalizing firms, the results demonstrate that the positive effect of international dynamic capabilities on financial performance increases over time, whereas the positive effect of international dynamic capabilities on financial performance decreases over time among gradual internationalizing firms. In addition, it shows that digital capability reduces the increasing positive effect of international dynamic capabilities on financial performance over time in early internationalizing firms, unlike gradual internationalizing firms. This demonstrates that digital capabilities are important in the early phases of early internationalizing firms, but their importance diminishes with age; while digital capabilities become more important over age for gradual internationalizing firms. The paper, therefore, encourages entrepreneurs and managers to approach the implementation of digital technologies in business activities with diligence. Theoretically, the paper provides clarity on the performance puzzle surrounding international dynamic capabilities by providing evidence that the international dynamic capabilities are not only important for early internationalizing firms as many studies have a shred of evidence (Rodríguez-Serrano and Martín-Armario, 2019; Sapienza et al., 2006), but equally

important for gradual internationalizing firms to achieve high financial performance. Furthermore, the role of digital capability in the international dynamic capabilities -international financial performance relationship contributes to the contingent perspective of international dynamic capabilities and performance literature relationship. It also serves as a response to the call for research on the impact of digital technology on internationalization (Coviello et al., 2017; Hazlehurst and Brouthers, 2018; Vahle and Johanson, 2017).

4.3 Essay 3

Essay 3 is entitled *Ambidextrous Learning and Survival of Early International Firms-The Role of Social Media Usage*. It is a conceptual study. It aims to answer sub-question 3 on the role of digital technology in driving ambidextrous learning and survival following foreign market entry of early internationalizing firms.

4.3.1 Background and Objective

According to the concept of “death of distance” (Cairncross, 1997), the global connectivity of the internet eliminates the impact of geographic distance on the internationalization activities of firms. In the past, firms have to spend huge sums of monies traveling to gather foreign market information. However, with the influx of internet-enabled tools like social media, firms no longer have to pass through the stress of traveling to gather information; they can now access information thereby reducing the risk of market uncertainty (Alarcón-del-Amo, Rialp-Criado and Rialp-Criado, 2018; Arnone and Deprince, 2016; Parveen, Jaafar and Ainin, 2016; Kaplan and Haenlein, 2010). Social media are internet-enabled platforms such as Facebook, YouTube, Twitter, and LinkedIn that facilitate information sharing, user-created content, and collaboration across multiple individuals (Kaplan and Haenlein, 2010). Early internationalizing firms benefit from social media’s exploratory and exploitation learning capabilities, which enables the acquisition of market-related knowledge and opportunities. For example, Sigfusson and Chetty (2013) show that international entrepreneurs overcome the liability of outsidership by employing LinkedIn to connect with potential partners to explore and exploit opportunities to be insiders in the relevant network in

foreign markets. However, it is still unclear how the use of social media influences the blend of exploratory and exploitative learning – known as ambidextrous learning – and the survival of early internationalizing firms. The study developed propositions and a conceptual model that explain the underlying mechanisms that drive ambidextrous learning and survival in early foreign market entry.

4.3.2 Results and Contribution

The model developed in the study comprehensively demonstrates that (1) using social media for marketing, building customer relations and information accessibility positively influences ambidextrous learning and foreign entry survival. Further, the model explicates that ambidextrous learning positively influences market entry survival prospects. Finally, the model shows that both differences in a cultural context and environmental uncertainty moderate the relationship between ambidextrous learning and market entry survival prospects.

The study contributes to capability and survival studies in internationalization literature. It does so by showing the interdependencies between social media usage, and the development of ambidextrous learning and survival. Second, it contributes to scholarly knowledge regarding phenomenon-based studies, in this case, firm internationalization and digitalization. It therefore responds to the call for more research on the phenomenological field of international business in digital contexts. In practical terms, the study generates fine-grained insights to help entrepreneurs, managers, and internationalizing firms understand the mechanisms underlying learning ambidexterity and survival following foreign market entry.

4.4 Essay 4

Essay 4 is captioned- *Liminality and Developmental Process of Learning Advantage of Newness of Early Internationalizing Firms*. It aims to answer sub-research question 4 on how the LAN of early internationalizing firms develops in the digital context during liminality. It is a longitudinal study of four

internationalizing Finnish firms operating in the digital context covering three years.

4.4.1 Background and Objective

The study considers early internationalization as a state of liminality between the state of inception and stable internationalization. In a state of liminality, early internationalizing firms have been found to enjoy LAN). LAN is the advantage that early internationalizing firms have in learning new competencies necessary for commercialization and value creation in foreign markets compared to those internationalizing later. During the state of liminality, early internationalizing firms are neither here nor there yet (Turner, 1969) and, may even panic (Prashantham and Floyd, 2019). They may encounter various deficiencies such as liability of newness, and liability of foreignness that challenge their survival and growth (Zahra, 2005; Zhou et al., 2010). Despite these constraints, studies show that their LAN supports their long-term survival and growth aspirations (Autio et al., 2000; Zetting and Benson-Rea, 2008). However, we still know little about how LAN is formed and developed into an advantageous capability of internationalizing firms to influence post-internationalization. Extant studies have predicted an influence of LAN on the outcomes of post-internationalization speed such as growth and survival trade-off, growth and profitability, international positional advantages, and positive performance outcomes (De Clercq et al., 2012). However, the mechanisms that link LAN to post-internationalization speed are not yet understood. Drawing on the processual approach to early internationalization and liminality concept (Turner, 1969), the objective of this paper is to explore the development of LAN and the underlying mechanisms that drive the process to post-internationalization speed.

4.4.2 Results and Contribution

The study presents an integrative process model of LAN development and outcomes. The originality of the model is based on incorporating the concepts of social anthropology, a non-business scholarship, into the understanding of LAN. The model provides a holistic perspective on LAN dynamics and integrates the following components: 1) triggers, 2) process, and 3) outcomes of LAN. According

to the model, learning intent, proactiveness and networking skills are the main triggers that influence the development of LAN. This confirms the studies that explain the non-serendipitous nature of LAN (see Zahra et al, 2018; Sapienza, et al, 2006). Also, from the lens of liminality, the model shows that developing LAN encapsulates liminal activities such as self-reflective learning, peer learning, consultative learning, horizon scanning, trade events (conferences and workshops), and *communitas*. New knowledge is derived from consultative learning, horizon scanning, and peer learning via *communitas* whilst self-reflective learning is integrated into firms to create a shared understanding among organizational members, which becomes existing organizational knowledge.

According to the model, there is a reconciliation process between new knowledge and existing knowledge which generates conflict, and in the process, firms either integrates both knowledge or disregards one. The outcomes of the reconciliation process create accumulated knowledge, ritual activities, routines, and adaptive behavior. Accumulated knowledge includes the understanding of industry trends and new technology developments, access to host market knowledge on competitors' resources and geographic presence, understanding of foreign markets' legislations, and collective understanding of the needs and reactions of customers. Rituals also include team events, outdoor events, and ceremonies; whereas routines include actions labeled as repetitive patterns of action that are functionally similar, but not necessarily fixed (Pentland and Rueter, 1994). They include the following: reliance on R&D, frequent updates of operations, constant outsource of locals in host markets, frequent foreign market feedbacks, and insights from partners. Further, before the effect of LAN on post-entry internationalization could be realized, firms leverage the accumulated knowledge, routines, and rituals they have acquired to adapt their operations. It includes changing products based on customers' information, adapting the marketing message around the core values and products, keeping operations up-to-date in response to technological changes. Subsequently, this is translated into post-internationalization speed in terms of expansion of the foreign activities of entrepreneurs.

Importantly, the study advances the existing knowledge on LAN by adopting a dynamic longitudinal approach and offering a process model of LAN development

and outcomes. The concept of liminality and the novel focus on the liminal transitions from no internationalization to stable international operations allows one to create a more holistic view of LAN development. The study also contributes to capability development studies in international entrepreneurship by highlighting some of the underlying mechanisms that support the development of LAN among internationalizing firms.

5 CONCLUSION

This chapter focuses on four main things. In the first place, it integrates the findings from the four essays. Further, it presents the overall contributions, limitations, and future research direction of the dissertation.

5.1 Integration of Findings

The main research question of this dissertation focuses on the processes and mechanisms that support early internationalization in the digital context. This was divided into sub-research questions, and the author addresses them by using four essays. The essays emphasize the importance of capabilities in the early internationalization of firms and the functionality of digital technology as a supportive mechanism. They build on current knowledge of the efficacy of digital technology in supporting the development of international dynamic capabilities in foreign markets.

The first sub-research question probes into how digitalization shapes early internationalization, and according to Essay 1, digitalization offers early internationalizing firms the potential to embark on international activities including opportunity recognition; creation of foreign entry modes, strategies, and decisions; the development of business models; management of foreign marketing activities; international knowledge acquisition; overcoming the liabilities of foreign market entry; and the development of capabilities. Essay 1 also illustrates the importance of digitalization in contributing to early internationalization outcomes such as internationalization speed, international market performance, and international financial performance. For example, the effective and efficient use of digital technology promotes cost reductions in international business operations when early internationalizing firms use it for communication, networking, market research, sales, image enhancement, and online transactions, which in combination can significantly enhance export marketing performance.

The second sub-research question probes into how international dynamic capabilities and its influence on early internationalization outcomes change over

time in the digital context. Building on the development of capabilities as an entrepreneurial activity from Essay 1, Essay 2 addresses this sub-research question by focusing on sensing, seizing, and transforming capabilities as a composite construct of international dynamic capabilities. It builds on theoretical arguments on dynamic capabilities as a composite construct influencing performance (Protogerou, Caloghirou and Lioukas, 2011; Teece et al., 1997). Dynamic connotes 'change', and studies show that firms do not create 'once-and-for-all' routines but continually modify the capabilities they have developed to meet present conditions (Winter, 2003; Zahra et al., 2006). According to Essay 2, international dynamic capabilities have a positive effect on international financial performance, and the relationship increases over time among early internationalizing firms but decreases among gradual internationalizing firms. This confirms the liability of ageing assumption and Autio et al.'s (2000) learning advantage of newness argument. Early internationalizing firms have the learning flare and absorptive capacity to acquire new knowledge to build new capabilities and recombine existing ones to adapt to market changes; but gradual internationalizing firms are stifled by ageing effects, and internal rigidities resulting from existing routines and capabilities that hamper the development of their international dynamic capabilities.

Although Essay 1 has illustrated the importance of digital technology to early internationalization, the findings in Essay 2 show that the application of digital capabilities- expressed as the use of digital technology for internal efficiency, the use of digital technology for collaboration, and the use of digital technology for communications- reduces the increasing positive effect of international dynamic capabilities on financial performance over time in early internationalizing firms. The findings demonstrate an extension of dynamic capabilities studies that incorporate the role of contingencies (Zahra, Sapienza and Davidsson, 2006; Pehrsson et al., 2015; Wilden, Gudergan, Nielsen and Lings, 2013). Though early foreign market entry is tightly coupled with uncertainties and shocks which can lead to sudden mortality (Sapienza et al., 2006), both Essays 1 and 2 show that early internationalization instigates positive international financial performance. Essay 1 shows that investing in digitalization can benefit early internationalizing firms to offset the liabilities of smallness in terms of resource paucity, and the mitigation of transaction costs. In the same vein, Essay 2 illustrates the importance

of international dynamic capabilities in meeting the challenges of the turbulent foreign business environment. It, therefore, postulates that entrepreneurs and internationalizing firms should put more effort into developing their international dynamic capabilities.

The third research question probes into the role of digital technology in driving ambidextrous learning and survival following early foreign market entry. In addressing this question, Essay 3 also builds on the development of capabilities as an entrepreneurial activity to investigate international dynamic capabilities in the digital context focusing on ambidextrous learning. It builds on the current debate surrounding ambidexterity by showing how the usage of social media influences the blend of both exploitative learning and exploratory learning – known as ambidextrous learning – and the survival of early internationalizing firms. Due to liabilities of newness and high failure rates of early internationalizing firms (Zaheer, 1995), Essay 3 acknowledges that focusing on survival is equally important as other internationalization outcomes such as speed, growth, performance, etc. Social media usage in the context of Essay 3 is considered a tool in the omnibus digital context. According to the findings, the role of social media in influencing ambidextrous learning reflects in its usage for marketing, building customer relationships, and accessing information from the market that can be used to explore and exploit knowledge digitally (Benitez et al., 2018).

The final sub-research question probes into the underlying mechanism of the formation of learning advantage of newness of early internationalizing firms and its influence on post-internationalization speed. Building on the development of capabilities as an entrepreneurial activity, Essay 4 investigates the learning advantage of newness using a processual approach. The findings unpack the development of learning advantage of newness and the mechanisms that link learning advantage of newness to post-internationalization speed from a process of liminality, which can be explained through the concepts of “communitas”, “conflicts”, and “rituals”. The findings show that the development of learning advantage of newness is supported by opportunity scaffolding activities, “communitas”, conflicts from knowledge reconciliation, rituals, routines, and accumulated knowledge. It supports our understanding of the non-serendipitous nature of learning advantage of newness, that previous studies have discussed (e.g.

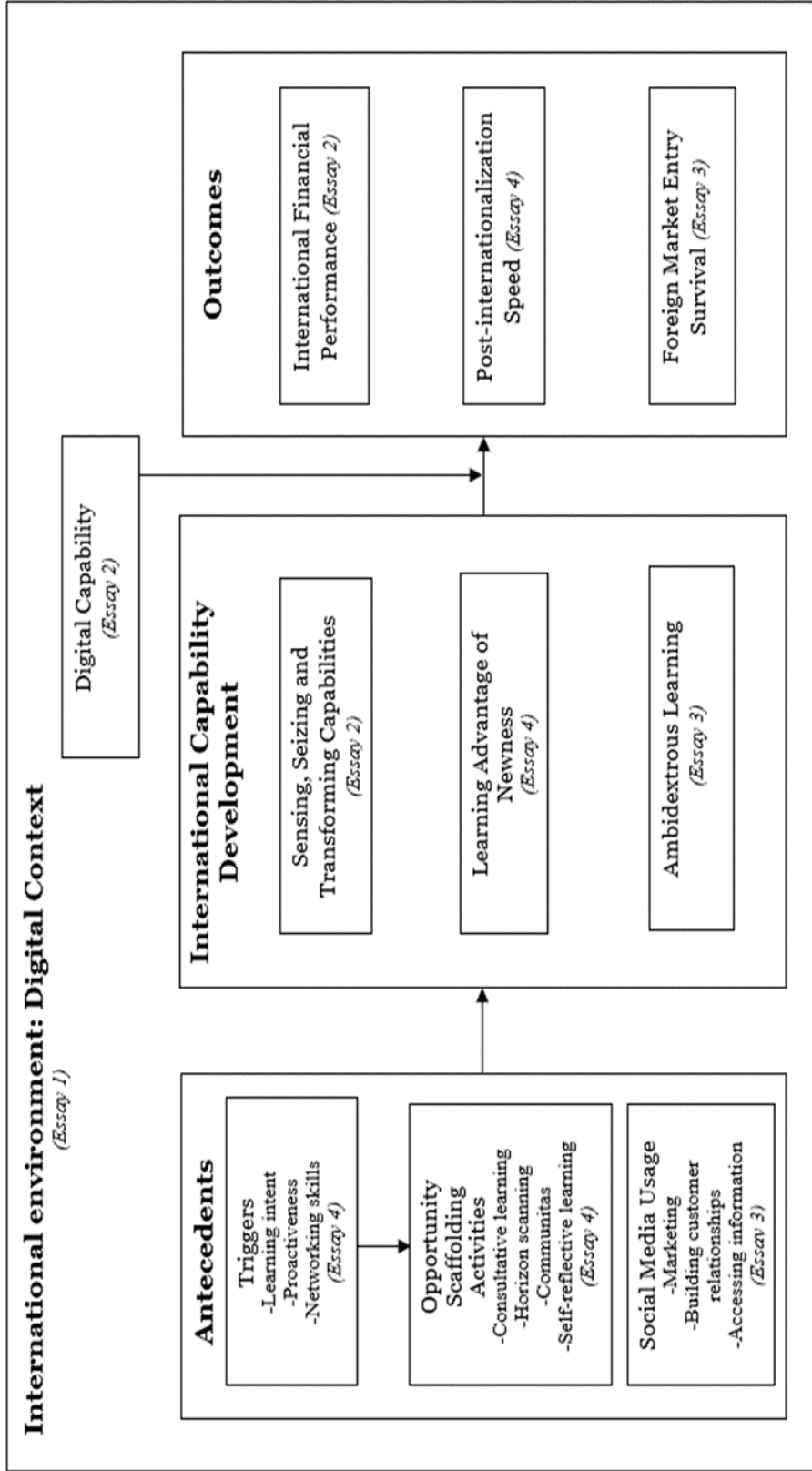


Figure 7. International capabilities development of early internationalizing firms in the digital context

Zahra et al., 2018; Sapienza et al. 2006; Autio et al., 2000). The findings also demonstrate that the learning advantage of newness enhances the international dynamic capability imprint for adaptability to emergent environmental changes and associated internationalization outcomes such as post-internationalization speed.

Based on the findings from the four essays, the dissertation proposes an integrative framework that could be tested in future inquiries (See Figure 7). The framework is captioned “*International capabilities development of early internationalizing firms in the digital context*”. According to the framework, international capabilities development can be explained through- 1) sensing, seizing, and transforming capabilities, 2) learning advantage of newness, 3) ambidextrous learning, -and how they are influenced by firm-specific antecedents such as opportunity scaffolding activities and social media usage, and the moderating role of digital capability.

5.2 Theoretical Contributions

The dissertation makes several contributions that can benefit researchers in IB and IE streams. Firstly, the dissertation augments the few existing studies on early internationalization and digitalization by investigating this phenomenon from a capabilities-based approach. As such, it responds to several research calls – namely, the call for more research on the impact of digitalization on internationalization (e.g. Coviello et al., 2017; Hazlehurst and Brouthers, 2018; Vahlne and Johanson, 2017), the call for more phenomenon-based studies (Doh, 2015), and the call for more empirical research on capability development processes among entrepreneurial firms (Autio et al., 2011; Drummond et al., 2018; Sigfusson and Chetty, 2013; Zahra et al., 2006). The capabilities-based approach advances our knowledge in the capabilities literature by suggesting that apart from existing resources (e.g. digital resources), early internationalizing firms generate learning advantage of newness and other international dynamic capabilities such as ambidextrous learning, sensing, seizing, and transforming that support the internationalization process and outcomes in a digital context. The capabilities-based approach also provides granular insights on the nuances and mechanisms that contribute to the development of learning advantage of newness and

international dynamic capabilities of early internationalizing firms. For example, during transitions along internationalization the findings show that learning advantages of newness development are supported by opportunity scaffolding activities, “communitas”, conflicts from knowledge reconciliation, rituals, routines, and accumulated knowledge. More importantly, explaining the underlying mechanisms through the concepts of “communitas”, “conflicts”, and “rituals” supports our understanding of the non-serendipitous nature of learning advantage of newness, which previous studies have discussed (e.g. Zahra et al., 2018; Sapienza et al. 2006; Autio et al., 2000).

Secondly, the dissertation contributes to the lack of empirical studies on the dynamic capabilities of new and small firms (Zahra et al., 2006; Evers et al., 2012; Tallott and Hilliard, 2016). The overarching theoretical underpinning for the dissertation is the dynamic capabilities framework from the field of strategic management (Teece, 2007; Teece et al., 1997; Zucchella and Magnani, 2016). However, this dissertation extends further to cross-fertilize perspectives from IB, IE, IS, and social anthropology to improve our understanding of early internationalization in the digital context, which represents a widespread, ongoing trend. For example, Essay 4 employs the concept of liminality from social anthropology to create a more holistic view and grasp the underlying mechanisms of learning advantage of newness development. Further, Essay 2 employs the dynamic capabilities framework and concept of digital capability from IS to provide fresh insights on the evolution of international dynamic capabilities and financial performance in the digital context. The direction taken by the dissertation serves as a response to the call for more interdisciplinary studies (Cavusgil and Knight, 2015; Etemad, 2017).

