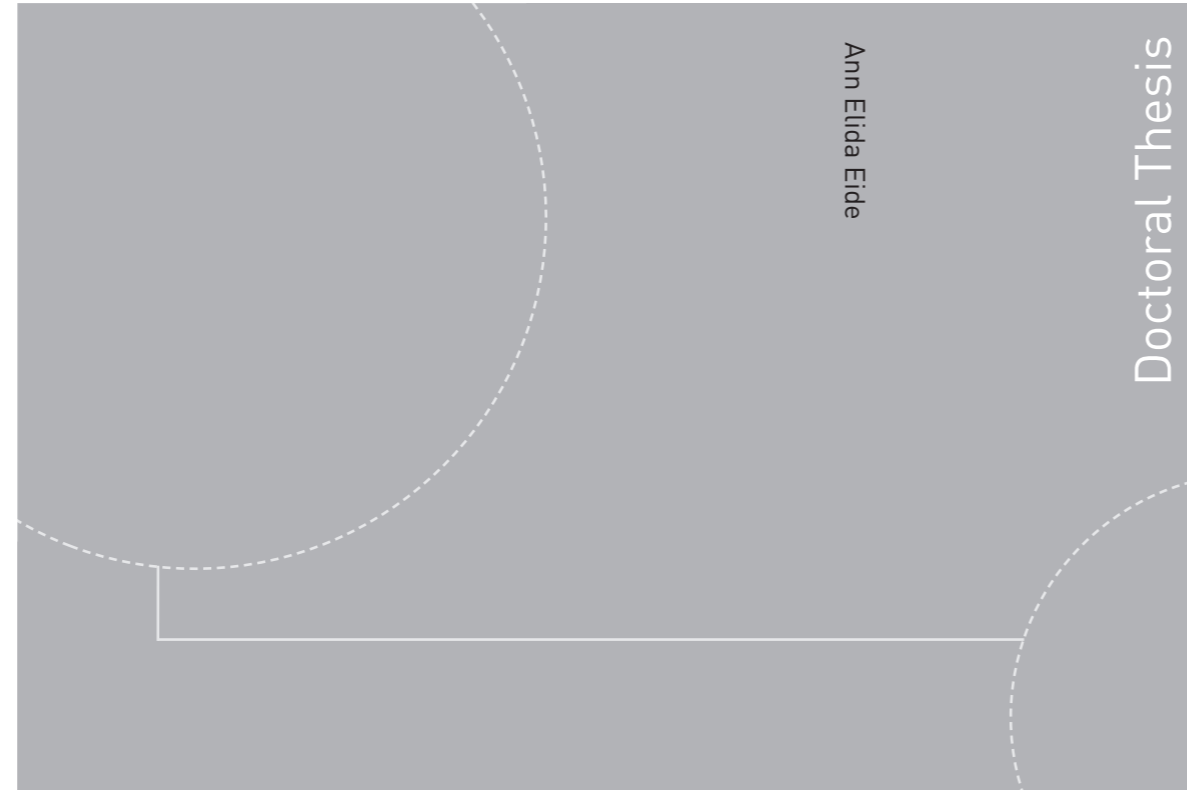


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Ann Elida Eide

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Science and Technology
Faculty of Economics and Management
Department of Industrial Economics
and Technology Management

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The Role of Managers in International Small Business

Thesis for the degree of Philosophiae Doctor

Trondheim, August 2020

Norwegian University of Science and Technology
Faculty of Economics and Management
Department of Industrial Economics and Technology Management



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SUMMARY

There are many aspects of organizational life that have the potential to influence the development paths of small international firms. This dissertation aims to provide insight into what role general managers play in such firms. Managers can be considered important, not because they are superhuman, but precisely because they are not. Due to their exposure to the same limitations as you and I, they make mistakes – sometimes fatal ones for their firms, but together with their organizations, they also develop wonderfully creative and meaningful solutions to pressing problems. The objective of this thesis is to attempt to answer the question: *What is the role of managers in international small business?* Small- and medium-sized firms are venturing abroad to a greater extent than ever, and the added uncertainty of the foreign context increases the strain on managers' already pressed decision frames. This pressure opens up for more of managers' idiosyncratic selves to enter the decision making process. As such, general managers can be said to be important in small- and medium-sized firms – for good and bad, due to their relatively strong influence in strategic decision-making.

In attempting to answer the main research question, this dissertation consists of four studies. In the first paper, I perform a literature review investigating over two decades of research in order to answer the question: *What is the current state of knowledge on the role of managers in international small business?* With the objective of structuring the findings in the literature, I develop a conceptual framework, which I build on further in this cover essay. To summarize the known effects of managers in the internationalization processes of small firms, I explain how findings from the literature reveal that studies of managerial cognition and behavior are lacking. I propose an agenda for future research to fill the identified gaps.

In the second paper, we sought to answer the research question: *How do top management team-composition (size, diversity and experience) co-vary with other characteristics of SMEs, specifically their strategic orientations (international, learning and growth) and international performance?* By performing a cluster analysis based on key managerial characteristics, we identified three firm groupings with distinct levels of strategic orientations and international performance. We called them: Born and Stuck Nordics, Agile Exporters, and Established Internationals. We outlined three propositions for future research to explore in order to obtain richer knowledge about the relationships between managerial characteristics and firm outcomes.

The third paper's objective was to uncover: *How are managerial aspirations aimed at either growth or international expansion, and managers' perceived change effectiveness, connected to positive and negative organizational consequences? And are management teams' experience and diversity related to the aspirations initially developed?* In this study, we built a complex research model to investigate several aspects of the growth processes in firms. Results showed that the differentiation of aspirations according to the level of organizational change they demanded made sense, and that managers could be both the cause and cure of employee frustration. The latter signals an important implication for practitioners in real-life business. In essence, our findings strongly confirmed that managers' experience, aspirations and perceptions mattered when examining firm-level growth processes.

The fourth paper aimed at identifying: *How do managers influence firms' strategic sustainability efforts, and to which degree are firms' sustainability strategies associated with performance?* Based on a unique research opportunity, we took a more operational approach by investigating specific managerial measures in a particular setting. Using strategy as a bridge, we linked

individual-level motivation and leadership behavior to firm-level outcomes relating to sustainability. Our study provides a unique picture of some of the ways leaders can contribute to their firms' sustainability strategies and, ultimately, to the performance of their firms.

In analyzing these four contributions collectively, I utilized the conceptual framework developed in this cover essay. My central scientific contribution in this dissertation is that managers matter in international small business due to their: 1) managerial human capital – what they know, 2) managerial cognition – who they are, 3) managerial behavior – how they act, 4) managerial history and context – what they can do, and 5) managerial discretion – what they are willing to do. Further, based on the theoretical groundwork that forms the foundation for this treatise, recent literature within the field of small international business, and my own findings, I have developed a theoretical contribution that I identify as a movement *toward a behavioral theory of the growth of small international firms*. Finally, I place these findings in a practical context by highlighting the implications for managers and policy makers.

SAMMENDRAG

Det er flere aspekter ved organisasjonslivet som kan påvirke utviklingen av små og mellomstore, internasjonale bedrifter. Denne doktorgradsavhandlingens formål er å gi innsikt i hvilken rolle daglig ledere spiller i slike bedrifters utvikling. Ledere kan anses som viktige, ikke fordi de er supermennesker, men nettopp fordi de ikke er det. På grunn av at ledere står overfor de samme kognitive begrensningene som du og jeg – gjør de feil, noen ganger fatale feil for sine bedrifter. Men sammen med sine organisasjoner utvikler de også vidunderlig kreative, og meningsfylte løsninger på viktige problemer. Med denne avhandlingen forsøkes det å gi et svar på det overordnede forskningsspørsmålet: *Hva er lederes rolle i internasjonale små bedrifter?*

Små og mellomstore bedrifter går internasjonalt i større grad enn noen gang tidligere, og den økte usikkerheten som følge av en fremmed og ukjent kontekst øker også presset på lederes beslutningsrammer. Dette presset åpner opp for at mer av lederens unike selv inkluderes i beslutningsprosessen. På grunn av at deres påvirkning i strategiske beslutningsprosesser kan ledere sies å være viktige for små og mellomstore bedrifter – på godt og vondt.

For å kunne svare på det overordnede forskningsspørsmålet består denne avhandlingen av fire studier. I den første artikkelen gjennomfører jeg en litteraturanalyse som tar for seg over to tiår med forskning for å kunne besvare spørsmålet: *Hva er nåværende status knyttet til vår kunnskap om lederes rolle i internasjonale små bedrifter?* Med mål om å strukturere funnene i litteraturen utvikler jeg en konseptuell modell, som jeg bygger videre på i avhandlingens kappe. Litteraturanalysen peker på at empiriske studier knyttet til lederes kognisjon og atferd mangler, og jeg foreslår en agenda for hvordan fremtidig forskning kan forsøke å fylle disse kunnskapshullene.

I artikkel nummer to søker vi å besvare forskningsspørsmålet: *Hvordan varierer toppledelsens team-sammensetning (størrelse, mangfold og erfaring) med små og mellomstore bedrifters andre karaktertrekk, spesifikt deres strategiske orientering (internasjonal, vekst og læring), samt deres internasjonale resultat?* Ved å gjennomføre en klyngeanalyse basert på nøkkelkarakteristikker ved ledelsen identifiserte vi tre grupperinger med særegne nivå av strategisk orientering og internasjonale resultater. Vi kalte disse gruppene: De fastlåste Nordiske, De fleksible eksportørene og De etablerte internasjonale aktørene. Vi skisserte tre proposisjoner for hvordan fremtidig forskning kan tilegne seg rikere kunnskap knyttet til forholdene mellom karakteristikker ved ledelsen og bedriftsprestasjoner.

Vår tredje artikkels formål var å studere: *Hvordan er lederes ambisjoner knyttet til enten vekst eller internasjonal ekspansjon, og lederes opplevde endringseffektivitet, relatert til positive og negative organisatoriske konsekvenser? Og kan lederes erfaring og mangfold knyttes til ambisjonene i utgangspunktet?* I denne studien bygde vi en kompleks forskningsmodell for å undersøke flere aspekter ved bedrifters vekstprosesser. Resultatene viste at differensiering av ambisjoner i henhold til nivået på organisasjonsendring de krevde, var fornuftig, og at ledere kunne være både årsaken til og kuren for ansattes frustrasjon. Sistnevnte signaliserer viktige implikasjoner for det praktiske arbeidsliv. I hovedsak bekreftet funnene våre at ledernes opplevde effektivitet, deres ambisjoner og erfaring var viktig for vekstprosesser på firmanivå.

Med den fjerde artikkelen ønsket vi å identifisere: *Hvordan påvirker ledere sine selskapers strategiske bærekraftige satsninger, og i hvilken grad er bedrifters bærekraftige strategier forbundet med bedriftsresultater?* Basert på en unik forskningsmulighet tok vi en mer operasjonell tilnærming i denne artikkelen, og studerte spesifikke ledelsesfaktorer i en bestemt setting. Ved å bruke strategi som brobygger, knyttet vi sammen motivasjon og ledelsesstil på individ-nivå med bærekraftige resultater

på bedriftsnivå. Vår studie gir et unikt bilde av noen av måtene ledere kan bidra til sine selskapers bærekraftige satsninger, og til syvende og sist, til bedriftenes resultater.

For å analysere mine fire artikkelbidrag samlet, benyttet jeg meg av det konseptuelle rammeverket skissert i den første artikkelen, og videreutviklet dette i kapp. Mitt sentrale vitenskapelige bidrag er at ledere er viktige for små og mellomstore bedrifter på grunn av: 1) ledes humankapital – hva de vet, 2) ledes kognisjon – hvem de er, 3) ledes adferd – hvordan de handler, 4) ledelsens historie og kontekst – hva de kan gjøre, og 5) ledes handlekraft – hva de vil gjøre. Videre, basert på det teoretiske grunnarbeidet som danner utgangspunktet for denne avhandlingen, litteratur innen forskningsfeltet på små og mellomstore internasjonale bedrifter, samt egne funn, utvikler jeg et teoretisk bidrag jeg kaller: *mot en atferdsteori knyttet til vekst i små internasjonale bedrifter*. Avslutningsvis plasserer jeg mine funn i en praktisk kontekst ved å fremheve spesifikke virkninger for ledelse og myndigheter.

PREFACE

At the time of writing, the Norwegian society in which I live has shut down. Universities, schools and kindergartens are closed and everyone is required to stay home. The humanity is facing a global pandemic due to the covid-19 virus. International trade (and most other trade), has evaporated due to closed country borders, locked in or sick employees, and a sudden drop in customer demand. The small firms that feature prominently in my thesis are currently struggling, many on the brink of collapse and bankruptcy. The situation is grave, and the numbers of infected, seriously ill and deceased are rising by the day. The reality as we know it seems to be falling apart. This dissertation is about the role of managers in international small business, but we are sometimes reminded that there are things greater than the individual. As humans, we depend on each other; in the society, in organizations and at home – in good times and bad. Even in the darkest hour, we individuals hold the solution – together. Right now, we are required to keep our distance from each other, an act which is difficult in times of fear. What we want most in difficult times is to hold all our loved ones close, but instead we are staying home to protect those of us who will handle the virus poorly. We are in a collective and voluntary lock down, a solidarity-dugnad. We are buying humanity time. Time to do research, and to develop paths toward a solution.

I do not at the time of writing know what will be the aftermath of this pandemic, or indeed how it will end, but I choose to be optimistic and from the bottom of my heart I hope humanity has shown its wonderful and forceful strength in trying to protect all of its individuals, at the end of it all.

Det heiter ikkje: eg – no lenger

Heretter heiter det: vi

- Halldis Moren Vesaas

With this backdrop, I want to express my sincere gratitude to a number of people in my life. I have had the honor of having three exceptional gentlemen as my supervisors. First and foremost, Arild Aspelund – you have provided me with the freedom to roam around, ensured me that “this is not rocket science”, and have put just enough pressure on me to get some writing done too. I have never gone from a meeting with you without having laughed heartily at least once, and I think that is actually what I am most grateful for. You are highly knowledgeable and an *excellent* supervisor and I want to thank you for all your help and encouragement. Øystein Moen, you are one of the brightest, and even more efficient, scholarly sparring partners I have had, and I am very glad I got to work with you. I also highly appreciate all of your creative lunch break research ideas (usually involving some sort of collective effort). Tage Koed Madsen, thank you so much for welcoming me to Odense, Denmark, and guiding our work together. It was a very productive stay in many ways, and me and my little family thoroughly enjoyed our visit. Erik Sæther, my only co-author not also my supervisor, thank you for a productive collaboration, and for being an amazing guy. I have just recently realized the irony of me trying to motivate the motivation-guru, but I hope we do find the opportunity to write together again – this time in a more controlled time frame. Øyvind Bjørgum, you have been there from my start and have always been a great guy for a break, a coffee, or beer. In addition, you have impressed me more than once with your superb quiz-related knowledge of just about anything. As my office-mates, Fanny Hermundsdottir and Mohammad Javadinia Azari

deserves special mentioning – having had to put up with all my quirks for years at an end. However, for my part I think you are truly the best co-workers I could ever have gotten, and we have had a multitude of interesting conversations (both about research and not), and plenty of very good laughs too. Puck Hegeman, Linn Slettum Bjerke, Lisa S. Græslie, Rikke Stoud Platou, and not least Marta Morais-Storz, you are high-quality women, I really enjoy our time together, let's have more of it! I am very grateful for having had the possibility to work with an exceptional group of intelligent and funny people – the faggruppe on the fourth and fifth floor in our building (both present and previous versions). Our lunch talks are not only rewarding because of their laughter, but because of the sheer range of topics discussed. You guys make work-life worth living. Rounding off, I want to thank the Globalization-program and Norwegian tax-payers for the opportunity to do this research.

Outside academia I have had the honor to grow up with, what has now become, a group of outstanding ladies – and along my path I have met additional amazing friends. Thank you so much for being there for me, for asking questions about the research I must admit I preferred not to answer, but also for letting me vent and getting my mind off the dissertation. I really value our friendships!

Before I started working on this PhD I spent some hectic years at a tech start-up, I believe this spurred my initial interest in the individual-level in firms. I want to thank Silje, Kine and Olav for an intense and also incredibly fun time! Experiences I will hold for the rest of my life.

I am very lucky to have a wonderful family, both the ones I have known all my life, and the extended version. Especially Mette, you really impress me with your dedication to our kids and family, thank you! To my parents, Audhild and Per Arne, thank you for your everlasting encouragement in my endeavors, for your inspiration, for being amazing grandparents, and for being the kindest and most generous people I know. You have provided us with a childhood of space to be who we really are, of unity as siblings, of opportunities to always bring friends over; of waffles, cocoa, and salty homemade ice cream – of happy memories.

To my siblings, HanneMa, Nora Kriss and Ulf, you are simply the greatest people to grow up with and I am very grateful to have you all in my life. I enjoy our discussions and laughter together, especially the talks that are about popular science, popular culture or just plain (popular) ridiculousness. You are there for me in times of need, but most importantly you are there for me whenever. Thank you!

Writing this dissertation has been a journey. Both for the scholar writing it and for the ones in her immediate vicinity. I started out with all the time in the world to devote to this dissertation, a couple of years later we have had two kids and made our own family, and other things in life are also important. Therefore, to my wonderful Espen, this journey would not have been possible had it not been for your steady (and long) shift at the helm. You have held our daily lives together in thick and thin, and made it all work astonishingly smooth. You never cease to amaze me with your consistently good mood, your playfulness, and (somewhat annoying) sense of order. You are my reality check in stressing times, my bauta in demanding times, and my most excellent celebrator in joyous times – and I love you for it! I am incredibly grateful to have you by my side. I have dedicated this work to our children because even in light of this dissertation being finalized, they continue to be my, and our, greatest achievements.

Ann Elida Eide

Trondheim
April 3, 2020

Dedication

To our sons,

Sondre and Sølve Birkir

May your lives be filled with
Wonder and curiosity,

And may you always know
You are loved

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LIST OF RESEARCH PAPERS

Paper 1

Eide, A. E. (2020). International SMEs: A review of the managers' role. *Submitted to an international peer reviewed journal.*

Paper 2

Eide, A. E. & Madsen, T. K. (2021). Top Management Teams and the Internationalization of SMEs: The Importance of Team Composition and Strategic Orientations. *To be published in McGill International Entrepreneurship Series, 7th Volume, Edward Elgar Publishing.*

Paper 3

Eide, A. E., Moen, Ø., Madsen, T.K. & Azari, M. J. (2020). Organizational Consequences of Applying Explorative and Exploitative Growth Strategies in Norwegian SMEs. *Submitted to an international peer reviewed journal.*

Paper 4

Eide, A. E., Saether, E. A. & Aspelund, A. (2020). An investigation of leaders' motivation, intellectual leadership, and sustainability strategy in relation to Norwegian manufacturers' performance. *Journal of Cleaner Production Volume, 254, 1-12.*

Part 1 – Main text

1. INTRODUCTION

General managers of small- and medium-sized firms (SMEs) are responsible for their businesses' day-to-day operations. The strategic decisions they make on behalf of their firms, and how these decisions are executed, determine the survival and success of their organizations. The aim of this thesis is to take a closer look at the role of managers in change-demanding processes, such as internationalization, to be able to say something about the part they play in the elaborate puzzle we call an organization. Focus is placed on the role of managers in international small business, and I explain why by exploring this setting through its two sub-themes, *international* and *small* business. Within the international context, the role of managers has been investigated to some degree. Characteristics of decision makers, along with their attitudes and strategic commitment to internationalization were found early on to be important for exporting companies (e.g., Cavusgil & Naor, 1987; Reid, 1981). Managers' international experience (e.g., Reuber & Fischer, 1997), along with their perceptions and aspirations have further been found to be some of the most important determinants of international endeavors (Aaby & Slater, 1989; Delmar & Wiklund, 2008). In 1998, Leonidou, Katsikeas, & Piercy observed that research conducted on the managerial influences of exporting was widely studied, but in fact comprised of one of the "least conclusive areas of exporting research" (p. 94). A bit earlier, in 1966, Aharoni had introduced the behavioral dimension (Cyert & March, 1963/1993) into international business research (IB), and in their retrospective 45 years later, the author and his colleagues concluded that "a relatively large segment of international business research continues to leave limited or no room for decision making on the part of managers" (Aharoni, Tihanyi, & Connelly, 2011, p. 135).

Aharoni and colleagues spoke here of the role of managers in large multinational enterprises (MNEs), as many other IB researchers traditionally did, and naturally still do. However, in the early 1990s, scholars also discovered smaller firms that ventured abroad very early in their business lives, giving them the names *born globals* (Knight & Cavusgil, 1996; Knight & Cavusgil, 2004; Rennie, 1993) and *international new ventures* (INVs; McDougall, 1989; Oviatt & McDougall, 1994). The accelerated expansion of these firms challenged the way the reigning Uppsala model described how smaller firms ventured abroad – in incremental steps starting with nearby markets and expanding into markets with a greater psychic distance as their experiential learning grew. Questions arose as to how these new firms were able to internationalize so soon after their birth. Madsen and Servais (1997) provided an explanation in that managers' prior knowledge, motivations and ambitions influenced the speed and scope with which small and young firms were able to go global. In line with this, Coviello and McAuley (1999) argued for an integration of theoretical frameworks to be able to properly understand SME internationalization.

Already in 1987, Cavusgil and Naor observed that "[a]lmost every study referenced in this article has pointed attention to the critical role played by the senior decision makers in exporting" (p. 223). In 1998, Miesenböck again identified the decision maker as the key variable in the internationalization of small business. Through an empirical examination in 2006, Anderson and Evangelista emphasized the advantages of micro-level research: "analysis on an individual level enhances the understanding of internationalization in new firms" (p. 642).

Internationalization of firms is understood in this thesis as "the process of adapting firms' operations . . . to international environments" (Calof & Beamish, 1995, p. 116). It is generally agreed

that internationalization increases uncertainty and risk, both for large and small companies (e.g., Aharoni, 1966; Liesch & Knight, 1999). Uncertain settings may further breed “weak situations” (Carpenter & Fredrickson, 2001; Hambrick & Mason, 1984; Mischel, 1977) in which there is less behavioral pressure from the environment and, thus, more psychological freedom for the managers to act according to their own judgement. This judgment will, in line with *bounded rationality* (which will be discussed more thoroughly in the theory section), be filtered through the individual manager’s idiosyncratic knowledge and background and result in unique decisions for the firm. Furthermore, the small firm setting also implies more *managerial discretion* (a concept that will also be presented in the theory section), meaning a manager’s relative power in the strategic decision making process of firms, due to less formalization (e.g., Mintzberg, 1973) in smaller firms, and presumably fewer shareholders.

Despite advances in our knowledge of the micro-level factors in international and small organizations, the scholarly community still lacks insights regarding the impact of managers – particularly in the combination of both small and international companies (Love & Roper, 2015; Naldi & Davidsson, 2014). In the last decade-and-a-half, there have been several calls to (re-)include the individual level in studies of international business in general (Aharoni et al., 2011; Contractor, Foss, Kundu, & Lahiri, 2019), and international entrepreneurship in particular (Coviello, 2015; Coviello, Kano, & Liesch, 2017; Zahra, Korri, & Yu, 2005). The strength and importance of this call is exemplified in the recent development of the Uppsala model, where after 40 years of claiming that the individual level was satisfactorily handled as an aggregated measure, the authors have recently opened up to using an integration of microfoundations as part of their framework (Johanson & Vahlne, 1977; Vahlne & Johanson, 2020) because “the closer our assumptions are to reality, the better the resulting model” (Vahlne & Johanson, 2020, p. 4).

In light of the above arguments, the purpose of this dissertation is to try to fill this gap in our knowledge by aiming to answer the following primary research question: *What is the role of managers in international small business?* The four studies comprising this treatise will investigate distinct aspects of this scholarly problem. Their individual research questions are the following:

- Paper 1: What is the current state of knowledge on the role of managers in international small business?
- Paper 2: How do top management team composition (size, diversity and experience) co-vary with other characteristics of SMEs, specifically their strategic orientations (international, learning and growth) and international performance?
- Paper 3: How are managerial aspirations aimed at either growth or international expansion, and managers’ perceived change effectiveness, connected to positive and negative organizational consequences? Are management teams’ experience and diversity related to the aspirations initially developed?
- Paper 4: How do managers influence firms’ strategic sustainability efforts? To which degree are firms’ sustainability strategies associated with firm performance?

This dissertation will mainly investigate Norwegian small- and medium-sized companies and their managers. It is important to recognize that, when it comes to international business, “small businesses are not smaller versions of large businesses” (Shuman & Seeger, 1986, p. 8). SMEs are

typically resource constrained and face unique liabilities concerning their smallness (Aldrich & Auster, 1986), newness (Singh, Tucker, & House, 1986), and foreignness (Zaheer, 1995), as well as their outsidership (Johanson & Vahlne, 2009). However, smaller firms also have advantages relating to their agility and flexibility as compared to their larger counterparts. As trade barriers between countries are shrinking (at least in a long-term perspective) based on greater mobility, technological advances and digitization (Coviello, Kano, & Liesch, 2017), the relative importance of the managerial level gains added leverage. In addition, Leonidou (2004) found that export barriers are largely based on the idiosyncratic perception of individual decision makers in firms, further increasing the importance of the managerial level.

From a practical perspective, the managers of real-life internationally exposed SMEs have to make decisions based on limited and ambiguous information, choosing from more or less conflicting targets in an uncertain environment with a potentially complex future development. All of this takes place with the clock continuously ticking toward an implicit or explicit deadline. Naturally, providing interesting and important insights for business practitioners is one of the most vital contributions of international business research. Motivated by the increasing importance of the managerial level in international small business, this investigation of the impact of managers, themselves, in a changing, intensive environment aims to provide practitioners with useful information concerning their top management team composition; the impacts of their perceptions, aspirations and motivations; as well as the importance of their behavior. Contractor et al. (2019) explain: “for too long, studies of corporate strategies have focused on the firm as a unit of analysis, as if the firm could decide or think on its own, neglecting the fact that it is managers who think” (p. 3). An approach that lacks the individual-level “is fundamentally problematic” (Felin & Foss, 2005, p. 452). In short, microfoundations in an international small business setting are needed, and this dissertation aims to contribute to filling this gap.

For ease of understanding, this cover essay will utilize the term *small business* to mean small- and medium-sized business and SME. I will also use the terms *manager*, *executive* and *leader* interchangeably. Neither do I distinguish between the executive functions of *managing* contra *leading* (Bennis, 1989). This is due to a twofold consideration: first, such a distinction between management and leadership is impractical from a research standpoint; second, and more importantly, SMEs are more resource-restricted than larger firms, and therefore the general manager will be required and expected to perform both management and leadership roles.

In the following sections, I will present the theoretical groundwork for this dissertation and further investigate its application to and implications for international business research. The theoretical chapter is concluded by a short presentation of the dissertation’s papers. After offering insight into the methodological approach, I will present the results from my research. Further, I will outline a conceptual framework at the managerial, firm and contextual levels, and structure my findings according to this framework. The discussion will end with some thoughts on the development of a behavioral theory of the growth of small international firms, before implications for managers and policy makers are outlined. Limitations, future research directions and a conclusion will be provided in the closing of this cover essay.

2. THEORETICAL GROUNDWORK

There are many aspects of organizational life that have the potential to influence firms' development and, ultimately, their performance. When it comes to international endeavors (Jones, Coviello, & Tang, 2011), industry aspects (Porter, 1980, 1985), firms' unique resources (Barney, 1991; Rumelt, 1984; Wernerfelt, 1984), networks (e.g., Johanson & Vahlne, 2009), external shocks such as technological novelties (Schumpeter, 1934) and disruptive innovations (Christensen, 1997) are some of the most prominent explanations. Many organizational-level perspectives, however, take a neoclassical approach to the rationality of individual actors (Aharoni, 1966). This implies that the individuals making up an organization are seen as rational, goal-congruent utility maximizers who, when aggregated to the firm level, accrue to rational, goal-congruent maximizers of financial profit.

Most people who study this topic know that this is not a correct description of either a human being or "the real flesh and bones of an organization" (Simon, 1947, p. xlvi). As early as 1938, Barnard wrote in *Functions of the Executive* about fallacious reasoning and "non-logical processes" for making decisions, meaning "[processes] not capable of being expressed in words or as reasoning, which are only made known by a judgment, decision or action" (p. xx). Today, this process is often denoted in another way, as managerial heuristics or intuition (Akinci & Sadler-Smith, 2012; Simon, 1987a). In elaborating on this type of management decisions, Simon (1987) notes: "Barnard did not regard the nonlogical processes of decision as magical in any sense. On the contrary, he felt they were grounded in knowledge and experience" (p. 58). However, Simon also argued that the nonlogical decision making of the executive was not an exception, but rather the rule.