Thirdly, the dissertation provides evidence on some of the underlying international dynamic capabilities and mechanisms that support the early internationalization process and outcomes in the wake of digital technology usage-which includes international dynamic capabilities and learning advantage of newness. Essay 2 unpacks the evolution of sensing, seizing, and transforming capabilities with respect to time and its influence on international financial performance. It shows that sensing, seizing, and transforming capabilities influence positively international financial performance; however, digital

capabilities reduce the sensing, seizing, and transforming capabilities' increasing positive effect on financial performance over time in early internationalizing firms, unlike gradual internationalizing firms. Essay 3 also illustrates the interdependencies between social media usage, environmental uncertainty, differences in cultural context, and the development of ambidextrous learning and survival of early internationalizing firms. Finally, Essay 4 unpacks the processual development of learning advantage of newness by showing the triggers, process, and outcomes. By this, the dissertation contributes to our understanding of the survival mechanisms of early internationalizing firms in foreign markets towards the achievement of sustainable performance and related outcomes from a capabilities-based approach.

Fourthly, the dissertation expands our knowledge on how contextual factor such as the development of digital technology impacts the internationalization of early internationalizing firms (Child et al., 2022; Laufs and Schwens, 2014; Ojala et al., 2018; Shaheer and Li, 2020). For example, Essay 1 delineates the conceptual domain of early internationalization at the interface of digitalization by providing anecdotal evidence on how digitalization shapes the internationalization of early internationalizing firms. Thus, it brings to light how digitalization features as the main factor underlying the causes, processes, and outcomes of early internationalization. It highlights potential contributions in the digital era as a way of offering theoretical and practical knowledge to entrepreneurs on the efficacy of digitalization in internationalization processes. In the evolution of international dynamic capabilities, Essay 2 brings to light the importance of digital capability- a contextual element from the discrete digital context- by showing how the influence of international dynamic capabilities on international financial performance changes over time and the moderating role of digital capabilities in the upgrading of capabilities. Essay 3 also illustrates how social media usage influences the survival of early foreign market entry. Similarly, Essay 4 shows how learning advantage of newness is developed in an omnibus digital context and how it is influenced by the discrete digital context. To address this specifically, the case firms were all operating in an omnibus digital context, but the usage of internet-related infrastructures supported networking, access to foreign market information, and communication.

Fifthly, the longitudinal approach adopted by the dissertation in Essays 2 and 4 responds to the call for longitudinal studies on entrepreneurial internationalization (Coviello and McAuley, 1999; Welch and Paavilainen-Mäntymäki, 2013). Both essays expand our understanding of the mechanisms and nuances that contribute to the development of the international dynamic capabilities of early internationalizing firms. The longitudinal perspective of Essays 2 and 3 also enriches the studies on time-based dynamics of behaviors and processes of entrepreneurial internationalization (Autio et al. 2000; Coviello and Jones, 2004; Jones and Coviello, 2005; Jiang, Beamish and Makino, 2014; Zahra, Ireland and Hitt, 2000).

5.3 Managerial Contributions

This dissertation has several implications for early internationalization practice. First, it provides significant insights for managers and entrepreneurs to help understand how the capabilities underlying the early internationalization of entrepreneurial firms evolve to influence internationalization outcomes in the digital context. For example, Essay 2 illustrates that international dynamic capabilities generate positive international financial performance; therefore, entrepreneurs and internationalizing firms should put more effort into developing them. Further, Essay 2 argues that the ability of a firm to create or refine existing capabilities depends on its management team, the entrepreneur, the entrepreneur's team, willingness, and motivation. Therefore, entrepreneurs and internationalizing firms are encouraged to approach the development of international dynamic capabilities with all seriousness. Essay 4 also provides a holistic insight into the development of learning advantage of newness from a processual approach. The processual approach brings to light the non-serendipity nature of learning advantage of newness. This places a responsibility on entrepreneurs and managers of early internationalizing firms in the learning advantage of newness development process. It suggests that entrepreneurs have to put up the right structures and settings to support the development of learning advantage of newness; for example, by investing in opportunity scaffolding activities such as consultative learning (e.g. participation in trade events, enrolling in business-related courses), peer learning, self-reflective learning, horizon

scanning (e.g. fact-finding trips, proactive search for information), maintaining rituals, and generating internal knowledge.

Second, managers and entrepreneurs should be aware of the benefits that digital technology generates and the relevant capabilities and resources that support how it is adopted in firms' operations. Although digital technology has engendered a growing realization of the importance of the early internationalization of firms, Essay 2 establishes anecdotal evidence that it reduces the increasing positive effect of international dynamic capabilities on financial performance over time in early internationalizing firms, unlike gradual internationalizing firms.

Third, while we know that digitalization has facilitated early internationalization, we do not yet know the exact processes and mechanisms that support such internationalization; therefore, this dissertation is a repository on which managers and entrepreneurs can depend. Entrepreneurs intending to implement digital technologies in their foreign business operations can draw insights from the dissertation. For example, how digital technology is implemented in firm internationalization, the benefits, and the challenges. Further, entrepreneurs and managers that have already prioritized digital technologies in foreign business operations can profit from the insights from the dissertation to strengthen their international digital capabilities and dynamic capabilities. For example, the anecdotal evidence showing that digital capabilities are important in the early phases of early internationalizing firms and the development of international dynamic capabilities but diminishes with age can compel entrepreneurs and managers to approach the investment into digital technologies and the development of digital capabilities with careful diligence. The dissertation also provides context and direction for consultants and professionals working on the early internationalization of new ventures. Consultants and professionals can apply the insights from the dissertation to offer consultative advice and expertise to entrepreneurial firms to help them improve their understanding and capabilities development in foreign markets. For example, the author argues that an improved understanding of digital capabilities required by entrepreneurs could help select and apply modern digital tools while searching for appropriate foreign markets and deciding on the best mode of international operation.

Fourth, this dissertation generates practical implications for policymakers. Early internationalizing firms have been found to play a significant role in the economic development of nations due to their potential to create jobs (Jie et al., 2021). This has propelled governments to attempts to support SME start-ups and growth and to encourage entrepreneurship. Therefore, the theoretical and empirical analyses about the importance of digitalization in the internationalization of early internationalizing firms offer granular insights for policymakers who aim to develop and implement digital and innovation policies to support the growth of the SME sector. Based on the theoretical and empirical findings, the dissertation recognizes that today's digital technology is not only a strategic driver for improving the efficiency of only large firms but also small firms and new ventures. This dissertation could be of benefit to policymakers in Finland. Since the global financial crises of 2009 that the ICT cluster built around Nokia came to an end, the Finnish economy has experienced economic challenges (Alaja, 2017). Even though Nokia has been making a comeback through 4G networks, and various firms such as Kone Corporation, Wärtsilä and Cargotech are deploying industrial internet, Finnish companies and public sector organizations have not utilized their full potential in digitalization (Alaja, 2017). Digibarometer reports over the years show that Finland seems to have good preconditions to utilize digitalization, but the application of digitalization developing online sales is inadequate (Alaja, 2017). Given this, policymakers in Finland can utilize some of the ideas in this dissertation to develop a clear digitalization strategy for both the private and public sectors.

5.4 Limitations and Future Research Directions

This dissertation is characterized by some limitations. First, the focus of the empirical articles was on early internationalizing firms from Finland, with a small and open economy. Therefore, our results are limited to this context and any generalizability beyond this context requires additional research (Lincoln and Guba, 2002; Yin, 1994). It would be interesting to study whether these results apply to other small and open economies. Given this, future studies on Essay 2 could utilize qualitative and longitudinal research approaches in different cultural settings, especially in larger and emerging economies. Essay 4 could conduct quantitative surveys preferably with a longitudinal study approach that would

allow for testing the generalizability of the findings to a larger population. Further, Essay 3 is limited in empirical generalization due to its conceptual nature. However, several promising avenues for future theoretical advancement are apparent. Future studies can empirically test the conceptual model and propositions described in the paper from both cross-sectional and longitudinal perspectives. Alternatively, to improve the generalizability of the findings of this dissertation, future studies could study the phenomenon using cross-country comparison studies between an advanced economy and a developing country. The importance of this initiative arises because most developing nations have institutional barriers that hinder early internationalizing ventures. This makes comparisons that can establish the differences and similarities with developed countries lacking such barriers interesting in the present era of digitalization.

Second, the focus of the dissertation was on international dynamic capabilities. However, international dynamic capabilities may not be the only capabilities that support the internationalization of early internationalizing firms. The reason is studies have shown that substantive capabilities such as digital capability enable early internationalizing firms to transform digital technology into customer value, which increases their international market share and sales growth (Glavas, Mathews and Bianchi, 2017; Jie et al., 2021). The author, therefore, invites future studies to focus on the evolution of substantive capabilities and how they contribute to internationalization outcomes of the early internationalization process in the digital context.

Research on the role of context in internationalization is pertinent, given the sensitivity of early internationalization to context. The dissertation brings to light the important role of the discrete digital context in the evolution of international dynamic capabilities and international financial performance. It demonstrates this by showing how digital capabilities moderate international dynamic capabilities-international financial performance relationship among early internationalizing firms. The author, therefore, suggests future research could investigate how the discrete digital context of social media influences the ambidextrous learning of early internationalizing firms. This is an area not covered by the dissertation.

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PART TWO

ESSAYS THAT FORM THE DISSERTATION

ESSAY 1

**Digitalization and Early Internationalization-
Systematic Literature Review Analyses**

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Abstract

Substantial anecdotal evidence has been garnered to make it uncontentious to concede to studies that stress on the influence of digital technology on early internationalization of firms. Having an interest to study how studies on this phenomenon has progressed overtime. The present paper systematically evaluates internationalization literature in which issues of digitalization feature as a component underlying the causes, processes, and outcomes of early internationalization. We contribute by proposing several future research directions.

Keywords: Digitalization, early internationalization, digital technology

1. Introduction

There is a continuing increase in the early internationalization of firms induced by digitalization. Since the 1990s when the internet and related digital tools were developed, there have been dramatic changes in the way international marketing is conducted. Digitalization has contributed to the changing of the environment, new business processes, new business models, new managerial models (Nam & Kannan, 2020; Ojala, Evers & Rialp, 2018), and even reshaped how firms build and manage global brands (Steenkamp, 2020). The tremendous impact of digitalization may even demand the unlearning of many previous marketing practices applied in the field of international marketing (Sheth, 2020). Digitalization has created an opportunity for firms to overcome the geographical limitations of distance, thereby adding to the importance of early internationalization for firms. Early internationalization refers to the early leap of firms into foreign markets after their foundation (Knight & Cavusgil, 2004). Such firms have been assigned various names but the most used are international new ventures (INVs) (Oviatt et al., 1994) and born globals (BGs) (Rennie, 1993; Chetty & Campbell-Hunt, 2004).

Within academia, early internationalization has prompted researchers to investigate digital perspectives. In the field of international marketing, for example, studies center on the use of the internet in international marketing activities (e.g., Shaheer, Li & Priem, 2020; Sinkovics, Sinkovics & Jean, 2013; Moen, Endresen & Gavlen, 2003; Prasad, Ramamurthy & Naidu, 2001). Notwithstanding the progress, the research advances do not provide a full understanding of how the studies have progressed over time. To advance the international business research field, we consider it appropriate to conduct a

systematic literature review on the phenomena. Existing related reviews were that of Vadana, Kuivalainen, Torkkeli and Saarenketo (2020) and Piqueras (2020). Vadana et al. (2020) provide insights on the influence of digitalization on international activities born digitals whereas Piqueras (2020) focuses the recurring themes in born digital research, but we argue that still there is a significant research gap. Our study extends to focus specifically on how digitalization feature as a component underlying the causes, processes, and outcomes of early internationalization.

Specifically, we have two aims. First, the paper aims to synthesize and identify the research themes, theories and methods used to investigate the phenomenon in the reviewed studies. Second, to provide suggestions for further study and future directions based on information extracted from the articles reviewed. By doing so, we offer the following contribution. According to Jean, Kim and Cavusgil (2020), digital technologies have become more appealing to early internationalizing firms, therefore, the present systematic review contributes to research on digitalization and early internationalization by presenting new insights to advance future theoretical development; thus, responding to recent calls for more research on the role of digital tools in internationalization (Katsikeas, Leonidou & Zeriti, 2020).

2. Method

Digitalization is assigned different meanings depending on the context. Building on prior definitions (see Table 1), in this study we define it as the use of digital technologies and infrastructure in the operations of firms, which Autio, Nambisan, and Thomas (2018) label digital affordances. We adopted a systematic literature review process advocated by Tranfield, Denyer, and Smart (2003) for this review. Following a review protocol, the author used Emerald, EBSCO, Science Direct, and ProQuest databases to source articles. The current review spans from 1994–2021. In 1994, Oviatt and McDougall's highly influential paper on INVs appeared (Oviatt & McDougall 1994) just as digital technologies had started to become more common in the form of personal computer and internet use, and importantly Netscape had introduced graphical web browsers at the 1990s. Therefore, it could be expected that firms began using such digital technologies when internationalizing from 1994 onwards. Our focus is on conceptual and empirical peer-reviewed articles, and we decided to include journals that can be traced from our chosen databases.

Table1. Prior definitions of digitalization

Definition
Digitalization is the use of digital technology, and digitized information, to create and commercialize value (Gobble, 2018)
“Digitalization is the use of digital technologies to innovate a business model and provide new revenue streams and value-producing opportunities in industrial ecosystems” (Parida, Sjödin & Reim, 2019, p. 6)
It is the exploitation of digital opportunities. For instance, using different technologies (e.g., cloud technologies, sensors, big data, 3D printing) to develop new products, services and business models (Rachinger, et al. (2019)

Our main keywords were “early internationalization”, “rapid internationalization”, earliness of internationalization”, “born global”, “born international”, “born regional”, “international new venture”, “instant internationals”, “instant exporters”, “international ventures”, “infant multinationals”, “instant internationals”, “global start-ups”, “early adopters of internationalization”, “border firms”, “borderless firms”, “infant multinationals”, “global start-ups”, “early adopters of internationalization”, “border firms”, “borderless firms”, “gazelles”, “global knowledge intensive firms”, “high technology start-ups”, “new technology-based firms”, “geographically focused start-up”, “export start-up”, “import start-up”, “multinational trader”, and “global start-up”. We used both internationalisation” (British english) and “internationalization” (American english) in the search processes. We used secondary key words such as “digitalization”, “digitalisation”, “digital technology”, “digital orientation”, “digital capability”, “ICT capability”, “ICT orientation”, “IT capability”, “IT orientation”, “Internet”, “Internet of things”, “cyberspace”, “block chain”, “social media”, “social networking”, “born digital”, “i-business”, “e-business”, and “e-commerce”. After the search process, we manually reviewed the individual titles, abstracts, and contents of the articles obtained. Those that did not directly discuss the topic were omitted and the outcome was 97 relevant articles. Figure 2 shows a systematic workflow diagram on how the 97 articles were derived.

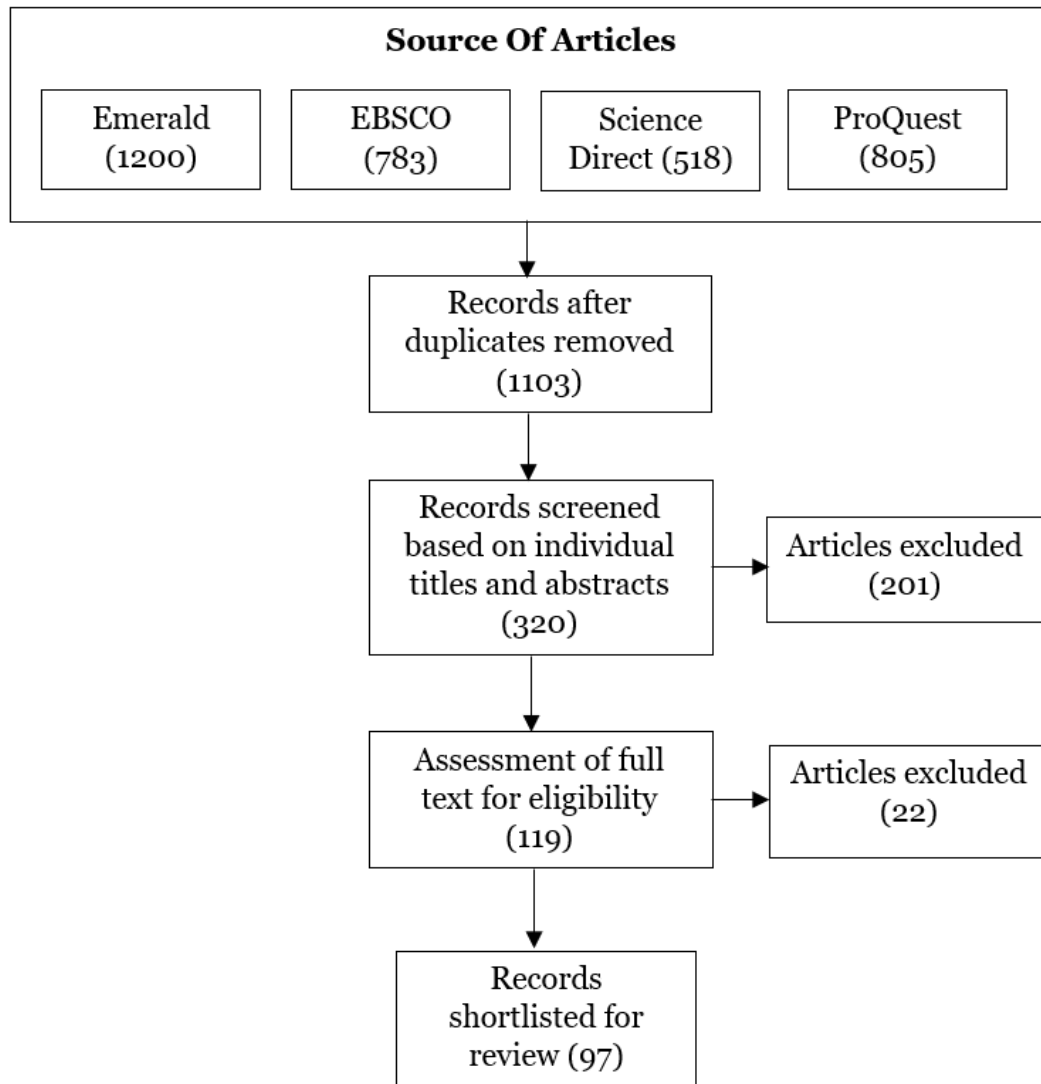


Figure 2. Systematic workflow

3. Results of Analyses

The interface of digitalization and antecedents of early internationalization

The literature review includes 43 articles on the interface of digitalization and antecedents of internationalization on three specific levels: environment, firm, and entrepreneur.

The environment level

We discovered nine studies relating digital technology to environment-related features (e.g., Oyson, 2018; Zalan, 2018; Langseth, O'Dwyer & Arpa, 2016; Kudina, Yip & Barkema, 2008; McCormick & Somaya, 2020). We categorized the focus of

those studies into two sub-themes: digital technology as an environmental force, and advances in technology in the business environment.

Studies related to digital technology as an environmental force recognize the internet and other digital orientated technologies as forces that stimulate early and rapid internationalization (e.g., Oyson, 2018; Zalan, 2018; Langseth et al., 2016; Kudina et al., 2008; Hamill, 1997). Focusing on the effect of international environment changes on the firm, Oyson (2018) found that one of the enabling factors that led to the emergence of small global firms was the ubiquity of the internet. Similarly, Langseth et al. (2016) found four forces that strongly influence the speed of internationalization in small and medium-sized enterprises (SMEs), and among them was the enabling force of technology, particularly ICT.