2.1 Bounded rationality, satisficing and a behavioral theory of the firm

As a response to the prevailing "economic man"-perspective of the time, Simon (1947) wrote *Administrative Behavior* in an effort to construct concepts and a vocabulary suited for a redefinition of human rationality and to "show how organizations can be understood in terms of their decision processes" (p. ix). In his work, he proposed that individuals are *boundedly rational* in that we have restrictions on our cognition related to three essential aspects: an inability to perceive all possible alternatives due to the incompleteness of knowledge, difficulties in anticipating the values of alternatives, and in not being able to fully predict the consequences of future actions (p. 81). In Simon's own words: "The limits of rationality . . . derive from the inability of the human mind to bring to bear upon a single decision all the aspects of value, knowledge, and behavior that would be relevant" (p. 108). Real-life managers are *intendedly* rational, but their actual behavior is, as it is for the rest of us, bound by the structure of the context and their cognitive limitations to perceive and process information.

Bounded rationality is simply the idea that the choices people make are determined not only by some consistent overall goal and the properties of the external world, but also by the knowledge that decision makers do and don't have of the world, their ability or inability to evoke that knowledge when it is relevant, to work out the consequences of their actions, to conjure up possible courses of action, to cope with uncertainty (including uncertainty deriving from the possible responses of other actors), and to adjudicate among their many competing wants. Rationality is bounded because these abilities are severely limited. (Simon, 2000, p. 25)

Due to perfect rationality's unattainable assumptions of knowing all alternatives and consequences, organizational members are unable to optimize and, therefore, *satisfice* (March & Simon, 1958/1993; Simon, 1947), meaning that "in the face of real-world complexity, the business firm turns to procedures that find good enough answers to questions whose best answers are unknowable. Because real-world optimization . . . is impossible, the real economic actor is in fact a satisficer, a person who accepts 'good enough' alternatives, not because less is preferred to more but because there is no choice" (Simon, 1996, pp. 28-29). As a metaphor for the optimizing decision, Simon (1987b) used the analogy of "looking for the sharpest needle in a haystack"; however, the haystack could have several "needles sharp enough to sew with" (p. 244), thus illustrating the less cost-intensive characteristics of satisficing decisions (Winter, 2000). In finding these satisfactory alternatives, individuals engage in search processes intended to identify alternatives and consequences of action. Aspiration levels are essential in guiding this search, and an outcome will be deemed good enough if it is able to satisfy the aspiration level. Moreover, aspiration levels may change over time, increasing if the actor over-performs, and decreasing if the actor under-performs or cannot find appropriate alternatives.

In their work, *Organizations*, March and Simon (1958/1993, p. 160) accentuated the *simplification* of context performed by the individual in the decision process. In the foreword to the third edition of *Administrative Behavior*, Simon (1947) explains that, while "economic man deals with the 'real world' in all its complexity, . . . [administrative man] is content to leave out of account those aspects of reality – and that means *most* aspects – that appear irrelevant at a given time" (pp. xxix–xxx, emphasis in original). This simplification of the world allows for the use of rules of thumb in decision making, or so-called heuristics that demand far less cognitive capacity (Simon, 1947).

Because their computational power is inadequate for the complexity of the choice situation, decision makers have to simplify their decision procedures. One of these simplifications is satisficing – the idea that decision makers interpret outcomes as either satisfactory or unsatisfactory, with an aspiration level constituting the boundary between the two. A decision maker looking for a satisfactory solution, searches until a solution that is good enough is found. (Augier & March, 2004, p. 13)

In *A Behavioral Theory of the Firm*, Cyert and March (1963/1993) explain that their book contains four major concepts: (1) quasi-resolution of conflict, (2) uncertainty avoidance, (3) problemistic search, and (4) organizational learning. I will attend to the first three as follows. In essence, Cyert and March "view the organization as a coalition" (p. 31) consisting of multiple stakeholders – individuals and groups that are important to its functioning (including, but not limited to, employees, customers, suppliers, owners, etc.). These groupings will represent diverse goals that the organization is expected to attend to in order to keep its legitimization. In addition, individuals also have different goals reflecting their personal values and motivations, and the goals themselves may be in constant flux – developing with time as the firm's organizational members develop and learn from their experience (Augier & March, 2008).

This goal incongruence existing both within and between individuals in an organization can be seen as several potential unresolved conflicts (Cyert & March, 1963). March and Simon (1958/1993) elaborate, stating that "conflict can arise from the incomparability of alternatives, from the

unacceptability of alternatives, or from uncertainty about the consequences of alternatives” (p. 155). Cyert and March (1963/1993) note that goals can be looked upon as “the result of a continuous bargaining-learning process” (p. 33), a process of negotiation and renegotiation that does not necessarily lead to consistent goals.

However, “decision makers do not attend to all of their goals at once, nor all of their alternatives, nor all of the consequences of the alternatives” (March & Simon, 1958/1993, p. 4). Attention is a scarce resource, and sequential – as opposed to simultaneous – focus on the different goals will be prevalent. This sequential attention to different goals is also an important aspect of the quasi-resolution of conflict in that “organizations resolve conflict among goals, in part, by attending to different goals at different times” (Cyert & March, 1963/1993, p. 166). This temporal space between goal pursuits allows firms to attend to streamlining production at one point in time and increasing their customer support at another.

Relating to uncertainty, Cyert and March (1963/1993) posit that organizations avoid uncertainty by focusing on short-term reactions to immediate problems, rather than developing strategies for an uncertain future. Further, they point out that firms tend to negotiate their way out of uncertainty, internally by the use of budgets and employment contracts, and externally through arrangements with suppliers and customers, and even competitors. Their concept of *problemistic search* entails a view that “search is stimulated by a problem (usually a rather specific one) and is directed towards finding a solution to that problem” (p. 169). They contrast this type of search to concepts of random curiosity and pursuit of understanding, and explain that “problemistic search is engineering rather than pure science” (p. 169). Further, they state that “the problem is solved either by discovering an alternative that satisfies the goals or by revising the goals to levels that make an available alternative acceptable” (p. 170).

The Carnegie School’s focus on intuitive decision making as part of a behavioral theory of the firm has spurred a variety of research approaches, from the heuristics and bias program (Kahneman, 2003; Tversky & Kahneman, 1973), to naturalistic decision making (Klein, 1998, 2008), to fast and frugal heuristics (Gigerenzer, 2001; Gigerenzer & Brighton, 2009). Underlying these research perspectives are different ways of looking at human decision making; while the heuristics and biases program “focus on flaws in human cognitive performance” and are carried out in labs and compared to statistical rules, advocates of naturalistic decision making “stress the marvels of successful expert performance” in its natural environment (Kahneman & Klein, 2009, p. 518). However, both agree with Simon’s (1992) definition of skilled intuition, or what Simon (1992) denotes to be expert behavior, as: “The situation has provided a cue: This cue has given the expert access to information stored in memory, and the information provides the answer. Intuition is nothing more and nothing less than *recognition*” (p. 155, emphasis added).

This dissertation is not explicitly about biases or expert intuition, but I find it useful to define the concept of intuition in order to “demystify” it (Kahneman & Klein, 2009, p. 520). Further, the development of research spurred by the Carnegie School can help us get a clearer picture of its implications for international small business.

2.2 The theory of the growth of the firm

The role of experience is also an important aspect of Penrose's *Theory of the Growth of the Firm* (1959/2009). Her objective for writing the book was to provide a better understanding of the actual processes by which firms grow – again, as compared to the simplistic neoclassical view of firms. Her viewpoint was that growth is not a process aimed at arrival at a predefined optimal size, but rather that growth in itself is a continuously unfolding developmental process. Also, Penrose (2009) was interested in the limits to growth – “the factors determining the maximum rate of growth of firms” (p. 3). In essence she argued that prior executive decisions and managers' experience are vital in the growth processes of firms in that they allow managers to increase their skills in performing their administrative tasks, thus freeing up mind-space to focus on new growth opportunities.

Penrose viewed firms as a bundle of productive resources, organized in an administrative framework that molds the productive services developed from the resources (Foss, 1999). In a footnote, she explained that “the general view of the administrative functioning of a firm set forth here does not differ fundamentally from the concepts underlying the analysis of Simon, Barnard, . . .” (Penrose, 1959/2009, p. 15). She further pointed out that the administrative framework was created by the individuals operating within it. As *the behavioral theory of the firm*, Penrose noted that managerial attention is a scarce resource, and new managers have to spend time getting used to their executive tasks and the firm's current operations (Coad & Guenther, 2014). She explained further: “Individuals taking over executive functions new to them will find that many things are problems merely because of their relative unfamiliarity” (Penrose, 1959/2009, p. 47). As this familiarity increases over time, managers' productivity of their daily responsibilities rise, and their executive tasks become more routine-like, demanding far less managerial attention and cognitive resources.

[T]he resources with which a particular firm is accustomed to working will shape the productive services its management is capable of rendering . . . [and] . . . the experience of management will affect the productive services that all its other resources are capable of rendering. As management tries to make the best use of the resources available, a truly “dynamic” interacting process occurs which encourages continuous growth but limits the rate of growth. (Penrose, 1959/2009, p. 4)

What constituted a productive resource was defined by Penrose in broad terms to include both physical and human resources – relevant examples ranging from entrepreneurial skill to the management team's learning. Penrose (1959/2009) identified managerial experience as important in the growth process: “the experience of a firm's managerial group plays a crucial role in the whole process of expansion” (p. 43). In his summary of the major ideas of Penrose, Pitelis further explained: “Human, and in particular managerial resources are of the essence, because expansion requires planning and managerial resources able to plan for the firm are firm-specific; they cannot be acquired in the market” (Penrose, 1959/1995, p. xx).

As experience frees the managers' minds and capacity, individuals with more experience are better able to plan for growth and focus on training new executives who are necessary in the growing firm. Penrose (1959/2009) noted that she was aware that not all firms grew, but she specified that she principally was concerned with the process of growth in growing firms. She also noted that “failure to

grow is often incorrectly attributed to demand conditions rather than to the limited nature of entrepreneurial resources” (p. 33). One of the limits to the growth of firms therefore entails the difficulties with training and instructing new additions to the management team (Foss, 1999); in other words, “the plans put into effect by past management limit the rate at which newly hired personnel can gain the requisite experience” (Penrose, 1959/2009, p. 42)

Decisions made by executives concerning a firm’s productive resources are shaped by what the managers see as potential uses of said resources. Productive services in the firm therefore arise from the actual usage of resources determined by managers within the administrative framework. This difference between resources and services is, in Penrose’s (1959/2009) eyes, the real reason for why firms are unique. She reasons, “it is never resources themselves that are the ‘inputs’ in the production process, but only the services that the resources can render” (p. 22). The productive services generated from firms’ resources are determined by managerial experience and vision, current decision making and prior decisions taken in the firm. Another of the limits to growth is therefore given by “the services of ‘inherited’ managerial resources [that] control the amount of new managerial resources that can be absorbed, and thus limit the rate of growth of firms” (Pitelis, 2009, p. xx). This path dependency is vital in Penrose’s theory, and she clarifies: “One of the primary assumptions of the theory of the growth of firms is that ‘history matters’; growth is essentially an evolutionary process and based on the cumulative growth of collective knowledge, in the context of a purposive firm” (Penrose, 1959/1995, p. xiii).

In essence, we have seen that firms’ productive resources at a given point in time enable them to create productive services. These productive services that a firm has developed at any given moment will also influence the horizon of *productive opportunities* that the executives are able to see. Penrose (1959/2009) explains that productive opportunities “comprise of all of the productive possibilities that its ‘entrepreneurs’ see and can take advantage of,” and that “[a] theory of the growth of the firm is essentially an examination of the changing productive opportunity of firms” (pp. 28–29).

As managers learn from their experiences within the firm, this new knowledge lets them think about new potential combinations and re-combinations of resources and services, meaning that the “horizon” of productive opportunities expands. In addition, “changing experience and knowledge affect not only the productive services available from resources, but also ‘demand’ as seen by the firm” (Penrose, 1959/2009, p. 76). In other words, managerial learning shapes the opportunities managers are able to perceive; “no firm ever perceives the complete range of services available from any resource, because the range of services recognized is for the most part confined by the management’s existing ideas as to possible combinations” (Penrose, 1959/2009, p. 76).

Due to the close interaction between previous growth – in the form of inherited productive services – and current growth, and also because of the limits to growth, Penrose (1959/2009) observed that growth is not an evenly distributed and smooth phenomenon. Rather, she noted, “growth can take place in spurts, and periods of relative decline may well be followed by periods of accelerated growth” (p. 213). This is known as the ‘Penrose-effect’ (Foss, 1999), meaning that firms that experience high growth in one period are likely to encounter low growth in the next; this results from the tacitness of experiential learning making it more difficult to transfer to new managers, and the fact that the current executives must familiarize themselves with their new resources and services. In other words, executives need time to get to know their administrative tasks and the organizational setting. As they

grow accustomed to the administrative framework, they simultaneously increase their production. This will ultimately lead to managerial slack and other unused resources, and “since the opportunity cost of unused, excess resources are zero” (Foss, 1999, p. 93), firms have a strong incentive to put their slack to good use (for example, through diversification). Growth may thus be seen as the outcome of this process.

2.3 The organization as a reflection of its top managers

In the preceding sections, we have seen that managers have limitations on their rationality that lead them to satisfice instead of optimize. This implies the simplification of searches and choosing the first and best option identified. We have also seen that experience levels and prior managerial decisions determine later decisions. Both the Carnegie School and Penrose place managers in a central position when explaining organizational behavior. The upper echelons theory put forward by Hambrick and Mason in 1984 largely builds on the writings of the Carnegie School, as well as Child’s (1972) writings on strategic choice as “the critical variable in a theory of organizations” (p. 15). Both Cyert and March (1963) and Child (1972) anchor their work in the perspective of the dominant coalition, which can consist of several stakeholder groups relevant for firms (from the board, to top management teams, to union groups). Hambrick and Mason (1984) agree to the use of the dominant coalition idea but argue that one group of individuals is more influential than any other: the top managers. The authors further make use of the concept of upper echelons to comprise the individuals in an organization with the highest level of authority, and argue that outcomes at the firm level should be “viewed as reflections of the values and cognitive bases of powerful actors in the organization” (p. 193). Thus, according to the upper echelons theory, the organization becomes a *reflection of its top managers*.

The upper echelons perspective makes use of the Carnegie School’s terminology in that strategic choice is performed under conditions of bounded rationality (Hambrick & Mason, 1984, p. 195). Additionally, Simon (1947) wrote, “[h]uman rationality operates . . . within the limits of a psychological environment. This environment imposes on the individual as ‘givens’ a selection of factors upon which he must base his decisions” (p.108). Hambrick and Mason (1984) elaborated upon these limitations by saying that “each decision maker brings his or her own set of ‘givens’ to an administrative situation” (p. 195). Such idiosyncratic aspects represent the knowledge, cognition and value sets of managers and, therefore, due to their limited rationality, executives’ strategic decisions are formed by their unique experiences and background, values and perceptions.

Executives are not handed nicely distilled comprehensive summaries of the situations they face. Instead, the “facts” that confront executives – if they can be called facts – are typically ambiguous, contradictory, and far-flung, and they emanate from various parties who have their own motives. As a result, the situations that executives face are not knowable; they are only interpretable. How then, do executives interpret their situations? It all occurs through the lens of executives’ experiences, values, personalities, and other human characteristics.
(Finkelstein, Cannella, Hambrick, & Cannella, 2009, pp. 3-4)

In a volatile, uncertain, complex and ambiguous world (also known as VUCA¹; Tulder et al., 2019), information overload, competing goals and the unknowableness of the future lead to so-called weak situations (Mischel, 1977), which allows (and necessitates) for managers to let their decisions reflect elements of themselves and their personal interpretations (Hambrick, 2007). Due to the difficulties of actually peering inside the minds of managers (or other individuals, for that matter), the upper echelons perspective postulates that demographic characteristics of decision makers, such as their age, tenure and functional background may act as observable proxies for managers' cognitive aspects (Carpenter, Geletkanycz, & Sanders, 2004; Hambrick, 2007), and therefore, with some reliability, predict their decision making tendencies.

In other words, “[t]he small group of people at the top of an organization can dramatically affect organizational outcomes” (Finkelstein et al., 2009, p. 3). However, I must point out that I do not believe, and neither do most researchers who investigate the upper echelons perspective, that top managers are the only individuals of importance in organizations. Some strategies are created at the top, while others are initiated and rise from the bottom. However, “[e]xecutives make big and small decisions. They shape the frameworks by which their organizations hire, mobilize, and inspire others to make decisions” (Finkelstein et al., 2009, p. 3). Therefore, managers seem to matter not because they make all decisions, but because they are more likely to make the important ones – “[i]n general, no other small group has nearly as much effect on the form and fate of an enterprise” (Finkelstein et al., 2009, p. 6).

However, there are indicators that managers do not matter equally across all settings and situations. Early research on the concept of *managerial discretion* showed that it moderated the relationship between the demographic effects of managers and the outcome at the organizational level (Finkelstein & Hambrick, 1990). These effects relate to the “latitude of action,” where more discretion is reflected in a closer relationship between managerial characteristics and organizational outcomes; whilst this relationship is weaker when managerial discretion is low. In other words, “[d]epending on how much discretions exists, an organization’s form and fate may lie totally outside the control of its top managers, completely within their control, or more typically, somewhere in between” (Finkelstein et al., 2009, p. 26). As such, discretion is a relative measure originating from contextual aspects, organizational factors and from the characteristics of the managers themselves. In the introduction, I argued that there will be more managerial discretion in smaller firms, an assumption that is empirically supported due to the existence of fewer inertial constraints (see Finkelstein et al., 2009). Also, general managers of Norwegian SMEs may be seen as a more diverse lot than the executives of Fortune 500 companies in the US simply because of the Nordic societies’ public school system and free higher education, as well as the existence of a more egalitarian community where everyone is provided the same opportunities at the outset.

As mentioned at the start of this theoretical section, there are many aspects, both external and internal to the firm, that have the potential to influence the organizational development of firms. However, as Finkelstein et al. (2009) postulate, “we need to also consider, in an integral way, the biases and dispositions of the people at the top of the firm. In doing so, we will find that human factors – deriving from personality, experiences, values, . . . and so on – play a substantial role in affecting

¹ “VUCA” as an acronym for volatility, uncertainty, complexity, and ambiguity to describe new environmental developments originated in the US military (Whiteman, 1998).

organizational outcomes” (p. 4). In the next section, I will explore the impacts this focus on the managers in firms may have for research on international small business.

However, I further agree with Finkelstein et al. (2009) that “[b]y focusing on senior executives, . . . we do not wish to be seen as glorifying them. Executives are important . . . precisely because of their limitations – the biases, filters, and varying motives that they bring to their decisions and indecisions” (pp. 5–6). In other words, managers matter (Hambrick, 2007) and are interesting to research, not because they are smarter or better than the rest of us, but because they are not. They are weird and unique pieces of a puzzle in the construct we call an organization.

2.4 Application of the theoretical groundwork for international small business

The three broad theoretical perspectives presented so far have in varying degrees been integrated into the literature on international business. In this section, I will cover the implications of these perspectives and explore how they can influence our understanding of the international small firm.

The internationalization process of small firms is stacked with obstacles and liabilities, but also advantages due the firms’ smaller size. Firms are frequently facing situations with high levels of volatility, uncertainty, complexity and ambiguity – in such a “VUCA world” (Tulder, Verbeke, Jankowska, & Buckley, 2019), managerial cognitions and actions become essential, and smaller firms may be better at adapting to new situations and acting flexibly in changing contexts. Several internationalization theories are built around the framework of limited rationality even though “the boundedly rational decision maker is underspecified in international business models and this oversight contributes to weak empirical findings on experience, learning, internationalization strategy and [firm] performance” (Maitland & Sammartino, 2015b, p. 733). As Aharoni and Brock (2010) point out that “[i]n most IB theories, managers are invisible” (p. 13).

2.4.1 The Uppsala model

This model, which originated out of a descriptive study of the way Nordic firms ventured abroad (Johanson & Vahlne, 1977), built its arguments on Cyert and March’s (1963) behavioral theory, as well as the arguments presented by Penrose (1959). The model, also named the internationalization process theory, framed internationalization as “the product of a series of incremental decisions” (Johanson & Vahlne, 1977, p. 23), where lack of knowledge and uncertainty are prevalent (Madsen, 2005). The extended model integrates two variables, *state* and *change*; the former reflects firms’ current state of commitment to international markets, while the latter reflects the dynamism in the model and is “where the action takes place” (Vahlne & Johanson, 2017). Such action is exemplified as knowledge development, which may lead to a new or refined pool of capabilities continuously influencing (either increasing or decreasing) foreign commitments and performance. In other words, “[t]he essence of the model is that the resource commitment and the knowledge development processes are intertwined” (p. 1092).

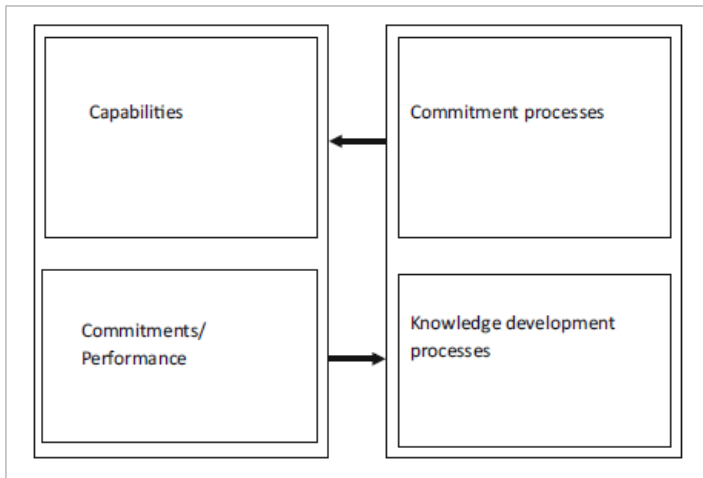


Fig. 1: The Uppsala model (Vahlne & Johanson, 2017). In their later edition, the causal relationships between variables are “unspecified,” but they do not illustrate this model (Vahlne & Johanson, 2020, p.6).

The Uppsala model “is an explanation not of internationalization but of internationalization *process*” (Welch, Nummela, & Liesch, 2016, pp. 784, emphasis in original), accentuating its misconception as a stage model. The model has received many citations, has been heavily critiqued (mainly due to its stage-wise characterization), and seen several revisions since its birth. Notable edits were made in 2009 – integrating a network-approach and the liability of outsidership (Johanson & Vahlne, 2009); in 2017 – accentuating the evolutionary aspects of the model (Vahlne & Johanson, 2017); and in 2020 – opening up for more individual level factors to be implemented (Vahlne & Johanson, 2020).

The original model specified that lack of knowledge of foreign markets “is an important obstacle to the development of international operations and that the necessary knowledge can be acquired mainly through operations abroad” (Vahlne & Johanson, 1977, p. 23). Such a focus on experiential learning as a way to handle uncertainty is essential in the Uppsala model (Forsgren, 2002) and reflects its heritage from the Carnegie School. Also, the model emphasizes that, due to this uncertainty and the assumption that managers are uncertainty avoiders, commitment to foreign markets will be “progressive,” with international endeavors initiated as low-risk forms of operation (i.e., exporting) and dependent on the psychic distance to foreign markets (Welch et al., 2016, p. 785). Even though psychic distance ultimately will depend on managers’ perceptions of commonalities and differences between home and foreign host countries (Williams & Grégoire, 2015), “the overwhelming bulk of studies on international expansion or location has used country or firm level variables to measure psychic distance” (Contractor et al., 2018, p. 5). Vahlne and Johansen noted in 2017 that they have “mostly treated the mille-micro level [i.e., individual level] as a black box,” and that they regard firm level changes as “the aggregate outcomes of processes at the mille-micro level . . . within the organization” (p. 1089). However, Coviello et al. (2017) argue that designating the explanations of firm behavior to “the people making strategic decisions that impact the organization, extends Vahlne and Johanson’s (2017) current version of the Uppsala model in a meaningful way” (p. 1156). This is because it is the individuals within a firm who make the development from one market to the next possible, and this “transforms opportunities into outcomes” (Coviello et al., 2017, p. 1156).

2.4.2 International entrepreneurship

Focus on the individual decision maker has been present to a somewhat larger extent in the field of international entrepreneurship, which grew out of the realization that not all firms behave according to the Uppsala model or other relevant theories on international business (McDougall, Shane, & Oviatt, 1994; Oviatt & McDougall, 1994). For example, firms have not necessarily bothered to set up a domestic presence before venturing abroad, but instead begin their lives by launching international initiatives; others do not wait to do a sequential entry into different countries, but rather enter multiple markets at the same time; and some skip the exporting stage and jump right into collaborative joint ventures and the like.

The definition of the research field has developed from a combination of the components in the (international) entrepreneurial orientation (IEO) consisting of proactivity, innovation and risk-seeking behavior (Covin & Miller, 2014; McDougall & Oviatt, 2000), to be defined as “the discovery, enactment, evaluation, and exploitation of opportunities—across national borders—to create future goods and services” (Oviatt & McDougall, 2005, p. 540). Oviatt and McDougall (1994) reported empirical evidence that showed that “such ventures [INVs] form because internationally experienced and alert entrepreneurs are able to link resources from multiple countries to meet the demand of markets that are inherently international,” and that “the success of international new ventures seems to depend on having an international vision of the firm from inception,” among other things as innovative product, network and strong management (p. 47).

However, most of the focus within this field has been on the newness of firms, as well as their early, rapid and extensive internationalization (Jones et al., 2011; Zahra & George, 2002), and not so much on the individuals behind firm behavior (Coviello, 2015). In describing born globals, for example, Knight and Cavusgil (2004) almost exclusively focus on the firm level, as well as the organizational orientations and capabilities that born globals hold (Coviello, 2015). The firm level is, of course, an important part of international small business; however, for born globals, the decision makers’ perceptions are vital to their international development, as well (Freeman & Cavusgil, 2007). Currently, the research program within the field of IE revolves around the entrepreneurial internationalization of both new and young, as well as larger and older firms (Coviello, McDougall, & Oviatt, 2011).

2.4.3 Perceptions and path dependency

It is generally assumed that going global early allows for the avoidance of inertia from a domestically based business that could have developed due to the founders’ imprint of risk perceptions and risk handling. In such a way, early internationalization enables firms to act flexibly while individuals learn rapidly from their experiences abroad, avoiding having to overcome possible rigidities due to established operations at home. This circumvention of domestic path dependency may be part of the explanation of how small firms are able to adapt to changing contexts and grow their international ventures at a great speed, at least initially (Penrose, 1959). The Penrose-effect assumes that prior growth places restrictions on current growth, and in addition, Penrose argued that path dependency – meaning managers’ inherited and own prior strategic decisions – frame or imprint the scope of opportunities they are able to see for their firms. This view of perceptions as essential to the growth of firms is also in line with the Uppsala model, which explicitly names this as a decision maker’s

“opportunity horizon” (Johanson & Vahlne, 1977, p. 29). In the authors’ own words, “[b]y the time we wrote our 1977 paper, we had realized that perceived opportunities are what drive the internationalization process, just as they drive the evolution of business firms” (Vahlne & Johanson, 2020, p. 5). However, where do perceptions and aspirations to internationalize come from in the first place, and how do they develop?

Knowledge seems to be of the essence in this regard (Rialp, Rialp, Urbano, & Vaillant, 2005), especially prior knowledge and motivation of the entrepreneurs (Madsen & Servais, 1997), in addition to the continuous increase in managers’ experiential learning (Maitland & Sammartino, 2015a). Prashantham (2005) noted that “internationalization represents an innovation of the firm and often entails decision making under conditions of uncertainty, for both of which knowledge is vital” (p. 37). In their concept of problemistic search, Cyert and March (1963) contend that a search for alternatives within an organization is stimulated by a problem. In line with Aharoni (1966), however, Johanson and Vahlne (1977) conceptualize searches as being initiated both by problems and by opportunities. The incorporation of both problemistic and opportunistic search implies that managers can be both reactive and proactive and, thus, exploit proven products as well as explore new methods of value creation. In addition, the search is guided by the decision makers’ aspiration levels, which again are adjusted by experience. However, Johanson and Vahlne assert that even though the searches in their model can be initiated proactively, decision alternatives will still be found in the vicinity of the problem/opportunity, emphasizing the incremental argument of the Uppsala model. Providing an argument for why Norwegian firms are more likely to export to our neighboring country, Sweden, than to South Korea requires us to understand that the solution is found near the problem.