Advances in technology within the business environment include the upsurge of new digital technologies such as blockchain technology, e-business opportunities, the IoT, virtual communication, e-learning, etc. Kudina et al. (2008) assert these technologies explain why small ventures rapidly become players on the global stage, sometimes more quickly than larger competitors. Zalan (2018) in his conceptual paper cites the influence of blockchain technology in accelerating the internationalization of BGs.

This research category contributes to our understanding of how technological advances in the form of digital innovations (e.g., blockchain technology, e-business, the IoT, etc.) in the environment offer opportunities for early internationalization rather than merely presenting a challenge to be overcome. The findings will alert scholars to novel research opportunities arising as a result of digital innovations emerging from the environment.

The firm level

The articles reviewed revealed two firm-related sub-themes. The first theme centers on digital capability and the second on the firm type. In all, there were 28 articles with these themes (e.g., Jean & Kim, 2019; Tabares, Alvarez & Urbano, 2015; Bell & Loane, 2010; Kotha, Rindova & Rothaermel, 2001).

Studies show the importance of digital capability in supporting early and rapid foreign market entry (e.g., Jean et al., 2019; Tabares et al., 2015). Jean et al. (2019) explain that exporters utilize their platform and web capabilities to support their marketing capabilities, which then translates into export performance. Similarly, Kotha et al. (2001), found the ability of firms to employ websites in their operations had a positive influence on their international presence, in that the more data were

sent and received by visitors to the firm's website, the more knowledge the firm acquired on visitors to support its internationalization decision-making process. The findings of Kotha et al. (2001) have contributed to our understanding of the significant positional role that a corporate website plays in early internationalization decisions. Nevertheless, the reviewed papers do not greatly expand our understanding of the relation between a corporate website and early internationalization; that is likely to remain the case until more research focuses on how website traffic drives early internationalization. Digital capability is also related to multifaceted ability because it acts as a driver of early and rapid internationalization and an enabler of effective development of the overall strategy of the firm. This is a conclusion evident in a framework developed by Loane, McNaughton, and Bell (2004) in a study concentrating on the internationalization strategies of internet start-ups. This category of research contributes to our understanding of the role of digitalization as an organizational capability during early internationalization. It extends further to reveal the digital competencies required by early internationalizing firms if they are to thrive in the current business climate.

The firm types seem also to differ in terms of the influence of digital technology. From the reviewed articles, digital technology is found to influence family business internationalization (e.g., Plakoyiannaki, Kampouri, Stavragi & Kotzaivazoglou, 2014) and start-ups somewhat differently (Bailetti & Zijdemans, 2014; Hagen & Zucchella, 2011; Loane et al., 2004). In family business internationalization, Plakoyiannaki et al. (2014) found that digital technology enables family businesses to compete in geographically distant markets; a finding that led the authors to coin the term e-born global family businesses. There is a body of research on family businesses but research on e-born global family businesses is scarce. This area warrants research attention if we are to fully comprehend the influence of digitalization on the strategic decisions of family members, and the impact on the internationalization of their businesses. These types of family firms often have relatively few employees and digital technology can, therefore, be an invaluable asset. We can also recognize a firm type called the e-business start-up. Hagen et al. (2011) empirically found that the possibility of an e-business firm becoming a BG depends on the strategic use of the internet, and how it is embedded in the firm's operations. This research category broadens our knowledge to understand that becoming an e-business does not necessarily mean

that the firm is a BG. Domestic firms can also be e-businesses, but differences lie in the use of the internet, and how the website is developed. Rapidly internationalizing firms often need a multilingual website while domestic firms can have a unilingual site. In the context of cybersecurity start-ups, Bailetti and Zijdemans (2014) found that one of the actions that enhance early and rapid globalization of such firms is the possibility that the firm can address existing market gaps by using the internet as a global sales conduit to generate leads and an overall increase in demand. Bailetti and Zijdemans (2014) found that digital technology is not a necessary condition for early and rapid internationalization, but BGs can use it to create strategies that bring efficiency gains compared to the competition. The various categories of firms identified in the reviewed articles show that the importance of digital technology in inducing early internationalization is not restricted to a specific kind of firm. The key factor affecting the extent of the impact of digital technology is the manner in which it is implemented. This category of research advances our knowledge on digital processes and tools that facilitate internationalization processes in firms.

Entrepreneur level

Studies examining digital technology as an entrepreneur-related feature point to how the entrepreneur utilizes digital capability to drive early internationalization. The reviewed papers included six studies in this category (Li et al., 2018; Maltby, 2012; Glavas, Mathews & Russell-Bennett, 2019). We categorized the content of those three into two themes, namely, outsourced digital capabilities and entrepreneur's digital capabilities. For the former, Li et al. (2018) showed how entrepreneurs with inadequate digital capabilities could drive a digital transformation in their cross-border business operations. Early internationalizing firms lack a resource advantage (Dunning, 1980), and Li et al. found examples of entrepreneurs lacking digital resources soliciting support from dominant digital platform service providers to foster the early internationalization of their ventures. In contrast, studies have shown how entrepreneurs with adequate digital capabilities can use online social media networks to rapidly internationalize. Maltby (2012) reports entrepreneurs with digital capabilities (e.g., an advanced social media capability) develop effective mutual relationships with customers and partners and increase their tacit knowledge for rapid internationalization. Similarly, Glavas et al. (2019) show how internet-enabled experiences enable the entrepreneur to generate both explicit and tacit forms of

knowledge to support the early phases of the internationalization process. The aforementioned studies contribute to our understanding of how important digital technology is in the internationalization process. Glavas et al. (2019) establish the efficacy of an entrepreneur's digital capabilities in driving early and rapid internationalization; however, how that entrepreneur acquires digital skills remains unclear. Understanding that process would considerably broaden our knowledge.

In contrast to the findings on the enabling role of digitalization in early internationalization, we found two articles that underestimate the role played by digitalization in born global firms. The first is by Chetty and Campbell-Hunt (2004) and it argues that digital technology is not a necessary condition for early and rapid internationalization, however, BGs can use it to create strategies that bring efficiency gains compared to the competition. The second is by Manning, Larsen, and Bharati (2015) and explains that the impact of digitalization on the physical distance to potential clients and markets is of less importance in born global industries. Therefore, we argue that the recognition of digitalization being a driver among BGs in part depends on the industry of the firm. Manning et al. (2015) studied firms in the global IT and business process outsourcing industry. Surprisingly, in such an industry, the impact of digitalization on the physical distance to potential clients and markets proved of less importance but the speed of service delivery and access to talent were the major elements driving the global configuration of service delivery units across time zones (Manning et al., 2015). The finding provides new insights into the existing differences in how industries perceive digitalization in their operations and offer a basis for potential future comparative studies across industries on how BGs or INVs perceive the role of digital technologies in their internationalization operations. We acknowledge that digital capability alone can seldom trigger early internationalization, but further research will provide more justifiable evidence to resolve the inconsistencies between the two opposing views proposed by scholars. In sum, from a theoretical standpoint, studying digitalization and internationalization at the entrepreneur level contributes to existing studies on the entrepreneur's role in the internationalization of an SME.

The interface of digitalization and early internationalization processes

There were considerably more articles on the interface of digitalization and early internationalization processes than the interface of digitalization and antecedents of early internationalization. In total, we found 66 articles. Our review is focused on the inherent activities in the process. By inference from the reviewed articles, we have obtained evidence on the role of digital technology in the entrepreneurial activities inherent in the early internationalization process. Entrepreneurial activities include opportunity recognition, creation of entry strategies, the emergence of business models, management of foreign transactions and communication, international knowledge acquisition, and overcoming of liabilities of foreign market entry. First, in the reviewed articles, we found that little study has been conducted on opportunity recognition (e.g., Glavas, Mathews & Bianchi, 2017). Glavas et al. (2017) found that the internet enables international entrepreneurial firms to realize international opportunities. For example, the opportunity to create new businesses in digital and internet-based environments, to discover information about buyers, to support the buying process, and to build positive brand meanings. Second, the reviewed articles reveal the extent to which digitalization has been discussed in the entry strategies of early internationalization processes of firms both conceptual (e.g., Jaw & Chang, 2006; Grönroos, 2016) and empirical (e.g., Mahnke & Venzin, 2003; Fuerst, 2010; Yoos, 2012; Neubert, 2018). These studies have contributed to our understanding of how the internet and mobile technologies have enabled new ways of internationalizing activities globally from the inception of a firm. Through digital technology, we now have e-commerce, where the firm can operate in a foreign country without necessarily being physically present. Despite the contributions made by scholars, we found that studies on how digitalization influences entry strategy choice decisions were arguably scarce. Third, the reviewed articles report how internationalization processes have been facilitated by information and communications technology (e.g., Google, Facebook). Morgan-Thomas and Bridgewater (2004) empirically, showed the role of the internet in the successful implementation of business models (i.e., virtual export channels) of firms focusing on foreign markets, and the finding was confirmed conceptually by Andersson, Evers, and Kuivalainen (2014). In addition to digital technology leading to the creation of business models, Autio (2017) also showed that digital infrastructures

enable INVs to experiment with their business models. Apart from the business model perspective, Servais, Madsen, and Rasmussen (2006) showed that the internet facilitates product development and relationship building processes. Fourth, we found scholars providing in-depth studies on the influence of digital technology in foreign transaction processes of early internationalizing firms (e.g., Gabrielsson & Gabrielsson, 2011; Hinson, Sorenson & Buatsi, 2007; Andersen 2005; Gabrielsson & Kirpalani, 2004). These studies have contributed to our understanding of how digital technology has changed the conventional way of managing foreign transactions. Before the era of digitalization, export and related foreign transactions were managed using intermediaries and agents. However, research indicates that international firms have adopted the internet as delivery and payment media, for example, receiving revenues and cash flow, getting paid for exports, or paying for raw materials used in production (e.g., Gabrielsson et al., 2004; Hinson et al., 2007). Similarly, concerning communication, studies provide evidence of the role of digitalization that encompasses how digitalization enables INVs to communicate cheaply with stakeholders and to meet the explicit and implied needs of global customers (e.g., Tanev, 2012). These studies emphasize the positive roles of digitalization. In contrast, studies focusing on the drawbacks of digitalization in the management of foreign transactions and communication among small firms, particularly INVs are scarce. Fifth, several studies among the reviewed articles focused on the entrepreneurial process of knowledge acquisition (e.g., Moen, Endresen & Gavlen, 2003; Tran, Yonatan & Mahnke, 2016; Glavas, Mathews & Russell-Bennett, 2019). These studies have enhanced our understanding of the role of digital technology in knowledge acquisition such as searching for information about customers, distributors, partners, and competitors, which forms part of the internationalization process activities. Finally, a couple of studies focused on how digital technology supports the efforts of early internationalizing firms to overcome the liabilities associated with foreign market entry (Arenius, Sasi & Gabrielsson, 2005). These studies provide an alternative perspective on how the liabilities of smallness, and newness (i.e., the questionability of legitimacy) could be mitigated.

The interface of digitalization and outcomes of early internationalization processes

The reviewed papers illustrated four thematic areas on the interface of digitalization and outcomes of early internationalization, each of which we discuss below. First, we found only three studies investigating the relationship between digitalization and speed of internationalization (i.e., the rapid development of new foreign markets) (e.g., Neubert, 2018). Notwithstanding the lack of research attention, the study contributed to our understanding of the dynamic ability of digital technology in the behavior of firms during internationalization processes. Under the main theme, we derived an increase in decision-making efficiency as a sub-theme. Neubert (2018) shows that digitalization improves decision-making efficiency and strategy optimization for the evaluation and rapid development of new markets. In the past, firms have had to spend huge sums traveling to gather foreign market information, however, the influx of internet-enabled tools like big data and predictive analytics can relieve the stress of traveling to gather information, thereby reducing the risk of market uncertainty in strategic decision-making processes (Neubert & Van der Krogt, 2018).

Second, we found eight studies reporting that digitalization leads to a positive international market performance. Subsequently, we derived the following sub-themes: promotion of transparency, promotion of competitive edge, development of opportunities, availability of market information, and promotion of online presence. These sub-themes represent the motives behind how digitalization influences positive international market performance. For example, Neubert and Van der Krogt (2018) found that the effective use of big data and predictive analytics to evaluate markets supports international strategic decision-making processes, which enhance export performance and international competitiveness. Another motive is the efficacy of digital technology in generating information availability, as reported in the study of Bianchi and Mathews (2016). The researchers found that the efficient use of the internet for marketing activities positively influences the accessibility of export information, subsequently influencing the firm's relationship with networks and export market growth. Using internet marketing activities encapsulates online channel support and sales, communication, networking, market research, sales, and image enhancement (Lu & Julian, 2007). Lastly, both Sinkovics et al. (2013) and Wang et al. (2011) show

that the efficient use of online channel support and sales generates sales growth and sales volume.

Third, we found four articles investigating the role of digitalization in positive international market and financial performance. Those articles led us to derive the following sub-themes affecting the role: cost reduction and development of marketing capabilities. Lu and Julian (2007) show that the effective and efficient use of internet technology promotes cost reductions in IB operations when ventures use it for communication, networking, market research, sales, image enhancement, and online transactions, which in combination can significantly enhance export marketing performance. Moreover, Zhang et al. (2013) show that using digital technology to reduce cost can also have a positive influence on both international marketing performance and financial performance. The study found that effective IT capability reduces the cost of communicating with foreign customers/suppliers, of gathering information about foreign competitors, and of the enhancement of distinctive competencies and skills in other business functions that promotes profitability, sales growth, increases sales volume, strategic global competitiveness, and improves strategic positioning and market share. In the quest for marketing capabilities development, Prasad et al. (2001) and Mostafa, Wheeler and Jones (2005) show that the use of digital technology has a positive impact on export performance in terms of sales growth, market share, the achievement of strategic objectives, and profitability.

Following Katsikeas, Leonidou, and Morgan (2000) logic of performance assessment, the current literature review identified effectiveness and efficiency among the articles considered (e.g., Glavas et al., 2017; Sinkovics et al., 2013). However, one element missing that merits research attention is how digitalization engenders the adaptiveness of early international firms (Domurath, Coviello, Patzelt & Ganal, 2020). The findings broaden our understanding on the importance of digital technology in enhancing efficiency and effectiveness in early internationalization.

Theoretical approaches

In all, 54 of the reviewed articles focused on specific theories, and 43 were more general. First, while internationalization process models (i.e., the stage model, Johanson & Vahlne, 1977) have been used in this research stream, the emphasis among the articles reviewed here tends to be on how BGs and INVs deviate from

the gradual stepwise process reported in the original theoretical work. The differences noted usually relate to the speed of internationalization and the process not necessarily mirroring the stages outlined.

The second often used theory is transaction cost analysis (Williamson, 1985). The utilization of this theory has crystallized the impact of digital technology on transactions associated with early foreign market entry and how early foreign entry is organized. For example, applying this theoretical underpinning, Andersen (2005), found that the internet could change the traditional way of organizing international activities. Using the context of exporting, Andersen asserts that the use of the internet has brought about unbundling of export marketing activities such as marketing, logistics and administration, prompting new forms of specialized activities among actors. Transaction cost analysis has also enhanced the understanding of the increased utilization of internet sales channels among early internationalizing firms (e.g., Gabrielsson & Gabrielsson, 2011) due to decreased transaction costs.

The third frequently used theory is the resource-based view or RBV (Barney, 1991). Researchers utilizing this theory have focused on internet-enabled capabilities (e.g., Jaw & Chang, 2006; Tabares et al. 2015; Lee, Falahat & Sia, 2019). The RBV clarifies how the digital capabilities, and the integration of resources influence the entry strategies of early internationalizing firms and their sustained performance (e.g., Lee et al. 2019; Jaw & Chang, 2006).

The fourth prominent theory is entrepreneurial opportunity theory albeit one rarely referenced in the articles reviewed; however, Glavas et al. (2019) did integrate it with the RBV and claims doing so enhances the understanding of how internet capabilities and resources enable early internationalizing entrepreneurial firms to realize international opportunities.

Although digitalization is associated with information systems management literature, none of the reviewed articles utilized information systems theories or information economics theories (e.g., Spence, 1973; Rogers, 1995) which is surprising given the important role they could have in understanding the phenomena.

Methodological approaches

The methods utilized by the various empirical studies differ. Some approached their studies from qualitative perspective. They sprang from single case study (e.g.

Arenius et al., 2005; Ojala et al., 2018) to multiple case study (e.g. Chetty & Campbell-Hunt, 2004). Among the qualitative case studies, few are longitudinal (e.g. Arenius et al., 2005; Ojala et al., 2018). Advantageously, these studies have provided us the opportunity to understand the context of how digitalization is perceived in early internationalization process. However, we consider the inability of generalization as a drawback in the sense that most of the studies focused on small samples (e.g. Arenius, et al. 2005; Fuerst, 2010). In view of this, more multiple qualitative case studies are encouraged. This method will enable us to have a holistic understanding that can serve as basis for generalization.

Others that approached from quantitative perspective mostly adopted survey method (e.g. Kotha et al., 2001; Deng & Wang, 2016). The objectivity nature of quantitative studies provides justification for these studies to be generalized. However, similar to the qualitative studies under review, most of the quantitative studies are cross-sectional. There are little emphases on longitudinal studies and absence of mixed approach studies.

4. Discussion and Future Directions

The review findings show that there have been considerable advances in understanding the influence of digital technology on early internationalization.

Firstly, the current review illustrates that most of the articles discuss digital technology as more of a firm-related feature (i.e., an organizational capability) influencing early internationalization than a feature of the general environment. There seems to be little research on the role of digital technology as a feature of the business environment and how it influences early internationalization. Research on how the accessibility of digital technologies in digital economies influences early internationalization would promote an understanding of the ongoing digital transformation processes in territories and the extent to which those processes contribute to the internationalization of ventures. Digital technology as an entrepreneur-related feature is also sparsely addressed. Entrepreneur-related features such as age, skills, education, and international experience have attracted the attention of early internationalization researchers (e.g., Sekliuckiene, 2017; Nayyar, 2016), unlike digital capability. These cited exemplars have demonstrated how entrepreneur-related features contribute to the success of the early entry of firms into the international market arena, it is therefore prudent to extend future studies that focus on the entrepreneur's digital capabilities.

Secondly, social networking is a significant channel known in the IE to influence early internationalization (Oviatt et al., 1994; Fuerst & Zetting, 2015; Williams, Du & Zhang, 2020) and by engaging in social networking, new ventures can acquire knowledge by imitating others (Zou & Ghauri, 2010). However, in the reviewed articles, we did not find any article on social networking and how it translates to opportunity recognition in a digital context (i.e., social media). There are prior studies (e.g., Coviello, 2006) on the topic but derived from a non-digital context. Future studies might investigate how social media drives early internationalization and opportunity recognition, a research direction that would enhance the understanding of some of the roles of social media in new ventures' international internationalization.

Thirdly, according to scholars including Johanson and Vahlne (2009), foreign market entry is fraught with the liability of outsidership (i.e., recognition as an outsider among existing networks in the new market), and it would be interesting for future studies to consider how digital technology supports the efforts of early internationalizing firms to overcome that liability. Another area that merits research attention is adaptation and standardization. The papers reviewed here reveal that born global firms adopt an internet-based sales channel strategy to serve global markets. In contrast, we argue that internet-based sales channels might not be feasible in all countries as a result of institutional boundaries and policies. Future studies on adaptation and standardization (e.g., Fuerst, 2010) of internet-based sales channels will enhance our understanding of how small firms manage their foreign marketing activities. Digitalization requires firms to adapt previous behavior and may demand the unlearning of marketing practices formerly applied to advance international marketing. For example, according to Sheth (2020), the axiom "think global, act local" will be replaced by "think local, act global".