In other words, due to path dependency and problemistic search, managers do not consider all alternative options; therefore, their chosen internationalization patterns are often guided by their own idiosyncratic backgrounds. In Johanson and Vahlne’s (1977) words, “Problems and opportunities – that is awareness of need and possibilities for business actions – are assumed to be dependent on experience” (p. 29).

The firms that presumably adopt more risk by venturing abroad in a rapid and/or extensive manner are also more likely to choose hybrid forms of organization, accentuating collaboration with partners (e.g., Berg, Aspelund, & Sørheim, 2008). This seems to be in line with the Carnegie School’s indication that decision makers aim to avoid uncertainty in the form of negotiations with their environment (Cyert & March, 1963). However, a shift in the pace of internationalization from incremental to rapid may require a critical incident, such as a change in management or the development of an innovative product solution (Madsen, 2005). In this way, older firms that have retracted from their international adventures may draw advantages from their “new blood” (Penrose, 1959/2009, p. 55) and changing managerial goals and become born-again globals (Bell, McNaughton, & Young, 2001; Bell, McNaughton, Young, & Crick, 2003).

2.4.4 The makers of decisions

In their behavioral theory, Cyert and March (1963) viewed the organization as a coalition of individuals. Aharoni (1966) noted that “this definition . . . adds much generality but at the price of vagueness: the ‘participants’ are never defined” (p. 267). Aharoni further argued that even though executives are not the only people making decision in international firms, “leadership is left with some

choice, and great leaders have been able to change the path of their organizations” (p. 271). In a recent editorial in *JIBS*, Reuber, Knight, Liesch and Zhou (2018) noted that research on the individual level in IB contends that “individuals matter to the pursuit of opportunity across national borders, because individuals make opportunity-related decisions” (p. 397). More specifically, the Uppsala model is primarily interested in the individuals who are making decisions concerning resource allocation, not only strategic and large-scale, but also more routinely performed (Vahlne & Johanson, 2017). Resource allocation decisions will influence and be influenced by commitment to foreign markets at any given time, and as such, the individuals making these decisions become essential.

The emphasis on *learning-by-doing* in the internationalization models described signals its importance in affecting risk perceptions and uncertainty. As in Cyert and March’s (1963) behavioral theory, the Uppsala model assumes that decision makers are avoiders of uncertainty. However, if knowledge about markets is difficult to acquire, *doing-to-learn* may be a solution. In line with this, Johanson and Vahlne (2009) assert that their model is “fully consistent” with effectuation logics (p. 1423; see also Sarasvathy, 2001). “The effectuation process has much in common with our internationalization process model, including similar environmental characteristics, a limited number of available options, incremental development, and an emphasis on cooperative strategies” (Johanson & Vahlne, 2009, p. 1423); however, the authors point out that, while the actor and their actions is essential in the effectuation theory, their Uppsala model for a very long time only implicitly allowed for managers to be considered. The authors’ recent commentary on the development of their model (Vahlne & Johanson, 2020) opens up for individual characteristics to be included and explicitly modelled. The foundation for the Uppsala model was a decade of research on international business, a broad research program initiated by Carlson at the Uppsala University. Three years before the original Uppsala model was published, Carlson wrote:

The world is large and complex, and it is only partially known to the decision maker. His horizon is limited – often very limited, indeed. The world is also changing. Old knowledge may rapidly become obsolete; it must be supplemented by new knowledge. This new knowledge may help to widen the horizon of the decision maker; it may help him to understand better and to foresee the changes which are taking place; or it may do both.
(Carlson, 1974, p. 56)

Summing up, the role of decision makers in international business has often been looked upon as an aggregate measure where the firm: 1) acts as an optimizer that makes rational decisions, 2) behaves independently of previous decisions, and 3) consists of individuals who are all the same and matter just as much. The theoretical groundwork laid out in this chapter argues the opposite: 3) that there are some individuals within an organization who matter more than others – for good and bad, 2) that decision makers are path dependent concerning both prior organizational investments and individual experiences, and 1) that all human beings, including managers, have limited rationality and, therefore, satisfice both in their decisions and aspiration levels.

2.5 Presentation of the dissertation's papers

The central theme of this dissertation is explaining the role that managers play in international small business. Below, I present the four scientific problems that make up this treatise, show that they also have practical relevance, and develop them into research questions.

Paper 1

The first paper in the dissertation is aimed at reviewing extant literature. With the objective of identifying the state-of-the-art research on the role of managers in international small business, I conducted both a keyword search and nesting from the most-cited paper on the theme. Including a systematic literature review in a research project, ensures that its researchers gain valuable insight into what has already been done and which interesting avenues for future research lies ahead. Also managers gain from a summary of existing knowledge in the field which can increase their insight into how they can be of concrete benefit for their firms. Even though this paper was initiated as the first paper, it was in fact finished last. The agenda outlined at the end of this research project is probably not the same as what would have been outlined at the start, and both the conceptual model and the interpretation of findings probably would not have been the same at the onset of the project. The research question of Paper 1 was the following:

What is the current state of knowledge on the role of managers in international small business?

Paper 2

The backdrop for the second article was the development of a larger questionnaire aimed at Norwegian small- and medium-sized exporters. This work was performed in collaboration with another PhD candidate and our supervisors. The final survey included measures related to managerial and organizational aspects, innovation and internationalization performance. This study was the first of two papers written that use data from the export survey, collected in 2014. During the survey design stage, I had already singled out my interest in examining the managers and their views of the world, and we wondered how we could best investigate these relationships. Initially, we found that we wanted to perform a descriptive categorization of the firms in the dataset in order to identify patterns that could be explored more in depth in future research. Thus, this study's objective was to investigate the co-variation between top management team (TMT) characteristics of firms and the strategic orientations and international performance in the same organizations. By focusing on the link between managers' and firms' strategic orientations and performance we were able to provide recommendations to managers concerning the characteristics and compositions of their top management teams. The specific research question of Paper 2 read:

How do TMT composition (size, diversity and experience) co-vary with other characteristics of SMEs, specifically their strategic orientations (international, learning and growth) and international performance?

Paper 3

This paper is also written based on analysis of the export survey data, and it partly builds on the research gaps identified in the cluster paper (Paper 2). The main purpose of the paper was to increase our understanding of the role of managers in organizational growth processes, and we especially wanted to dive deeper into the possible antecedents and influences of managerial growth aspirations and perceptions, with special attention paid to the nuances of these relationships. Aspirations' impact on organizational life, as well as the importance of managers' perceptions of their managerial teams' ability to work together in challenging circumstances, were singled out as important measures, as were the well-being of employees (measured as the level of conflict within firms) and the organizational knowledge integration. This study holds practical relevance in providing and analyzing a refinement of the aspirations of managers and linking it to distinct organizational consequences of conflict and learning. In trying to provide more meat on the bone as to why not all firms aspire to grow, it may also give managers more insight into their own ways of working – and potentially, ways of working better. The twofold research question asked:

How are managerial aspirations aimed at either growth or international expansion, and managers' perceived change effectiveness, connected to positive and negative organizational consequences? Are management teams' experience and diversity related to the aspirations initially developed?

Paper 4

The fourth paper in this dissertation takes a different approach than the rest. Prior to writing it, we received a unique opportunity to investigate the role of managers in an exciting and challenging setting – the manufacturing industry's transition to sustainability. We joined the data collection process at the questionnaire's design stage and were able to add measures on the managerial level relating to motivation and leadership style. The objective of this study was to investigate the degree to which managers' specific value-laden motivations for sustainability and their distinct leadership of intellectual stimulation related to the adoption of sustainability strategies aimed at the firms' core business areas. Also, we examined the implications this had for the performance of firms.

While Papers 1 through 3 of this dissertation investigate the general role of managers in relation to their experience, aspirations and perceptions, the fourth study takes a more operational approach in utilizing specific and detailed measures in a particular setting. Firms' transition to more sustainable solutions are also applicable in an international environment, as many of the firms investigated were exposed to foreign markets. Even though international business was not the focus of the article, and therefore receives minimal attention, sustainable solutions are especially important in international trade, as foreign activities increase the footprint of organizations and their focus on sustainable solutions becomes increasingly important. The research questions for the last paper read:

How do managers influence firms' strategic sustainability efforts? To which degree are firms' sustainability strategies associated with firm performance?

3. METHODOLOGICAL CONSIDERATIONS

I entered academia and the PhD-program after working in a small international startup for four years. Coming from the practical point of view of the private business sphere, I knew I wanted to do research that, in addition to theoretical value, held practical impact. During my work in the startup, I saw first-hand the importance of individuals in shaping organizational development, while simultaneously taking advantage of opportunities along the way. As a tech-heavy firm with developers in Bulgaria, sales people in the US, and some of its first customers in Norway and India, this startup truly saw the entire world as its playground. Even though the overall organizational goal could be identified as generating profit to ensure the future existence of the firm, planning was truly difficult due to the rapid changes in technology and the business environment.

The development of this dissertation has evolved alongside its author over time. Who this person was at the onset if the PhD program is not entirely the same as the researcher writing this cover essay at the current point in time. Coming from a practical standpoint, the initial degree of explicit reflection concerning philosophical worldviews was minimal. However, academic experiences, knowledge building, reflections and discussions with fellow scholars along the research path have indeed shaped my development. For me, it really has been a researcher's education and a scholarly journey.

To illustrate what I have come to understand of the different philosophical positions, I want to re-introduce the reader to a famous philosophical thought experiment: *If a tree falls in the forest and no one is around, does it make a sound?* I utilize this question to provide a platform to explain the differences between philosophical worldviews, and to clarify where I have come to realize that my own philosophical position resides.

3.1 Research approach and philosophy of science

The articles making up this dissertation consist of one systematic literature review and three quantitative research papers. A statistical approach to science implies that researchers believe that the world is in some way real and measurable – that there exist patterns in the world, and that scientists are able to observe and study such patterns. This empirical focus is characteristic of the positivist worldview, in which the ontological position holds that the world is indeed real and exists independently of our perceptions of it. Ontology is here understood as our view of the world, while epistemology concerns how we may acquire knowledge about this world.

The way we think the world is (ontology) influences: what we think can be known about it (epistemology); how we think it can be investigated (methodology and research techniques); the kinds of theories we think can be constructed about it; and the political and policy stances we are prepared to take. (Fleetwood, 2005, p. 197)

The following light metaphor can provide an image of what it means to acquire scientific knowledge in the positivist view. By throwing a beam of light onto a landscape that originally lay dark, we may see its details more clearly. As the light grows stronger, we are able to see further out toward the horizon. In other words, our knowledge is both broadened and deepened. However, when a landscape

is illuminated in this way, we may also come to see it differently, as new knowledge may entail a re-interpretation of prior knowledge. Do we really know that the landscape was in fact there before we shone a light on it (Nyeng, 2010)? This latter scientific position is characteristic of the relativist, or social constructivist, view (e.g., Berger & Luckman, 1966). While the ontological position of positivists holds that there exists a real world about which we can acquire objective knowledge, (extreme) relativism on the other hand, argues that there exists nothing in the world that is independent of our minds. Such a worldview holds that all knowledge is dependent on the viewer's perspective, and that our understanding of reality is dependent on our social construction – therefore, there exists no objective reality. The world of meaning is dependent on the way we look at it and interpret it. In other words, meaning is what we make of it (Van de Ven, 2007). Embodying both a subjectivist ontology and epistemology, the relativists' worldview posits that, because we construct our world in our collective interactions, there exists not one real world but many, and we cannot generate objective knowledge from these worlds, as our interpretations will always be formed by the cultural and social settings of which we are a part.

Revisiting the philosophical question mentioned above, a positivist would (in a simplified view) answer: *Yes, the tree does make a sound even if no one is around*, because the motion will produce waves in the air that are not dependent on anyone being around for it to be produced. The relativists, on the other hand, would argue that: *No, the tree does not make a sound if no one is around*, because sound is a product formed in human brains based on its interpretation of electrical signals from the ear – and, therefore, it can only be understood in the minds of individuals. In other words, relativists would answer that, if no one is around, the falling tree did not produce any sound.

As an anecdote, a description of the discussion between two of the most famous scientists of all time is fitting: When asked if he really believed that the moon ceased existing if nobody was looking, Niels Bohr² supposedly answered Albert Einstein, “You cannot prove that it doesn't.” This is the predicament in relation to the philosophy of science – scholars may argue for what they believe is right, but we cannot obtain evidence for any particular stance. However, our philosophical viewpoints do have implications for the research we perform and the understandings we can draw from this research.

The falling tree thought experiment is, of course, a bit of a trick question because, in essence, it depends on our definition of sound. Nevertheless, it illustrates the different philosophical worldviews described so far. While positivists believe there only exists one objective reality – with patterns ready to be investigated – relativists believe there exist many subjective realities, each residing within the minds of individuals and shaped by our social interactions. In the following section, I introduce a third view, critical realism.

Critical realism can be framed as “a middle ground between positivism and relativism” (Van de Ven, 2007, p. 58), as it encompass both a focus on sense/empirical data and asserts that there indeed is a real world out there (objectivist ontology), but at the same time recognizes the influence and meaningfulness of socially constructed entities (subjectivist epistemology; Van de Ven, 2007). This worldview is a critique of positivism's broad generalizations based on empirical data because reality is “an open system consisting of underlying contingent structures” (Van de Ven, 2007, p. 61).

² The story goes that Niels Bohr was the one answering this question in this way, however Abraham Pais has also reported that he was asked this question by Albert Einstein, as referenced in Pais (1979).

However, it also rejects the idea that all knowledge is socially constructed and that reality is merely our interpretation of it. In other words, critical realists posit that there exists a real world independent of our perception of it, but “some of our impressions and understandings do not accurately represent the real world, as they are influenced by perceptual illusions and cognition” (Mehmetoglu & Jakobsen, 2017, p. 9). There is, therefore, “*no unmediated access to the world: access is always mediated*” (Fleetwood, 2005, p. 199, emphasis in original), in the sense that our access to the world is always filtered through our social conditioning, experiences and the collective understandings of which we are a part.

Whenever we reflect upon an entity (or a state of affairs), our sense data are always mediated by a pre-existing stock of conceptual resources . . . , which we use to interpret, make sense of, understand what it is and take appropriate action. This stock is both individual (e.g., a subjective belief or opinion) and social or inter-subjective (e.g., an accepted theory, perspective or social norm). (Fleetwood, 2005, p. 199)

Further, critical realism posits that entities can be real in different ways, or modes (including material, ideal, artefactual and social). Entities are often also in constant change and can thus encompass two modes at the same time. Essentially, “an entity is said to be real if it *has causal efficacy; has an effect on behavior; makes a difference*” (Fleetwood, 2005, p. 199, emphasis in original). Returning to our philosophical question, a critical realist would answer: *Yes, the tree does make a sound even if no one is around*,³ because “things and events . . . exist independently of knowing subjects” (Ackroyd, 2012, p. 231). In other words, the sound of the falling tree can “exist without someone observing, knowing and constructing it” (Fleetwood, 2005, p. 198).

I believe my own research position is most closely related to that of critical realism. In other words, I favor that the moon exists independently of the onlooker’s perspective because it shapes the flow of tides on our shores. As an extension, I also understand that organizations exist, even though they are essentially intangible, because they have the potential to provide meaning, shape our perceptions and influence our behavior. In Ackroyd’s (2012) words, “the idea of social science is difficult to conceive as such without thinking that the social world is real and has causal effects” (p. 230). Concerning the light metaphor for critical realism, it can be argued that the real world does not change when it is increasingly illuminated, rather it is our knowledge of it that develops (Nyeng, 2010).

3.2 Research design

The specific challenges of the methodology applied in the four articles comprising this dissertation have received detailed description and commentary in the respective studies. Here, I will discuss the overall and more general issues concerning the research design and the methodologies we utilize.

³ Bhaskar has elaborated on such a understanding of this actual philosophical question, referenced in Collier (1994).

3.2.1 Objectivity in research

Because our perception of entities in the world will always be identified and mediated by our consciousness, they are never truly objective. Likewise, because our internal understanding of entities will always be the product of our socialization, it is therefore never entirely subjective. It is, thus, impossible to remove the researcher from the research because researchers, more or less, have to engage in their research to be able to understand and interpret what it is they are researching. “Our knowledge of external things and of past events is influenced by our interpretation of these” (Mehmetoglu & Jakobsen, 2017, p. 9). However, “it does not mean that the actual presence of these objects are in the consciousness of the researcher” (Mehmetoglu & Jakobsen, 2017, p. 9). Our perceptions as researchers can never truly be neutral, as everything we do is influenced by the culture we are part of, by our scientific perspectives and interests (Nyeng, 2010).

To be able to account for this, scholars need to reflect on their own research practices and aim at performing their research in such a way that it best reflects the observable reality in the most accurate manner possible. In the studies reported in this dissertation, my co-authors and I have made conscious efforts to be as objective as possible in our approach to the empirical data, and we have relied on several measures to ensure this. For the export survey, we utilized a third party to identify our population (the Kompass database). In the sustainability survey, we relied on the NACE codes related to manufacturing reported by the firms, themselves. Concerning the validity of our measures, we utilized established measures where available, and where this was not possible, we based the development of constructs on known theoretical perspectives established in the literature. By utilizing pilot studies before distributing the surveys, we were able to exclude any misconceptions and possible misunderstandings relating to the wording of the questionnaire. In the three empirical studies, we have used well-known and recognized software for the analysis. We report all relevant results and have tried to be consciously aware of our own research frames while interpreting the findings and relating them to existing theory.

3.2.2 Replication of scientific studies

One of the key features of science is that the studies we perform should be able to be replicated by other researchers. Because we cannot remove the researcher from the research, it becomes essential to describe what we have done, the assumptions that we potentially have made, and the understandings that we implicitly have employed in our research in such a way that other researchers can understand it and perform their own analyses. This also follows from science’s focus on falsification (Popper, 1983) as the process toward acquiring more knowledge of the world (Ackroyd, 2012). The argument states that scientific knowledge (including theories) cannot be verified by a stream of observations. It can, however, be proved wrong by a single observation (Nyeng, 2010). If our studies are not replicable, other scientists cannot potentially prove that we are possibly wrong; thus, the knowledge produced cannot be perceived as scientific knowledge (Nyeng, 2010).

In the empirical studies in this dissertation, the theoretical assumptions, data collection process and statistical analyses performed have been thoroughly documented and reported. Likewise, the process to identify the studies in the literature review have been transparent and performed in a systematic manner to ensure its replicability. Further, the limitations of our studies have been explicitly noted.

3.2.3 Causality

Even though statistical research builds upon the notion that there exists an external world (Ackroyd, 2012), and that this world consists of patterns available to study, “obtaining knowledge of [this world] is not straightforward” (p. 232). In many cases, we are aiming to measure unobservable, latent constructs, and the proxies we are using may not always be optimal (Mehmetoglu & Jakobsen, 2017). Due to this, it is important not to rely only on statistical analysis in itself, but rather also to base it on theoretical foundations, or at least common sense (Mehmetoglu & Jakobsen, 2017). Only in this way are we able to indicate the direction of causality in cross-sectional studies. The hypothesized models in the latter two empirical studies of this dissertation are based on well-known and empirically supported theoretical frameworks. However, if we had utilized other theories with different theoretical assumptions, we could have offered other interpretations of the findings. Theories are simplifications; they are maps of the world in which we live. Such maps direct our attention and behavior. By being aware of what we are measuring, and which theoretical assumptions we are using to interpret our findings, we may become more conscious of the limitations of our own understandings. In Ackroyd’s (2012) words: “There is an unavoidable and necessary distinction between the things and events in the world as they are and any descriptions or accounts of them. The distinction cannot be removed and, because of it, knowledge of the world is always only approximate and provisional” (p. 232).

3.2.4 Generalizations

In the social sciences, we can never truly develop an all-encompassing theory. Due to the complexities of human perceptions, actions and interactions, there will always be exceptions to the theoretical frameworks we use. In other words, even if all swans we have observed have been white so far, we cannot know that the next one will not be black. However, one of the aims of research is to be able to generalize empirical conclusions to go beyond the collected data (Mehmetoglu & Jakobsen, 2017). Using statistical methods, we can generalize our findings beyond our sample, but only so far as the population from which we drew the sample. Therefore, it is of utmost importance to define the population correctly and also to be aware of any possible sampling error. The latter issue is discussed in more detail in the specific papers. Below is an illustration of the specific populations and samples that our studies build upon and how they correspond to the methodology applied in the studies, themselves.

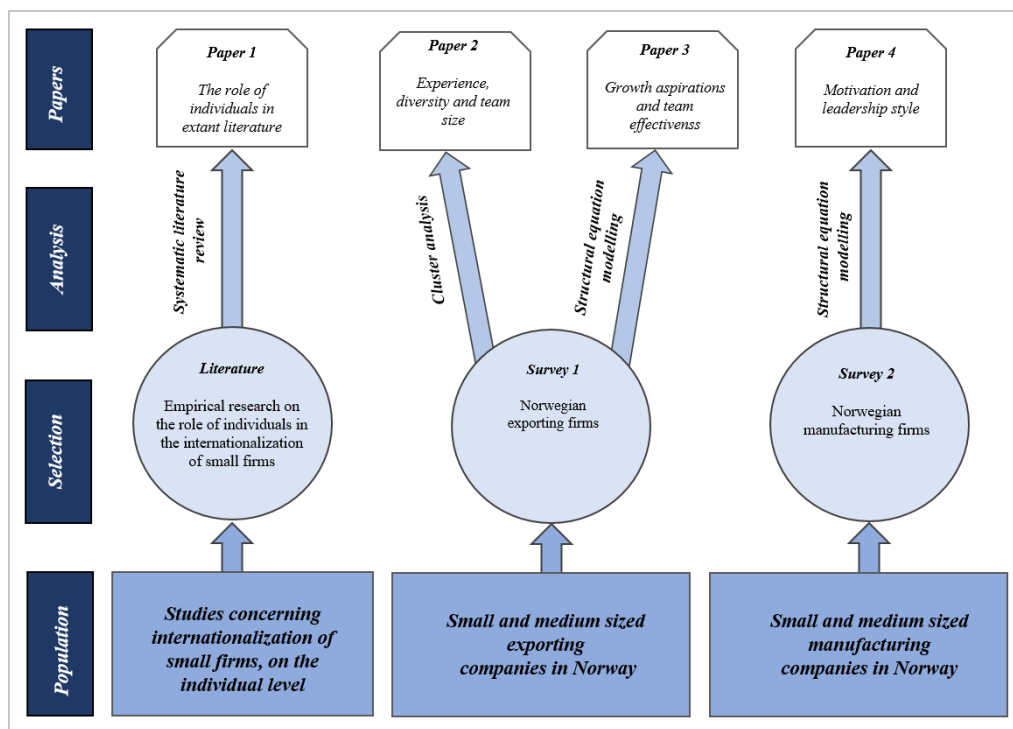


Fig. 2: Overview of the methodological techniques applied in this dissertation

Paper	Research design	Observations	Sampling approach
1	Literature study	42 articles	Nesting and keyword search
2	Cluster analysis	380 general managers as respondents	Questionnaire
3	Structural equation modelling	249 general managers as respondents	Questionnaire
4	Structural equation modelling	352 general managers as respondents	Questionnaire, financial statements

Tab. 1: Descriptive overview of the dissertation's studies

3.3 Research context

This dissertation investigates the role of managers in Norwegian small- and medium-sized organizations. This research context implicitly adds limitations for the generalization of our findings. Norway is an egalitarian society with an extensive welfare state, free health services and higher education, and where most children attend public schools in their communities. One in three Norwegian inhabitants pursue university degrees (SSB, 2014). As such, managers of SMEs can potentially originate from all layers of society and walks of life. Further, the Norwegian state has, from the point of discovery, executed control of the Norwegian oil reserves, building up a national

pension fund. The public services are, thus, well developed and provide a safety net for individuals eager to start their own businesses. Almost 30% of new firms are still in existence after five years, and it is important to point out that the vast majority of firms in Norway are considered small- or medium-sized. However, small Norwegian firms are not found to be less innovative than larger ones (SSB, 2011). With a population of 5.4 million at the time of writing, Norway is a small, open country with a population that frequently travels abroad. This probably influences managerial attitudes toward performing international business for their SMEs. In this regard, it is important to note that, due to a smaller internal market, firms in Norway may be pushed to look for markets abroad to a greater extent than are organizations in countries with larger internal markets.

3.4 Ethical considerations

Prior to distributing the questionnaires utilized in this dissertation, we reported the planned study to NSD (The Norwegian Centre for Research Data) and obtained approval to collect and store data. In the letter to managers concerning the survey, we specified what the data were to be used for. After five years, the data were, in accordance with NSD's guidelines, anonymized for future use. All analysis and reporting concerning the data have been aggregated, and it is not possible to recognize individual firms. Below is an overview of the papers that make up this dissertation. I am the first author of all papers, and the sole author of Paper 1. One paper is published (Paper 4), one has been accepted for publication (Paper 2) and two are submitted to journals (Papers 1 and 3).

Paper	Title	Author(s)	Publication status
1	Internationalization of SMEs: The role of managers	Eide	Submitted to an international, peer-reviewed journal
2	Top Management Teams and the Internationalization of SMEs: The Importance of Team Composition and Strategic Orientations	Eide and Madsen	Accepted as a book chapter in McGill International Entrepreneurship Series, 7th Volume, to be published by Edward Elgar Publishing
3	Organizational Consequences of Applying Explorative and Exploitative Growth Strategies in Norwegian SMEs	Eide, Moen, Madsen and Azari	Submitted to an international, peer-reviewed journal
4	An Investigation of Leaders' Motivation, Intellectual Leadership, and Sustainability Strategy in Relation to Norwegian Manufacturers' Performance	Eide, Saether and Aspelund	Published in the <i>Journal of Cleaner Production</i>

Tab. 2: Overview of studies with co-authors, methods and publication status

4. PRESENTATION OF MAIN FINDINGS

In this section, I present the main findings of the four papers included in this dissertation. Their methodological approach and/or data are different from each other, and as such, they contribute to a more holistic understanding of the theme by utilizing different approaches and angles. The individual papers are included in their entirety in section 2 of this dissertation. Below is an illustration of how the different papers contribute to the central theme of the PhD – the role of managers in international small business.

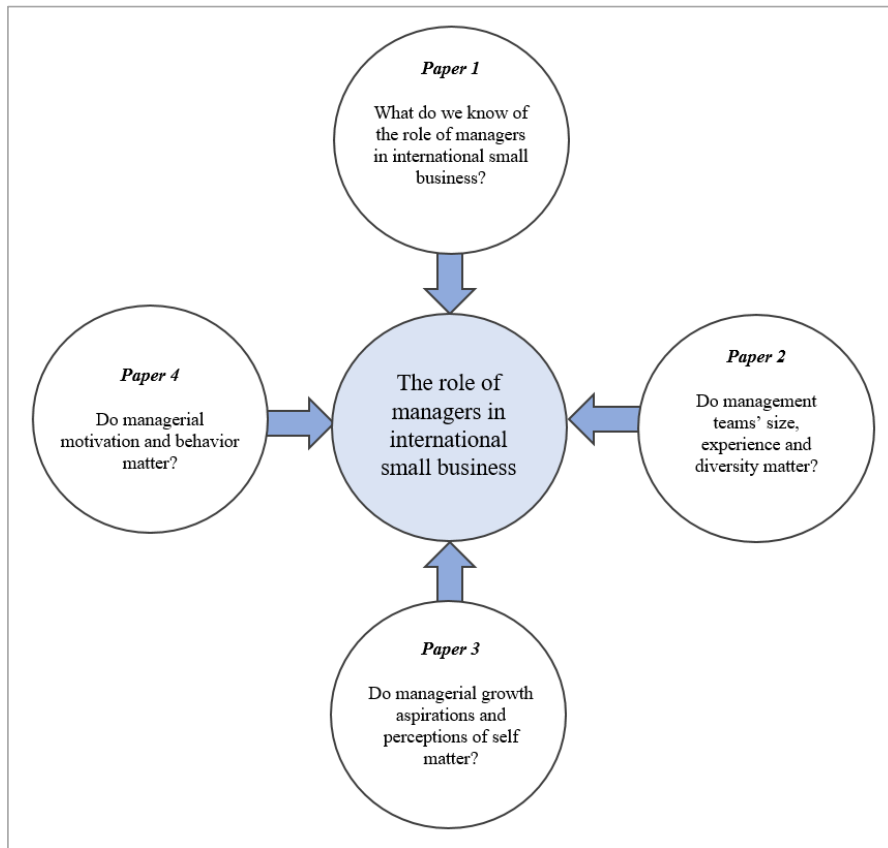


Fig. 3: Illustration of how the dissertation's studies aim to contribute to the central theme of the PhD

4.1 Paper 1

In order to provide an overview of what we know of the role of managers in international small business, this dissertation's first paper starts off with a review of extant research. The field of international business has traditionally focused on large multinational enterprises and firm-level measures. There have been consistent calls for more individual-level research within IB, and recently these calls have increased in magnitude. In smaller firms with less structured decision processes, the role of management is amplified – therefore, the research question presented here aims at uncovering the significance of managers in international small firms.