Fourthly, the reviewed studies emphasize the positive roles of digitalization, we therefore encourage future studies to focus on the drawbacks of digitalization in the management of foreign transactions and communication among early internationalizing firms. Such studies will enable us to have a fuller picture of the effects of digitalization on foreign transaction management and communication.

Further, future studies should focus on the improvement of theoretical approaches. Most of both conceptual and empirical studies reviewed were not associated with any theoretical paradigm. We argue for the use of theoretical

perspectives in the study of the phenomenon in the sense that theories present a systematic way of understanding behaviors and events. We need to move forward from descriptive studies describing the use of digital technologies to a deeper theoretical understanding of the mechanism and reasons for the underlying relationships. We, therefore, propose a more frequent application of theoretical approaches in future studies and developing theories that can explain the intersection of digital technologies and the earliness of firm internationalization.

Finally, future studies should also focus on the improvement of methodological approaches particularly focusing on mixed methods which is scarce in the research domain. Mixed methods provide an in-depth understanding of events and phenomena when methods can be triangulated.

5. Conclusion

This review has enabled us to outline the major research areas in terms of research themes, and theoretical approaches. As a result, we have illuminated some future research avenues and issues developed based on the findings from the review articles. We make recommendations concerning interesting new research areas, theoretical and methodological advances. In practical terms, this review provides insights to managers and entrepreneurs to help understand the role of digitalization—in terms of the important drivers, processes, and outcomes that can help to optimize the use of digitalization and performance in the early internationalization processes of their firms.

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ESSAY 2

**International Dynamic Capabilities and Financial
Performance of Internationalizing Firms**

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ESSAY 3

**Ambidextrous Learning and Survival of Early
International Firms-The Role of Social Media Usage**

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Abstract

Prior studies show the importance of social media in facilitating both exploitative learning and exploratory learning. The central concern is how the usage of social media influences the blend of both exploitative learning and exploratory learning – known as ambidextrous learning – and the survival of early internationalizing firms. The theoretical discussion in this paper centres on international entrepreneurship, social media usage, and ambidexterity literature. We developed a conceptual model that explains the underlying mechanisms through which social media drives ambidextrous learning and survival. Collectively, these discussions are important to the advancement of knowledge on capability and survival studies in international entrepreneurship.

Keywords: International new ventures, social media, ambidextrous learning, exploratory learning, exploitative learning

Introduction

Early internationalizing firms are business entities that make an early leap into foreign markets to seek significant competitive advantage from the use of resources and the sale of output in multiple countries [36]. Such firms are known as international new ventures (INVs). The turbulent nature of the international business environment demands INVs to constantly improve their dynamic capabilities, which can be achieved by learning [44]. Learning is the process of transferring and integrating information to product knowledge. Without learning, firms will be locked-out from current market trends and technologies. According to Autio, Sapienza, and Almeida [10], early internationalizing firms tend to have a learning advantage flowing from their newness that enables them to explore and learn new things derived from the foreign market. They also tend to have a residue of an individual or group international experience which forms the basis of exploitative learning. Digital technologies also offer novel ways for early internationalizing firms to transact business operations, register their global presence, and to develop and manage knowledge [68].

Digital technologies come in different forms. Among them is social media (SM). The low-cost and accessibility of the internet has made the usage of SM platforms, such as Facebook, Twitter, and LinkedIn appealing to early international firms [31]. At both the entrepreneur's level (e.g. [45]) and the organizational level (e.g. [67]), SM is recognized as an important digital tool that influences early internationalization process. International entrepreneurs can use SM to increase their knowledge of customers and convert it into products and

services [45]. Besides customers, Sigfusson and Chetty [62] show that international entrepreneurs overcome the liability of outsidership by employing LinkedIn to connect with potential partners to explore and exploit opportunities to be insiders in the relevant network in foreign markets. SM also provides young entrepreneurial firms with distinct ways to build their brands without expensive marketing campaigns, register their global presence, and to forge international business strategies [68].

Prior studies show the importance of SM in the facilitation of knowledge development and organizational learning in firms [61]. For example, Tran, Yonatan and Mahnke [67] found that Facebook's success depended on its ability to use virtual learning tools and supporting systems to acquire, articulate and integrate extramural knowledge from geographically dispersed communities of users to accelerate its rapid internationalization in cyberspace. Despite the prominence of SM usage among early internationalizing firms, there are limited numbers of studies exploring the influence of SM usage on ambidextrous learning and market entry survival. Prior studies on SM and learning centre on causal relationships between SM knowledge management processes and organizational learning (e.g. [58]). Studies on the implications of ambidextrous learning have shown that it has a positive influence on firm performance [28]. Whereas prior work on ambidextrous learning has focused on performance implications, the implications for survival among early internationalizing firms is under-researched. The existing studies on survival outcomes of ambidexterity are not centred on organizational learning (e.g. [5]; [55]). These are gaps, we intend to bridge.

This paper identifies aspects of ambidextrous learning and foreign market entry survival that can benefit from the use of SM. To address the research gaps identified above, the focal research question here is: what is the role of SM usage in driving ambidextrous learning and survival following foreign market entry? The theoretical discussions of this paper rely on the international entrepreneurship (IE), information systems (IS), and ambidexterity literature. We use an organizational learning theoretical framework (i.e. exploratory learning and exploitative learning) to conceptualize and explore ambidexterity e.g. [12]. Based on the framework, we develop propositions and provide a conceptual explanation of the underlying mechanisms by which the phenomenon of SM drives

ambidextrous learning and survival. Collectively, these discussions advance knowledge within the realm of IE and IS.

The paper makes the following contributions. First, it contributes to capability and survival studies in IE. It does so by showing the interdependencies between SM usage, and the development of ambidextrous learning and survival. Second, as noted by Crossan, Maurer and White [17]: A theory of organizational learning is more about a well-grounded trunk than it is about adding to the complexity of branches and leaves (p. 454). However, they emphasised that adding more branches and leaves creates the need for an even stronger and sustainable trunk and base to support them, therefore, we contribute to organizational learning theory by strengthening that “trunk”. We do this by deepening our understanding of ambidextrous learning within the context of INVs. Third, we contribute to IS literature on SM usage by responding to research calls on how technological context affect the internationalization process of firms [16]; [69].

Theoretical Background

Learning in International Business

International business is distinguishable from domestic business in being a form of business operations that transcends national borders. It involves “active involvement in establishing a greenfield site abroad, a manufacturing facility in another country, a sales or service centre abroad, cross-border merger or acquisition, or establishment of a cross-border joint venture or strategic alliance” [4], p. 494. All those activities involve an element of learning. Fletcher and Prashantham [23] state, “internationalization is a learning-intensive process” (p. 475). Context sensitivity is important in this process, as differences in cultural context can influence how the firm learns [71]. Scholars (e.g. Zahra, Zheng and Yu [71]) argue that unlike culturally dissimilar markets, culturally similar markets limit opportunities for organizational learning because knowledge flows from newly entered markets are similar to previous entered markets, adding only incrementally knowledge stocks. The critical learning period in the cycle of a firm during internationalization is in the early and growing stages [4]. This assertion is particularly true of INVs and learning is seen as a capability that drives the early internationalization of that type of firm [23]. The means of learning available to INVs are diverse and might involve learning by using, in relation to the use of

products, machinery and inputs; learning from new technological developments; learning from inter-industry spillovers (imitating competitors); learning by interacting; and learning by searching [44] the external environment and the firm's internal milieu [23]. Other forms include congenital learning derived from the experience of the founding members of the firm, and grafting (learning from the expertise of people newly recruited into the firm) [23].

The multiple ways of learning and forms of associated content have impelled organizational theorists to categorize the firm learning process into two main processes: exploratory learning and exploitative learning [46]. Exploratory learning is defined as market-based learning focused on the search for the unknown [40] and new opportunities through the acquisition of knowledge that is distinct from existing organizational expertise [14]. It is the dynamic sensing capability of firms to experiment and identify potential market patterns. In contrast, exploitative learning is defined as the firm's capability "based on routines that allow firms to refine, extend, and leverage existing competencies or to create new ones by incorporating acquired and transformed knowledge into its operations" [73], p. 190). Exploitative learning is thus an internal directed form of learning aimed at adapting the firm to its environment [14] by applying existing knowledge [46]. According to organizational theorists, concurrent or sequential usage of both learning approaches is termed ambidextrous learning [74; 22].

Ambidextrous Learning

The international business environment is a turbulent market characterized by inherent uncertainties and dynamism flowing from issues such as technological change, market instability, changing competitive landscapes, unfamiliar consumer preferences, culture differentials, and others. Some of these issues have a direct influence on the competitive situation of the firm while the influence of others is indirect [41] but as a group, they complicate the effective internationalization of firms, and particularly of small firms. The complexity involved justifies firms employing both exploratory and exploitative learning to advance the acquisition of knowledge [23].

Exploratory learning enables INVs to discover threats and opportunities within their environments. Unlike opportunities, threats are difficult to control. Becoming privy to them enables firms to optimize performance and offset threats by engaging with issues over which they have more control [14]. In contrast,

exploitative learning provides an avenue for INVs to maximize scarce resources by utilizing currently available market information within the firm's stock of knowledge [46]. The INV literature informs us that founding entrepreneurs and management teams support early internationalization; however, Fletcher and Prashantham [23] add that the support is augmented by new knowledge obtained from the firm's ongoing activities. Learning from the international experiences of entrepreneurs and management teams is about the exploitation of existing knowledge. In contrast, learning from the firm's ongoing international activities is more exploratory than exploitative. Significantly, this means that both exploratory and exploitative learning complement each other [42], though each has a distinct role and associated performance outcome [29].

The uncertain and dynamic nature of foreign market environments [1] implies that firms must practice exploration and exploitation to survive and amass competitive advantage [51]. According to March [46] both exploratory and exploitative learning approaches depend on market uncertainties. Also, they compete for scarce resources, which can create tensions. March [46], therefore, posits that there should be a way to leverage synergy or an alternative way to manage the tensions inherent in the deployment of the two learning approaches. Effective achievement of synergy and management of tensions is what makes a firm ambidextrous [35]. Studies show that there is no single unique way to achieve ambidexterity. Firms have the option to choose either to focus on differentiation tactics or on integration tactics to increase performance. Karafyllia and Zuchella [35] suggest internationalizing firms use integration tactics to leverage synergy and differentiation tactics to manage tensions. Integration tactics involve a firm concurrently utilizing exploratory and exploitative learning in its knowledge development process [13]. Differentiation tactics, in contrast, involve a firm engaged in a knowledge development process focusing on either exploitation or exploration. That firm can then switch from one to the other to suit its strategy at different times.

Early Internationalization and Survival

Scholars, e.g. [46] note that IE research flows from an interest in early internationalization following McDougall's (1989) empirical study comparing domestic ventures and INVs. Since then, early internationalization has become one of the prominent research concepts. According to the concept of early

internationalization, entrepreneurs choose to internationalize from inception due to the variety of skills they possess, and their abilities to sense opportunities [10]. Oviatt and McDougall [54] conceptualized early internationalizing firms as INVs. INVs are “business organizations that, from inception, seek to derive significant competitive advantage from the use of resources and the sale of output in multiple countries” ([54], p.49). INVs behave radically differently to traditional firms, whose entry into an international market is gradual and sequential, involving a long period of a learning experience and resource accumulation [32]. Some of the common features linked to INVs are the earliness of their foreign market entry [54], network involvement in the facilitation of rapid internationalization [48]; [16], the speed and outcomes of internationalization processes [10], their learning advantage of newness (LAN) [10], and their entrepreneurial orientation [74]. Scholars have used the terms INVs and born globals interchangeably [5]. For the sake of consistency and theoretical parsimony, in this paper we refer to INVs.

Anecdotal evidence from prior research e.g. [59]; [10] shows how INVs survive foreign market entry. Autio et al. [10] report that in the case of having little or no existing domestic knowledge, INVs can deploy LAN that boosts their chances of survival following their foreign market entry. Nevertheless, Sapienza et al. [59] adopt a capability-based perspective and argue that irrespective of LAN, INVs have resource liabilities that reduce their chances of survival but increase the chances of growth if they survive. Sapienza et al. [59] also highlighted the role of the prior experience of founders in influencing the survival of INVs. To our knowledge, among these prior studies, none specifically focuses on either the role of SM or ambidextrous learning. We consider these omissions as sweet spots to capitalize on in this paper.

SM Usage

SM is growing in importance as a strategic tool among firms [56] and is changing interactions between firms and consumers [33]. However, Kaplan and Haenlein [34] argue that the understanding of this concept is to a certain extent limited. Some refer to SM as Web 2.0 e.g. [30] but according to Kaplan and Haenlein [34], there are differences between the concept of SM and Web 2.0 because SM platforms are created using Web 2.0 technologies. Web 2.0 offers a new way for users to modify in a participatory and collaborative fashion content built with Adobe Flash, Really Simple Syndication (RSS: web feed formats used to

publish frequently updated content, in a standardized format), Asynchronous JavaScript (AJAX: a technique to retrieve data from web servers asynchronously) [34]. Kaplan and Haenlein [34] describe SM as a group of mobile and web applications that build on the ideological and technological foundations of Web 2.0, and that allow users, such as individuals and communities to create, share, collaborate, discuss, and modify user-generated content [34]. This definition is one of the most-often cited in academic literature [56]. The availability of the internet has provided leeway for individuals to use SM to communicate across geographic locations without a physical presence [26]. Likewise, at the firm level, prior studies have shown the importance of SM for the development and conducting of international business operations (e.g. [2]). Parveen et al. [56] posited SM usage can be split into three sub-constructs: SM used for marketing, for building customer relations, and for accessing information. Examples of SM are networking sites (e.g. Facebook, Twitter, LinkedIn), content communities (e.g. YouTube), blogs, etc. [34].

Conceptual Model and Propositions

Figure 1 presents a conceptual model of the influence of SM usage in driving ambidextrous learning and market entry survival among INVs. Owing to the challenges posed by resource scarcity among INVs [72], and the low-cost and accessibility of SM [31], we argue that survival prospects of such firms will be enhanced if they employ SM. Further, relying on SM, the firm can concurrently employ exploratory and exploitative learning in its knowledge development process or switch from either exploitation or exploration to suit its strategy at different times [13]. Lastly, INVs are known to contend with environmental uncertainty in global markets, and according to March [46], exploratory and exploitative learning also depends on environmental uncertainty. We, therefore, consider environmental uncertainty to play a moderating role between the probable influence of ambidextrous learning on foreign market entry survival. In sum, the conceptual model establishes a relationship among organizational contextual characteristics, SM usage, ambidextrous learning, and survival. We also incorporate differences in cultural context (i.e. a culturally similar market versus a culturally dissimilar market).

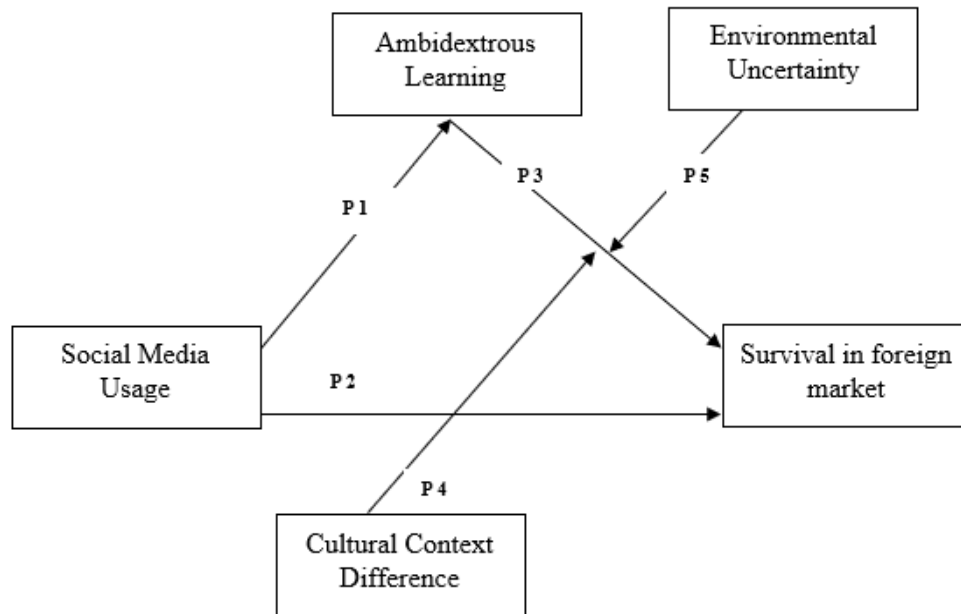


Figure 1. Conceptual Model

SM usage and Ambidextrous Learning

SM facilitates cross-boundary communication and conversation, preserves institutional memory, harnesses distributed knowledge, and reveals emerging opportunities [47]. It also provides new knowledge that supports exploratory learning and facilitates the conversion of new knowledge into practical knowledge through content creation and sharing. Unlike traditional CRM, where information is delivered from the firm to the customer with the sole aim of creating a one-to-one relationship [66], SM provides a network of many-to-many relationships whereby the firm interacts with customers and other stakeholders by creating and sharing content [37], which by adding online followers extends the firm's knowledge repertoire.

Firms also use SM as a channel to access information on customers and competitors; for instance, using a simple hashtag on Twitter, a firm can explore and know all that has been said or written on followers. There are also SM search tools that facilitate the exploratory learning of firms such as Twitter Advanced Search, Bing Social Search, etc. Within the firm, SM platforms such as microblogs and SharePoint serve as a facility for the preservation of organizational memory that supports exploratory and exploitative learning. On these platforms, the

organization's members can interact socially to share knowledge and apply it effectively to the firm's business activities. If, for example, individual members or functional units have to deal with complaints from customers, they might search through online conversations to discover if any unit or individual has encountered similar challenges before. If there is no precedent, the unit can post the challenge on the platform for individuals and other units to share their existing expertise on how to overcome it.

Lastly, in using SM for marketing, firms usually create online communities where users and potential customers congregate and interact around their products and services. The more the interaction develops, the more enthusiastic users or consumers will become about sharing the firm's product and services on their SM timelines. The online communities make it possible for users and customers to submit reviews, recommendations, and ratings of the firm's product and services [26]. They also create fan pages where customers and users can comment, like, or dislike the firm's services or products. On these pages, firms post product or service-related videos, messages, quizzes, information, and other materials. The creation of online communities and fan pages opens opportunities for firms to discover information about their potential customers, their tastes, their explicit and implied needs from their conversations on the firms' fan pages.

In summary, using SM for marketing, building customer relationships, and to access information provides an array of data from the market that can be used to explore and exploit knowledge digitally [12]. Hence, we make the following proposition.

Proposition 1: SM usage for marketing, building customer relations and information accessibility positively influences ambidextrous learning.

SM and Market Entry Survival

The survival of INVs in foreign markets depends on how they overcome the liabilities of newness, and foreignness [74; 59]. A liability of newness exists because early internationalizing firms usually lack specific sets of resources and capacities to compete in foreign markets [72], which can spur failure. Proponents posit that due to liability of newness the risk of INV dying is at the highest during its inception and decreases, as it becomes older [72]. Studies have shown how digital technology can support new ventures in overcoming the liability of newness. For example, Morse, Fowler and Lawrence [49] developed a theoretical

framework to address how the adoption of virtual embeddedness by new ventures affects the likelihood of their survival by mitigating the liabilities of newness rising from the need to create and manage new roles and systems, lack of social capital, lack of economic capital, and lack of relational trust. The authors use the term virtual embeddedness to refer to the establishment of inter-organizational connections through the use of internet-based technologies [24]. Arenius et al. [6] also found that the internet can offer a way to reduce the effects of the liability of foreignness and resource scarcity. The liability of foreignness is often associated with the costs of trading abroad including but not limited to travel and transportation costs, co-ordination costs, and those flowing from efforts to establish legitimacy.