Research question

- What is the current state of knowledge on the role of managers in international small business?

Research focus

The review investigated more than two decades of research in order to structure and summarize the findings and provide an agenda for future research. To ensure systematic categorization and evaluation of the studies reviewed, and to be able to identify trends and fruitful avenues for future research, a conceptual framework was developed. This framework was based on established literature and recent advancements in international business research, as well as in psychology and cognitive research. The main elements of the framework were (1) Content – *What managers know*, (2) Structure – *Who managers are*, and (3) Behavior – *How managers act*.

The first dimension includes managerial human capital, exemplified by their experience levels, prior knowledge and demographics. Scholars have argued that international and industry experience are especially vital in shaping how managers perceive their firms' environments. Such experience has indeed been found to influence the actual internationalization processes of firms. As all knowledge posits some element of tacit knowing residing within the individual, it was important to map out the general findings to provide an overview of the role of managerial human capital.

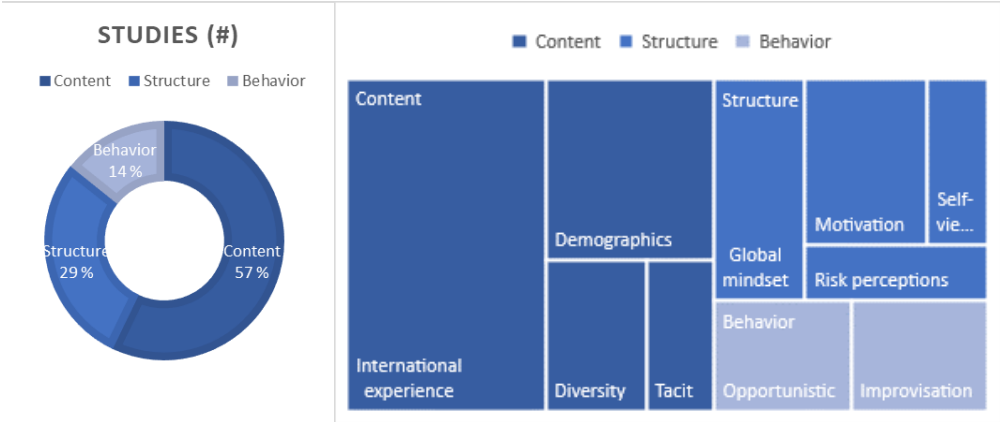
The second dimension relates to managerial cognition, a slightly more elusive element. In some aspects, managerial human capital and managerial cognition may overlap and be in close interaction with each other. But while the former dimension focuses on the more easily attainable attributes of managers, such as their concrete experience and demographics, the latter is more in tune with how the individuals reason, their motivations and aspirations. This dimension also captures the individual orientations and perceptions of managers, as exemplified by specific constructs such as global mindset. Due to the filtering of information through the bounded capacity of the mind, the understanding of signals from the environment are idiosyncratic, and the reasoning around it will be unique to the manager.

The third dimension, managerial behavior, encompass the conative dimension of individuals in international business, here understood as an act of attempting, as endeavor or effort, and purposeful action. The strategic decision making of managers falls into this category, along with their preparations, search efforts, experimentation, conflict resolutions and leadership styles. The conceptual model developed in this paper does not intend to depict the inner workings of the mind; rather, it aims to illustrate the effects of the interaction of research topics on the role of individuals in international small business in order to synthesize the literature's findings.

Methods

To make a rigorous attempt at identifying relevant research that investigates the role of managers in international small business, both a keyword search and a nesting procedure from the most-cited article within the theme of managers' roles in small firm internationalization were performed, per Reuber and Fischer's 1997 study. Utilizing Elsevier's research database, *Scopus*, Reuber and Fischer's study marks the year of departure for this literature review, which includes the years from 1997 to 2018 (October). The two procedures generated 1,077 unique papers that were further scrutinized. Criteria for inclusion consisted of empirical, peer-reviewed articles published in academic outlets in

accordance with the journal list applied in the review by Mainela et al. (2014). Studies had to include the individual level in their hypotheses or propositions. In accordance with the overall scope of this dissertation, studies that limited their investigation of the individual level to a generalized or overall focus on networks, national culture, language or gender were excluded. Included were papers that investigated organizational behavior and outcomes by truly making an effort to understand the individuals and teams that establish or manage firms, leaving 42 studies to be analyzed in this narrative review.



Figs. 4 and 5: Distribution of studies across conceptual categories

Key findings

The objective of this study was to summarize the known effects of managers in the internationalization processes of small firms in order to better define main priorities for future research. From the systematic review, it was found that the majority of empirical studies concerning individual-level research on small firm internationalization focus on the experience of the founder/manager(s) or investigate the effects of demographic variables associated with the decision maker(s). Studies examining deeper psychological and cognitive aspects of the individuals – how they perceive, reason around and evaluate international opportunities, and make strategic decisions – exist, but more rigorous attempts at uncovering the role of managerial cognition and behavior are needed if we are to move the field forward. Studies of individual behavior in an organizational setting make up the smallest category in our framework, suggesting that the way managers behave and interact within an organization is an under-researched area. We proposed an agenda for future research to fill the gaps identified in this review.

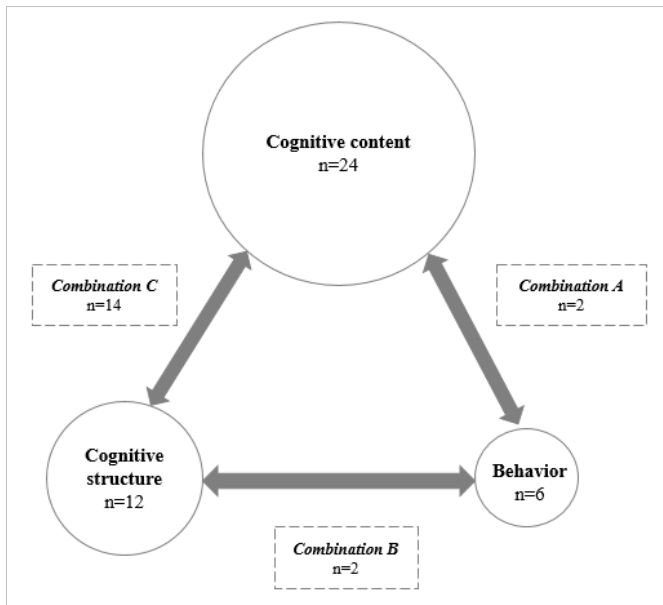


Fig. 6: Illustration of the unbalanced state of research on the role of managers in international small business

4.2 Paper 2

The background for this article was the extensive questionnaire and data collection performed in 2014 and aimed at Norwegian small- and medium-sized exporters. With scholars from NTNU and SDU, we gathered empirical data on constructs related to managerial and organizational variables, as well as firms' strategic orientations and performance. This paper is the first of two articles written using data from the export survey. At the outset, we wanted to perform a descriptive categorization of the firms in this dataset in order to identify patterns of taxonomies that could be explored in more depth going forward. In addition, we sought to examine the possible relationships between managerial-level variables and firm-level outcomes.

Research question

- How do TMT composition (size, diversity and experience) co-vary with other characteristics of SMEs, specifically their strategic orientations (international, learning and growth) and international performance?

Research focus

The study's objective was to investigate the relationship between TMT characteristics of firms and the strategic orientations and international performance in the same organizations. Regarding theory, we wanted to extend the upper echelons perspective into the international small business arena and provide more insight into how proxies for managerial background and value sets were linked to firms' strategies and performance. In short, the upper echelons perspective proposes that the beliefs, perceptions and values of managers are linked to their prior experiences and demographics. Thus, by using the latter as proxies for underlying cognitive activity, we may be able to say something about

how managers shape their firms' behavior. Diversity as a managerial team characteristic, in particular, is found to potentially act as a double-edged sword. Too little diversity may hamper the innovativeness of the solutions managerial teams are able to come up with, but too much may act as a disruption to constructive communication. By utilizing a clustering technique, we were able to distinguish between key characteristics of the managerial teams and relate them to concrete findings at the organizational level.

Methods

Due to validity concerns, the export survey questionnaire built upon previous scholarly work (e.g., Hambrick & Mason, 1984; Knight & Cavusgil, 2004), and a pilot study was performed prior to dispatching. All measures were taken on a 7-point Likert scale. The firm population was classified as Norwegian exporting SMEs, and using the Kompass database, we identified 2,262 firms that matched the description. The survey was addressed to the general managers of the firms in our population, or if not the CEO, the person most knowledgeable about the firm's international activities. Upon return, the vast majority of responses were performed by the manager or someone most likely on the management team. We obtained 380 fully and mostly completed questionnaires, and thus obtained a response rate of 16.7%.

To analyze the data, we applied a hierarchical cluster technique, Ward's method with squared Euclidian distances. Cluster analysis is a methodology that divides a set of items, in our case firms, in such a way that items in the same group are more similar to each other than to those in other groups. It is an exploratory technique that draws up the broad trends of the groupings. The clusters were formed based on TMT characteristics concerning team size, diversity and experience, and a three-cluster solution was deemed the most appropriate.

Key findings

Based on our analysis, we identified three clusters of firms: (1) Born and stuck Nordics, (2) Agile exporters and (3) Established internationals. As a general trend, we saw that international growth expectations and actual performance, as well as strategic orientations (growth, learning, international), were significantly higher in firms in which top management teams were larger, more diverse and more experienced.

The *born and stuck Nordics* were firms that mainly exported to other Nordic countries, and they had significantly lower growth orientation and expectations than firms in the other clusters. These firms were the most experienced exporters, but they seemed to be stuck on a lower growth trajectory than those in the other two clusters. In regard to their learning orientation, they displayed a significantly lower approach to knowledge acquisition and development. The *established internationals* were on the other end of the scale, larger firms with more experienced and diverse management teams. These firms had more high-tech products and they reported significantly higher international orientation and growth expectations than firms in the other two clusters. The *agile exporters* on the other hand, were internationals on the move. With fewer members on their management teams, these firms still displayed high levels of diversity and experience among the members they had. Concerning international and entrepreneurial experience, they actually reported the greatest levels, possibly implying an entrepreneurial approach to internationalization. These firms incorporated just as high a learning

orientation as the established internationals, but compared to the established internationals' more acquisition-aggressive growth, the agile firms expected to grow in a more collaborative fashion.

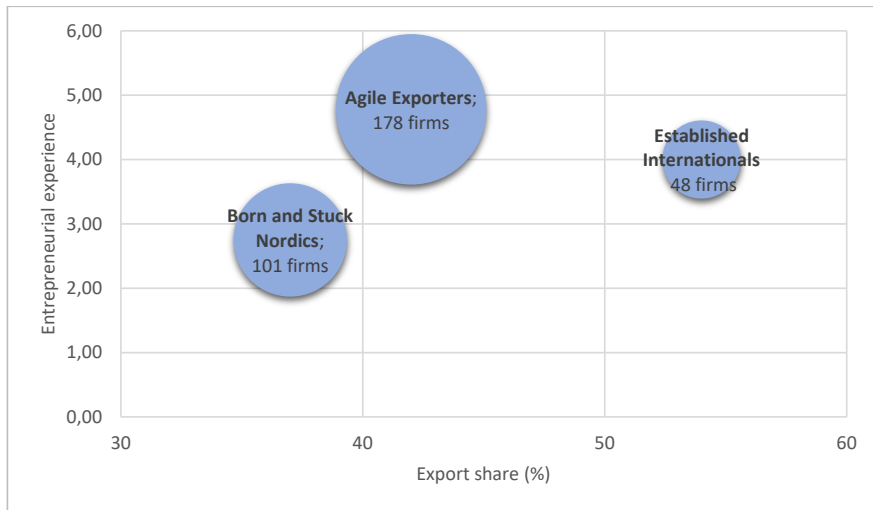


Fig. 7: The clusters of Paper 2

In this paper, we identified several possible relationships between the characteristics of the top management team and the product solutions, organizational behavior and performance of firms. All firms were SME exporters, but their approach to international markets, as well as their performance, were different. In the final section of this paper, we outlined three propositions for future research to explore in order to obtain richer knowledge about the relationships between managerial characteristics, strategic orientations and firms' performance.

4.3 Paper 3

This is the second paper written on the export survey data, and it partly builds on the research gaps identified in the cluster paper (Paper 2). The main purpose of this paper was to increase our understanding of the managerial role in firms' growth processes. We identified managerial aspirations and perceptions as well as organizational conflicts and learning as important factors in this regard. Empirical studies have found that not all firms aspire to grow; using this as our baseline, we sought to investigate how different aspirations can have specific organizational consequences concerning employees' well-being and firms' knowledge integration.

Research questions

- How are managerial aspirations aimed at either growth or international expansion, and managers' perceived change effectiveness, connected to positive and negative organizational consequences?
- Are management teams' experience and diversity related to the aspirations initially developed?

Research focus

By distinguishing between two growth strategies that are often employed by small firms, the acts of innovation and internationalization, we were able to contrast their unique effects on the organization. We framed growth aspirations aimed at growth in general to relate to the exploration of new opportunities through radical innovation, and international aspirations to relate to the exploitation of existing offerings through internationalization. In other words, we argued that export as a growth strategy would imply less organizational change than what radical innovation potentially would. Building a rather complex research model, we investigated the degree to which managerial experience and diversity were related to aspirations aimed at either growth or international expansion. Next, we looked closer at what we could theoretically expect as consequences of the distinct aspirations. Our study addressed how aspirations could have negative effects due to reduced employee well-being, and positive effects through increased knowledge integration. We also sought to examine how managers' perceptions of their teams' effectiveness in the face of change was related to the same organizational outcomes. Finally, we investigated the relationships between managerial aspirations and perceptions, and the actual growth processes employed by firms.

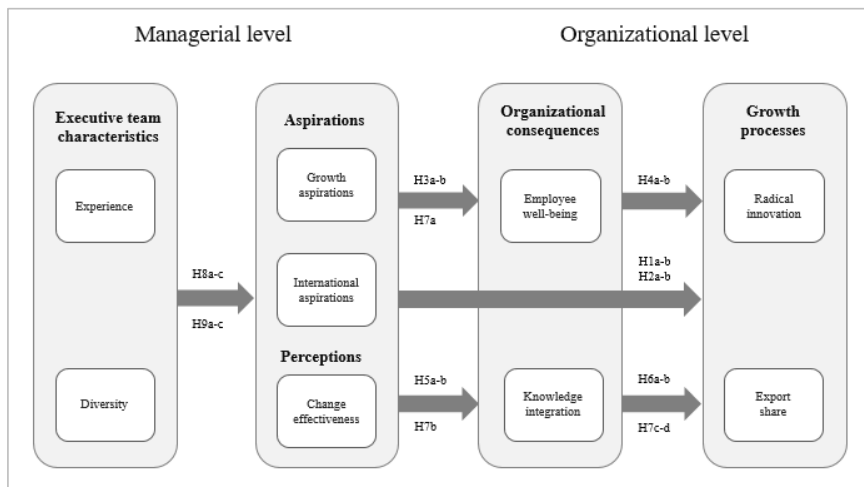


Fig. 8: The research model for Paper 3

Methods

As the empirical data utilized in this study stem from the export survey, there is some overlap in the measures used between Papers 2 and 3, but the latter paper also builds upon other scholarly work (e.g., Pearce & Sims, 2002; Zahra et al., 2000). The research model developed in the theoretical part of this study was tested using structural equation modelling (SEM) in the statistical software Stata IC/15. Due to listwise deletion of missing responses, the final path model ran with 249 small- and medium-sized firms. The average size of the responding firms was 38 employees, and the mean operating income was €15 million. The majority of firms characterized their major value offering as a physical product.

Confirmatory factor analysis was performed with maximum likelihood estimation and robust standard errors. We separated estimation of the measurement model from the structural path model to ensure their independence. All measurement items loaded significantly onto their respective

constructs, and construct validity and reliability were satisfactory (except for one item, which is discussed in the paper). Some measurement covariations were allowed in both the measurement and structural model. Goodness of fit indexes showed adequate fit of the estimated model to the data.

Key findings

Our results show that the differentiation of aspirations according to the level of organizational change they demand makes sense. Innovation and internationalization are organizational strategies that relate to distinct types of growth – either through the development of new markets (internationalization) or new offerings (innovation) – and also to distinct types of organizational consequences. We observed that growth aspirations, in general, were associated with more radical innovation, and that international aspirations were related to increases in the export share, while there was no cross-fertilization between the two. While international aspirations did not significantly impact the well-being of employees, aspirations related to innovation were found to reduce this well-being. However, if managers perceived their teams to be change effective, this had the opposite effect on employee well-being, increasing it instead. In other words, managers could be both the cause and cure of employee well-being, signaling an important implication for practitioners in real-life business. Managers thus have the potential to relieve detrimental employee effects due to ambitious growth aspirations by employing flexible and competent leadership when it comes to organizational change.

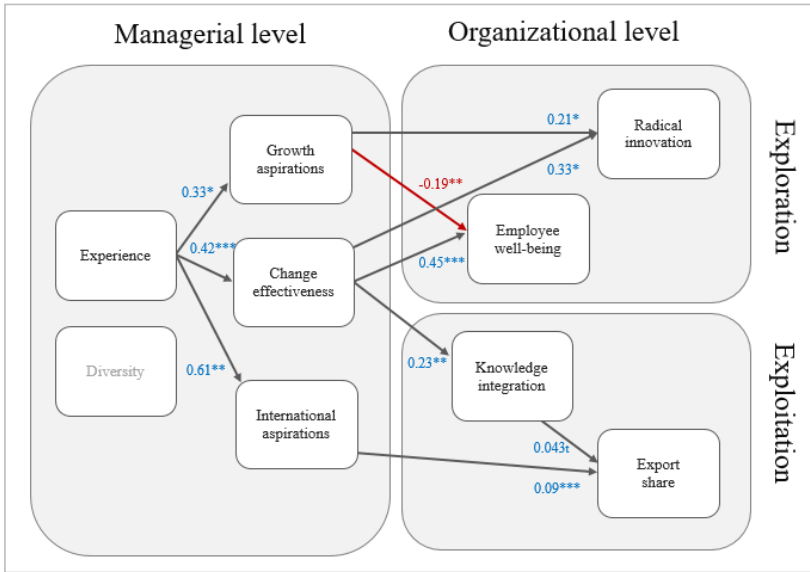


Fig. 9: The estimated path model for Paper 3

Finally, our findings further suggested that managerial experience indeed matters in the development of aspirations, both related to growth, in general, and to international expansion, as well as to increased levels of change effectiveness. This indicates that having more experience on the management team heightens their perceived ability to effectively handle organizational change. The study’s objective was to increase the understanding of the role of managers in organizational growth,

and our findings strongly confirm that managers' experience, aspirations and perceptions matter when examining firm-level growth processes.

4.4 Paper 4

The basis for the fourth paper in this dissertation was a unique research opportunity relating to managerial influence in manufacturing firms' transition to sustainability. By joining the research project very early on, we were able to add individual-level constructs related to managerial value-based motivation and the leadership style employing intellectual stimulation. Thus, this study takes a more operational approach than the other three, investigating specific managerial measures in a particular setting. Many of the firms in the sample were, as expected, exposed to international markets, and even though the impacts of managerial variables on international business weren't the focus of this specific study, firms' sustainable development have received "renewed interest" within the international business field (Kolk & van Tulder, 2010) and strategic management (Engert, Rauter, & Baumgartner, 2016).

Research questions

- How do managers influence firms' strategic sustainability efforts?
- To which degree are firms' sustainability strategies associated with firm performance?

Research focus

The objective of this study was to investigate the degree to which managers' motivation and intellectual leadership relate to the adoption of sustainability strategies aimed at the firms' core business areas. We also investigated the implications this had for the performance of firms, both objective and subjective. The adoption of sustainable efforts at the strategic level is not the same as approaching sustainability from a philanthropic standpoint or based purely on marketing effects. Our concept of *sustainability strategy* related to firms' incorporation of sustainable practices at the core of what they did. Integrating sustainability into the heart of organizations' value offerings are found to inspire novel business opportunities that have the potential to create increased value for firms, the environment and society as a whole. We wanted to look closer at the role of managers in instilling such practices in their firms.

Self-determination theory posits that several motivational types exist and that they are separated by their level of autonomy and individual control. *Identified motivation* (named "personal motivation for sustainability" in the paper) is an autonomous type that arises when an individual identifies with the value of a behavior. We investigated the direct relationship between managers' identified motivation for sustainability and firms' propensity to hold a sustainability strategy. We also investigated the role of the transformational leadership style of *intellectual stimulation* (named "intellectual leadership" in the paper), in which executives, among other things, encourage their employees to look at old problems in new ways. We investigated the mediating effect of intellectual leadership on the relationship between managers' motivation for sustainability and actual sustainable practices employed in the firms. Further, as the relationship between sustainable efforts and firm performance is yet to be determined, we specified the potential effects of incorporating sustainability into the core of what the firms were doing on their perceived value creation and financial performance.

Methods

The population for the survey was Norwegian small- and medium-sized firms in the manufacturing sector. By the end of 2015, we identified 2,466 firms that matched the description, and they were sent a questionnaire via e-mail. The questionnaire included 110 questions mainly aimed at environmental and social sustainability, both attitudes and actions. At the end of the data collection in February 2016, we had received 352 complete surveys, accumulated at a response rate of 14.3%. To investigate the hypothesized research model, we performed structural equation modelling, as this technique allows for investigating mediating effects and for several relationships to be tested simultaneously between constructs. The statistical software of Stata IC/15 and SPSS AMOS 26 were used to analyze the data. The validity and reliability of the measures were established, and both the measurement model and structural model showed satisfactory goodness of fit. To investigate the indirect effect present in our hypothesized model, we followed Baron and Kenny's (1986) approach to testing mediation and also performed a Sobel test.

Key findings

This study contributes to the literature by connecting two streams of research. By using strategy as a bridge, we linked individual-level attitudes and action to firm-level outcomes. At the managerial level, we study the personal motivation and leadership behavior of executives and find that the relationship between motivation and strategy is partly mediated by the style of leadership employed by the executive. This implies that the initiation of a sustainability strategy may be both a top-down and a bottom-up process. A path to sustainability may start with the motivation of top management, but the content and the solutions embedded in the strategy may stem from employees. By utilizing intellectual leadership to challenge the employees to come up with more meaningful solutions (e.g., through questioning the assumptions of the reigning industry logic), firms may create more sustainable opportunities for themselves. The link between sustainability strategy and firm outcomes is also interesting. We focus on two types of firm performance, financial measures and perceived value creation, and the firms' ability to solve the industry's major problems. Our study provides a unique picture of some of the ways that leaders can contribute to their firms' sustainability strategies and, ultimately, to the performance of their firms.

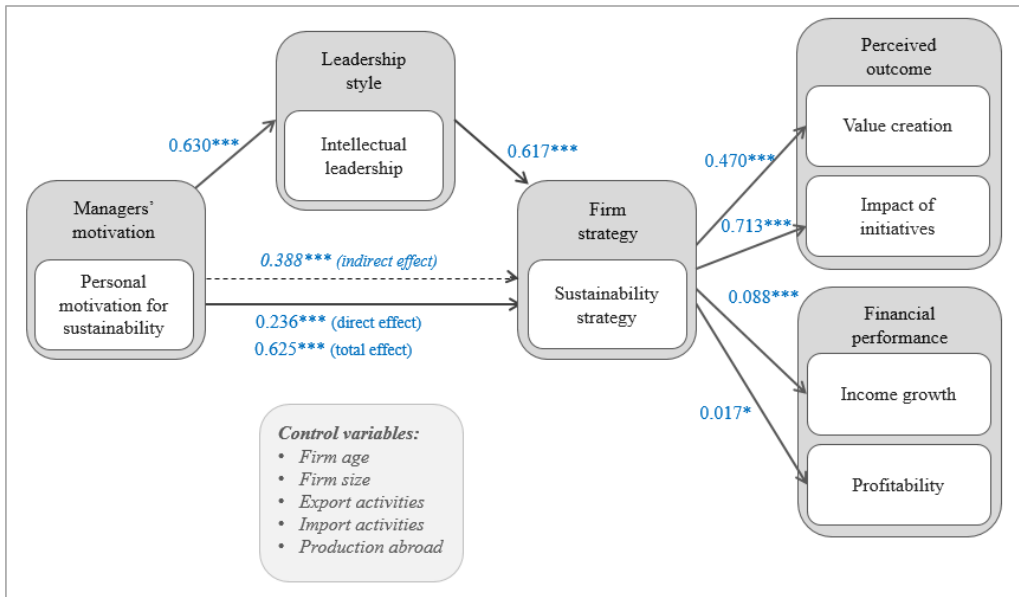


Fig. 10: The estimated path model of Paper 4.

Our findings have important implications for managers, as their personal motivation for sustainability can contribute to a deeper anchoring of sustainability efforts in firms. Furthermore, based on our study, it can be argued that managers can do good, both for their firms and for the world, by following their own values and standards for sustainability. This is because such efforts speak to customers and other stakeholders through more meaningful product solutions and by addressing key challenges in the firms' environments. Furthermore, sustainability strategies may be firms' best bet to guard themselves from sudden policy changes driven by the rising awareness of the climate crisis.

5. CONCEPTUAL FRAMEWORK

In Paper 1 of this dissertation, I reviewed the literature on managers in international small business and developed a conceptual framework to analyze the review's findings in a systematic way. In this chapter, I build on the conceptual model developed in Paper 1, and the framework is further developed to include the firm and contextual levels, as these are also important aspects of international small business. The aim of the overall framework is to piece together the parts of the role of the manager in international small business. It is meant to structure and aid in the interpretation of the research findings in this dissertation. The conceptual framework consists of six parts: the first three comprise the individual level, the fourth is the firm level, the fifth is the contextual level, and the sixth is conceptualized as international opportunity.

Based on Sarasvathy and colleagues' application of effectuation logics in international entrepreneurship (Sarasvathy, 2001; Sarasvathy, Kumar, York, & Bhagavatula, 2014), as well as Adner and Helfat's (2003) concept of dynamic managerial capabilities, I build the conceptual framework with the purpose of structuring and contextualizing my own findings in this dissertation to discuss how they fit together. Dynamic managerial capabilities are conceptualized as "the capabilities with which managers create, extend, and modify the ways in which firms make a living," which in turn "helps to explain the relationship between the quality of managerial decisions, strategic change, and organizational performance" (Helfat & Martin, 2015, p. 1281). The foundation for dynamic managerial capabilities is threefold, consisting of 1) managerial human capital, 2) managerial cognition, and 3) managerial social capital. Likewise, Sarasvathy et al. (2014, p. 76) characterize the entrepreneurial manager as a "holistic bundle of identity, knowledge and networks" (Sarasvathy, Kumar, York, & Bhagavatula, 2014, p 76; as cited in Coviello, 2015); this bundle is comprised of 1) what managers know, 2) who they are, and 3) whom they know (Sarasvathy, 2001).