Similarly, the use of SM can ease the difficulties resulting from liabilities of newness, and foreignness, that hampers the survival of firms. Firstly, due to the low-cost and accessibility of the internet, the usage of SM for marketing (e.g. via Twitter, Instagram, and Facebook) in the foreign market enable INVs to overcome their paucity of resources by reducing transaction costs in marketing activities associated with liabilities of foreignness. For example, many internationalizing firms have set up shops on Facebook, Twitter, Instagram and other SM networks in pursuit of new customers as a means to overcome their paucity of resources. Uber began as an early international firm and has used SM to grow very fast. It offered incentives to riders in exchange for a SM share. The SM channels are more cost-effective than traditional marketing, advertisements, and promotions conveyed through radio, TV, newspapers, and the like.

Secondly, having the difficulty in achieving legitimacy (i.e. liability of foreignness), the usage of SM to facilitate technology-enabled customer relationship management can create an opportunity to pluralize ongoing discussions about firms. Unlike in the past where organizational legitimacy was assessed by news media, surveys, and governmental agencies [21], presently, SM enables the internationalizing firm to include the voices of customers, users, and the public. The individual tweets, Facebook posts, LinkedIn posts, and blogs judgements about the firm mitigate perceived risks and enhance the legitimacy of the firm in a foreign market [7]; [2]. This effect was confirmed in a study conducted by Arnone et al. [7] on the role of social networking sites in the internationalization of small businesses.

Thirdly, the use of SM search tools (e.g., Buzzsumo, Tagboard, and AgoraPulse) to improve access to information can provide INVs with more information on customers, competitors, existing, and new geographic markets than would be available without using such tools. Such usage reduces the difficulty in acquiring foreign market knowledge arising from the liability of newness as exacerbated by the liability of foreignness that has the possibility of hampering the survival of the firm. Based on the foregoing discussions, a direct relationship between SM usage and market entry survival is proposed.

Proposition 2: SM usage for marketing, building customer relations, and information accessibility positively enhance the survival of INVs.

Ambidextrous Learning and INV Survival

Exploratory learning improves opportunities for the firm to amass new knowledge through the process of discovery. Exploitative learning also promotes the emergence of new knowledge through the combination and recombination of existing knowledge [9]. It often leads to early success [25]; however, during the internationalization process, INVs need both exploratory and exploitative learning because new ventures that depend solely on exploitative learning lack an understanding of market conditions that differ from their current environment [46]. As a result, INVs find it difficult to adapt to emerging changes within the foreign market and tend to suffer from a competency trap [15], also known as organizational inertia [42] or a success trap [40]. A firm can fall into a competency trap when its core competence becomes a core rigidity, which causes the firm to focus on existing competencies and routines and ignore new forms of knowledge in the mistaken belief that existing competencies and routines will continue to be effective in the future. Competency trap can also affect new product development, although exploitative learning may enhance survival and performance, beyond a certain point the level of survival-related performance diminishes due to knowledge ossification [9]. In contrast, new ventures that prioritize exploration suffer from internal inefficiencies and information myopia [12] known as the failure trap [40]. A failure trap occurs when the firm is clustered with diversity body of new knowledge but does not exploit prior learning and experience [46]. Depending solely on exploratory learning nullifies the short-term commercial benefits that new ventures can achieve [40]. In addition, Autio et al. [10] studied LAN and showed that in the early stages of INVs' internationalization, they have

an exploratory learning ability in the form of LAN that supports their survival; however, as INVs age they develop internal rigidities that render LAN obsolete. We, therefore, argue that it is appropriate for INVs to adopt ambidextrous learning processes. Ambidextrous learning paves the way for firms to integrate exogenous knowledge with existing knowledge, prevents organizational inertia and information myopia, and creates new capabilities that enhance the achievement of commercial benefits and sustainable competitive advantage [38]. Based on the foregoing discussion, we propose that:

Proposition 3: Ambidextrous learning positively influences the survival prospects of INVs.

Cultural Context Difference

Achieving ambidexterity in learning is about the balance of how high or low levels of exploratory learning are applied and how low or high levels of exploitative learning are used either simultaneously or sequentially. The path dependence perspective shows that when INVs pursuing a rapid internationalization process enter a culturally similar foreign market they have entered before, they tend to invoke more exploitative learning than exploratory learning. That choice stems from the similar knowledge flows, culture, and business climate. They benefit from replicating the knowledge and experience of the entrepreneur and the knowledge acquired from one foreign market in other similar markets and settings [70]. Fletcher and Prashantham [23] state the effectiveness of exploitative learning in the internationalization process is augmented by new knowledge obtained from the firm's ongoing activities [23]. In terms of balance, because of resource scarcity, the greater focus is on differentiation tactics as the firm shifts from exploitative learning to exploratory learning as required to align activities and strategies with environmental situations [53]. However, when a firm enters a culturally dissimilar market, it must address a high level of psychic distance which prompts it to embark on exploratory learning [71]. Characterized by the LAN, the internationalizing firm has to do more exploratory learning than exploitative learning to understand the market dynamics, structures, and institutions of the particular target market. Under the conditions of absence or few existing organizational routines to unlearn, the knowledge acquired from exploratory learning is maximized in domains close to the domain of existing knowledge [52]. For this reason, in terms of balance, INVs focus more on differentiation tactics, which involves a shift from exploratory

learning to exploitative learning when required to align activities and strategies with environmental situations [53]. In conclusion, the balance between exploratory and exploitative learning due to cultural contextual differences creates a knowledge intensity that enhances international growth and sustainable competitive advantage [38]. We propose that:

Proposition 4: The relationship between ambidextrous learning and market entry survival is moderated by differences in the cultural context that the INV enters.

Environmental Uncertainty

The resource dependence literature recognizes that the external environment in which firms operate potentially influences their behaviours [3]. There are a multitude of ways to describe the external environment of firms; for example, Duncan [20] describes the environment based on simple/complexity and static/dynamism dimensions, while, adopting a different perspective, Ansoff [8] describes the environment as a function of changeability and predictability with five different turbulence levels – namely, the repetitive, expanding, changing, discontinuous and surprising environments. In line with Dess and Beard [19], we describe the environment based on uncertainty through the dimensions of complexity, dynamism, and munificence. Complexity refers to the multiple external factors and challenges that the firm encounters. It includes heterogeneity in customer demands, cultural dissimilarity, diversity in operational processes, and competitors [64]. Dynamism defines the degree of change inherent in the factors emanating from environmental complexity. Finally, munificence defines the ability of the environment to support the growth of the firm [3].

The degree of uncertainty determines the benefits that a firm might derive from learning [42]. Though INVs have LAN to support them in exploring and acquiring new knowledge in environments characterized by a high degree of cultural dissimilarity [71], and the experiences of founders to depend upon to cement knowledge exploitation; they do not have adequate resources to meet the necessary demands of the environment, as established by research on the liability of smallness [60]. Pehrsson et al. [57] discovered that despite the advantages accruing from LAN, developing dynamic capabilities in the early stages of internationalization is resource sapping and causes firms that do not have existing resources or connections fail to build new capabilities to amass competitive advantage and performance. Inadequate resources can also adversely affect the

strategies, operations, and learning processes of INVs. Building on the premise of the liability of smallness (i.e. resource scarcity) [72], we argue that environments marked by high complexity and dynamism will have an adverse effect on the relationship between ambidextrous learning and survival. The reason is that in such environments, firms' survival and growth depend on their resources [27], although some scholars argue that slack resources can impose constraints on a firm [18]; [50]. In addition, according to the resource-based view, sustained competitive advantage is more a function of firm resources than of industry structure [65]. In contrast, when the INV enters an environment of munificence, although it lacks resources, the environment provides the opportunity for it to create resources through the accumulation of revenues that can support survival and growth [3]; [11]. Although developing dynamic capabilities in the early stages of internationalization is resource sapping [57], a munificent environment can provide INVs with the confidence and energy to build new capabilities and develop a long-term strategy to amass competitive advantage [11]. The foregoing arguments prompt the following proposition:

Proposition 5: The relationship between ambidextrous learning and the survival of INVs is moderated by environmental uncertainty.

Discussions and Implications

This paper extends the current debate surrounding ambidexterity. The topic of ambidexterity has attracted attention across different academic disciplines [43]; however, the "understanding of its determinants and consequence has remained rather vague" [39], p. 1109. Among the related studies, few centre on international new ventures (INVs). Relating the concept of ambidexterity to early internationalization and organizational learning literature, this paper extends our conceptual understanding of the determinants and consequences of ambidexterity. We propose SM usage is a determinant of ambidextrous learning with a consequent influence on survival following new market entry. As a point of explanation, we show the interdependencies between SM usage and the development of ambidextrous learning and survival by developing a conceptual model and propositions. Our conceptual model clarifies the normative implications of ambidextrous learning in the context of SM usage. To advance theoretical development, we incorporated key contingencies from internationalization process literature: environmental uncertainty and differences

in cultural context. In summary, the discussions in the present paper will have important implications for both academics and practitioners.

Theoretical and Practical Implications

First, the paper contributes to a capability-based view of the effects of early internationalization on survival studies in IE. Researchers suggest that early internationalizing firms face a deficiency of the resources and capabilities required to compete in foreign markets [57]. In addition, they encounter a liability of foreignness that challenges their survival and growth [72]. Despite these liabilities, studies also show that they have a LAN to foster exploratory learning and can also call on a residue of individual or group international experience which forms the basis of exploitative learning [10]. These characteristics provide an interesting context in which to study ambidextrous learning. Building on ambidexterity literature, we provide insights to help understand how digital capabilities in terms of SM usage influence the survival following foreign market entry.

Second, we contribute to organizational learning theory by extending the understanding of ambidextrous learning and its implications for organizational survival within the context of early internationalizing firms. We have strengthened the “trunk” of organizational learning theory by examining it peripherally and highlighting its importance in early internationalization.

Third, we contribute to IS literature on digitalization by focusing on SM usage in the context of ambidextrous learning and its implications for firm survival. Studies on SM usage, although not yet numerous, have provided evidence of the implications of SM for the activities of internationalizing firms (e.g. [67]; [45]). Those last referenced studies show that SM usage enables international knowledge acquisition to support rapid internationalization. Our perspective extends such studies by generating discussions on its impacts on ambidextrous learning and survival.

Rather than recommending a course of action, this paper provides a comprehensive view of SM in enterprise management. That said, international entrepreneurs that see the importance of SM usage in their operations may wish to consider the implications of the derived propositions. Empirical confirmation of these propositions calls for international entrepreneurs to pay close attention to the usage of SM in their organizational learning activities and foreign market entry survival. This paper also provides insights to help international entrepreneurs

understand the need to apply ambidexterity in their organizational learning process when operating in foreign markets. Scholars warn that applying ambidexterity is not straightforward (e.g. [63]). Entrepreneurs and firms have to understand the influential factors and mechanisms that support ambidexterity. This paper will, therefore, serve as an invaluable source of information for their decision-making processes.

Limitations and Future Research Agenda

The major limitation of the present paper lies in its conceptual nature, in the sense that there are no data or empirical justifications to buttress the discussions. However, several promising avenues for future theoretical advancement are apparent. We suggest that further studies empirically test our conceptual model and propositions described in Figure 1 from both cross-sectional and longitudinal perspectives. Such a course will advance our knowledge of capability-based view studies in IE, and SM in enterprise research in the field of IS.

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ESSAY 4

**Liminality and Developmental Process of Learning
Advantage of Newness of Early Internationalizing
Firms**

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Abstract

Existing studies have put limited attention on the dynamics of learning advantage of newness. This article takes a process approach and aims to investigate the development of learning advantage of newness and its effect on post-internationalization speed. We examine these through the novel lens of the concept of liminality. Using a multiple-case study of four Finnish internationalizing firms, we inductively derive a process model that shows how the underlying liminal factors such as opportunity scaffolding activities, communitas, conflict, routines, and rituals contribute to the development of learning advantage of newness. They are critical for the successive development of firms to overcome liminality.

Keywords: International new ventures, learning advantage of newness, post-entry internationalization speed, digital context, liminality

Introduction

Early internationalization is a highly complex, risky and ambivalent process (Oviatt and McDougall, 2005; Knight and Cavusgil, 2004). It is a process whereby a firm enters a foreign market soon after its establishment (Knight and Cavusgil, 2004; Yang, Li and Wang, 2020). From the time of early internationalization till the state of an established position in foreign markets, these firms experience a betwixt and between the state of liminality, which is marked with ambiguities, uncertainties, and risks (Prashantham and Floyd, 2019). During such periods of initial internationalization, firms are neither here nor there yet (Turner, 1969). Therefore, they encounter other deficiencies such as liability of newness, the liability of size or smallness, liability of foreignness that challenges their survival and growth (Zahra, 2005; Zhou, Barnes and Lu, 2010). At the same time, evidence shows that early internationalizing firms are more innovative and can actually benefit from a learning advantage of newness (LAN) to attain rapid international growth (Autio, Sapienza and Almeida, 2000). LAN is the advantage that newer firms have in learning new competencies necessary for commercialization, long-term survival, and value creation in foreign markets (Autio et al., 2000).

Arguably, LAN of entrepreneurial firms is not a new field of research. Among the extant works, we identified two areas that demand more research

attention. Firstly, scarce attention is paid to the development of LAN from a process-based perspective. Only Fuerst and Zetting (2015) apply a dynamic approach; however, they do not provide a holistic picture of LAN development. Rather, they focus on how the interactions with network partners contribute to the creation of international market knowledge. Therefore, we still know little about how LAN is formed (Bai, Liu and Zhou, 2020) and developed into an advantageous capability of early internationalizing firms. Secondly, the other area that awaits more empirical studies relates to LAN's effect on post-internationalization speed (Sadeghi, Rose and Chetty, 2018; Zhou et al., 2010). Received research has focused on several outcomes of LAN. For example, the existing studies have predicted the effect of LAN on the outcomes of post-internationalization speed such as growth and survival trade-off, growth and profitability, international positional advantages, and positive performance outcomes (De Clercq, Sapienza, Yavuz and Zhou, 2012). However, the mechanisms that link LAN to post-internationalization speed are not yet understood. Given these research deficiencies and drawing on the processual approach to early internationalization and liminality concept (Turner, 1969), the objective of this paper is to explore the development of LAN focusing on its antecedents, process, and outcomes, specifically, the post-entry internationalization speed of early internationalizing firms.

Our work provides several important contributions. First, longitudinal studies have been highly demanded in internationalization studies because the time dimension in internationalization has been largely neglected (e.g. Coviello and McAuley, 1999; Welch and Paavilainen-Mäntymäki, 2013), and calls for process-based studies still remain relevant (Zucchella, 2021). In response, we advance the existing knowledge on LAN by adopting a dynamic longitudinal approach and offering a process model of LAN development and outcomes. Second, our study contributes to the literature on capability development and learning of early internationalizing firms (Autio, George and Alexy, 2011) by highlighting the underlying mechanisms that support the development of LAN during their liminal transitions along internationalization. We explore how certain firm-specific characteristics trigger liminal activities to promote the development of LAN and their implications on internationalization outcomes. Our study brings liminality, the concept from a non-business scholarship of social anthropology, into IE; this allows to view LAN development from a novel perspective as a process of liminal transition, which can be explained through the concepts of

“communitas”, “conflicts”, and “rituals”. Third, the present paper strengthens the link between LAN and the concept of post-entry internationalization speed. While some contributions have shown the influence of LAN on post-internationalization speed, they were not able to provide more nuanced explanations on how it occurs (e.g. Autio et al., 2000; Blesa, Monferrer, Nauwelaerts, and Ripollés, 2008). We take a step further and open up the underlying mechanisms between LAN and post-internationalization speed.

Theoretical background

Early internationalization as a liminal transition

Coming from the social anthropology, liminality is the process of potential change between an old and new period (Turner 1969). It is characterized by what Ibarra and Obodaru (2016) termed as liminal experience, which is seen as a state of “progressive function which begins with the encountering and integration of something new” (Land, Rattray and Vivian, 2014; p. 201). Several studies have addressed the mechanisms that enable firms to go through the liminal transition. For example, Turner (1969) examines the so-called “communitas” and “rituals” that emerge to support the transitioning process. On one hand, “communitas” is a feeling of interrelatedness and it enables liminal entities to connect and generate novel ideas to facilitate easy passage to a stable stage (Turner, 1995). On the other hand, “rituals” are programmed routines that accompany every change of state (Gennep, 1960; Smith and Stewart, 2011). In an organizational setting, existing studies make a distinction between rituals and routines by defining rituals in terms of their formality, sacredness, irrationality, and aesthetics (Koschmann and McDonald, 2015). Routines are repetitive patterns of actions that are functionally similar, but not necessarily fixed (Pentland and Rueter, 1994).

On the premise of Van Gennep’s basic conception of rites, Trice and Beyer (1984, 1985) propounded six different types of organizational rituals. The first is rites of passage. It is used to remove individuals from their roles and move them to a role associated with higher status. The second is the rites of degradation. It is used to remove individuals from their social roles and move them to a role associated with lower status; E.g. ceremonies such as layoffs of organizational leaders or workers (Islam and Zyphur, 2009). The third is rites of enhancement. They are events or ceremonies used to celebrate organizational members who

demonstrate outstanding performance. The fourth is rites of renewal. They are symbolic actions that are periodically organized to reaffirm existing structures of certain organizational values rather than promoting real system change (Trice and Beyer, 1993); E.g. annual meetings, feedback programs, and team-building workshops (Islam and Zyphur, 2009). The fifth is rites of conflict reduction. It is a ritual pursued to send an impression that something is done to resolve issues of importance; E.g. collective bargaining committee formation. The sixth is rites of integration attempt. It is an activity done to bring different groups who do not normally interact together within the organization together; E.g. Christmas parties (Trice and Beyer, 1993).

Being a process of firm inevitable transition, early internationalization can be described as a highly liminal process; it is an ambivalent transitory state where a firm is neither in the early stages nor in a mature state of experiencing international growth or survival (Prashantham and Floyd 2019). In view of this, early internationalizing firms go through so-called opportunity scaffolding activities that support liminal transition (Prashantham and Floyd, 2019). They are self-reflective learning, consultative learning, and peer learning. Self-reflective learning is the “process of internally examining and exploring an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of self, and which results in a changed conceptual perspective” (Boyd and Fales, 1983; p. 100). Consultative learning, on the other hand, refers to the process in the liminal stage whereby individuals or firms learn from mentors, training programs, and organizations (Prashantham and Floyd, 2019). Finally, peer learning is the process that occurs at a liminal stage whereby individuals or firms learn from their counterparts, similar to what is known as vicarious learning (Posen and Chen, 2013). Overall, liminality research shows that learning constitutes an essential part of liminal transitions of early internationalizing SMEs. Similarly, the entire concept of LAN and its development builds on the importance of learning. Liminality research also shows that a firm’s adaptive behavior constitutes an essential part in liminal transitions of early internationalizing SMEs and LAN development (Sapienza Autio and Zahra, 2006). Adaptive behavior is the responsive ability of firms to accustom to emerging changes and opportunities involving the processes of market trends analyses, sensing and making necessary innovations and improvements of offerings, business structures, management style, operations, business models, and strategies (Okanga and Groenewald, 2016).

The nature of a firm's adaptive behavior depends on its ability in utilizing existing resources (i.e. resource fungibility) to address market changes (Chakravarthy, 1982; Eshima and Anderson, 2017; Sapienza et al., 2006). According to Chakravarthy (1982), depending on how a firm interacts with its environment, adaptive behavior can be defensive, reactive, or proactive. First, defensive adaptation is where a firm reduces its responsiveness ability by narrowing its product market scope (Chakravarthy, 1982). Second, reactive adaptation is where a firm responds to the environment by imitating what other firms have done in the market (Chakravarthy, 1982). Third, proactive adaptation is where a firm searches for opportunities and invests resources in activities to adapt speedily to the opportunities (Chakravarthy, 1982). The next sections will address the concept of LAN.