Managerial behavior is one of the most under-researched aspects of small international firms (Andersson & Florén, 2008), but due to the relative importance of what managers actually do and decide in SMEs, it may potentially have great impact if specified explicitly. In his research on entrepreneurial intentions, Krueger pointed out that by specifying the intentions model backward, such that intentions precede attitudes, some scholars observe that intentions explain attitudes to a greater extent than the other way around (Krueger, 2017). As the conative, intentions level (Allport, 1935) is relatively close to actual behavior (Krueger, 2017), it is reasonable to consider whether or not behavior is able to change the attitudes and intentions of individuals. Research has partly confirmed such a relationship through the concept of cognitive dissonance, where behavior that is not in line with one's own attitudes will require that the attitudes (or behavior) change to ease discomfort (Cooper, 2007; Festinger, 1962). Therefore, due to managerial behavior being closer to the individuals' cognitive level than whom they know, and because it is outside the scope of this dissertation to specifically investigate the social capital and networks of managers, I argue that it is possible to add more nuance to the conceptualization of individual managers proposed by Sarasvathy, Helfat and colleagues by adding behavior in a closer integration with managerial cognition and human capital.

This revised conceptual model will therefore entail: 1) managerial human capital – what they know, 2) managerial cognition – who they are, and 3) managerial behavior – how they behave. Manager's social capital – whom they know – is instead conceptualized at the intersection between the individual and contextual levels of research. Managers' influence on strategy is conceptualized in the

transition between the individual and firm levels, as path dependency and managerial discretion – what they can, and are willing to do.

5.1 Content: What managers know

The cognitive content dimension of the conceptual model emphasizes managers' human capital (Becker, 1964). Managerial human capital develops through individuals' education, prior knowledge, functional backgrounds, skills and through their experiential learning (Kolb, 2015). Within the field of international small business, it is found that managers' international experiences are of vital importance for firms' exposure to foreign markets and their performance abroad (e.g., Reuber & Fischer, 1997). International experience is found to influence entry mode (Herrmann & Datta, 2006; Nielsen & Nielsen, 2011), timing of internationalization (Rialp et al., 2005; Zucchella, Palamara, & Denicolai, 2007), speed of deepening (Hsieh et al., 2019), and even the intention to internationalize (Sommer & Haug, 2011). Prior knowledge is also found to be important specifically when it comes to the rapid internationalization processes of international new ventures and born globals (e.g., Madsen & Servais, 1997).

Managerial knowledge is continuously being extended and developed, and it is generally acknowledged that humans do this by linking new and novel information with what the individual already knows (Grégoire, Corbett, & McMullen, 2011). Grown human beings are no *tabula rasa* in any field, and even though managers may start in a new firm or industry, they bring with them their knowledge baggage – for good and bad. Researchers investigating structural alignment and other analogous reasoning techniques have found that more experienced individuals are more likely than novices to perform creative mental leaps (Holyoak & Thagard, 1996) between seemingly unconnected knowledge pools. Thus, they seem to be more likely to see a pattern in an abundance of information (Grégoire, Barr, & Shepherd, 2010).

Having prior experience in the same industry as current operations is found to increase the likelihood of exporting (Westhead, Wright, & Ucbasaran, 2001) and the degree of internationalization (Segaro, Larimo, & Jones, 2014). However, experience may be seen as “ambiguous,” in the sense that “the inferences to be drawn from it are unclear[,] and the contribution of experiential learning to long-term improvements in organizations are difficult to establish” (March, 2010, p. 2). Also, managers seem to “*grow stale in the saddle*, ceasing to make adaptive changes” (Hambrick, 2007, p. 337, emphasis in original) as time goes by. Age and tenure are observed to have a non-linear relationship with internationalization. Particularly, tenure is found to initially increase export, and to later decrease it (Agnihotri & Bhattacharya, 2015), while Laufs, Bembom, & Schwens (2016) observed that more tenured and older managers in firms with little foreign experience are more likely to choose collaborative foreign entry modes compared to their younger and less tenured counterparts. The relationship between experience and risk perceptions seems to be a complicated one.

According to Polanyi (1958, 1966), all knowledge has a tacit element, something we are not even aware that we know and that we are even less able to articulate; for example, “[w]e know a person's face and can recognize it among a thousand, indeed among a million. Yet we usually cannot tell how we recognize a face we know” (p. 4). Due to its idiosyncrasy, experiential knowledge is especially prone to this dimension (Athanasidou & Nigh, 1999, 2000) in that we can know more than we can tell, and, by extension, we can know what we are looking for (Polanyi, 1966). In his

introduction to Huff's work on mapping strategic thought, Weick (1990) notes that "you have to know something already in order to 'see' something different" (p. 2). While the experts can focus on the actual carpenter job produced by the use of a hammer and nail, less skillful individuals are more concerned with the actual tools than with the job being performed. In other words, the value of tacit knowledge lies in the ability to use it (Polanyi, 1966), and if managers are not able to see anything but difference when they look at foreign markets, it will be difficult for them to approach the task. More tenured managers may, thus, be better able to handle foreign collaborative constellations in unknown territories because they may have led similar operations before and, on some level, know what they are looking for. Thus, they may be able to spot when something is different and they should be alarmed. This may be one of the key reasons for why the prior experience of managers is so important in the internationalization of firms, simply because it provides a map of possible strategies to be taken. The map does not need to be specified or even correct (Weick, 1990), but it may stimulate taking action and provides a point of departure from where managers "can 'see' something different," perhaps even an opportunity.

5.2 Structure: Who managers are

Penrose (1959/2009) noted that "[i]ncreasing experience shows itself in two ways – changes in knowledge acquired and changes in the ability to use knowledge" (p. 48). While the content dimension described above is mainly about the former and the way this may serve as a proxy for underlying cognition, the knowledge structure category is about measurements of managers' perceptions and their mental models – in essence, how they use their knowledge. Managerial structure – who managers are – consists of their emotions (Cardon, Foo, Shepherd, & Wiklund, 2012; Hodgkinson & Healey, 2011), their "mental processes" (Helfat & Martin, 2015; Sánchez, Carballo, & Gutiérrez, 2011), and their "knowledge structures" (Walsh, 1995). Cognitive theory suggests that human beings develop knowledge structures to aid in the processing of information and decision making. Such structures "represent [managers'] information worlds" and may help in making swift decisions in complex and demanding situations (Walsh, 1995, p. 281).

Perceptions of risk are generally acknowledged to be important in decision making (March & Shapira, 1987) and have been found to influence the decision maker's will to internationalize as well as the speed of foreign expansion (Acedo & Jones, 2007). It has also been found that managers' risk perceptions mediate the relationship between individual-level measures and firm outcomes, possibly explaining prior non-significant results in regards to the effects of cognitive variables on firm performance (Acedo & Florin, 2006). Of importance is also perceived behavioral control, which can be compared to the concept of self-efficacy (Bandura, 1997), and is concerned with "people's perception of the ease or difficulty of performing the behavior of interest" (Ajzen, 1991, p. 183). This favorable belief in one's own abilities to perform has been found to influence intentions to compete abroad (e.g., Sommer, 2010) and, ultimately, firms' international behavior (Acedo & Galán, 2011). Sommer and Haug (2011) observed that both the direct and interaction effects of experience and perceived behavioral control increased managers' intentions to internationalize.

In Evangelista's (2005) study about the formation of INVs, she notes, "it appears that the international experience of the founders concerned was a source of prior knowledge that helped them identify foreign market opportunities, which also gave them the confidence to exploit these

opportunities” (p. 194). However, important mediators have also been observed when it comes to the relationship between international experience and performance. Gruenhagen, Sawang, Gordon, and Davidsson (2018) found that while the breadth of foreign experience (number of foreign countries visited) seemed to have a positive relationship with degree of internationalization, depth of experience (time spent abroad) on the other hand, had to be combined with explicit growth aspirations to produce greater international exposure. As such, it seems not to be enough for managers to acquire experiential knowledge, as motivation to internationalize may also be a necessary precondition for the strategic decision to do so. Scholars have conducted extensive research on the concept of growth of SMEs and found that aspirations to grow are essential if actual growth is to happen (Delmar & Wiklund, 2008; Wiklund & Shepherd, 2003). In other words, due to being prone to satisficing and limited search (Cyert & March, 1963), managers do not necessarily see all alternatives unless their aspiration levels point in the relevant direction – and aspiration levels are generally shaped by experiences (Winter, 2000; Simon, 1996).

Other types of managerial perceptions are also found to be of importance for foreign expansion – having a global mindset, for example, has often been understood as a cognitive orientation necessary for the successful internationalization of firms (Levy, Beechler, Taylor, & Boyacigiller, 2007). Perlmutter (1969) originally conceptualized multinational corporations in a threefold typology according to the mindsets of their general managers, consisting of 1) ethnocentrism – an orientation toward the home country, 2) polycentrism – an orientation toward the host country, and 3) geocentrism – an orientation toward global business (pp. 11–14). While ethnocentric firms are more likely to express something along the lines of, “this works at home; therefore, it must work in your country” (p. 12), managers of geocentric organizations are more likely to view subsidiaries as “parts of a whole whose focus is on worldwide objectives as well as local objectives each part making its unique contribution with its unique competence” (p. 13).

Global mindset as a scholarly concept has been conceptualized as “the cognitive capabilities of key decision makers” (Levy et al., 2007, p. 231). Researchers have found that the application of global mindset as a concept has been operationalized as either “a characteristic of top management in multinational companies that leads to better global leadership or as a feature of SME managers that leads to successful entrepreneurial internationalization” (Torkkeli, Nummela, & Saarenketo, 2018). As this thesis is concerned with smaller firms, we subscribe to the latter application. A global mindset has been found to be an important determinant for foreign market success (Levy et al., 2007) and may heighten export intensity and scope of internationalization (Freixanet, Renart, & Rialp-Criado, 2018), as well as increase the speed of it (Acedo & Jones, 2007). Turunen and Nummela (2017) even observed that a global mindset was a necessary prerequisite for managers to be able to recognize and exploit opportunities abroad.

Connected with a global mindset is the Uppsala model’s concept of psychic distance. The latter has often been conceptualized as a firm-level construct where higher psychic distance to a foreign country is perceived as incorporating more risk. Williams and Grégoire (2015), however, utilize cognitive research to re-conceptualize distance perceptions as an individual level construct. They observe that “the human mind perceives and processes commonalities differently than it perceives and processes differences. As such, commonalities and differences are not polar opposites that cancel one another, but form parallel considerations to which we attend” (Williams & Grégoire,

2015, p. 273). Due to the application of different reasoning about markets abroad, managers do not seem to think in simple terms of near and far, but rather apply a systematic cognitive tendency to overvalue commonalities and consequently “overlook the potential threats implied by signals of differences when making decisions where and when to expand” (Williams & Grégoire, 2015, p. 276).

5.3 Behavior: How managers act

While managers are intendedly rational, their actual decision making is limited by their own cognitive processing ability and the structure of the environment. Simon (1956) liked to use the analogy of a pair of scissors when describing bounded rationality, with one blade representing the individual’s cognition and the other the external situation. Because “full rationality is simply too complicated” (Arrow, 2004, p. 48) to be applied in real-world decision making, managers use a combination of analysis and intuition when finding and selecting alternatives (Evans, 2003; Kahneman, 2003). This dual processing (Stanovich & West, 2000) explains that managerial decision making will consist of heuristics built from experience and made rapidly accessible by managers’ affective states (see Akinci & Sadler-Smith, 2012 for a review on managerial intuition). Large firms may have developed more formalized decision making routines, and already in 1997, Busenitz and Barney observed that managers of small firms tended to rely more on decision heuristics than did managers of large companies. In Maitland and Sammartino’s study (2015a), they argued that “heuristics may serve as powerful cognitive tools that enable, rather than limit, decision making in dynamic and uncertain environments,” and they observed that “expert individuals drew on experiential learning to build richer representations of the . . . environment” (p. 1554).

As such, Simon’s view was that “complex behavior is not the result of complex plans or ideas, but rather the use of simple heuristics in a complex environment” (Augier & March, 2004, p. 23). Simon had another analogy that fit this theme, the “ant on the beach.” When looking only at the tiny ant-steps in the sand, the viewer may observe that the path seems to twist and turn, and overall looks highly unstructured and random. However, the ants follow this winding path to be able to escape restrictions from the environment that prohibit a more direct approach. Such an observation may apply to managerial behavior, as well, in that “intentional behavior which appears to be complex, often is directed by a very simple goal and appears more complex than it is because the environment prevents a straightforward path” (Augier & March, 2004, p. 23).

This is related to the findings of Crick and Spence (2005), who observed that firms’ internationalization paths were far from linear and instead bore the marks of opportunistic behavior born out of “serendipitous events” (p. 182). Lindblom’s (1959) muddling-through process (Schweizer, 2012) share similarities with Simon’s ant, and with the opportunistic managers of Crick and Spence’s firms. These managers seemed to make their own luck and, thus, can be said to have created their own path without relying on much formal goalsetting (except for, perhaps, an overall goal of internationalization). This is also in line with effectuation; in situations where the value of prior knowledge is limited, managers use improvisation (Evers & O’Gorman, 2011) and effectuation logics, such as the affordable loss principle, to be able to generate relevant knowledge in new settings (Kalinic, Sarasvathy, & Forza, 2014). Apart from the overall goal, the process may look like it moves randomly ahead, even though decision makers consciously shape the behavior by acting on perceived

opportunities. However, managers themselves may seem to prefer to plan, if possible, and apply more causal logic next time around (Freixanet et al., 2018; Kalinic et al., 2014).

Even though goals may not be able to chart in unknown territories, an organization generally consists of its individual members' private and organizational goals – and these may not be coherent. Members of an organization are often affected differently by firms' development and change; while some notice almost nothing, others will find their day-to-day routines turned completely upside-down. This tension may lead to organizational conflict in either spoken or unspoken terms. The upper echelon perspective accentuates the important role of decision makers' aspirations and motivations in shaping firm strategy and performance, and as a natural extension for recognizing opportunities and acting on them. Leaders who encourage fellow managers and employees to think creatively around old challenges may be able to create novel opportunities for their firms. And management teams that believe in their own abilities to handle change in the organization may be better suited at contributing to firms' endeavors to grow.



Fig. 11: Developing the conceptual framework: The managerial level

In ending this section, I paraphrase Huff (1990, p. xvi) and propose that *how managers act depends on who they are and what they are thinking about*. How managers act also influences what they think about, and eventually who they grow into being. A reciprocal relationship between all three dimensions is also present; they are influencing and being influenced by each other – a continuous process at the level of the individual.

5.4 Firm level

As an extension of the “ant on the beach” metaphor describing human behavior, this image may also describe firm behavior. Coad (2009) noted that the growth of firms resembles a random walk. Along

with industry characteristics and firms' idiosyncratic resources, the strategic decisions of managers may help us to understand why this is so.

Penrose (1959) viewed firms as a collection of productive resources and services guided by an administrative framework. Managers' ability and capacity to perceive opportunities for their firms was seen to be influenced by previous growth and prior strategic decisions within the organization. Path dependency thus determined the productive opportunities that managers were able to conceive of, and slack and flexible re-combinations of resources provided (some of) the means by which to pursue them. Both Uppsala and IE can be said to incorporate evolution into their understanding of the internationalization process. Uppsala specifically acknowledges evolution as a part of their model (Johanson & Vahlne, 2017). As managers build their knowledge through experiential learning, they are able to recalculate risk perceptions and will, thus, (gradually) change their commitments to international markets. Other authors have further developed the variance and selection criteria necessary for the Uppsala model to be perceived as an evolutionary model (Santangelo & Meyer, 2017). In international entrepreneurship, prior experience is present more implicitly in the orientations and prior knowledge of founders starting rapidly and extensively internationalizing firms. Even rapid internationalization requires the development of knowledge along the way. However, "[f]irms aiming for the born global pathway do not have time to develop these skills in the organic way (inside the firm); they need to possess them beforehand or be able to acquire them underway, i.e. through collaboration with other firms already possessing these supplementary competences" (Hollensen, 2012, p. 65).

The Carnegie School viewed opportunities as being guided by managers' simplified searches for alternatives in the neighborhoods of their problems, and by their aspiration levels. Due to tendencies to satisfice, aspiration levels were not seen to be fixed entities, but rather fluctuated with experience:

Aspiration levels provide the computational mechanism for satisficing. An alternative satisfices if it meets aspiration levels along all dimensions (aspects, meaning performance and well-being). If no such alternative is found, search is undertaken for new alternatives. Meanwhile, aspirations along one or more dimensions drift down gradually until a satisfactory new alternative is found or some existing alternative satisfices. (Simon, 1996, p. 30)

Thus, the moving target of aspirations implies an evolutionary dynamism also in the Carnegie School, and one of the main outcomes of this school is, in fact, evolutionary economics (Augier & March, 2008; Winter & Nelson, 1982).

Cyert & March (1963/1993) also focused upon the nameless conflicts of organizations, as tensions between organizational members' goals. These are often handled through delegation and "attending to different goals at different times" (p.166). Specifically, ambitious growth aspirations are inclined to increase stress and tension and generate larger conflicts within organizations, which could be handled either through such quasi-resolution of conflict as above, or through the adjustments of aspiration levels.

The underlying assumption of this dissertation is that managers matter in small firms because of their greater managerial discretion compared to executives in larger firms. Large firms generally incorporate greater knowledge levels and more formalized routines for decision making, while smaller firms have more informal ways of operating (Andersson & Florén, 2008). In March’s (1991) work on exploration and exploitation, he notes: “Increased knowledge seems often to reduce the variability of performance rather than to increase it. Knowledge makes performance more reliable” (p. 83). SMEs are more likely to have less complicated ownership structures and more straightforward understanding of who is in charge and where the power ultimately lies. Smaller firms also typically have less financial slack and lack substantial resources (Buckley, Enderwick, & Cross, 2018), and thus have to be more creative in their responses to happenings in the environment, opening up for more human intervention (Mischel, 1977).

Aharoni and colleagues have several times called for the integration of behavioral theory into international business research (Aharoni et al., 2011; Aharoni & Brock, 2010). However, Aharoni (1966) disapproved of Cyert and March’s (1963) use of the “nameless coalition” in that this excluded the role of the managers. Strategy may be seen as a bridge between the managerial and firm level – created by individuals for the use in organizations and determining the resource allocations of firms (Finkelstein et al., 2009). This is part of why managers may be seen to be important, because they are making decisions regarding the future development of organizational resources. Mintzberg (1978) provided a view of strategy as “a pattern in a stream of decisions” (p. 934). Here, I adhere to Mintzberg and Water’s (1985) later refinement of this definition and understand strategy as “a pattern in a stream of action” (p. 258). This latter definition includes intended and emergent strategies, not only carefully planned ones.

However, in Andrew’s early words (1971), “Executives in charge of company destinies do not look exclusively at what a company might do and can do. [They] sometimes seem heavily influenced by what they personally want to do” (p. 104). The decision power of executives determines the directions managers set for their firms, influenced by their understanding of what the firms can do – through their idiosyncratic minds and unique perceptions of the environment – and what they want to do at the organizational level.

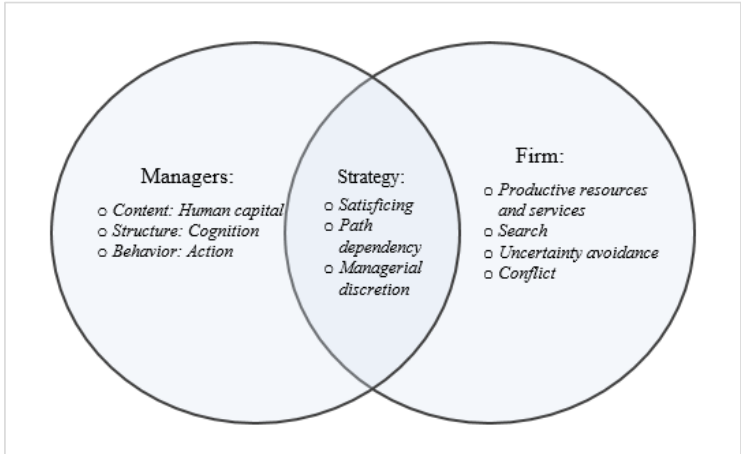


Fig. 12: Developing the conceptual framework: The intersection of managerial and firm level.

5.5 Contextual level

In this dissertation, the international context plays an important part. By internationalizing firms' operations and markets, management has always been faced with increased levels of uncertainty and complexity (Tulder et al., 2019). Nevertheless, due to technological advances, digitization and overall market liberalization, "more small firms are now involved in international business than ever before" (Buckley et al., 2018, p. 610). The international environment is known to be subject to the VUCA conditions of volatility, uncertainty, complexity and ambiguity (Tulder et al., 2019), and these conditions are related to what is inherently perceived as "risky" with international operations. However, the specific context of the foreign operations of firms are also important, and not least the managers' understandings and perceptions of it.

In general, "the more difficult and complex export activity is perceived to be, the lower will be a firm's level of export involvement" (Suarez-Ortega, 2003); however, such perceived export barriers also "decrease as the firm moves further in the export development process" (p. 403). The latter implies that risk and uncertainty related to international operations, indeed, seem to be handled by experiential learning at the managerial level (Forsgren, 2002; Johansen & Vahlne, 1977). Penrose's (1959/2009) treatment of the environment as an image in the mind of the entrepreneurial manager accentuates the importance of perceptions, "for it is, after all, such an 'image' which in fact determines a man's behavior" (p. 4).

Observations of an organization's environment are ultimately made by individuals, and human interactions are of importance for collectively interpreting and attaching meaning to the organizational context. Thus, "behavior in the real world is as much determined by the 'inner environment' of people's minds, both their memory contents and their processes, as by the 'outer environment' of the world on which they act, and which acts on them" (Simon, 2000, p. 25).

5.6 International opportunities

Opportunity recognition has taken a significant role in the field of entrepreneurship (although scholars have different viewpoints of it, e.g., Alvarez & Barney, 2013; McMullen & Shepherd, 2006; Shane, 2012; Shane & Venkataraman, 2000; Venkataraman, Sarasvathy, Dew, & Forster, 2012). Several scholars have also highlighted the research potential of international opportunity perceptions in IE (Dimitratos & Jones, 2005; Mainela, Puhakka, & Servais, 2014; Zahra et al., 2005). In his work on "opportunity recognition as pattern recognition," Baron (2006) contends that individuals use "cognitive frameworks they have acquired through experience to perceive connections between seemingly unrelated events or trends in the external world" (p. 104). In other words, managers use their prior knowledge to "connect the dots" between data points, and in this way create "meaningful patterns" to recognize opportunities (Baron & Ensley, 2006). The conceptual framework presented here accentuates the role of the individual's cognition and behavior in strategizing for its organizations, as well as the individual's collective understanding of the environment as a key asset in the identification of international opportunities. Individual perceptions play a vital role in opportunity recognition and for the complex interactions in and between minds necessary to facilitate it. Krueger and Day (2010) explain that "our brain grasps external phenomena through processes of perception. We are unlikely to pursue an opportunity that we do not perceive. What do we notice? How do we interpret what we notice? What might bias our perceptions?" (p. 325).

This dissertation subscribes to the definition of international opportunity presented by Mainela et al. (2014) as “a situation that both spans and integrates elements from multiple national contexts in which entrepreneurial action and interaction transform the manifestations of economic activity” (p. 120). The authors underline that this definition is intended to encompass both opportunity discovery and creation, as well as opportunities for innovation and arbitrage. Since international opportunities often are accompanied by high levels of complexity in fast-moving environments, managerial recognition of opportunities abroad will most likely depend on an orchestration of cognitive efforts, including prior knowledge, reasoning and motivation. The conceptual framework presented here does not intend to depict the inner workings of the mind, the organization, or its environment. It is a simplification of reality, and is rather meant to illustrate the interaction of research topics on the role of individuals in international small business.

The conceptual framework illustrated below is meant to structure and aid in the interpretation of the research findings in this dissertation.

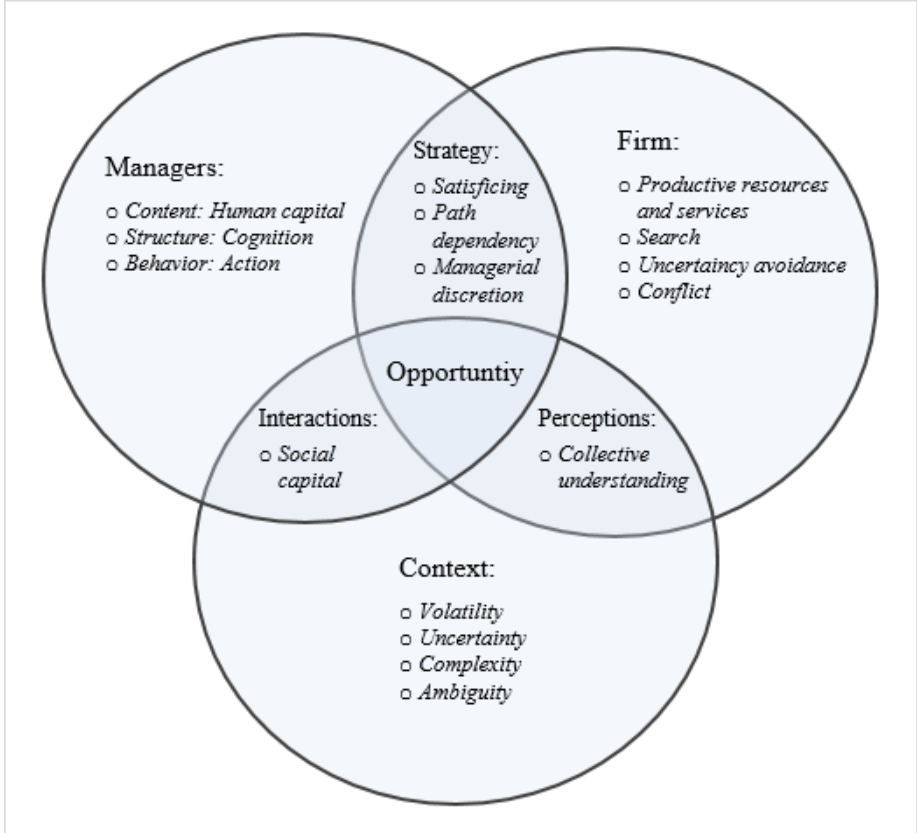


Fig. 13: Conceptual model of the interaction between managerial level, firm level, and contextual level

6. DISCUSSION, IMPLICATIONS AND LIMITATIONS

This chapter has two parts: first, I sum up the key takeaways from our four papers and use the conceptual framework to analyze and discuss my findings in light of the overall research question. Next, I discuss the contribution of the dissertation by articulating how the theoretical perspectives, empirical literature and my own findings reported in this cover essay can move us in the direction of an integration and extension of the theoretical groundwork it builds on. First and foremost, we revisit the illustration of how the four individual research questions applied and investigated in the studies contribute to the central theme of this dissertation – the role of managers in international small business. This is to provide the reader with an overall understanding of how the articles’ findings are jointly connected.

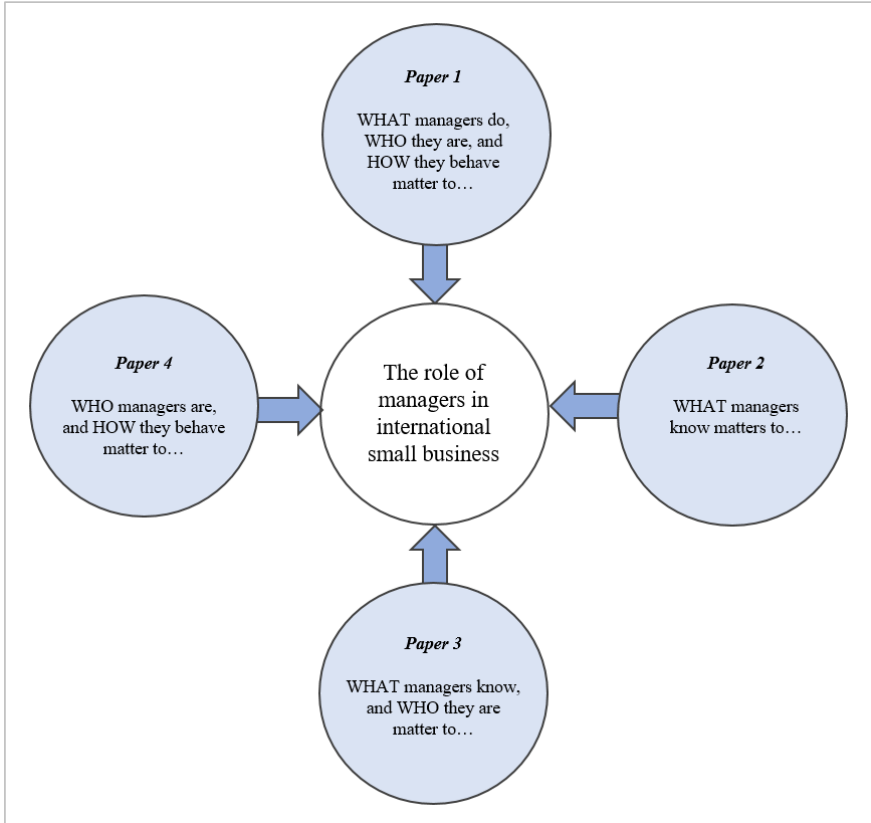


Fig. 14: Key findings of the four papers and how they inform the central theme of the dissertation

6.1 Analysis of the dissertation’s studies

The overall research question for this dissertation read: *What is the role of managers in international small business?* From the findings of our studies, we see that managers matter in international small business. The aim of this framework has been to piece together a picture of the impact of general managers in smaller firms that are internationally exposed. As previously mentioned, the goal is not to

imply that all other aspects pertaining to organizational life are insignificant; I only wish to accentuate that managers also matter. And they matter in at least five ways.