Triggers of LAN

Earlier studies have attested to the non-serendipitous nature of LAN meaning that LAN is contingent upon certain organizational, environmental, and strategic contextual triggers (e.g. Zahra, Zheng and Yu, 2018; Sapienza et al. 2006; Autio et al., 2000). We broadly classify these triggers into internal and external. On one hand, the internal encompasses organizational triggers, cognitive triggers, structural triggers, strategic intent, and entrepreneurial proclivity (i.e. proactiveness, risk-taking, and innovativeness). First, as for organizational triggers, Autio et al. (2000) find age at entry to be a factor that triggers LAN. They find that years of foreign operating experience did not match with growth; as firms get older, they develop internal rigidities that prevent them from growing in new markets. Newer firms, instead, have flare for the learning processes and competencies needed for growth in foreign markets. Second, cognitive triggers relate to non-existent domestic routines and practices that prevent them from being caught by a "competency trap" (Cohen and Levinthal, 1990: 137), which relates to relying on past assumptions, competencies and mental models hoping they will lead to the same success. Third, structural triggers refer to new ventures' flat organizational structures and the absence of rigidities that enhance knowledge articulation. Fourth, strategic intent as a trigger of LAN specifically focuses on a firm's learning intent and its main motivation to internationalize. In this regard, Zahra et al. (2018) propose that new ventures embark on deliberate learning by investing in the creation of organizational routines, accumulation of experience,

knowledge articulation, and knowledge codification to gain more LAN. Fifth, new ventures that internationalize when their performance is below their aspiration levels are more likely to gain more learning advantages of newness (Zahra et al., 2018). In this regard, an entrepreneurial proclivity (i.e. proactiveness, risk-taking, and innovativeness) serves as an important trigger enabling knowledge and network capabilities to acquire LAN and avoid the liabilities of newness and foreignness (Zhou et al., 2010).

On the other hand, the external encompasses social and cultural dissimilarity triggers. Social triggers of LAN apply to building foreign ties that enable a firm to focus on learning from the foreign market. Interestingly, strengthening an existing knowledge base and tightening domestic-market relations can be harmful to developing LAN in foreign markets (Fuerst et al., 2015; Zahra et al., 2018). In a similar vein, entering a new market that is culturally similar to a venture's home country reduces opportunities for acquiring new knowledge (Zahra et al., 2018). Hence, the cultural dissimilarity between home and host markets serves as an important environmental trigger of LAN (Zahra et al., 2018; Autio et al., 2000).

The discussion above shows that existing research on LAN formation has predominantly focused on identifying its triggers, which do not open up the actual process of LAN development. One study that stands out among them is the study by Fuerst et al. (2015). While their process model is important because it explains LAN development through interaction with network partners, it focuses predominantly on networks and does not provide an integrative picture. Hence, the actual emergence and evolution of LAN is not fully examined.

Outcome of the Developmental Process of LAN

Given our research aim, we center the underlying theoretical discussion on post-internationalization speed, which is one of the outcomes of LAN. Autio et al. (2000) assert that the time between a venture's pre-internationalization phase has an imprinting effect on its post-entry internationalization speed in terms of international growth. It is therefore important for us to examine how the new knowledge available to a firm as a result of LAN at the pre-internationalization phase affects its post-entry internationalization speed. Internationalization speed determines how rapidly a firm increases its international activities once an initial commitment of resources has been made during a specific period (Casillas and

Acedo, 2013). Oviatt and McDougall (2005) conceptualize internationalization speed into three dimensions: first, speed of initial entry referring to how early firms enter their first international markets (Autio et al, 2000); second, the pace of international expansion or growth of a new venture in terms of country scope (number of foreign countries entered); third, the rate of international commitment in terms of how a firm makes revenues. The first can also be named as early internationalization speed, and the early internationalizing firms investigated here are all rapid in this sense. The last two dimensions represent measures for post-entry internationalization speed (Oviatt and McDougall, 2005). Casillas and Acedo (2013) also conceptualize post-entry internationalization speed by incorporating change at a certain time into Oviatt and McDougall's (2005) conceptualization. They explained post-entry internationalization speed as the relation between the internationalization process and time. By this, they proposed post-entry internationalization speed as- the speed of change in the breadth of a firm's international markets (i.e. the increase, over time, in the number of new countries to which the firm operates); the speed of changes in the growth of a firm's international commercial intensity (i.e., growth in foreign sales as a percentage of total sales at a specific time); and the speed of increased commitment of resources in foreign markets within a specific point in time (Casillas et al., 2013). All these dimensional conceptualizations determine the rate of international expansion among internationalizing firms.

Several studies have looked at how LAN influences post-entry internationalization speed once an initial market entry is made. For example, the study by Autio et al. (2000) focuses on post-internationalization speed in terms of growth. It shows that early internationalizing firms have LAN that ensures their long-term survival and growth prospect. Similarly, Carr Haggard, Hmieleski and Zahra (2010) find that post-internationalization, younger firms experienced significantly higher rates of short-term growth than older firms due to their ability to learn and adapt to emerging opportunities. From the perspective of LAN, Blesa et al. (2008) also show that earlier internationalizers are more effective in building international positional advantages such as price, distribution, profitability, and market share, than later internationalizers. Finally, Schwens and Rudiger (2011) found a positive relationship between early internationalization and perceived achievement of international performance goals due to LAN.

Our theoretical discussion above shows that the existing studies are variance in nature trying to find relationships or causalities between dependent and independent variables (Langley, Smallman, Tsoukas and Van de Ven, 2013). Hence, they do not provide fuller explanations on how LAN influences post-entry internationalization speed. It is therefore imperative to understand how LAN influences post-internationalization from a processual perspective. Our research intends to uncover this aspect, and in what follows, we describe the methodology and empirical procedures of our study.

Methodology

The Rationale behind the Empirical Study

The present study is a longitudinal one using an exploratory case study approach. The longitudinal approach allows us to identify the processual developmental changes in the formation of LAN in the context of liminality and how it translates into post-entry internationalization speed in terms of the firms' entrepreneurial activity expansion. The multiple-case study strategy allows to answer "how" questions and to grasp how a certain phenomenon unfolds in its dynamics (Yin, 1994). Our study explores how the LAN develops in early internationalizing firms and is particularly appropriate because we intend to investigate the phenomenon from the perspectives of social actors within a real-life context (Yin, 1994). Having a real-life view of the phenomenon under study enables us to understand the similarities and differences between the cases, without any form of manipulation. Besides, this empirical approach has a strong theory-building power (Eisenhardt and Graebner, 2007; Pratt, 2009), which corresponds with our goal to advance the LAN concept.

Case Selection

We followed purposeful sampling principles (Patton, 2015) and developed the following criteria for case selection. First, we made sure that the selected firms were going through an internationalization process that started from a state of no activities in foreign markets towards realized and stable international operations. Second, we set up the age criterion; the selected firms were at most 8 years old (McDougall, Shane, and Oviatt 1994) to minimize validity issues related to recall bias and to ensure similarities across our selected firms. Third, we ensured that

Table 1. Background of Case firms

Firm	Fire	Luminary	Lean	Ultrasound
Year of Inception	2015 (operations began 2016)	2011	2012	2014 (operations began 2015)
Area of operation	fire systems supervision, commissioning, and delivery of spare parts	design, manufacture, and export of luminaries	delivery of energy competences and company development of solutions based on lean principles	cleaning industrial equipment with ultrasound power
Founders	1 person	1 person	1 person	2 persons
Foreign operations	Ethiopia, Togo, Zambia, Mozambique, Cameroon, Curaçao, Jordan, Thailand, Indonesia, and Thailand	U.S, Norway, Germany, U.S, Thailand, Australia, China, Malaysia, and South Africa	Japan, Sweden, Czech Republic, Germany, Belgium, and Norway	Thailand, Japan, Netherlands, Switzerland, Spain, Sweden, and the US
Share of foreign sales within 3 years of establishment	95%	85%	33%	25%

they are early internationalizing firms; the selected firms have achieved at least 25% foreign sales within 3 years from their foundation (Knight and Cavusgil, 2004). We made some preliminary investigations regarding suitable firms meeting our criteria. We approached 7 of them and 4 agreed to be part of the study. This number of cases selected corresponds with the recommendation of Eisenhardt (1989) who suggests a minimum of four cases in a multiple case study. She posits that this usually provides a good basis for generalizing results back to theory. All the selected firms were from Finland and the cleantech sector to ensure homogeneity across the case firms. Cleantech sector encapsulates firms that produce products and services that are unharmed to the environment (Souza et al., 2019). This empirical setting provides us a good understanding of how theoretical constructs of interest influence firms' behavior when the country and sector-specific variation are kept to a minimum. For the sake of anonymity, we have decided to change the names of case firms. Instead of their real names, we use these fictitious names- Fire, Luminary, Lean, and Ultrasound- as they reflect the area of their businesses. Table 1 provides a brief description of the case firms under investigation.

Data Collection

We collected data from both primary and secondary sources. We gathered primary data in three rounds during a three-year period. We used in-depth face-to-face semi-structured interviews in the first two rounds. Secondary data included information from the firms' webpages, and blog sites; they were used for the interview preparation and verification of facts obtained during the interviews. Due to the pandemic, we used video conferencing via Zoom to conduct the last round of interviews. In sum, the total hours spent in the three-round interview are as follows⁴: Fire (4 hours 15 minutes), Luminary (2 hours 49 minutes), Lean (3 hours 56 minutes), and Ultrasound (3 hours 16 minutes)⁴. The interviews were audio-recorded with the permission of the informants and subsequently transcribed verbatim into text. Besides, we transcribed interim summaries which we recorded during every interview. We considered the interim summaries to be invaluable aids for our analyses and ensuring the quality of our procedures. They have supported

⁴ Additional information on the interview process can be requested from the author

us in developing reflexivity in recalling the context, content of observation, and their interpretations (Saunders, Lewis and Thornhill, 2016).

Data Analysis

Each interview transcript was thoroughly read several times by the authors to understand how each of them viewed the phenomena under study. Applying a deductive approach, we assigned a priori codes derived from the literature to some of the data. All the codes with similar meanings were grouped together into broader, higher-level categories based on the literature (Miles and Huberman, 1984). We also applied inductive approach for the data that were emerging. We started our coding with no pre-specified codes, letting the raw data suggest emerging codes on a case-by-case basis, reviewing the interview extracts line by line. Moving from the open coding to a more abstract coding of data into theoretical categories and subcategories, we combined the emerged codes into groups with similar attributes, forming first-order concepts. Following Gioia, Corley and Hamilton (2013), the first-order concepts were combined into second-order themes which were then further abstracted into aggregate theoretical dimensions. With this method, we intend “to have the basis for building a visual representation” (Gioia et al. 2013; p. 20) for cross-case analyses and to show how we inductively progressed from raw data to concepts and themes in conducting the analyses (Gioia et al. 2013). To grasp the process of LAN development, we employed the technique of the visual mapping suggested by Langley (1999). Given this strategy, we documented all the activities and mechanisms in the data during the coding that have supported the case firms to develop LAN. We mapped the activities to determine their connections.

Trustworthiness

We employed two separate methods to establish the credibility of our study, namely peer debriefing, and data triangulation (Lincoln and Guba, 1985; Korstjens and Moser, 2018). For peer debriefing, we sought scholarly feedback from our peers in the research community by presenting our results at different seminars, meetings, and conferences and exposing our ideas to criticism. Constructive comments from our academic colleagues have improved the quality of our findings. As for the triangulation, we used different sources of data (Korstjens and Moser, 2018), namely interviews, firms’ webpages, and blog sites.

The second thing we considered is the dependability of the study (Lincoln and Guba, 1985). With this, we made sure that the questionnaires were correctly designed, and piloted to check for inconsistencies before the actual interview process was conducted. During the interview process, we developed an interview guide but allowed for new emerging themes and nuances to come from the data. Also, we coded the data twice at different points in times and later compared to see whether they were the same or not. Consequently, we found out that they were highly similar, which demonstrates that the findings are consistent and could be repeated. The third thing we focused on is the transferability of the study (Lincoln and Guba, 1985). Given this, we have conducted the present study using the appropriate theory to achieve theoretical generalization. Besides the theoretical issue, the transferability of the findings is limited to the early and rapid internationalizing firms in the cleantech industry. The final thing was the confirmability of the study (Lincoln and Guba, 1985). To support the confirmability of the present study, during the interview process we acted like an outsider to avoid self-biases. Also, we conducted data triangulation across the data sources to avoid biases (Lincoln and Guba, 1985).

Findings and discussion

Triggers of LAN

The visual representation of our data (Figure 1) shows that the development of LAN can be enhanced by both internal and external triggers. The internal triggers are learning intent, and proactiveness, and the external trigger is networking skills. This supports the non-serendipitous nature of LAN argument proposed by Zahra et al. (2018) and Sapienza, et al. (2006). In the following lines, we provide discussions on these triggers and how they affect LAN development. Notably, we illustrate our findings with the most powerful quotes in the text below; further support for our interpretations with more evidence is provided in Figure 1.

Learning Intent

According to Zahra et al. (2018), the learning intent of new ventures is reflected in the efforts they put in learning, for example- investing in the creation of organizational routines, accumulation of experience, knowledge articulation, and knowledge codification to gain more LAN. From our findings, learning intent

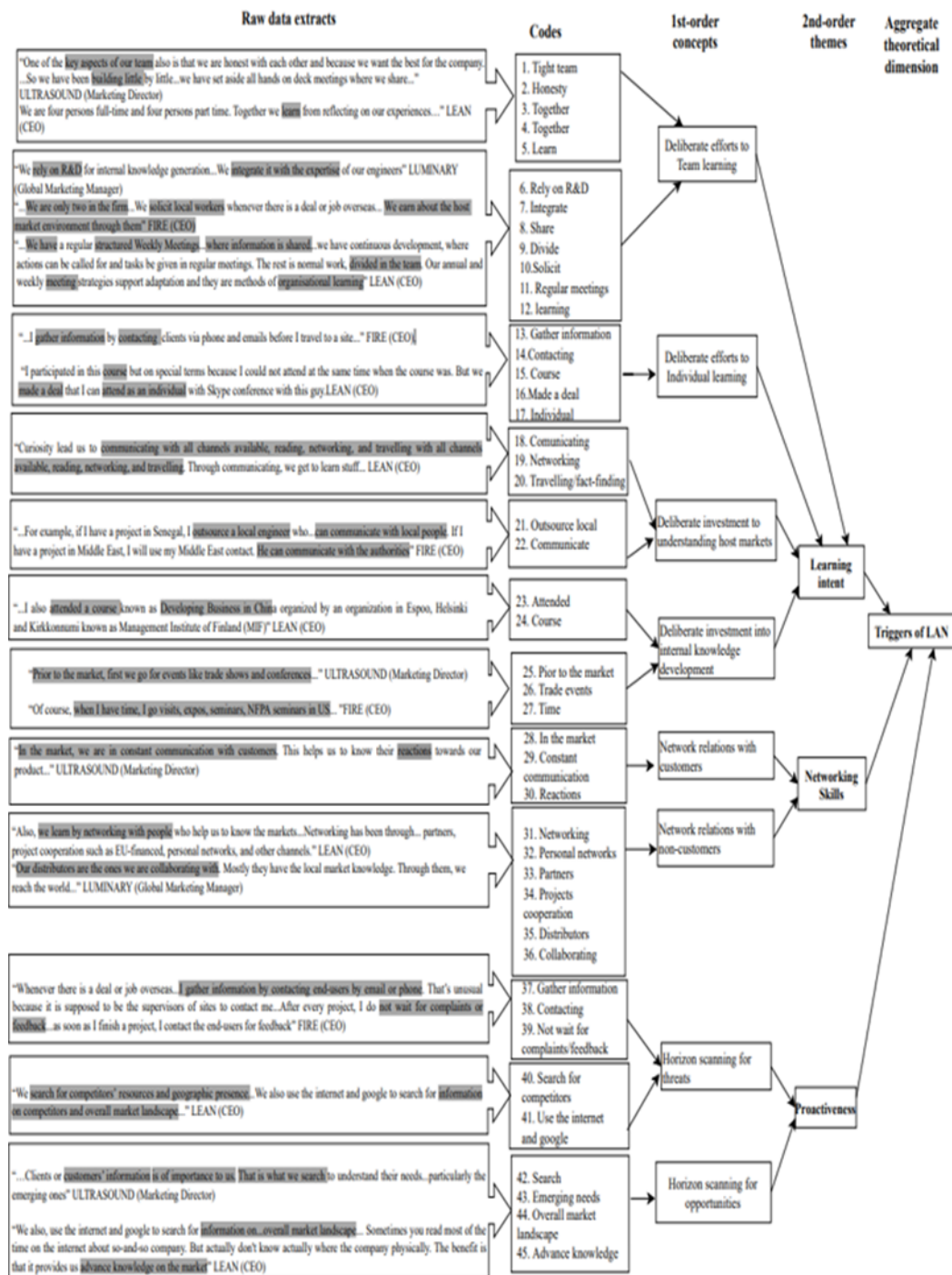


Figure 1. Data Structure for the Triggers of LAN Development

includes deliberate investment to understand the host market, and deliberate investment into internal knowledge development. Firstly, deliberate investment to understand the host market manifested in how the firms consciously devoted time and resources to learn about host markets, for example, to embark on fact-finding trips, and to have joint market research collaboration with research institutions in the host market. We found the deliberate investment to understand the host market as a common practice between Fire and Lean. According to the CEO of Fire, whenever he received job offers from their clients, he deliberately hires local people to learn about the culture, communication, security issues, and how systems worked in a specific host market. He also embarks on fact-finding trips to acquire information. He confirmed: *"...for example, when I am going to a power plant in let me say Senegal, I make a personal visit to the site to check the situation on the ground..."* (CEO of Fire). Similar was the case in Lean. As explained by the CEO: *"We learn about foreign markets by going there to find out. For example, I travelled to the Shanghai area to find out companies to discuss business potentials"* (CEO of Lean).

Secondly, deliberate investment into internal knowledge development is exhibited in how the firms divided time and resources for attending trade events, enrolling in a business-related course module, investing in internal research and development, and internal discussions on current activities. According to the marketing director of Ultrasound, before going to the market they first devote time in participating in trade events. He explained: *"Prior to the market, we go for events like trade shows and conferences where we can talk with people and find out their demands and how they see our service"*. In the same line, the CEO of Fire also asserted: *"...When I have time and possibility, I go for visits, expos...Usually, I go to the US at least once in a year just for seminars"* (CEO of Fire). Regarding Lean, according to the entrepreneur, he spent huge sums of money to participate in a business-related course. He explained: *"That course was organized by an experienced Finnish lawyer based in Hong Kong...It was quite expensive, but I knew the risk. I just realized the added value that I needed from them..."* (CEO of Lean). In contrast, according to the global marketing manager of Luminary, they invest heavily in internal research and development to come up with new ideas. As explained by the CEO: *"We are in a dynamic world and the business is changing and to us attending conferences and events are not needed in our operations; we have invested in internal research and development, and it keeps on improving"*

(CEO of Luminary). Finally, we also found the deliberate investment of time to internal knowledge sharing and discussions among Ultrasound and Fire. As stated by the marketing director of Ultrasound: *“Monday morning every week...we share everything that is going on in cases, in the company itself, in the supply chain”* (Marketing Director of Ultrasound). The CEO of Fire also shared a similar experience. He expressed: *“...I trust the pool of engineers I hire...but I invest time to communicate with them on skype about projects...if there is the need to provide an engineer training...for example, I sent one guy to Curaçao, and it was his first project. I have...to go there and train him onsite”* (CEO of Fire).

Networking Skills

We found that networking skills among the case firms is a trigger of LAN development. In the operations of Ultrasound, its ability to maintain a relationship with customers triggered constant communication between the firm and the customers. As elicited by the marketing director: *“...constant communication with customers is of importance to us...”* (Marketing Director of Ultrasound). Concerning Lean, networking skills enabled them to connect with people and firms. As explained by the CEO: *“...also...by networking with people. In 2013, 2014 till now, we are actively collaborating with Swedish firms. From time to time, we have been utilizing networks on-demand and based on opportunities”* (CEO of Lean). In the case of Luminary, we found that their ability to maintain a relationship with distributors enabled them to have global contacts. As explained by the CEO: *“...we have a strong relationship with our distributors...Globally contacts are coming from distributors, and some are coming directly from other firms...”* (CEO of Luminary). Finally, in the operations of Fire, its networking skills enabled it to establish a relationship with end-users. As explained by the CEO: *“I all the time try to contact places where I have been working and the end customers to get feedback when I complete a project...Sometimes I will invite them for coffee just to get feedback from them”* (CEO of Fire).

Proactiveness

Fourth, we found proactiveness as a trigger of LAN development. It caused the case firms to engage in horizon scanning, which provides them access to advanced information on the market. Concerning Lean, proactiveness triggered an active search for competitors' resources and geographic presence. The CEO

expressed: *“We explore the webpages of competitors. We explore some parts of their resources and competencies and geographic presence to understand their strengths and weaknesses...Of course, in potential markets, we do not always know who our competitors are. Sometimes we know, sometimes we do not...”* (CEO of Lean). Similarly, in Ultrasound, proactiveness triggered an active search for competitors. As cited by the marketing director: *“Yes, we did, and we are continuously doing so. Not just asking clients whenever they tell us that they have seen something similar, then, of course, we ask: can you remember? But we also do research online, what solutions are out there. Yes, we do this all the time just to keep updated on the different solutions that could impact our business of course”* (Marketing Director of Ultrasound). Finally, the proactiveness of Fire was shown in its active search for foreign market requirements anytime they are about to embark on a foreign project. The CEO expressed: *“Yes, of course. At least local policies, security issues, and health issues..., I make a personal visit to the site to check the situation on the ground...”* (CEO of Fire). We found Luminary to be proactive, but this does support the development of LAN. Its proactiveness was focused on product design. As expressed by the CEO: *“We have developed our pocket computer associated with internally designed programs that we use to design our products. With this system, we presume we are living ahead 55 years ahead of the world. We try to be light years ahead”* (CEO of Luminary). In sum, the proactive trait exhibited among the case firms confirms the assertion made by Zhou et al. (2010) about the proactiveness of entrepreneurial firms.

Process of LAN Development

We see internationalization as a highly liminal process, and we found that the case firms engaged in diverse activities and events to develop LAN. Within the context of liminality research, we follow scholars (e.g. Vygotsky, 1962; Prashantham and Floyd, 2019) by defining the activities as opportunity scaffolding activities. Building on prior research (e.g. Prashantham and Floyd, 2019), the main opportunity scaffolding activities identified are self-reflective learning, peer learning, consultative learning, and horizon scanning⁵. We discuss in detail how these opportunity scaffolding activities support the case firms in the developmental processes of LAN in the next lines.

⁵ Data structure of opportunity scaffolding activities is available upon request from the author

Self-Reflective Learning

Triggered by learning intent, according to the findings, self-reflective learning is influenced by individual-level learning and organizational-level learning. Individual-level learning includes- the entrepreneur making sense of his prior experiences to explore possibilities; and reflection on ideas derived from participating in events (e.g. conferences, and training programs). We found both individual levels of learning in Lean and Fire. According to the findings, the CEO of Lean projects the outcomes of fact-finding trips from reflection on previous experience in similar tasks. He uses his prior industry experience in fact-finding trips by making simulations and discussions in the mind on how to proceed in finding information in the foreign market. He posited: *“I have earlier experience in finding information about markets...So this experience is important because based on that I know how to find information and what information to find...in fact-fact finding trips”* (CEO of Lean). This finding supports the argument made by Cohen et al. (1990) that “the ability to evaluate and utilize outside knowledge is largely a function of the level of prior related knowledge” (p. 128). Furthermore, the finding is consistent with a study by Bruneel et al. (2010) on how young firms can offset a lack of firm-level experience. It shows that the lower a firm’s experiential learning from foreign markets the more it influences its ability to utilize the start-up team’s or entrepreneur’s prior international knowledge base. In addition, the CEO asserts that he engaged in self-reflective learning after attending consulting training on how to do business in China. His reflection on the notes from the training supported him to know Chinese business culture before embarking on a fact- finding trip to China. Similarly, according to the CEO of Fire, whenever the domestic MNC partner offers him a deal in a power equipment site, he first travels to the place to check the situation on ground. Using experience in a similar task enables him to have a clear picture of what to do and not to do. Furthermore, he affirms that anytime he attends an event, he reflects on how the ideas shared will support the development of his company. The interview excerpt below supports this evidence: *“In these programs you share ideas...The fire system I am using is difficult to understand...Sitting in a group with people who are in the business and have the experience, reflecting on their opinions- it becomes clearer”* (CEO of Fire).

At the organizational level, we found in Lean, Luminary, and Ultrasound that teams and the entire organizational members collectively engage in discussions, interpret ideas, and reflect on ongoing activities. This provided Lean and Ultrasound access to current and future knowledge. Explained by the CEO of Lean: *"...and the second is weekly meetings...where we critically examine what to do and what not to do...they are also methods of organizational learning"*. Concerning Luminary, it provided it with new knowledge on the performances of distributors on which it decides whether to continue or discontinue a distribution right.

Peer Learning

Just like human beings resort to peers through an unstructured group called "communitas" during periods of liminality for survival and sharing (Turner, 1969), from the state of pre-internationalization phase to the post-entry internationalization state, the case firms also relied on peer support from "communitas". In our study, "communitas" is represented by a community of practice with partners. Within the "communitas", the case firms develop new knowledge by learning from customers, end-users, distributors, partners, and personal networks. This supports previous research (e.g. Posen and Chen, 2013) that argues that firms learn not only from their own experiences but also from the knowledge of others. To this, we found two main channels that the case firms are using in their peer support activities. The first one is by learning from customers. This was evident in the operations of Ultrasound and Fire. According to the marketing director in Ultrasound, in the market, they keep constant communication with foreign customers to have access to knowledge concerning their perceptions toward their products. Similarly, the CEO of Fire asserts that they collaborate with clients of plants to obtain feedbacks after every project execution. To him, feedbacks from clients have provided them ideas on how to improve their operations. He explained: *"I contact them and say, hello...talk about personal stuff and the work. Then I get information if it is a good or bad feedback"* CEO of Fire.

The second channel is by learning from networks. This was found to be a common practice in Lean, Luminary, Fire, and Ultrasound. Among these firms, we found that the networks they learn from were either domestic or foreign. In the operations of Lean, they learned from foreign networks, specifically individuals

who are privy to the host country, suppliers, partners, and project cooperation to obtain knowledge in foreign markets. According to the CEO, such people help them to know the host markets. Concerning Luminary, they learned from foreign distributors. From the findings, the distributors provide them with foreign knowledge, particularly customer feedback and insights. According to the global marketing manager, there came a time when a military organization in Australia needed luminary for drones and it was a foreign distributor that provided them with the information. Similarly, in the operations of Fire, they also learn from foreign contacts. According to the CEO, whenever the firm procures a foreign offer from its domestic partner, he uses local contacts who can communicate with the authorities to enable him to have access to the knowledge of the host country. Finally, in Ultrasound, according to the CEO, they learn by networking with research institutions to have access to technology developments and host market information. Currently, Ultrasound has a domestic network with a renowned university in Finland and a foreign network with an American market research agency. In sum, the foregoing findings are in sync with that of Bruneel et al. (2010). It shows that the lower a firm's experiential learning from foreign markets the higher it influences its ability to utilize start-up knowledge acquired through networks. Furthermore, according to Zahra et al. (2018), the extent of resources and efforts that new ventures offer to domestic affiliates has a role in either weakening or strengthening the development of LAN but since the case firms have focused their efforts and resources on building foreign ties, it has made them to learn from the established networks they have created. The present finding is consistent with that of Fuerst et al. (2015), which shows how the interactions with network partners contribute to the creation of knowledge.

Consultative learning

Evidence from the case findings shows that the learning intent character of the case firms triggered consultative learning. The findings also show that consultative learning occurred in different ways among the case firms. In the operations of Fire, consultative learning appears in the form of event participation and outsourcing of locals in host countries for the execution of projects. According to the CEO, attending events such as workshops and conferences makes him to have access to new developments in fire systems. He expressed: *"...I go to visits, expos, NFPA seminars in the US. Last year's summer, I was in Stockholm for*

Sprinkler Conference...such events provide me the access to new developments in fire maintenance systems” (CEO of Fire). For the outsourcing of locals, it enables Fire to learn from foreign markets. The outsourced locals support the firm to have in-depth knowledge about the environment. In the operations of Ultrasound, consultative learning is in the form of event participation and research collaboration. Ultrasound has actively participated in conferences, for example, POWTECH 2017 held in Germany and ITAG 2017 held in Brussels. According to the marketing director, such events have provided the firm with the platform to acquire new knowledge through discussions with clients, innovators, and collaborate with partners. He explained: “*...In Paris, they have always expos on a smaller scale usually that we attend to have access to new developments... You understand industry trends...Well, we were previously in Brussels for iTag conference...*” (Marketing director of Ultrasound). Besides this, Ultrasound receives support from an American research agency to learn about the US market and from a Finnish university to have access to new knowledge on ultrasound technology. For Lean, consultative learning involves the engagement of foreign legal assistance for the interpretation of foreign markets’ legislation, and consultative advice from a governmental organization on how to conduct business in China. As explained by the CEO: “*Actually some quite important information regarding my fact-finding trip to China: I sought for information from this guy from Merinova, and a lawyer in China ...and also from Business Finland*” (CEO of Lean). Contrarily, in Fire consultative learning is derived from learning from the ideas generated by the internal research and development unit of the firm. Explained by the CEO: “*Attending conferences and events are not needed in our operations; we have invested into internal research...where the ideas are integrated with the expertise of our engineers*” (CEO of Luminary). Arguably, the reason for the dissimilarity between the learning process of Luminary and the other case firms is derived from the area of operations of the individual firms and their strategic focuses.

The findings are confirmatory to the pronouncement made in liminality literature about the availability of community leaders that provide support to liminal entities (Prashantham and Floyd, 2019). The literature argues that during the liminal stage, human beings are separated from their previous environment experience into an environment of ambiguity, a sort of social limbo (Turner, 1969); however, there is an intermittent availability of community leaders that provide

support and training (Prashantham and Floyd, 2019). In the same line, within the context of firm development and entrepreneurship, the studied firms in transitioning stages resorted to supporting from governmental bodies, consulting agencies, training programs, internal research and development unit, and events for guidance.

Horizon Scanning

We have found that the proactiveness of Lean, Ultrasound, and Fire has resulted in horizon scanning process of LAN development. It is about searching for opportunities and threats outside and inside the firm in a purposeful way (Teece, Pisano and Shuen, 1997). On one hand, we found opportunity searching activity prevalent in the operations of Lean and Ultrasound. In the operations of Lean, the firm searches for information on customers and the market. As explained by the CEO: *“We search for the needs of customers...and the overall market landscape”* (CEO of Lean). This is similar to the case in Ultrasound. As stated by the CEO: *“...customers’ information is of importance to us. That is what we search”* (Marketing Director of Ultrasound). According to the marketing director, this supports them to understand their needs.

On the other hand, we found threat searching activity prevalent in the operations of Fire and Lean. According to the CEO of Fire, he searched for potential threats from host markets by making personal visits before they embark on a project. As explained by the CEO: *“Whenever there is a deal or job overseas...I make a personal visit to the site to check the situation on the ground...local requirements and labor policies”* (CEO of Fire). In Lean, as explained by the CEO: *“We search for competitors’ resources and geographic presence to understand their strengths and weaknesses...”* (CEO of Lean). According to the CEO, this activity enables the firm to understand the strengths and weaknesses of competitors and their geographic presence.

In contrast to the foregoing, we found Luminary inactive in horizon scanning. However, in the firm’s inactiveness state, according to the findings, they have access to foreign market knowledge through their distributors. As explained by the Global Marketing Manager: *“Our distributors...Mostly they have the local market knowledge. Through them, we reach the world...They provide customer feedback and insights...The Australian Army needed luminary for drones, and this came not from direct contact but distributors”* (Global Marketing Manager of

Luminary). Further, according to the CEO, they assume that their products are associated with features that competitors do not have and therefore, do not spend time and resources to search for information on competitors. He expressed: *“Our products are associated with features that competitors do not have. We assume we have no competitors because we develop something different. We do not worry ourselves searching for information on competitors...”* (CEO of Luminary)

According to our findings, horizon scanning emerged as an organizational-level element found to be a liminal activity that enables new ventures to develop LAN. We realize it helped the case firms to understand the needs of potential customers, opportunities, and competitive landscape. However, it has not been mentioned in the liminal transitory discussions of firm internationalization. We, therefore, argue that horizon scanning is one of the effective means for developing LAN.

Apart from the opportunity scaffolding activities, within the period of internationalization intent and stable internationalization, the case firms encountered varying liminal challenges. In overcoming them, it fostered experiential learning, defined as the process by which knowledge is created by learning through experience (Zahra et al. 2018). This provides additional new experiential knowledge to the firms' existing knowledge repertoire. Prima facie, Fire encountered skills deficit arising from sub-contractors it employs to execute projects, and according to the CEO, overcoming it has provided him the experience to know what to do in case something of that sort happens. He explained that he usually does this by providing on-site training to his personnel. In contrast to Fire, Lean encountered a language barrier when they had a project in Germany with Japanese businesses. According to the CEO, the German language was not a problem, but the major challenge was the Japanese language. He explained that they used google translator to translate the Japanese website, and this has been the firm's habit when it faces language challenges. Another challenge that Lean encountered was how to manage deals and according to the CEO, they overcame it through partnership. The CEO intimated: *“...But what turned out to be challenging, we knew it would be challenging, was how to get deals...A way to overcome the challenge was quite important. We were utilizing the organizations available like Merinova and also Business Finland... to support us...We got good access to companies...We, therefore, do not downplay partnerships when entering new markets”* (CEO of Lean)

Regarding Ultrasound, according to the marketing director while reflecting on the US market he explained that the major challenge they have encountered was logistics issues due to spatial distance between cities in the US, and the transportation of equipment from Finland to the US. Similar to the method used by Lean, they overcome it through a partnership with other logistics firms. He expressed: *“... Also, logistics need to be taken care of when shipping from Finland to the US, and customs clearance. I would say that those are challenges that we just need to deal with...We have partnered with UPS on the logistics side, and they are helping and guiding us...They have a lot to teach us about the US market”* (Marketing Director of Ultrasound).

Finally, Luminary also encountered a unique challenge that was different from what the other case firms had. According to the global marketing manager, the cultural distance was a major challenge when they entered the US market, and they overcame it by utilizing local people in their business operations. The following quote provides evidence: *“The challenges; especially on the United States market is that the culture is very different... How people buy things is quite different..., so that is one of the main challenges if you are entering United States market...We overcame these challenges by having local people working on the marketing side and also on the sales side...”* (Global marketing manager of Luminary)

In sum, we found that the case firms' existing knowledge is based on self-reflective learning and experiential learning. In contrast, their new knowledge is derived from consultative learning, peer learning via “communitas”, and horizon scanning.

Reconciliation of Existing and New Knowledge

Because learning in the liminal space encapsulates the acquisition and use of new forms of knowledge and their internalization (Land et al., 2014), there is a conflict as one's habits intersect with the established norms of the society (Turner, 1995; Gennep, 1960). Likewise, our case firms experienced conflicts between newly acquired knowledge and existing knowledge. According to the CEO of Fire, in moving from country to country there are differences in local policies that are incongruent to his company's policies. *“Sometimes the local requirements and labor policies differ from the company's design standards and policies...because they are not Finnish citizens, they do not have social security numbers so I do not*

pay pension or insurance...If you hire a guy from Finland, then you have to take into account the social and pension costs” (CEO of Fire).

On one part, in resolving the conflicts the case firms must either ignore existing knowledge or new knowledge. This was evident in the operations of Fire. Any time, they enter a foreign country to execute a project, they have to ignore existing knowledge and focus on the new knowledge with regards to local legislation and requirements of doing business. The CEO explained: *“...you have to abide by the local... local requirements and local labor overrules our company’s policies” (CEO of fire).* On another part, in resolving the conflicts some of the case firms integrated their existing knowledge with new knowledge. This was evident in the operations of Lean, Ultrasound, and Luminary. According to the CEO of Lean, he participated in an international business course on how to do business in China and thought the ideas could be integrated with existing knowledge. He explained: *“I did not have any need or wish to discard that information. That would have been stupid I think, so we utilized that information and probably that is why I remember it positively still so.... we utilized some in our fact-finding trip...” (CEO of Lean).* In a similar vein, according to the marketing director of Ultrasound, when it entered the US market, they integrated the knowledge they acquired with their existing knowledge. He explained: *“...For us at least, we didn’t change the whole thing, but it gave us focus and you can integrate the learnings you have had before and also use that newly learned information and integrate them both to the new message...Rarely have we abandoned everything” (Marketing director of Ultrasound).* The same goes for Ultrasound. According to the global marketing manager of Luminary, they integrate internally-generated knowledge, customer feedback, and insights with the tacit knowledge of engineers. He stated: *“We rely on R&D for internal knowledge generation...Our distributors.....They provide customer feedback and insights...We integrate it with the expertise of our engineers” (Global marketing manager of Luminary).* In sum, the integration of existing knowledge with new knowledge evidenced in the findings underscores the role of path-dependencies in the development of LAN (Zahra et al., 2018).