Managers are important for international small firms due to their: 1) managerial human capital – what they know, 2) managerial cognition – who they are, 3) managerial behavior – how they act, 4) managerial history and context – what they can do and 5) managerial discretion – what they are willing to do. In addition, managers also matter due to whom they know and how they collectively understand firms' contexts. These latter two themes have not been explicitly investigated in this dissertation and will, therefore, not receive any thorough examination here.

In relation to managers' human capital, Papers 1, 2 and 3 all found that experience plays a vital part in the internationalization and growth of firms. What managers know, their prior life experiences and both their tacit and explicit knowledge have the potential to shape the development paths of the firms they lead. In the explorative Paper 2, we found that both management teams' level of experience and diversity had a positive relationship with strategic orientations and performance. Higher levels of these constructs were related to better international performance and greater strategic orientations aimed at growth, learning and internationalization.

Paper 3 added more nuance to this finding, as only managers' experience proved to be significantly associated with aspirations for distinct growth strategies, while diversity of the top management team showed no such effect. Granted, these studies did not investigate the exact same variables, but they nevertheless provide an interesting entry into the aforementioned double-edged sword of diversity. This dual role of team diversity was also found in the literature review in Paper 1, where it was observed that firms founded by teams did significantly better than firms founded by solo entrepreneurs (Loane, Bell, & McNaughton, 2007); moreover, the findings indicate that, in settings of intense competition, homogeneous teams proved more effective in handling demanding conditions (Carpenter & Fredrickson, 2001). When it came to industrial experience, the role of diversity was somewhat nuanced again, as Bjørnåli and Aspelund (2012) found that international sales were more prominent in firms with either high or low levels of diversity in their industrial backgrounds. The insignificant effects of diversity in Paper 3 were surprising and most likely signal a complex interaction with the environmental setting and/or non-linear effects on firm performance.

In Paper 2, we identified three clusters of firms based on their managers' levels of experience and diversity (reflecting what they know). The born and stuck Nordics had the lowest levels of both variables and seemed to have fastened in a lower-level growth path – a trajectory that they themselves weren't satisfied with and that provided less international exposure and performance. The other two clusters had higher levels of experience and diversity and were similar when it came to most sub-items. However, the agile exporters showed more diversity among fewer members, while the established internationals seemed to be diverse, simply due to having larger management teams. The agile firms also incorporated higher levels of entrepreneurial experience and reported that they expected to grow in a more collaborative manner. Such a collaborative growth structure is characteristic of entrepreneurial internationalization (Jones, Coviello, & Tang, 2011; Coviello, McDougal, & Oviatt, 2011). Thus, the agile exporters could be seen as being on their way up the growth trajectory of the established internationals.

Observations of managerial preferences toward firms' collaborative growth were also found in the review (Paper 1) and were specifically linked to the tenure of managers. Laufs et al. (2016) found

that in firms with less international experience, more tenured managers tended to prefer collaborative entry modes abroad compared to their younger and less tenured counterparts. Higher levels of experience (and thus tenure) could influence this process in at least two ways: through possible prior exposure to everything that can go wrong in international projects, and to the potential benefits of having partners in foreign environments.

The reviewed studies reported in Paper 1 showed little interest in the tacit dimension of knowledge (only two papers explicitly investigated this theme). This apparent lack of interest could, of course, be due to the difficulties of studying an aspect of managerial knowledge that is hard to specify explicitly, but is nevertheless surprising. Tacit and explicit knowledge are not mutually exclusive, but complementary in nature. Boundaries are “both porous and flexible,” and their interaction over time may lead to enhanced firm performance (Spender, 1996, p. 50). For example, managers’ international experiential knowledge, which is acknowledged as a crucial factor for SME internationalization (e.g., Reuber & Fisher, 1997), is fundamentally tacit in nature (Athanassiou & Nigh, 1999; 2000). Authors, contributors and critics of the Uppsala model have specified experiential and vicarious (social capital-based) knowledge to be of specific interest in the internationalization process (Johanson & Vahlne, 1977, 2009; Forsberg, 2002; Santangelo & Meyer, 2017). Madsen and Servais (1997), proposed that the rapid international expansion of born globals was due to the congenital learning of their founders, a view that has also been supported by others (Casillas, Moreno, Acedo, Gallego, & Ramos, 2009; Oviatt & McDougall, 1994; Pellegrino & McNaughton, 2017).

Prior knowledge of the international kind has generally been found to strengthen the foreign focus in firms’ growth strategies (see Paper 1), however, also here there are nuances, in particular when it comes to the depth of experience. Gruenhagen et al. (2018) found that, individuals who spent several years in one country had to be able to combine this experience with motivation to internationalize in order for it to have an effect on firm outcome.

Therefore, it seems that in relation to managerial cognition, motivation influences behavior (how they act), (Meyer, Becker, & Vandenberghe, 2004). Motivation was also one of the themes in our fourth paper where we investigated the influence of value-based motivation (Ryan & Deci, 2000) on leadership behavior (Bass, 1985). Specifically, we looked at managers’ motivation that could be connected to their values concerning sustainability, and we examined the role of leaders who encouraged creativity and novel solutions to enduring problems, as well as questioning the existing assumptions likely to influence past decisions. We studied the link between sustainability motivation and firms’ propensity to incorporate sustainability efforts into the core of their business strategies. We found that value-based motivation indeed predicted sustainability strategy, and also that leadership partly explained how this effect took place. As the indirect effect via leadership was stronger than the direct effect from value-based motivation to sustainability strategy, it helps to have both if the overall goal is to transition to a green future.

Sustainability strategy was not the only firm factor affected by managerial aspects; the strategic orientations regarding growth, learning and international exposure were influenced, as well (see Paper 2). Higher levels of managerial human capital were significantly associated with a greater orientation toward international expansion, and, among other things, the firms with this orientation actively looked for business opportunities abroad. Firms with more human capital also had greater growth aspirations, as well as greater focus on organizational learning (e.g., by analyzing successful

and failed projects). According to Penrose, what managers know and the decision making history in firms – its path dependency – shape the opportunity horizon of current managers. Experience influences individuals' perceptions of risk (Acedo & Jones, 2007) and distance (Collinson & Houlden, 2005; Madsen & Servais, 1997). In Paper 1, in relation to managerial behavior, we saw that managers have been found to act on serendipitous events (e.g., Spence & Crick, 2006), improvise along the way (Evers & O'Gorman, 2011), and, under conditions where knowledge was hard to come by, use effectual logic to create the knowledge needed (Kalinic et al., 2014). Such path development especially accentuates the roles of managers. In two studies from Vietnam, Thai and Chong (2008, 2013) observed that the managers in their studies accentuated adaptability: "How we internationalize is like how a tree root finds its paths. Yes, it's all in the dark . . . so we have to do a lot of guessing. If we hit rocks, we go around them or try another path . . . If the nutrients in a particular place dry up, we will abandon the root there and live off another root" (Thai & Chong, 2013, p. 382).

On a different note, we specifically saw that more managerial experience (what they know) had a major positive influence on aspirations (who they are) concerned with both internationalization and innovation as growth strategies (see Paper 3). Experience did, however, reveal a stronger relationship with aspirations to export, rather than to engage in more ambitious growth processes as radical innovation. This suggests that managers holding more experience and possibly more tenure, seem to favor less demanding growth processes. This is in line with findings from the literature review, where one study in particular found a non-linear relationship between tenure and internationalization (Agnihotri & Bhattacharya, 2015).

In Paper 3, we observed that managerial perceptions regarding the working capacities of their own teams (reflecting who they are) influenced the organizational effect of their aspirations. Perceptions of change effectiveness on management teams positively influenced firms' degree of engaging in radical innovation efforts but showed no significant relationship with the level of export. The latter indicates that change effectiveness is simply not needed to engage in exporting activities, and this type of aspiration did not affect the well-being of employees, either. Ambitious growth aspirations on the other hand, had a negative effect on well-being among employees. However, change effectiveness seemed to counteract this detrimental relationship. In organizational goal conflicts – between goals for the growth of firms and goals for the well-being of employees – favoring the status quo and not aspiring to grow is a possible solution. This could be why managers who perceive their management teams as lacking change effectiveness refrain from having aspirations to grow. Expectations of resistance from employees, as they will be exposed to increased strain and thus the unfavorable effects on managers themselves (Wiklund, Davidsson, & Delmar, 2003), may act as a powerful influence on the development of aspirations. Interestingly, managerial experience also showed a significant impact on change effectiveness, signaling a potential effect of prior mastery experiences, grafting and vicarious learning on perceptions, and providing reflected managers with ways to overcome conflicts within their organizations.

In essence, our studies found that what managers know, who they are and how they act matters to international small business, and these dimensions also influence each other to make up the overall role of managers. Experience, history and context shape managers' windows of opportunity, and these aspects often need to be interpreted and reflected on before influencing behavior. Behavior, in turn, shapes what knowledge managers acquire, and their reflection on these events weighs in on their

ability to connect the dots between unique knowledge pools. Our findings reveal that there, indeed, is a lot of managerial discretion in small international firms, signaled by the significant effects of managerial level variables. Managers are important because, in changing environments, the speed with which decisions need to be managed and the foundation they need to be taken on is limited, allowing managers to base more of their decisions on their idiosyncratic knowledge and backgrounds. Haddoud, Jones and Newbery (2018) observed that export intentions do not hinge on a single managerial characteristic, but rather on a resource orchestration of different individual constructs. The contribution of this dissertation has been to look more closely at how such a constellation of decision makers' human capital, cognition and behavior may influence their strategic choices in international small firms.

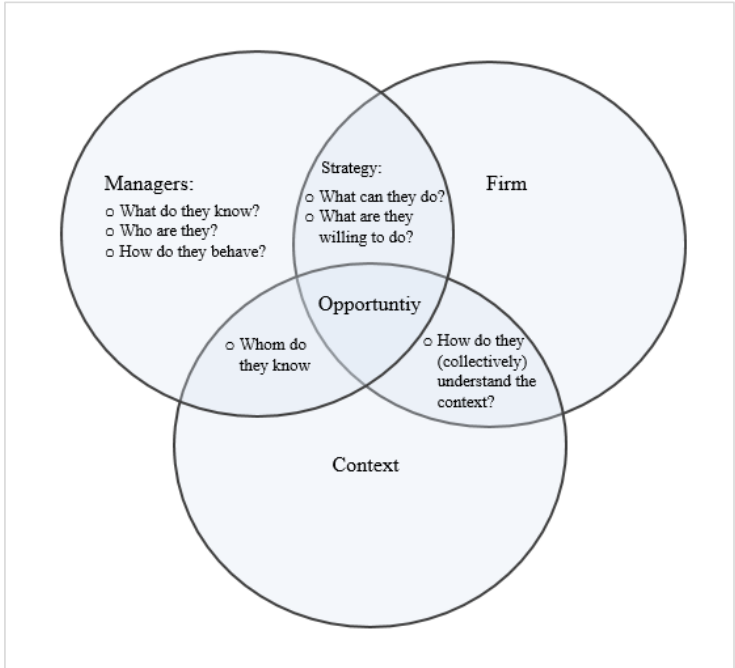


Fig. 15: The conceptual model revisited

6.2 Theoretical contribution

In the following section, I draw on several intellectual streams in an effort to piece together a picture that is relevant for small international firms and for scholars investigating international small business. Several authors have integrated and developed the Carnegie teachings and Penrose in scholarly areas related to this dissertation (e.g., Dew, Read, Sarasvathy, & Wiltbank, 2008; Pitelis, 2007; see also Gavetti, 2012; Gavetti, Greve, Levinthal, & Ocasio, 2012). This thesis builds on the groundwork outlined in the theory section, the theoretical developments mentioned above, the literature described within the field of international small business, as well as my own findings, to be able to move *toward a behavioral theory of the growth of small international firms*.

6.2.1 Elements of a behavioral theory

In this final section, it may be reasonable to ask, what really makes a theory behavioral? The concept of behavior could easily be confused with the history of *behaviorism* in psychology, where the latter does not include studying the mind but rather looks at the stimuli and response (behavior) of individuals. Behavioral, on the other hand, is in this thesis understood as “being about mental processes” (Gavetti, 2012, p. 267), and was originally launched as a response to the perfectly rational, utility maximizing decision makers of firms (Cyert & March, 1963). A focus on the managerial variables of, for example, experience and perceptions implicitly accounts for the bounded rationality of decision makers and is, thus, a shift in the direction of more behavioral variables. Such a shift is beneficial in providing descriptions of decision makers that are more relevant to the real world. In Madsen’s (2005) words:

There is no doubt that internationalization research could have improved the quality and the interpretation of empirical observations if they had made more explicit use of the Carnegie’s way of conceptualizing managers and decision-making. The resulting “description” of organizational behavior and decision-making could have been richer and easier to compare with empirical research conducted in other fields. (p. 382)

In Dew et al.’s (2008) *Outlines of a Behavioral Theory for the Entrepreneurial Firm*, they accentuate the contrast between firms operating in well-defined markets and entrepreneurial firms operating by transforming their contexts. As small firms have fewer resources to utilize than larger organizations, they may also rely more heavily on entrepreneurial approaches to foreign markets, even though they are not necessarily new firms (Coviello, McDougall, & Oviatt, 2011). However, I argue for a more holistic approach to firms’ environments, where small international businesses may be seen as either following a path-dependent way to growth, or turning to a path-developing approach from time to time.

6.2.2 Elements of the theory of the growth of firms

In Penrose’s (1959/2009) theory, she views the entrepreneurial managers as key in that they hold the environment as an image in their mind, including “the possibilities and restrictions” they are faced with (p. 4). In other words, she highlighted the important role of managers’ perceptions of the organizational environment. Together with firms’ prior resource decisions and development of services, this image determines the productive opportunities managers are able to identify for their firms. In Penrose’s (1959/2009) own view:

Strictly speaking, it is never resources themselves that are the “inputs” in the production process, but only the services that the resources can render. The services yielded by resources are a function of the way in which they are used – exactly the same resource when used for different purposes or in different ways and in combination with different types or amounts of other resources provides a different service or set of services. (p. 22)

In other words, while resources “can be defined independently of their use,” productive services cannot, as they are a function of the way in which the resources are used, and “it is largely in this distinction that we find the source of the uniqueness of each individual firm” (Penrose, 2009, p. 22). There are differences as well as overlaps between the two theoretical perspectives of Penrose (1959) and Cyert and March (1963). The Uppsala model is one prevalent example of a perspective that has built its framework on an integrated view of both. Pitelis (2007) notes that “Penrose’s theory of the growth of the firm can be fruitfully integrated with Cyert and March’s contribution” (p. 478). The main differences between the theoretical perspectives pertain to the issue of intrafirm conflict, which is non-existent in Penrose’s view of the firm. Major similarities involve a view that research on firms requires looking inside the firm at its individuals, and that decision makers perceive their environments through idiosyncratic filters, resulting in imperfect environmental matching (Cyert & March, 1963), and a unique horizon of productive opportunities (Penrose, 1959).

In the following section, I aim to integrate these two theoretical views with the upper echelons theory in an effort to build a theoretical perspective relevant for international small business. A theory may be understood as a map of the real world: “A map is a highly simplified representation of some territory; but it is, nonetheless, a reliable guide to key features of the landscape” (Ackroyd, 2012, p. 234). Theory building is also a collaborative scholarly endeavor in that new maps tend to build on previous ones in such a way that “map-making is a collective and ongoing practice and achievement” (Ackroyd, 2012, p. 234). In the following, I will make the contribution of my own findings explicit and supplement this argument with the literature reported on small international business to ensure its relevance for small firms exposed to foreign markets.

6.2.3 Aspirations as a moving target

In this thesis, I have presented scholarly views that argue that decision makers do not seek to perfectly optimize their decisions – looking for that particular needle in a haystack with many needles sharp enough to sew with is both unbearably costly and unnecessary. An alternative may be said to be satisfactory or unsatisfactory depending on its aspiration level. Moreover, aspirations themselves seem to adapt to individuals’ experiences and their expectations relating to the consequences of these alternatives (e.g., employees’ frustration within firms; see Paper 3). Simon has been said to view values and goals as equal or at least very similar (Augier & March, 2008), and thus our value-laden motivation construct from Paper 4 can also be said to provide a strong direction for the aspiration levels. Searches for satisfactory alternatives tend to be performed in the vicinity of the problems’ placement, meaning that a sales problem is usually first tried to be handled in the sales department. Should no satisfactory alternative be found, the search is broadened for other alternatives. At the same time, aspirations tend to drift downward, relating to one or several of their key dimensions “until a satisfactory new alternative is found or some existing alternative satisfies” (Simon, 1996, p. 30).

Vahlne and Johansen (2020) recently asked: “What makes managers tend to shy away from radical change and to prefer instead an incremental approach?” (p. 4). Our research suggests that managers’ experience and their expectations of intrafirm conflict due to changes in employees’ well-being could be an explanation. Organizational goals are often formed through political bargaining among important individuals in firms (Cyert & March, 1963), especially their managers (Hambrick, 2007). If goals related to work harmony weigh more heavily than those of organizational growth,

decision makers may over time adjust their growth aspirations accordingly – to favor the status quo or less ambitious growth in order to keep the peace internally. In this way, the concepts of aspirations and that of quasi-resolution of conflict as described in Cyert and March (1963) seem to be more closely related than initially recognized. An insight which should be accounted for in future scholarly work.

Extending Penrose's view of the limits to growth, intrafirm conflict could therefore be seen as such a limitation on firms' actual growth rate in that the aspiration levels related to growth itself are reduced. In other words, managers' images of the internal and external environments of the firms are adjusted according to their aspiration levels. This, in turn, influences managers' horizons of opportunities.

6.2.4 Experience as a shaper of perceptions

Experience continually shapes the aspirations and perceptions of the individuals holding it (see Paper 1 and 3). Perceptions further influence how managers view their organizational environments and the opportunities seen as being possible for the firm to pursue (Penrose, 1959). In his work on "opportunity recognition as pattern recognition," Baron (2006) contends that individuals use "cognitive frameworks they have acquired through experience to perceive connections between seemingly unrelated events or trends in the external world" (p. 104). In other words, managers use their prior knowledge to "connect the dots" between data points and, in this way, create "meaningful patterns" to recognize opportunities (Baron & Ensley, 2006).

Other perceptions are also important. Views of risk are essential in international small business (Paper 1), and perceptions of teams' effectiveness in changing environments showed a strong positive effect on intrafirm consequences (Paper 3). Organizations can be said to be born with some latent structures and routines (inherited by their founders), and this early imprinting is vital in any organizations' further life span in that it shapes the trajectories of firms.

6.2.5 Path dependency

Path dependency indicates a slow and gradual evolution of the firm where prior knowledge and decisions mold future alternatives, exemplified by the born and stuck Nordics in Paper 2, in which low levels of experience and more similar managerial members were associated with less satisfactory international performance.

Problemistic or proactive searches for solutions (Aharoni, 1966) are mostly performed in the local vicinity of the problem, advocating an incremental view of internationalization (Johanson & Vahlne, 1977; Vahlne & Johanson, 2020) and explaining why we tend to export to our neighboring countries. A focus on experience implies gradual familiarity with foreign contexts and incremental learning by doing (Coad, 1995; Penrose, 1959). As an example, we see that in Paper 3, more managerial experience is related to the less ambitious growth strategy of exporting compared to radical innovation. Other scholars have also observed that tenure is linked with a lower willingness to tolerate risk (Paper 1) and managers tendency to grow stuck in old patterns (Hambrick, 2007). In such a way we can say that the amount, and maybe particularly the novelty, of experiences seem to matter. Managers surely need some knowledge – either tacit or explicit – to be able to "see something different" (Weick, 1990). They need a map in their mind to be able to structure new knowledge into

their already existing knowledge pools, but too much experience (of the same kind) makes humans more rigid, unable to perceive or unwilling to act on new opportunities.

However, experience can sometimes be of a novel type. It can be of a surprising and puzzling kind, not fitting into the existing frames of reference. Such experience can be sudden – a critical incident involving a realization of the need to do radical innovation – or it might relate to a growing societal awareness of, for example, the severity of climate issues.

6.2.6 Path-breaking events

Individuals make use of prior knowledge to understand new information. If this new information does not fit into existing cognitive categories in the mind, we become puzzled (Weick, 1995). The triggers described above represent path-breaking events that shift managerial attention from business as usual to collective sensemaking and interpretation of the new situation. In relation to the Uppsala model, scholars have proposed that:

Path-breaking resource commitments increase the exposure to threats and opportunities, and thus the variation of possible outcomes. Therefore, path-breaking commitments are associated with both outstanding performance and higher rates of failure of both the specific country operation and of the firm as a whole. (Santangelo & Meyer, 2017, p. 1115)

Both Penrose and the Carnegie School paint a picture of the development of firms as being far from an orderly process. Cyert and March (1963) argue that firms negotiate to avoid uncertainty, that they handle conflict by delegating, that they satisfice their aspiration levels, perform simplified searches, and act according to rules of thumb. Penrose (1959) contends that entrepreneurial managers hold unique images of their surroundings, that they develop idiosyncratic productive services based on the use of their current resources, and thus shape their own productive opportunities going forward. However, none of these theoretical perspectives explicitly develops arguments in relation to the path-breaking and more revolutionary sides of organizational development. Still, Vahlne and Johanson (2020) note that “an evolutionary process can indeed include radical and risky change” (p. 8).

This thesis has argued for the relative importance of the managerial level in small international firms (Hambrick & Mason, 1984). In the fourth paper, we also found a path-breaking effect related to leadership behavior. We observed that the leadership style of intellectual stimulation was strongly and significantly related to the incorporation of revolutionary sustainability practices into the core of business strategy. This leadership behavior is related to new ideas and novel reflections and a movement out of old boundaries. In the third paper, we also saw that perceptions of change effectiveness influenced the implementation of radical innovation practices in small internationally exposed firms. The moderate role of experience as a predictor of change effectiveness implies that experience levels need to be “just right,” and the impact of change effectiveness on ambitious growth processes underlines that leadership can be both the cause and cure of conflict in organizations.

6.2.7 Path development

Contrasting with boundary-contingent path dependency, path development signals a move away from situations where prior knowledge is easily applicable into settings with less fixed knowledge

structures. In itself, the path breaking event could depend on prior knowledge in the form that it relies on some initial knowledge to identify the puzzling happening, or realization. In new international markets, if managers have little international experience, they see nothing but difference; therefore, it is difficult to map the task of how to internationalize. I suggest that this is also the reason why the imprinting of founders is found to be important in international small business (Oviatt & McDougal, 1994; Madsen & Servais, 1997); that is, it serves as a starting point for the horizon of opportunities.

Path development could entail radical innovation (Paper 3), it could extend from path-breaking entrepreneurial actions of the agile exporters in Paper 2, it most certainly is related to effectuation and opportunistic managerial behavior as identified in Paper 1, and it could also be related to intellectually stimulating leaders (Paper 4) who challenge the individuals within firms to question old assumptions, think in new ways and be creative when it comes to old challenges. Path development could also entail true Knightian uncertainty where the future is unknowable and therefore impossible to predict (Dew et al., 2008). While prior knowledge is necessary in the exploitation of discovered opportunities, new knowledge generated through managerial action is needed where the opportunity itself is created.

Penrose argued that growth requires planning, and in the Penrose-effect this is signified in the way that high growth levels in one period are expected to be followed by lower growth in the next. Because managers need to adjust to the new organizational settings after a growth spurt and to teach new executives the ropes in the firm, time is of the essence. Using Penrose's terminology, path dependency means a continuous adjustment of the managerial images of the organizational context. Path development, on the other hand, accentuates the creation of new images.

By using analogous reasoning in an effort to explain the distinct features of path dependency, path breaking, and path development, I use the metaphor of black and white holes. Black holes are known to encapsulate immense gravitation, and due to this gravity, such holes have event horizons. An event horizon can be visualized as a funnel and understood as a boundary from which nothing can escape the singularity. In this metaphor, I view the event horizon as an equivalent to the opportunity horizons of managers. If we can imagine managers each standing within their own black hole, looking out on all the organizational possibilities in front of them, their view of the opportunity horizon would be bound by prior strategic decisions concerning resource allocations, and their perceptions would be molded by idiosyncratic experiences and knowledge (path dependency).

If and when a path-breaking event happens – a situation that can be due to an internal “aha moment” that results from managerial reflection over time, or a surprising event originating from the environment – the new situation does not fit the pattern of expectancy. Due to such a puzzling experience, managers may enter a white hole. In entering a white singularity, managers can be said to tumble down the rabbit hole to where their current levels of knowledge are inapplicable. They, thus, have to create new knowledge through action and interaction to be able to navigate the novel terrain. As white holes are the opposites of black ones, astrophysics says that the event horizon of a white hole can never be reached. In my analogy, this is understood in terms of the continuous enactment of the opportunity horizon. Because the potential opportunities in a white hole are continuously being created through path development, they have no boundaries.

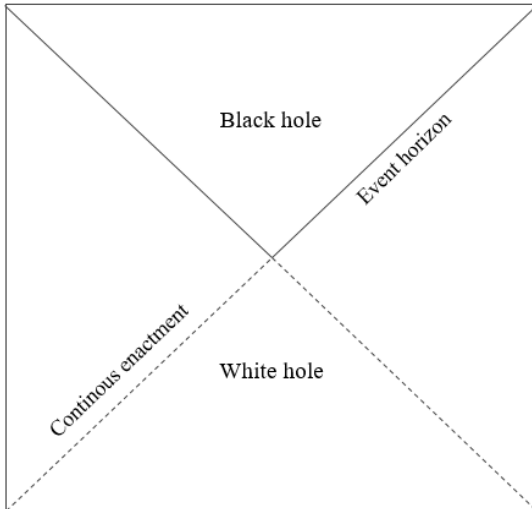


Fig. 16: The metaphor of black and white holes. Illustration is based on Rias (2011).

Several scholars have highlighted the research potential of international opportunity recognition in IE (Dimitratos & Jones, 2005; Mainela et al., 2014; Oviatt & McDougall, 2005; Zahra et al., 2005). However, extant research has so far not adopted this point of view (Mainela et al., 2014), and opportunity recognition remains in the shadows of firm behavior abroad – implicitly assumed, but receiving little explicit investigation. The lack of research on opportunities corresponds with the avoidance of individual-level research in IB, as the mind is the vehicle able to perceive and understand opportunities – and we rarely pursue an opportunity we do not see (Krueger & Day, 2010) or comprehend.

Even though “superior opportunities” can be said to be “cognitively distant,” in that they “rarely correspond to common ways of thinking” (Gavetti, 2012, p. 267), the change and innovation implied in the path development of opportunities is not a straightforward recipe for success because “when companies try something new, it usually fails” (Pfeffer & Sutton, 2006, p. 159). In Norway, only 30% of startups are still in operation after five years of business. However, firms that never try anything new will eventually be passed by firms that are better at utilizing novel technology, that are more efficient, or that takes into account changing customer preferences (Pfeffer & Sutton, 2006). It is recognized that a balance of efforts relating to exploitation – path dependency, and exploration – path development is necessary if firms are to enjoy lasting success (March, 1991; Tushman & O'Reilly, 1996). In other words, managers should try to fall down the white (rabbit) hole into the path-developing wonderland beneath once in a while, to be able to ensure their firm’s continued success.

6.3 Managerial implications

In this dissertation I studied a question that has practical relevance – a question that matters to both scholars and organizational members. The answers to this question could influence the way we investigate organizations and can affect the way managers see themselves and their teams, as well as the ways they think about and do their jobs. Through our research, we have found that managers hold

an important role in small international firms. Managers matter because they, in the turbulent context of foreign markets, have high managerial discretion, for good and bad (Chatterjee & Hambrick, 2007). They matter because they are the key interpreters of the organizational environment, and because this understanding depends on their idiosyncratic backgrounds and perceptions. In this section, I will tease out of my research what I see as the main implications for managers.

6.3.1 Experience matters . . . but not too much

First and foremost, we confirmed and elaborated on the notion that experience is a vital part of the managerial role in international small business. International experience is important for the speed, scope and degree of internationalization (Paper 1), while tenure and team diversity hold the properties of a double-edged sword – some are beneficial, but not too much as this makes managers stale in the saddle, or makes productive communication difficult (Papers 1 and 2). A practical suggestion to managers in firms where performance is not living up to expectations is to bring in new members on the top management team. However, it is important to give such an addition to the management team the time, space and ability to learn from existing managers (Penrose, 1959). Any new addition needs to learn the ropes of the organization to be able to identify interesting opportunities for growth.

On a related note, it is also important for practitioners to be aware of the Penrose-effect and to effectively communicate this to shareholders and other stakeholders. These effects can anecdotally be illustrated by the famous “Gazelle curse” discussed in a Norwegian business paper (Dagens Næringsliv). Each year, the newspaper awarded a new rapidly growing firm the Gazelle-award (see Acs & Mueller, 2008; and Birch, 1981 for more on firms as gazelles), but there seemed to be a misfortune connected with the award in that prize winners always had marked slower growth the year following the prize acquisition. However, had journalists bothered to read about the Penrose-effect, they might have foreseen such an outcome. For managers, being able to communicate realistic expectations of growth rates to stakeholders is important for the long-term relationships with their owners and customers.

6.3.2 There exists no “one size fits all” strategy

Literature on leadership has long recognized the important effect of context (Northouse, 2013). Charismatic leadership undertaken in pressing situations can ensure that organizational members have the motivation to pull in the same direction (Bass, 1985), at least for a while. However, once the pressing situation evolves into a less turbulent environment, other leadership styles may be more suited for managing the intra-organizational political negotiations of conflicting goals. In our papers, context is not explicitly studied but rather assumed to have influence through the perspective of the managers and their idiosyncratic images of the environment (Penrose, 1959). Managers in small international firms are more exposed to unique export barriers compared to larger firms, and research has found that a significant proportion of such barriers are related to managerial perceptions (Leonidou, 2004). Managers continuously adjust their images of the world due to gradually increasing experiences, or they create new images when confronted with unusual and puzzling events.

In our studies, we have seen that experience and expectations influence managerial perceptions and aspirations, and it is important for managers to be aware of their own role, as we assume that the vast majority of them are interested in how best to serve stakeholders and run their

firms. Given that managers hold a profound role in international small business, it is important to recognize that there is no “one size fits all” approach. Ambitious managerial aspirations reduce the well-being of employees, while international aspirations do not. Change effectiveness is very important in firms performing radical innovation, but it does not influence export levels. Firms can and do grow in a number of ways (e.g., McKelvie & Wiklund, 2010), and this dissertation has investigated some of these ways. If firms are facing challenges to which they cannot seem to find a satisfactory solution, they might try to broaden their search for alternatives – looking in directions where they initially would not expect to find any solutions. Falling down the white rabbit hole can enable managers and their teams to find new perspectives on sticky problems.

6.3.3 Questioning old assumptions might save us all

Through their values, motivations, aspirations and perceptions, managers have their own unique way of seeing the world, and through their actions and interactions, they can influence the contexts in which they operate. The world’s current challenges relating to virus pandemics, inequality, alienation, loss of bio-diversity and climate change tests managers to think in new ways around old assumptions. In our fourth paper, we saw that managers’ values and behavior had strong and significant relationships with firms’ integration of sustainability into the core of their business strategies. It is important for managers to have insight into their own powerful role when it comes to shaping the environments in which they operate and the standards they operate after. To identify what makes sense and is meaningful in a world in constant flux is difficult, and the internationalization of SMEs exposes them to new stakeholders from different cultural and environmental contexts. However, it also poses an opportunity to create new images of the organizational environment, such as one in which the firms can focus on “doing well by doing good” (Falck & Heblich, 2007, p. 247). Together, small- and medium-sized firms have the power to find solutions to the world’s pressing problems, and building their strategic decisions around their own views of what is important and meaningful has never been more important.

6.4 Implications for policy makers

Due to the double-edged sword of team diversity, neither this thesis nor prior research has been able to produce unambiguous results. To reduce the possible detrimental effects of diversity educational institutions need to acknowledge that their students and society at large will benefit from access to more learning opportunities and collaboration across functional, experiential and cultural dimensions. Students need to learn how to collaborate with people unlike themselves, to practice empathy and learn to see things from another person’s perspective. In this way, they may also become better managers and better able to understand the perhaps widely different viewpoints of their stakeholders.

In light of our changing global reality, societies need to educate individuals who are open to change. Due to climate change and recent pandemics, we need to find new ways of doing things. Adaptability, creativity and the questioning of old assumptions are of the essence in being able to provide meaningful solutions in a constantly changing world. As the world is in flux, we need to be able to educate individuals that do not resist, but rather embrace, change. To be successful, this demands a managerial level that is confident in their own handling of change-intensive development

projects, who themselves seek and enact opportunities. As experience has been argued in this thesis to influence the opportunity horizon of firms, the education system needs to provide our students with more and diverse experiences, and also to encourage reflections around these experiences. Further, we need to design our education system so that students learn to an even greater degree to become critical thinkers, to question old assumptions and to be able to look at old problems in new ways. In this way, future managers can provide our societies with more meaningful solutions to pressing global problems, and not just introduce more technology for technology's sake. If students get to see the practical implications of their work and acquire experiences related to mastering change-intensive settings, they may be more able to realize their own potential in engulfing their solutions in more meaning, and thus create greater value for society.

6.5 Limitations and future research directions

As in all other research, this scholarly contribution has some limitations. First and foremost, we investigate a particular setting, the Norwegian collection of small- and medium-sized firms that are either exporting or specifically in the manufacturing sector. This implies limitations regarding the generalizability of our results, and future research is needed to provide insights into the transferability of our findings to other settings. Also, the empirical data utilized in the studies' analyses are cross-sectional with single respondents. With a longer time frame on this research project, we might have been able to perform longitudinal studies and obtain more reliable causal interpretations – this is also a particular suggestion for future research. This dissertation focuses specifically on the general managers of small international firms, but other individuals also matter in the development paths of firms and are worthy of future investigations. Also, deeper investigations of managerial cognition and behavior in different contexts are needed to provide a more holistic view of the managers' impact. In general, I want to emphasize that microfoundations need a place in research on international small business for such research to avoid misspecified models and to more accurately uncover the role of managers in international small business.

7. CONCLUSION

Motivated by repeated calls to incorporate more individual-level variables in international business, this dissertation investigated the role of managers in small international firms. By performing a systematic literature review and utilizing two independently collected datasets in three empirical studies, we identified at least five ways that managers matter: what they know, who they are and how they behave, as well as what they can do and are willing to do. The primary aim of the dissertation has been to piece together a picture of how managerial human capital, cognition and behavior influence the strategic decision making in firms. Building on extant and own work I develop four arguments in my theoretical contribution: toward a behavioral theory of the growth of small international firms. These include, a) aspirations and interfirm conflict are closely intertwined and should be studied as such, b) conflict may act as a limit to growth, c) the amount (and novelty) of experience should be emphasized by scholars, and d) path breaking behavior involves the development of new managerial perspectives, so called images. The overall theoretical contribution of this thesis is that managerial pieces matter in the puzzle we call international small business, and they should therefore be included in future research within this theme.

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Part 2 – Research papers

Paper 1

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Paper 2

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Paper 3

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Paper 4

An investigation of leaders' motivation, intellectual leadership, and sustainability strategy in relation to Norwegian manufacturers' performance

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ABSTRACT

The objective of this paper is to study how leaders' motivation and leadership style relate to the adoption of sustainability efforts at the strategic level and to investigate some of the implications this has for firms. We investigate the relationships between leaders' personal motivation towards sustainability, their intellectual leadership for sustainability, and organizations' sustainability strategies. Further, we study perceived outcomes and objective measures of financial performance influenced by firms' incorporation of such strategies. Findings from a structural equation model of 352 Norwegian manufacturing firms showed that intellectual leadership partly mediated the relationship between leaders' personal motivation for sustainability and their firms' sustainability strategies, indicating that personal motivation influences firm strategy through executives' leadership behavior. We also find strong and significant paths from firms' sustainability strategies to perceived value creation and impact of initiatives at the organization level. Further we find small, but significant relationships between incorporation of sustainability efforts in firms' core business strategies and objective measures of their financial performance. We discuss possible implications of this study for managers and scholars.

Keywords: Sustainability strategy, Leaders' motivation, Leadership, Firm performance, Manufacturing firms, Corporate sustainability

1. INTRODUCTION

The general population's attention towards the climate crisis is resulting in increased stakeholder pressure on manufacturing firms to become more sustainable in all aspects of their value chain (Carter & Easton, 2011; Gonzalez-Perez, 2013; Mani, Agrawal, & Sharma, 2014). Recent examples are the 'Thunberg-effect', where young and engaged people, such as Greta Thunberg are provoking and inspiring the general public to act in a more sustainable manner. In the EU-parliament election in May 2019, European voters called for more ambitious climate policies – a sign that politicians may follow up on the Paris Agreement with stricter environmental regulations for the manufacturing sector. In this paper we understand corporate sustainability (CS) as the overall company activities to ensure sustainable development defined as “development that meets the needs of the present, without compromising the ability of future generations to meet their needs” (WCED, 1987, p. 43). Recent studies have looked at various drivers of corporate sustainability (Lee, Kim, & Kim, 2018; Papagiannakis & Lioukas, 2012; Rivera-Camino, 2012). One primary driver of corporate sustainability is firms' sustainability strategy (Etzion, 2007; Galpin & Whittington, 2012; Lartey et al., 2020), and studies have shown that sustainability initiatives and outcomes of firms – and within them – can be predicted by individual differences in management, including motivation and leadership styles (Blome, Foerstl, & Schleper, 2017; González-Benito & González-Benito, 2006; Rivera-Camino, 2012; Wesselink, Blok, & Ringersma, 2017).

Incorporating sustainability at the strategic level stands in contrast to firms which only engage in sustainability efforts due to institutional demands. In their review, Aguinis and Glavas (2012) found that when management commitment was absent from decisions related to sustainability practices it led to unsuccessful “decoupled” activities (p. 947). In other words, to be able to build successful sustainability practices, leaders need to be involved at the level of individual motivation and behavior. Even though the manufacturing sector is highly competitive and corporate sustainability has sometimes been framed as a zero-sum game, some scholars today argue that the climate challenge we currently face is one of the greatest business opportunities of our time (Porter & Kramer, 2006, 2011). They uphold that strategies that intricately incorporate sustainability have the potential to create increased value for firms, the environment, and society. Consequently, they believe that many firms are missing out on business opportunities that are created by new stakeholder concerns springing from an increased focus on sustainability. Following this line of reasoning, practitioners would benefit greatly from insight into how sustainability efforts could be developed and integrated into businesses' core strategies (Engert, Rauter, & Baumgartner, 2016; Ghobadian, Money, & Hillenbrand, 2015).

Responding to calls to investigate the implementation and effects of strategic sustainability (Hart & Dowell, 2011; Waldman & Siegel, 2008), we focus on relationships between motivation, leadership style, and sustainability strategy. Furthermore, we investigate the link between sustainability strategy and firm-level performance as research still struggles with inconclusive results regarding this relationship (Goyal, Rahman, & Kazmi, 2013; Hussain, Rigoni, & Cavezzali, 2018). Specifically, we ask how leaders may influence firms' strategic sustainability efforts and the degree to which firms' sustainability strategies are associated with firm performance. By studying firms that incorporate sustainability efforts into the very heart of their core business strategies we may uncover the organizational implications of considering the three pillars of environmental, social and economic responsibility (Elkington, 1998).

We use an offshoot of a motivation type from self-determination theory called identified motivation. Identified motivation means that one behaves due to an identification with the value and importance of an activity (Ryan & Deci, 2000). Furthermore, we term leaders' identified motivation in relation to sustainability as *personal motivation for sustainability*. This type of motivation is linked with one's values for sustainability and is expressed when one wholly accepts the importance of sustainability (Graves & Sarkis, 2018; Sheldon, Wineland, Venhoeven, & Osin, 2016).

In line with calls for leadership research to focus on more specific leadership styles – e.g. the components of transformational leadership rather than the broader concept of transformational leadership (Hughes, Lee, Tian, Newman, & Legood, 2018; Van Knippenberg & Sitkin, 2013) – our study looks specifically at the leadership style of intellectual stimulation in relation to sustainability, which we specify as *intellectual leadership for sustainability*. This type of leadership means that management takes on a leadership style that is akin to intellectual stimulation, but with a sincere focus on sustainability. In other words, leaders who exemplify intellectual leadership are those that encourage others to reconsider assumptions, use different perspectives, and to look at issues of sustainability in new ways.

Below we will first outline the theoretical framework and develop eight hypotheses. Our hypothetical model is tested using structural equation modeling (SEM) on a representative sample of Norwegian manufacturers (n = 352) with data collected through an online questionnaire. The path model and results are presented before we discuss the findings, implications and limitations of our study.

2. THEORETICAL FRAMEWORK

2.1 Motivation, leadership, and sustainability strategy

Motivation guides behavior – it helps to determine what individuals do, and how they do it (Meyer, Becker, & Vandenberghe, 2004). Self-determination theory is an established theory of motivation in psychology that posits that there are multiple types of motivation that are distinguished by their levels of autonomy and control. Higher levels of autonomous motivation are often preferred because they are associated with better performance for relatively complex tasks (Deci, Olafsen, & Ryan, 2017). Ultimately, according to self-determination theory, behavior is not only dependent on the amount of motivation, but more importantly on the quality of motivation.

Autonomous forms of motivation drive individuals to act based on intrinsic interest inherent in an activity and through identification with the importance of an activity and its goals (Ryan & Deci, 2000). There are two primary types of autonomous motivation: intrinsic and identified motivation. Intrinsic motivation comes from enjoyment and interest inherent in an activity or behavior, while identified motivation is expressed when one identifies with the value of an activity or behavior (Ryan & Deci, 2000). Identified motivation has been found to positively associate with various outcomes such as individual performance (Burton, Lydon, D'Alessandro, & Koestner, 2006), information seeking (Koestner, Losier, Vallerand, & Carducci, 1996), organizational commitment and conceptual understanding (Gagné & Deci, 2005), and behaviors such as civic virtue and altruism (Güntert, 2015), as well as innovative work behavior (Saether, 2019).

For some behaviors, identified motivation may be more fitting than intrinsic motivation, since not all activities necessarily lend themselves to enjoyment, but are rather more congruent with values-based motivation. Identified motivation in relation to sustainability – i.e., personal motivation for sustainability – is inherently linked with environmental values and is expressed when one internalizes the importance of sustainability (Graves & Sarkis, 2018; Sheldon et al., 2016). Recent studies have also supported an association between personal motivation for sustainability with pro-environmental behaviors (Graves & Sarkis, 2018; Graves, Sarkis, & Zhu, 2013; Kaplan & Madjar, 2015). Essentially, by having a personal motivation for sustainability that extends from one's own values, managers are likely to influence the greening of their own organizations (Papagiannakis & Lioukas, 2012; Rivera-Camino, 2012).

Since top managers create firm strategy (Carpenter, Geletkanycz, & Sanders, 2004; Hambrick & Mason, 1984), then those that personally value sustainability and express personal motivation for sustainability will likely include sustainability as an integrated part of firm strategy. Thus, leaders' personal motivation for sustainability should have a direct and positive effect on the likelihood of firms adopting a sustainability strategy.

H1: *Leaders' personal motivation for sustainability will be positively associated with firms' propensity to adopt a sustainability strategy.*

Above we argue that leaders' personal motivations for sustainability are of importance to the sustainability strategy of firms. However, to be able to incorporate sustainability strategies in firms, executives must communicate their values and lead others to put effort into the strategic practices regularly. Strategy development is complex because it needs to consider the turbulence of industry and the changing needs of stakeholders over time. Transformational leadership has been linked to contexts of turmoil and to accelerating levels of change and crisis (Bass, 1985a; Bass & Riggio, 2006). Such situations necessitate development, and transformational leadership is a tool to provide a meaningful vision for the future and inspire employees to perform beyond even their own expectations. Currently, manufacturers are facing a future with unknown environmental regulation and consumer requirements; thus, these industries can be characterized as being in an uncertain environment.

Transformational leadership is possibly the most utilized perspective of leadership in management studies (Lord, Day, Zaccaro, Avolio, & Eagly, 2017). It is composed of 1) *charisma/idealized influence* (leadership that energizes followers and gives them a sense of purpose), 2) *inspirational motivation* (providing followers with meaning and challenges to achieve good for the collective group, firm or society), 3) *intellectual stimulation* (leadership that helps followers to question the common ways of solving problems and encourages novel improvements of methods and solutions to problems), and 4) *individualized consideration* (leadership that tries to understand the individual needs of others and helps them to realize their full potential) (Avolio, Bass, & Jung, 1999; Bass, 1985a). Previous research has shown that leaders' environmentally oriented transformational leadership contributes to firms' green human resource practices (Jia, Liu, Chin, & Hu, 2018) and green psychological climate (Zhou, Zhang, Lyu, & Zhang, 2018), and to employees' autonomous motivation for sustainability and pro-environmental behaviors (Graves & Sarkis, 2018; Graves et al., 2013).

Executives that adopt the transformational leadership style of intellectual stimulation, “may be less willing to accept the status quo and more likely to seek new ways of doing things while taking maximum advantage of opportunities” (Bass, 1985b, p. 38). Such leaders encourage their employees to question established assumptions, to look at problems in new ways, and to focus on developing creative solutions to challenges (Bass & Steidlmeier, 1999). Moreover, when leaders employ the leadership style of intellectual stimulation, they are scanning and evaluating the context in such a way that they are more inclined to discover opportunities to serve the firms’ various stakeholders (Du, Swaen, Lindgreen, & Sen, 2013; Waldman, Siegel, & Javidan, 2006). As such, intellectual stimulation has been found to be a significant predictor of strategically oriented sustainability efforts (Waldman et al., 2006), in that it promotes creativity and whole new approaches to complex problems which may lead to developing untapped competitive environments. Therefore, intellectual stimulation may be the transformational leadership style that is most likely to result in improved, integrated, and effective sustainability strategies that are far-reaching and have a deep impact on their firms as opposed to more superficial or “greenwashing” sustainability strategies.

Motivation informs behavior, and leadership style is a form of behavior. Specifically, leaders’ motivation precedes their leadership style (Kark & Van Dijk, 2007), which suggests a potential association between leaders’ personal motivation for sustainability and the way they lead. Previous studies have investigated the relationship between personal motivation and leadership style and these studies revealed a positive link between autonomous motivation and transformational leadership (Barbuto Jr, 2005; Trépanier, Fernet, & Austin, 2012). Ultimately, leaders who identify with their work as being valuable and important (e.g., personal motivation for sustainability) are likely to exhibit transformational leadership behaviors (e.g., intellectual leadership) for sustainability. Considering the above, we propose the following hypotheses:

H2: *Leaders’ personal motivation for sustainability will be positively associated with intellectual leadership for sustainability.*

H3: *Intellectual leadership for sustainability will increase the propensity of firms adopting a sustainability strategy.*

Based on the relationships proposed in the previous hypotheses, an indirect positive effect of personal motivation for sustainability on sustainability strategy is suggested through intellectual leadership. A manager’s motivation may not be visible, but leadership style is – and so intellectual stimulation will act as a conduit for personal motivation for sustainability and sustainability strategy. Thus, we propose that intellectual leadership will mediate the relationship between personal motivation for sustainability and sustainability strategy.

H4: *Intellectual leadership mediates the relationship between leaders’ personal motivation and firms’ sustainability strategy.*

2.2 Sustainability strategy and firm outcomes

In balancing the three dimensions of corporate sustainability connected to the business, natural environment, and societal aspects (Dyllick & Hockerts, 2002), there are bound to be conflicts of interest. It is unreasonable to assume that the manufacturing industry will go beyond regulatory demands and make radical and costly changes to their business models to benefit external stakeholders' sustainability concerns at the expense of shareholders. Manufacturing firms operate in highly competitive industries and if the adoption of sustainability strategies is perceived as yielding costs instead of economic benefits, as suggested by managers in Christman and Taylor's (2006) study, it is unlikely to be adopted broadly and rapidly. Hence, the question of the economic benefits and financial performance of sustainability strategies becomes pivotal.

Previous research on the relationship between sustainability and firm performance has been inconclusive (Goyal et al., 2013; Hussain et al., 2018). There might be several reasons for this. One of them is that it is methodologically difficult to study this relationship as it takes time for strategic innovations to provide positive economic impact (Hojnik & Ruzzier, 2016) and relevant economic measures for sustainability are underdeveloped (Elia, Gnoni, & Tornese, 2017). Therefore, we have chosen to address the second part of our research question related to the outcomes of sustainability strategies, by dividing it into two dimensions – managers' perceived outcome and the objective financial performance in terms of growth and profitability.

The argument that sustainability strategies could be driving costs is apparent (Waldman & Siegel, 2008). However, research and practice also suggest that in many cases there could be a good business opportunity in taking a sustainable approach, one that clearly outweighs the costs. In justifying sustainability strategies, Dyllick and Hockerts (2002) argue that "corporate sustainability implies a much broader interpretation of the concept capital than is used by either economists or ecologists" (p. 132). In approaching managers, Porter and van der Linde (1995) make a significant effort to build a business case for sustainability. They frame their argument from a competitive point of view and find that both firms and nations could benefit from being frontrunners in the development of making industries more sustainable. Hence, managers could be motivated to adopt sustainability strategies to keep them on the leading edge of an inevitable drive towards sustainability in the industry, to solve their industry's biggest sustainability challenges, and to mitigate business risk from stricter future environmental regulations. The natural-resource-based view (NRBV) (Hart, 1995), is an extension to the resource based view (RBV) and assumes that firms on their own also can achieve competitive advantages by "going green" (Berchicci & King, 2007).

Through this theoretical perspective it is argued that RBV in its attempts to explain competitive advantage "ignored the interaction between an organization and its natural environment" (Hart & Dowell, 2011, p. 1465), and that "it is likely that strategy and competitive advantage in the coming years will be rooted in the capabilities that facilitate environmentally sustainable economic activity" (Hart, 1995, p. 991).

Research has since shown that sustainability strategies are more likely to create better economic performance and value for shareholders if sustainability is integrated with overall business strategy (McWilliams & Siegel, 2001; Siegel & Vitaliano, 2007; Waldman et al., 2006). Porter and Kramer (2006) argue that this is due to firms' increase in innovative capabilities and because it broadens firms' typical scope for innovation. This argument has been empirically supported in later

studies. Bocquet, Le Bas, Mothe & Poussing (2013) and Haanaes et al. (2011) concluded that firms which adopt and integrate sustainability into their overall strategies are more likely to be more innovative in their product and service offerings.

Sustainable strategies' effects on value creation and the ability to solve industries' major challenges are difficult to measure objectively. Therefore, we approach these issues through managers' perceived impacts of the sustainability strategies.

H5: *Firms' sustainability strategies will be positively associated with firms' perceived value creation.*

H6: *Firms' sustainability strategies will be positively associated with firms' perceived impact of initiatives (i.e. their focus on solving the biggest challenges in their industry).*

Even though the relationship between sustainability efforts and financial performance is not conclusive in extant research (Goyal et al., 2013; Hussain et al., 2018), there are recent studies that suggest a positive relationship between sustainability and objective measures of firm performance (Eccles, Ioannou, & Serafeim, 2014; Lartey et al., 2020; Reyes-Rodríguez, Ulhøi, & Madsen, 2016). Eccles and Serafeim (2013) found that firms which strategically focus on sustainability efforts that are the most relevant, or "material" to shareholder value, can increase both financial performance and the positive effects of such sustainability practices.

There are many trajectories in which sustainability strategies might lead to objectively measured firm-level outcomes. When it comes to increased firm profit, the most obvious is increased profitability through improved efficiency relative to inputs. This strategy has a long history in manufacturing and is most often referred to as 'lean and green' (Florida, 1996). The concept refers to the logic that firms can increase sustainability, profitability, and operational excellence through incremental efficiency improvements in the use of input factors such as water, energy, and materials. Whether labelled 'lean and green' or not, this type of improvement program is something that most manufacturing firms implement to stay competitive (Netland & Aspelund, 2013), and it has been shown to increase firms' environmental performance (King & Lenox, 2001) and firm growth (Lartey et al., 2020). Although few studies exist that show the direct effects on profitability (Garza-Reyes, 2015), sustainability strategies that focus on resource efficiency are likely to influence profitability positively.

Regarding firm growth, the resource efficiency strategy will probably not have a great impact on growth of operational income unless it delivers significantly lower costs for consumers. This is because resource efficiency strategies are generally not transparent to consumers. Rather, sustainability strategies that drive growth are more likely to be strategies that entail transparent sustainability performance, such as green certifications and labeling, fair trade, use of sustainable materials, and recycling/reuse options embedded in products, which appeal to the growing market segment of environmentally concerned consumers. This market segment is already significant in size (US\$966 billion globally according to Unilever), and the Nielsen Global Sustainability Report (2015) shows that this segment is growing rapidly and that consumer brands with demonstrated commitment to sustainability grow four times faster than competitors globally. In addition, market research from

McKinsey & Company (2012) shows that concerned customers are willing to pay a significant premium for products that fulfill their expectations about sustainability. These general trends lead us to hypothesize:

H7: *Firms' sustainability strategies will be positively associated with firms' financial performance, in the form of the growth rate of operational income.*

H8: *Firms' sustainability strategies will be positively associated with firms' financial performance, in the form of return on assets (profitability).*

Fig. 1 below provides a visual presentation of the hypotheses in this study.

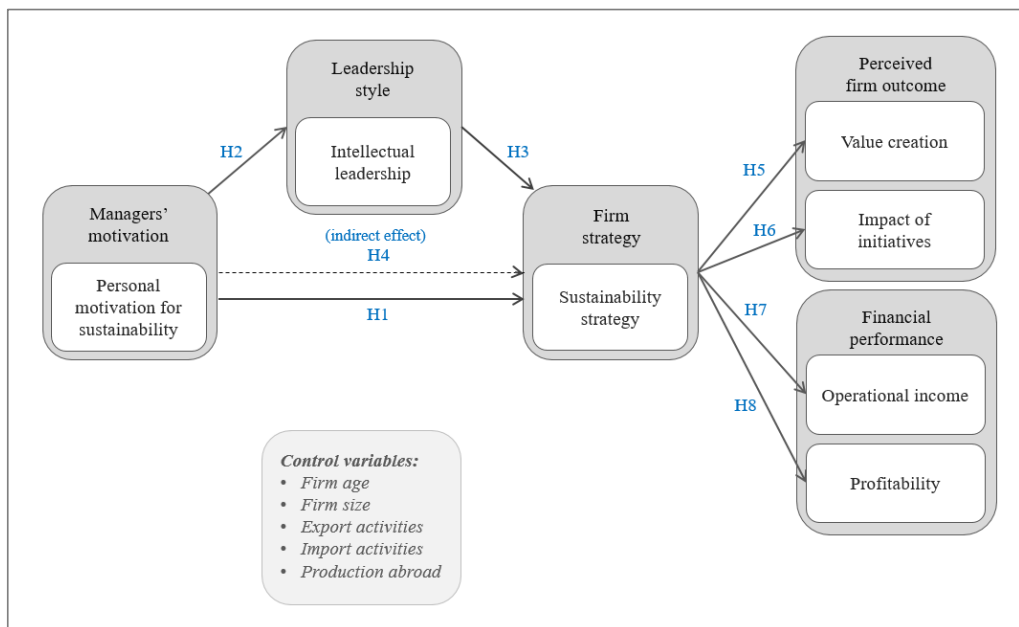


Fig. 1: The hypothesized model.