Outcomes of Knowledge Reconciliation

Reconciling existing and new knowledge among the case firms resulted in three main LAN-related items, namely- accumulated knowledge, routines, and

rituals. First, in the operations of Fire, accumulated knowledge includes access to industry trends (i.e., new developments in fire maintenance systems) and access to host market knowledge. Explained by the CEO: *"...When you are at these seminars or workshops, you exchange opinions and discussions...such events provide me access to new developments in fire maintenance systems...have enabled us to keep our operations up-to-date...Going by local requirements and labor policies enable us to understand how business is done in the host markets..."* (CEO of Fire). Contrary to Lean, accumulated knowledge involves knowledge of competitors' resources, geographic presence, understanding of foreign markets' legislations, and the overall market landscape. According to the CEO, knowledge of competitors' resources and geographic presence enables them to understand the strengths and weaknesses of their competitors. He stated: *"...We search for competitors' resources and geographic presence to understand their strengths and weaknesses...any piece of information we have on a competitor is important. This supports us to learn from the market"* (CEO of Lean). Further, he intimated that the information he had in participating in the international business course provided him knowledge about the Chinese market. As explained: *"Content-wise from this course, I got good information...For example, how businesses are established in China, tax system, and legislation"* (CEO of Lean). The foregoing findings differ from that of Luminary and Ultrasound. On the part of Luminary, it involves knowledge on the performances of distributors, and new knowledge on technology derived from the integration of new ideas from its R&D with the expertise of its engineers. To the global marketing manager, obtaining knowledge on the performances of distributors provides them the advanced knowledge on whether to decide to continue or discontinue a distribution right. Further, according to the global marketing manager, the integration of internally-generated knowledge, with the tacit knowledge of engineers enables them to be abreast with current issues. He explained: *"We want to be light years ahead... We integrate it [internally-generated knowledge] with the expertise of our engineers. This helps us to update our operations"* (Global Marketing Manager of Luminary). On the part of Ultrasound, accumulated knowledge involves a collective understanding of the market, and knowledge on current trends in ultrasound technology. According to the marketing director: *"In the US market, rarely have we abandoned everything...we are collaborating with external research bodies on... market research who are helping us to know the market....We have learned that so many*

potential applications are related to our technology. Without the research collaborations with other organizations, we would not have known this” (Marketing director of Ultrasound)

Second, apart from the creation of accumulated knowledge, reconciling existing and new knowledge led to the formation of routines and rituals among Luminary, Fire, Ultrasound, and Lean. According to the Global Marketing Manager of Luminary, they do not involve in any kind of trade events or conferences to acquire knowledge, but as a form of routine, they only rely on their internal R&D activities, which keep on improving all the time. As stated by the Global Marketing Manager: *“We rely on R&D for internal knowledge generation and our research keeps on improving”* (Global Marketing Manager of Luminary). In contrast to Luminary, due to the superiority of local policies and laws, Fire has a routine of outsourcing locals in host markets. The CEO posited: *“...local requirements and local labor overrule our company’s policies...I try to organize it so that if I have a project in Senegal or Morrocco, I will send a guy who knows the French language. He can communicate better with the customers and local people”* (CEO of fire). Another routine noted in the operations of Luminary is frequent foreign market feedbacks and insights from partners. As stated by the Global Manager of Luminary: *“Our distributors are the ones we are collaborating with... They provide customer feedback and insights...”* (Global Marketing Manager of Luminary). Similarly, Fire stressed the routines related to being constantly in contact with end-users: *“...I gather information by contacting end-users by email or phone, and for example ...when I am going to a power plant in let me say Senegal...”* (CEO of Fire). Similarly, according to the marketing director of Ultrasound, they have a routine in the form of frequent updates of operations based on the knowledge of customers’ perceptions toward their products. These exemplars are routines because they are repetitive involving recognized pattern of actions (Pentland and Rueter, 1994). For example, outsourcing is a repetitive activity in the operations of Fire that include organizing and hiring locals or those that understand and can communicate better with stakeholders in the host market. Besides the findings on routines, we consider social activities as rituals to be evident in the operations of Ultrasound, Fire and Lean. Luminary organizes “champagne afternoon” to celebrate success, whenever it achieves its objectives in a period. According to the marketing manager of Ultrasound, they also usually organize fun times around summer and December to celebrate their wins and

understand their losses, what they can learn from them, and what they can do better in the subsequent year. On the part of Fire, the CEO affirms that after the successful completion of a project he invites end-customers for coffee time. Finally, in the operations of Lean, they also use outdoor team events to celebrate success but according to the CEO, they do not celebrate failure. He explained: “...*We actually look at what went wrong and learn from it and encourage open discussion about why this failed... But then we celebrate it once we get it correct...*” (CEO of Lean).

The rituals are symbolic events periodically organized to strengthen existing activities (Trice and Beyer, 1993). This also demonstrates the dual significance of rituals, that is, having a symbolic character through which meanings can be deduced, and a tangible character where they are used to perform a task (Smith and Stewart, 2011; Van den Ende and van Marrewijk, 2014). In the context of our findings, rituals are used as a learning scheme to provide meaning and support to liminality. As explained by the CEO of Luminary: “...*Depending on the objectives we have, we discuss what we can do to be better for the next target, or for the next period, what things we could improve*” (CEO of Luminary).

Adaptive Behavior

With respect to adaptation as result of knowledge reconciliation, the adaptive behavior of the case firms occurs in the areas of technology, product/service, legislation, culture, and externalization (i.e. resourcing)⁶. According to the findings, in the operations of Ultrasound, they adapted their products based on the electrical technology system in the US, legislation requirements, and on the needs of customers. Furthermore, according to the marketing director, access to host market knowledge has altered their business model in the sense that based on the acquired information on the US market, they have been able to develop a set of different products for several types of industrial equipment such as pipelines, heat exchangers, evaporators, steam injectors, tanks, etc. Differently, in Lean, they adapted their services based on the needs of customers and to the cultures of countries where they operate. Next, in the operations of Luminary, they adapted their products based on the firms' internal technological knowledge and externalize their operations by making licensed

⁶ Data structure of adaptive behavior is available upon request from the author

distributors responsible for the delivery of products to their home countries. As explained by the global marketing manager: *“Our products are adapted according to the outcomes of our R&D activities...we provide the distributors the necessary documentation, but they have to take the responsibility for how to get them to their own countries”* (Global Marketing Manager of Luminary). Similar to Ultrasound, Fire also adapted its operations based on current technological changes in the fire systems and prevailing legislation in host countries. More so based on market outlook in Africa, Fire outsourced locals rather using Finnish or European employees. He explained: *“When I use Finnish engineers, the cost can be twice as much as when I use them locally in Africa. But the big advantage here is that it is easier for the local people in Africa to get a visa, or to go to some countries closer by. Many times, they speak the local language, if it is French or Swahili or whatever”* (CEO of Fire).

We found these adaptations support the case firms to go through liminality. Relating the level of adaptation found in our findings to the three forms proffered by Chakravarthy (1982), we conclude that the case firms embarked on a proactive form of adaptation. Because of this, they search for opportunities and invest resources in activities to adapt their operations, to the opportunities. We conclude that the flexibility and the absence of cognitive inertia among the case firms enabled this kind of adaptation. The absence of cognitive inertia supports the claim expressed by Sapienza et al. (2006) on the cognitive characteristics associated with early and rapid internationalizing firms in the formation of LAN. For instance, in the operations of Lean, according to the CEO concerning the Chinese market, they are not tied to any existing routines, but they are currently building a team regionally purposely to learn from that market. As stated by the CEO of Lean: *“I understand that we are a micro company and going abroad especially so far way requires muscles. So, we do not have an office or paying staff in China, but we have a strategy which is long term...we have readiness for opportunity when it comes. Right now, we are building our team regionally to learn from the Chinese market, growing the team here”* (CEO of Lean).

Outcomes of the Developmental Process of LAN

Positively, the various forms of adaptation (i.e. product/service, technology, legislation, culture, and externalization) have influenced the post-internationalization speed of the case firms in terms of entrepreneurial foreign

activity expansion (i.e. the number of countries entered after the initiation and share of foreign sales). Among the case firms, Ultrasound is currently operating in six countries, having around 80% of the foreign share of sales. As explained by the marketing director: *“Clients or customers’ information dictates the pace on how we respond to changes...our sales have been growing. It keeps doubling annually...and now we are having a permanent office in the USA”* (Marketing director of Ultrasound). According to the marketing director, they are entering different areas in Europe, the Americas, South and North America, and Asia. In contrast, Lean also is now having a 5% estimated foreign share of sales. According to the CEO, they worked heavily in foreign markets such as Japan, Sweden, Czech Republic, Germany, Belgium, and Norway during the first three years of their establishment. However, after that period, they are not getting more foreign demands, but he expressed: *“the last accounting year showed very good growth. We have the potential for profitability. Currently we are little stretched because we are investing in new markets and competence development”* (CEO of Lean). Regarding Fire, according to the CEO, by adapting its operations to current technological changes in the fire systems, it has provided them the opportunity to receive a lot of offers from its domestic MNC and foreign clients. He explained: *“I have been fully occupied with company X [domestic MNC] projects. I have a few other international companies that have approached me to work for...and I do not have the capacity to do that”* (CEO of Fire). Currently, Fire’s foreign share of sales is 95%. It has been involved in a lot of maintenance projects in the US, Ethiopia, Togo, Zambia, Mozambique, Cameroun, Curacao, the Americas, and others. In the operations of Luminary, according to the Global Marketing Manager, adapting the manufacturing of their products to the knowledge from internal research and development and that of their engineers and the externalization of distribution has allowed them to deliver across the globe. Although, they have domestic operations in Finland, according to the CEO, the biggest share of sales comes from abroad. It is around 85%.

Process Model of LAN Development and Outcomes

Based on our foregoing discussion, we present a comprehensive process model of LAN development and outcomes (see Figure 2). The originality of the model is

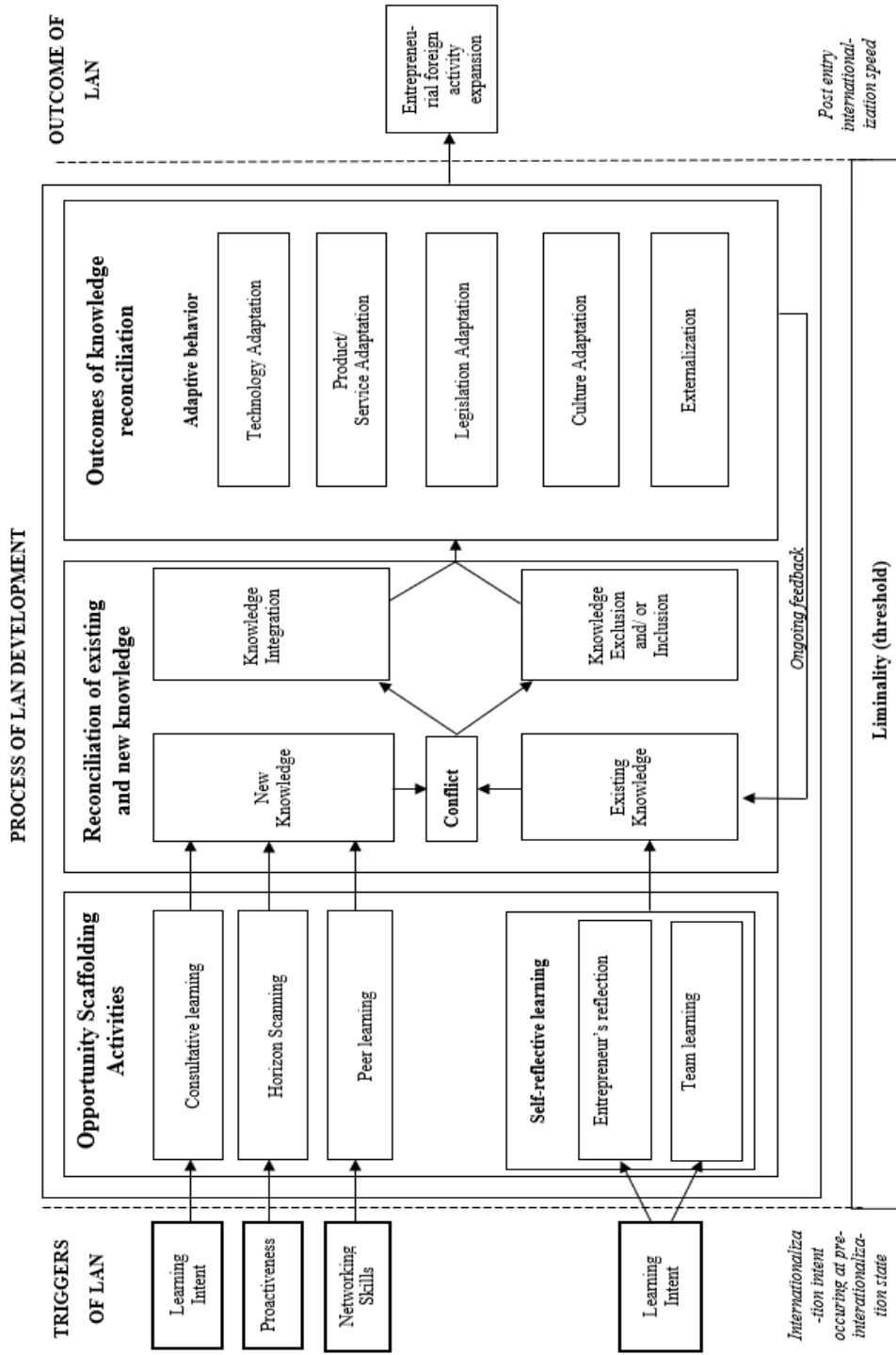


Figure 2. Development of LAN and Outcome

The two dotted parallel lines show the beginning of the threshold and the end (space between internationalization intent and post entry internationalization speed)

based on incorporating the concepts of social anthropology, a non-business scholarship, into the understanding of LAN. The model provides a holistic perspective on LAN dynamics and integrates the following components: 1) triggers, 2) process, and 3) outcomes of LAN. Since the theoretical gap for this study is on the process of LAN development, we center our discussions on that. On the model, the process of LAN development is in three phases. The first phase is referred to as opportunity scaffolding activities. As shown, these activities generate both new and existing knowledge. On one part, new knowledge is derived from consultative learning, horizon scanning, and peer learning via “communitas”. On another part, the outcome of self-reflective learning (i.e. the entrepreneur learning by reflecting on prior experiences, and teams learning by reflecting on current activities) is integrated into the firm to create a shared understanding among organizational members, thereby becoming existing organizational knowledge.

The second part of the model is the knowledge reconciliation process phase. Here, we have a situation where new and existing knowledge intersects. There is always a conflict and extreme reactions between old and new habits during liminal moments (Turkle, 1998). In our case, there exists a conflict between new and old knowledge. One way the INV resolves this conflict is by integrating both forms of knowledge. The other way is by disregarding one, for example, focusing on new knowledge and disregarding existing knowledge, or vice versa. The outcome of the process leads to the third phase of the model.

The third phase of the model is the outcomes of the knowledge reconciliation process, which includes accumulated knowledge, rituals, routines, and adaptive behavior. Accumulated knowledge includes the understanding of industry trends and new technology developments, access to host market knowledge on competitors’ resources and geographic presence, understanding of foreign markets’ legislations, and collective understanding of the needs and reactions of customers. Rituals also include team events, outdoor events, and ceremonies; whereas routines include actions labeled as repetitive patterns of action that are functionally similar, but not necessarily fixed (Pentland and Rueter, 1994). They include the following: reliance on R&D, frequent updates of operations, constant outsource of locals in host markets, frequent foreign market feedbacks, and insights from partners. Further, before the effect of LAN on post-entry internationalization could be realized, the firms leverage the accumulated knowledge, routines, and rituals they have acquired to adapt their operations. For

example, it includes changing products based on customers' information, adapting the marketing message around the core values and products, designing products based on legislation requirements, and keeping operations up-to-date in response to technological changes. Subsequently, this is translated into post-internationalization speed in terms of entrepreneurial foreign activity expansion. This state is where the occurrence of knowledge transformation in liminal transition is manifested. Finally, since learning is an ongoing process (Dibella et al., 1996), the experiences of the firms in the foreign market are feedbacked as new knowledge to complement their existing knowledge repertoire. This is demonstrated with a feedback loop in the model.

Conclusion

This study has addressed previously under-researched aspects of the dynamics of LAN. Taking the process perspective and applying the concept of liminality, we have conducted a longitudinal study of four early internationalizing SMEs. Based on our findings, we have developed an integrative process model that demonstrates how LAN is formed. This way, our study contributes to the IE and IB field both theoretically and practically. In what follows, we will address these contributions in more detail.

Theoretical Contribution

First, the study introduces a process-based perspective on LAN as important to the future development of IE and IB literature. LAN as a concept has been generally accepted in IE and IB literature to explicate the implications of how early internationalization influences new ventures' learning and subsequent international performance (Bai et al., 2020). However, empirical research on LAN is often static, which makes it difficult to capture the dynamism inherent in the process. By adopting this dynamic longitudinal approach from the lens of liminality, we offer a more integrated and nuanced view of LAN dynamics, which allows grasping not only how LAN unfolds but also what factors provoke its development and what consequences it can have on internationalization. Precisely, our model shows the non-serendipitous nature of LAN and envisages highly interconnected activities and processes of change over time to depict the formation and outcome of LAN. It does this by opening up the complexity and interrelatedness of whys (triggers), hows (developmental process), and effects

(outcomes) of LAN. This helps us to understand the underlying liminal factors that contribute to the development of LAN and outcomes.

Second, our study contributes to the literature on capability development and learning of early internationalizing firms (Autio, George and Alexy, 2011) by highlighting the underlying mechanisms that support the development of LAN during their liminal transitions along internationalization. We found LAN development to be supported by opportunity scaffolding activities, “communitas”, conflicts from knowledge reconciliation, rituals, routines, and accumulated knowledge. More importantly, explaining the underlying mechanisms through the concepts of “communitas”, “conflicts”, and “rituals” supports our understanding of the non-serendipitous nature of LAN, that previous studies have discussed (e.g. Zahra et al., 2018; Sapienza et al. 2006; Autio et al., 2000). Firms depend on “communitas” for new knowledge but as they explore the foreign markets, they encounter liminal challenges, and in overcoming them, they develop experiential knowledge, which automatically becomes an existing knowledge. Consequently, the existing knowledge is reconciled with new knowledge from “communitas”, which possibly can create conflicts. In resolving the conflicts, it generates the accumulation of knowledge, formation of routines and rituals. We see rituals as crucial than routines because, in varying levels of uncertainty where a firm may regularly need to adjust its behavior, routines will be insufficient due to the possible occurrence of a “competency trap” (Cohen and Levinthal, 1990). Further, the sustainability of routines depends on rituals (Trice and Beyer, 1993).

Furthermore, our study also contributes to the discussions on LAN and post-entry speed of internationalization, which is limitedly understood in literature (De Clercq et al., 2012). Less clear, however, is the underlying mechanisms between the influence of LAN and post-entry internationalization speed. Our model opens up how this process unfolds in detail. It describes how the post-entry speed of internationalization as an outcome of LAN can be achieved through the mediating mechanisms of early internationalizers’ adaptive behaviors. By this, our model responds to call on studies on post-entry development of firm internationalization (e.g. Welch and Paavilainen-Mäntymäki, 2013).

Managerial Contribution

The non-serendipity nature of LAN evidenced in the present study places a responsibility on entrepreneurs and managers of early and rapid

internationalizing firms in the LAN development process. This postulates that entrepreneurs have to put up the right structures and settings to support the generation of LAN to overcome the challenges of liminal transitions by developing their firms so that they can create and benefit from as many triggers of LAN as possible. Notwithstanding the liminal transition challenges of market uncertainties and liabilities due to new ventures, the study also postulates that when opportunity scaffolding activities are well-tapped by entrepreneurs, they have a role in influencing the development of their ventures' LAN. We recommend entrepreneurs invest in opportunity scaffolding activities. For example, they should engage in consultative learning (e.g. participation in trade events, enrolling in business-related courses) and horizon scanning (e.g. fact-finding trips, proactive search for information). We also encourage entrepreneurs to devote attention to organizational rituals such as weekly meetings, quarterly and annual strategic meetings because they reinforce the values of their firms and provide information that supports their adaptation process. These submissions are especially important for managers of rapidly internationalizing firms. This is because the development of the LAN advantages contributes to firms' adaptive capabilities that increase post internationalization speed, which is often critical in the competitive marketplace where they operate.

Limitations and Further Research

This paper is characterized by some limitations. First, our case firms originated from a small and open country, Finland and they were from the clean-tech industry. The presented "thick" case descriptions allow for naturalistic generalization as each reader can apply the results to the parts they are applicable in their context (Stake, 2000). Moreover, the results can be generalized analytically back to theory, but generalization to a larger population requires further investigation (Lincoln and Guba, 2002; Yin, 2012). Future studies could conduct a similar study in different cultural settings, especially in larger and emerging economies and also extend the investigation to other sectors. It would also be interesting to conduct quantitative surveys preferably with a longitudinal study approach that would allow for testing the generalizability of the findings to a larger population.

Since new ventures' internationalization is a liminal transition process, apart from LAN, IE and IB scholars can also leverage liminality theoretical

perspective to study how other capabilities (e.g. managerial competence, marketing competence, collaboration competence, etc.) of early international firms are developed and their influence on post-internationalization speed, international performance or foreign market entry survival. Furthermore, in this study, we focused on the positive sides of liminal transition and how they contribute to the development of LAN. Future studies can extend further by investigating how the challenges of liminal transition influence the learning disadvantage of newness of early internationalizing firms. Finally, future research can look at how the age or timing of first internationalization determines the development of LAN as the firms mature to become larger MNCs as our focus was purely on young and early internationalizing firms.

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