3. METHOD

3.1 Data

Some studies on the relationship between sustainability and firm performance are based on case studies with convenience sampling (Aspelund, Fjell, & Rødland, 2015; Goyal et al., 2013), which makes it hard to establish external validity. To improve this aspect our study adopted a quantitative approach, targeting the whole population of Norwegian manufacturing firms. The population was identified through the Brønnøysund Business Register that holds all public accounts of Norwegian businesses. The sample included companies listed with NACE codes in group C, Manufacturing, and

thus consists of firms which manufacture a wide array of products, e.g. textiles, furniture, machinery, chemicals, metals, etc.

Firms which had less than five employees in 2015 were excluded, as were those without contact information registered in official registers. The total number of companies in NACE group C with registered contact information and 5 or more employees was 2466. The data collection took place during 2 months at the year end of 2015 and beginning of 2016. To ensure the questionnaire's validity, a pilot study with ten companies was performed prior to distribution. Then, firms were sent an online questionnaire with 110 questions related to their sustainability strategies and leadership. We received 352 fully complete responses resulting in a response rate of 14.3% and ended the data collection in February 2016. We performed a simple comparison between the sample and the population on the descriptive variables we had for all firms (firm size, age, industry code) and within the sample (early or late responder), and we found no significant differences, indicating that the sample was representative for the population.

Subsequently, we completed the dataset with three years of financial data from the year of censoring (2015, 2016, and 2017). This information was obtained from the business information service, Proff Forvalt (forvalt.no), which holds reliable financial accounts of all firms in the population. The sample predominantly consists of SMEs, which is in line with the Norwegian industry profile. The responding firms had on average 80 employees and an annual turnover of approximately 33 million EUR. The survey was addressed to the CEO, or top-level leader and a cover letter noted that if the leader was unable to answer the questionnaire, it should be passed on to someone with responsibility for sustainability. In the final sample, more than 90 percent of valid responses were completed by the top-level leader.

3.2 Measures and control variables

The measures in the study are based on established and validated measures, but where we were unable to identify established measures, we instead developed them from theory related to the core concepts we were seeking to measure. All measures were tested with a reliability analysis (Cronbach's Alpha) and a Confirmatory Factor Analysis (CFA) with maximum likelihood information. All constructs were measured on a 7-point Likert scale ranging from 1 – not at all to 7 – to a great extent. Please see Table B1 in the Appendix for all survey items, reliabilities, and factor loadings.

Personal motivation for sustainability was measured using three items adapted from the identified motivation measure in the "Multidimensional Work Motivation Scale" developed by Gagne et al. (2015). These items captured the leaders' motivation to put effort into sustainability work, which extend from their values concerning sustainability. The leadership style of intellectual leadership for sustainability was measured based on the intellectual stimulation scale in Waldman et al. (2006). It was adapted to specify the leadership style that the respondent and their management team use in relation to sustainability. Questions relating to the dependent variable of sustainability strategy were based on theoretical contributions by Porter and Kramer (2006, 2011) and Willard (2012). This measure intended to capture the depth of firms' strategic foundations when it came to sustainability efforts. The measure on perceived value creation was developed for the purpose of this study. The theoretical inspiration was taken from the seminal work of Dess and Davis (1984), which established

that various strategies have various desired outcomes, such as increased sales, increased market premiums, or strategic market benefits. The final variable on Impacts of Initiatives was also developed specifically for this study. Its objective was to measure the extent to which the sustainability strategies were aimed at solving the biggest challenges in their industry, and if these initiatives were perceived as effective in handling those challenges.

The variables operational income growth rate and return on assets were calculated as percentages based on the annual financial statements (see Appendix A for calculations). The growth rate of operational income was calculated as the percentage change in operational revenue from the accounting year of 2015 until 2017 – providing lagged financial data for the three years after the survey took place. Return on assets was calculated based on the sample firms’ financial statements for the year 2017. As the effects of firms’ strategic measures are unlikely to show up on the financial statements immediately, lagging financial data enables us to capture the potential financial effects of firms’ sustainability strategy over three years.

In addition, we included five control variables – firm age, firm size, and three measures of firms’ international exposure. Firm age was calculated based on a single open-response item indicating the year of establishment of the firm. Firm size was measured by the number of employees in 2015. Firms’ international exposure was measured with three dummy variables relating to the firms’ exporting, importing, and production activities.

3.3 Measurement model

To test the validity and structure of our constructs, we tested our measurement model via CFA with maximum likelihood information. In Table 1, the factor loadings, standard deviations, and alphas of the measures are reported. We allowed no measurement error covariations within or across items or factors. All items loaded significantly onto their respective factors and exhibited loadings higher than 0.5. Cronbach’s alphas (α) for all factors were well above 0.8. The average value extracted (AVE) for the measures was higher than 0.5, and higher than the respective squared factor correlations, signaling that our measures did not have problems with convergent or discriminant validity. To assess the goodness of fit of the measurement model we calculated the standardized root mean squared residual (SRMR) in addition to the root mean squared error of approximation (RMSEA). We also calculated two relative fit indexes, the comparative fit index (CFI) and the Tucker-Lewis index (TLI). The overall fit of the measurement model to our data was satisfactory, indicating that the model fits the data well (SRMR = 0.056; RMSEA = 0.063; CFI = 0.935; TLI = 0.925). Further information is found in Table 1 and B1.

Tab. 1: Factor means, standard deviations, average variance extracted and squared factor correlations

Factor	Mean	SD	AVE	1	2	3	4	5
1. Personal motivation	4.974	0.074	0.885	1.000				
2. Sustainability leadership	4.242	0.079	0.743	0.455	1.000			
3. Sustainability strategy	4.291	0.087	0.771	0.404	0.561	1.000		
4. Value creation	4.314	0.070	0.582	0.214	0.323	0.256	1.000	
5. Impact of sustainability	4.161	0.085	0.896	0.284	0.436	0.369	0.178	1.000

3.4 Common method variance

Common method variance is variance in the collected data stemming from the method of measurement (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Even though common method variance can be limited by various procedural and statistical methods, it is often very difficult to avoid completely (Chang, Van Witteloostuijn, & Eden, 2010), especially when objective data sources are hard to obtain. This is the case for many sustainability measures of Norwegian firms, where there is a lack of reporting schemes concerning sustainability. Survey data collected at a single time point may be subject to common method bias (CMB), although there are disagreements about the severity of it (Chang et al., 2010; Podsakoff, MacKenzie, & Podsakoff, 2012). Nevertheless, we adopt a cautionary approach and explain how we limited its potential below.

To reduce the potential for CMB in the portion of the model based solely on self-report survey measures, we chose to rely on procedural and statistical remedies as outlined by Podsakoff et al. (2012). From a procedural standpoint, we used proximal separation between our predictor and criterion variables in our survey, which helps to eliminate common retrieval cues (Podsakoff et al., 2003). Furthermore, we assured respondents of their anonymity and confidentiality, which can help limit this type of bias even when questions and their responses may be personally sensitive (Konrad & Linnehan, 1995). Also, when possible, we used validated scales, since they are generally less sensitive to CMB (Doty & Glick, 1998).

Statistically, our CFA demonstrated that our model gave good fit to the data, giving confidence that our model was not overtly suffering from CMB (Stam & Elfring, 2008). Seeking more assurance, we chose to specifically test for CMB in our data. We initially performed a Harman's one-factor test (Podsakoff & Organ, 1986) where the resulting single factor model showed an explained variance of 35.77%. Since this factor accounts for less than the majority of variance, it indicates that our data does not considerably suffer from CMB. Furthermore, we also conducted a latent common factor analysis (Podsakoff et al., 2003; Podsakoff et al., 2012), which also revealed that CMB was not a major issue for our model. We found that three items in the value creation-construct may have been slightly affected by common method variance, since their respected loadings were moderately reduced when the common factor was included in the model – this could be a sign of social desirability where the survey-respondent tends to answer in accordance with what he or she believes the researcher is after (Carter & Easton, 2011). However, we did not deem this to be an issue that necessitated item removal, especially, since we felt it would be inappropriate from a construct validity standpoint.

3.5 Analytical approach

We used structural equation modelling (SEM) to test our hypotheses. The rationale for using this method is that it allows for several relationships to be tested simultaneously between constructs, and we can estimate both the direct and indirect effects while also accounting for potential measurement error in indicators. To be able to investigate the indirect relationships hypothesized, we adopted Baron and Kenny's (1986) approach to testing mediation and conducted a Sobel test. To analyze the data, we used Stata IC/15 and SPSS AMOS 26.

We followed a two-step approach described by Anderson and Gerbing (1988), in that we first estimated and studied the measurement model before we performed the full structural model. In the

results and discussion-section we will first describe our findings before discussing the implications and limitations of our results. Lastly, we point to some avenues for future research.

4. RESULTS

4.1 Structural model

After determining the validity and fit of our measurement model, we went on to test the hypotheses. We had hypothesized both direct and indirect relationships in our model (see Fig. 1 for an overview of the hypothesized relationships). To increase the ease of illustration the paths from control variables were not included in Fig. 2. However, control variables were included in the model specification where no residuals were allowed to co-vary. The path model was run with 352 firms with complete data. The structural model showed satisfactory model fit indices (SRMR = 0.067; RMSEA = 0.072; CFI = 0.922; TLI = 0.905). After determining that the structural model adequately fit the data, the statistical significance, direction, and size of the path estimates were examined in order to assess support for the hypotheses. The hypothesized model results and standardized path estimates are illustrated in Fig. 2.

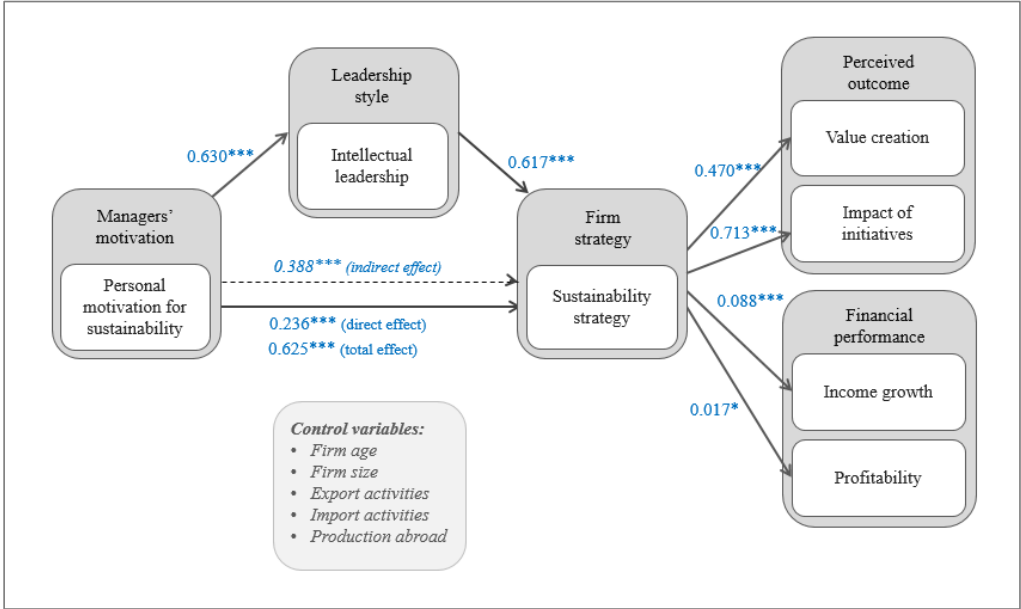


Fig. 2: Model results with standardized path coefficients.

The results indicate that all hypothesized relationships in our model are significant and in line with our expectations. We see a significant and strong direct relationship between leaders' personal motivation for sustainability and firms' strategic sustainability practices. This means that the more a leader is consciously valuing and placing personal importance on sustainability activities and its goals, the more we see sustainability strategies at the firm level.

Intellectual leadership partly mediates the relationship between motivation and sustainability strategy, and the indirect effect linking motivation with sustainability strategy through leadership is stronger than the direct effect. The standardized path estimates from personal motivation to leadership, and from leadership to sustainability strategy both showed strong, positive, and statistically significant effects. To investigate mediation more closely we followed Baron and Kenny's (1986) characterization of mediation effects. All relationships were significant, as were the Sobel test, indicating that we have partial mediation (Baron and Kenny, 1986) or complementary mediation (Zhao, Lynch Jr, & Chen, 2010). This indicates that motivation may impact strategy through leadership behavior, and in our dataset, the indirect effect through intellectual sustainability leadership is stronger than if the manager only exhibited personal motivation for sustainability.

Our findings show that leaders that have personal motivation for sustainability are more likely to lead firms with sustainability strategies. However, firms' strategic positioning on sustainability is not only influenced by their managers' personal motivation, but also of the managers' way of leading their employees. Our dataset shows that leaders' intellectual leadership for sustainability associates with firms that have developed a sustainability strategy.

We uncover a significant, strong, and positive relationships between sustainability strategy and firms' perceived value creation, and between sustainability strategy and firms' impact of sustainability initiatives. These findings suggest that top managers perceive sustainability strategies to be associated with higher value creation and with solving the major challenges of their industry. We also find that sustainability at the strategic level positively relates to the objective firm performance measures of operational growth and return on assets. The results of the objective measures are positive and significant, but weaker than the subjective ones. The results nevertheless indicate that there is a positive and significant relationship between having a sustainability strategy and realizing increased financial performance, but more so on growth than profitability. Table 2 shows the results of the model tests relative to the hypotheses.

Tab. 2: Test of hypotheses with standardized path coefficients

H	Model parameters		Standardized estimate	Critical ratio	
H1	Direct effect	Motivation → Strategy	0.236	4.46***	Supported
H2	Direct effect	Motivation → Leadership	0.630	13.21***	Supported
H3	Direct effect	Leadership → Strategy	0.617	9.65***	Supported
H4	Indirect effect	Motivation → Leadership → Strategy	0.388	8.32***	Supported
H5	Direct effect	Strategy → Value creation	0.470	9.59***	Supported
H6	Direct effect	Strategy → Impact	0.713	11.39***	Supported
H7	Direct effect	Strategy → Income growth	0.088	4.19***	Supported
H8	Direct effect	Strategy → Profitability	0.017	2.40*	Supported

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Finally, there are multiple paths to estimate between the controls and the dependent variables in our hypothesized model, so we present the significant paths in Table 3 and provide an overview of all results in Appendix B, Table B2. Many of the significant paths from control variables showed very small standardized effects. The export-dummy, on the other hand, showed a significant and moderately positive association with sustainability strategy and a strong negative relation to value creation. This indicates that firms that are engaged in international sales are more likely to have

incorporated sustainable efforts at the strategic level, but that they perceive their value creation to be lower. Also, the effect of production abroad had a small, but significant negative effect on profitability, indicating that manufacturing outside of domestic borders is related to lower return on assets.

Overall, the findings from our hypothesized model highlight the importance of managers' personal motivation and an intellectual leadership style for sustainability to be able to increase the incorporation of sustainability efforts at firms' strategic levels. Our results also show that executives' motivation impacts the sustainability strategies of firms through their leadership behaviors. The results further strengthen the argument that sustainability strategies are associated with higher value creation, higher impact of initiatives, and better financial performance in manufacturing firms.

Tab. 3: Control variables' significant paths to dependent variables

Control variables, significant paths	Standardized estimate	Critical ratio
Control Firm size → Strategy	0.001	2.37*
Control Export → Strategy	0.209	2.05*
Control Export → Value creation	-0.340	-3.13**
Control Firm age → Income growth	-0.003	-1.97*
Control Firm size → Income growth	-0.000	-1.99*
Control Production abroad → ROA	-0.095	-2.88**

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

5. DISCUSSION

5.1 Firm performance associated with sustainability strategy

Scholars differ in their view on the direction of causality between sustainability and firm performance, as there are empirical arguments for both (Goyal et al., 2013). This study provides support to the research that indicates a positive path direction from sustainability strategies to firm performance (e.g., Eccles et al., 2014; Reyes-Rodríguez et al., 2016), both perceived and financial. We observed a strong relationship between sustainability strategies and their perceived effects of firm value creation and ability to solve the greatest sustainability challenges in their industries. In other words, integration of sustainability efforts into the core strategies of firms will lead to more value creation and greater impact of firms' efforts at solving the major challenges of their industries, as perceived by managers. These findings support the justification of the business case for corporate sustainability (Dyllick & Hockerts, 2002) and the shared value creation perspective as advocated by Porter and Kramer (2006, 2011) and suggest that being responsible is certainly not at odds with being competitive. Although, the finding for our value creation-construct needs to be interpreted with caution, due to the potential for social desirability, the path estimate between sustainability strategy and value creation was highly significant, and the effect was strong and in the expected positive direction. These are important findings in demonstrating the strength of the relationship – being sustainable in the areas that matter to the firm could also mean the firm is better able to create meaningful product solutions and value for stakeholders.

Firms with a sustainability strategy are also the ones that report the greatest ability to solve the major challenges of their industries (Porter and Kramer, 2011). Incorporating sustainability into the

very essence of what firms are doing will, in other words, make them better at addressing the key challenges that their competitors also face. Sustainable solutions to these challenges could thereby involve competitive advantages (Hart, 1995).

In addition to perceived measures of firm performance our study also included the objective measures of operational income growth and profitability in the form of return on assets. The paths from sustainability strategy to both variables measuring financial performance were small, but significant and in the expected direction. Having a sustainability strategy increases firms' probability of generating minor increases in both income growth and profitability. However, one can ask why the effects on financial data were so weak, and more specifically, why the effect on profitability was weaker than income growth.

There could be several reasons for this. Sustainability strategies that drive income growth are likely to involve transparent sustainability efforts to stakeholders, such as the use of sustainable and recyclable materials, fair trade, green labeling, and certifications. A growing number of customers have been shown to be willing to pay more for products which satisfy their sustainability expectations (McKinsey & Company, 2012; Nielsen Global Sustainability Report, 2015) therefore, this could be argued to be one of the first sustainable efforts firms take. Furthermore, when implementing sustainability strategies, manufacturers may initially be focusing on preventing or reducing costs through efficiency improvements in the use of input factors (e.g. water, energy, and materials), and such effects do not immediately trickle down to the financial bottom line. Thus, the quicker effect is more likely to show up in the form of operational income growth.

Overall, it is methodologically challenging to study the effects of sustainability on firm performance, as it takes time for these types of strategic changes to provide positive economic impact (Hojnik & Ruzzier, 2016). In competitive industries, such as in manufacturing, sustainable technological improvements soon become the industry standard, providing only temporary competitive advantages for the first movers. This is also the reason why we have chosen to utilize both subjective (perceived measures) and objective (annual financial statements) constructs of firm performance in our study. Leaders have deep insight into their firms' operations and often realistic expectations for the performance of their firms, including the potential effects originating from strategic change. Acknowledging that the economic benefits from strategic efforts takes time to materialize, executives' subjective evaluations of the performance of their sustainability strategies could provide a more "correct" picture at a given point in the process.

5.2 Motivation and leadership associated with sustainability strategy

This study provides a novel perspective on the impact of leaders' motivation and leadership style on sustainability strategies among manufacturers. Transformational leadership is assumed to increase the motivation of employees (Bass, 1985a), and intellectual stimulation, specifically, is expected to increase the creativity of employees and inspire them to look at old challenges in new ways. In this paper we studied the motivation of leaders and found that their underlying values for sustainability were linked with leadership behaviors to create sustainable strategies at the firm-level. An intellectual leadership style seems beneficial in situations when the firm is facing complex challenges as it draws on the creative resources of the whole organization (Bass & Steidlmeier, 1999).

Expanding on previous studies that point to motivation and leadership as important elements in sustainability (Blome et al., 2017; González-Benito & González-Benito, 2006; Rivera-Camino, 2012; Waldman & Siegel, 2008; Wesseling et al., 2017) we contribute to the corporate sustainability literature by showing that executives' motivation and leadership style are associated with firms' inclusion of sustainable measures into their core business strategies. In accordance with Waldman et al. (2006) and Christensen, Makey and Whetten (2014) we found that executives' leadership style had a positive association with sustainability strategy. Extending Waldman and colleagues' research we also found that intellectual leadership partly mediated the relationship between personal motivation for sustainability and the firms' incorporation of sustainable strategies, thus providing an explanation for how managers' motivation can influence strategy. Our study supports the leadership literature in showing that a type of transformational leadership (intellectual leadership for sustainability) links to and acts as a mediator between motivation and sustainability strategy, but it also provides evidence that it may be prudent to focus on specific leadership styles, as advocated by Van Knippenberg and Sitkin (2013), rather than using the typical and broad approach of applying transformational leadership as a whole.

Furthermore, according to self-determination theory (Deci et al., 2017), higher levels of autonomous motivation lead to superior performance in complex tasks. Sustainability transition of the manufacturing industry is definitively a complex task. Therefore, more beneficial changes may come about through internal motivation rather than through controlled forms of motivation brought on by external forces like governmental regulation. This is also in line with Porter and van der Linde (1995) who argue that regulation should "create maximum opportunity for innovation by letting industries discover how to solve their own problems" (p. 129).

5.3 Implications

The question of how leaders in manufacturing firms should approach the sustainability challenge is highly pertinent and the current academic literature offers little coherent guidance in how to handle it effectively (Aguinis and Glavas, 2012; Engert et al., 2016; Waldman and Siegel, 2008). Given the inconclusive findings of previous research on the relationship between sustainability and firm performance, and the perceptions of sustainability as driving costs (Christman and Taylor, 2006), many managers have previously conceptualized sustainability efforts as a zero-sum game and regarded such practices as marketing campaigns.

This skeptical tradition that was created as a result of Friedman's (1970) arguments of sustainability could be one of the reasons why the business sector has not been able to adopt sustainable practices fast enough. The present study, however, suggests that it is not the case that sustainability strategies are purely cost drivers. Rather, the findings in this study show that top managements' motivation and leadership behaviors are significantly related to adopting sustainability strategies, and that the adoption of such strategies is not detrimental to firms' performance. Instead, we find the incorporation of sustainability into firms' core business areas to be positively associated with financial performance, perceived value creation, and impact of problem solving initiatives.

This has important implications for managers as their personal motivation for sustainability can contribute to a deeper anchoring of sustainability efforts in firms. Furthermore, based on our study it can be argued that managers can do good, both for their firms and for the world, by following their

own values and standards for sustainability. Such efforts speak to customers and other stakeholders through more meaningful product solutions, and by addressing key challenges in the firms' environments. Furthermore, sustainability strategies may be firms' best bet to guard themselves towards sudden policy changes driven by the rising awareness of the climate crisis as exemplified by the most recent EU-election where voters called for more green policies.

Finally, the initiation of sustainability strategies is both a top down and a bottom-up process. A path to profitable sustainability may start with the motivation of top management, however, the content and the solutions embedded in the strategy may stem from employees. By utilizing intellectual leadership to challenge the employees to come up with novel and more meaningful solutions (e.g. through questioning the assumptions of the reigning industry logic), firms may create more sustainable opportunities for themselves.

5.4 Limitations and future research

Our findings open for some interesting avenues for future research. The present study is based on one dimension of leadership (i.e. intellectual leadership for sustainability) and one form of motivation (i.e. personal motivation for sustainability). More research could be done to provide a more nuanced picture of the role of top managers and to investigate the role of other specific types of leadership and motivation. In order to address these questions, we suggest more longitudinal studies to investigate how top managers influence sustainability strategies and practices over time. We also call for more research to investigate the sources of competitive advantages derived from sustainability in general. Moreover, the present study has some limitations that should be considered. For one, the primary survey data is cross-sectional and based on self-report measures. Therefore, causality cannot be determined, and CMB may be present. To limit the potential for CMB we used objective financial measures for one part of our model; this does not resolve the potential for CMB in the rest of our model, but it does perhaps contribute to a more convincing argument for the influence of sustainability strategy on firms' financial performance. Furthermore, we performed various procedural and statistical remedies to reduce CMB, (outlined in the methods section). Ultimately, we agree with Spector (1994), who claimed that cross-sectional self-report studies are useful in uncovering interesting relationships dealing with organizational behavior. In our case, causal direction is suggested by theory, but our research design cannot exclude the possibility that directionality is reversed.

Future studies could use longitudinal data to establish the directionality and causal ordering of the relationships. They could also use employee evaluations or peer ratings of managers' leadership styles in order to reduce the potential for social desirability of the responses and other common method bias inherent in self-reports. Future studies could also investigate other moderating and mediating variables as our study may suffer from omitted variable bias. This could, for example, help to explain the weak relationships between sustainability strategy and firms' financial performance. Finally, this study is based on a representative sample of Norwegian manufacturers, but it remains to be seen whether the results transfer to other country settings. Unique characteristics of the Norwegian industry could mean that the results may transfer unsatisfactorily, especially to subsistence economies and countries with weak regulatory institutions. Further research is needed in order to establish whether the relationships between sustainability strategies and the perceived outcomes and financial performance can be generalized to other economies and contexts.

6. CONCLUSION

This paper aimed at investigating manufacturing firms' adoption of sustainability strategies and some of their potential outcomes. We studied the relationships between managers' personal motivation for sustainability, their intellectual leadership behaviors to promote sustainability, and firms' efforts to incorporate sustainability strategies into their core business areas. We found that leaders are important for firms' strategic sustainability efforts. The indirect effect in our results suggest that intellectual leadership partially mediates the relationship between motivation and sustainability strategy, providing an explanation for how executives' motivation impacts the propensity of manufacturers to adopt sustainable strategies. This study also observes a positive relationship between the adoption of sustainability strategies and firm performance. This positive relationship is found in four different dimensions, including leaders' perceptions of value creation and impact of initiatives, and to objective measures of income growth and profitability.

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APPENDIX A

Calculation of average total capital:

$$\text{Eq. (A.1) Average total capital} = \frac{\text{Total debt and equity (Jan. 1st)} + \text{Total debt and equity (Dec. 31st)}}{2}$$

Calculation of return on assets:

$$\text{Eq. (A.2) Return on assets} = \frac{\text{Ordinary profit before tax} + \text{Financial expenses}}{\text{Average total capital}}$$

APPENDIX B

Table B.1: Factor loadings, standard deviations, and Cronbach's alpha

<i>Factors and items</i>	<i>Loadings</i>	<i>SD</i>
<i>Personal motivation for sustainability (α= 0.9528)</i>		
Why do you put effort into work to promote sustainability in your company? Because I personally consider it important to put effort into this work	0.944	0.007
Because putting effort into this work is consistent with my values	0.979	0.005
Because putting effort into this work has personal significance to me	0.888	0.012
<i>Sustainability leadership (α= 0.9183)</i>		
We regularly reconsider the assumptions our sustainability strategy is based upon	0.854	0.016
We seek to use different perspectives when we make decisions related to sustainability	0.883	0.014
We encourage employees to look at environmental and social challenges in new ways	0.877	0.015
We often suggest new ways of solving environmental and societal challenges	0.842	0.017
<i>Sustainability strategy (α= 0.8975)</i>		
Sustainability is an inspiration to ongoing improvements in our production	0.804	0.020
Sustainability is integrated into our business strategy	0.916	0.013
Sustainability is a fundamental value for our business	0.893	0.014
<i>Value creation (α= 0.9168)</i>		
How does the company's commitment to sustainability affect the company's: Sales growth (increased volume)	0.828	0.019
Perceived value for the customer (willingness to pay)	0.874	0.016
Customer loyalty	0.867	0.016
Ability to avoid direct competition	0.764	0.025
Ability to introduce new products and services	0.796	0.022
Political goodwill for allocations of social resources (regulations, licenses, permits)	0.504	0.042
Relation to company stakeholders	0.735	0.027
Position as an attractive partner	0.664	0.033
<i>Impact of sustainability initiatives (α= 0.9531)</i>		
Our initiatives for sustainability are aimed at mitigating or solving the biggest challenges concerning sustainability we see in our industry	0.939	0.014
Our initiatives for sustainability are effective ways to mitigate or solve the major challenges of sustainability we see in our industry	0.952	0.014

Table B.2: Control variables' paths to dependent variables

Paths from controls to dependent variables		Standardized estimate	Critical ratio
Controls on leadership	Firm age → Leadership	-0.006	-1.67
	Firm size → Leadership	0.000	1.39
	Export → Leadership	0.103	0.91
	Import → Leadership	0.007	0.05
	Production abroad → Leadership	-0.135	-0.66
Controls on strategy	Firm age → Strategy	-0.0028	-0.82
	Firm size → Strategy	0.001	2.37*
	Export → Strategy	0.209	2.05*
	Import → Strategy	-0.126	-1.05
	Production abroad → Strategy	-0.150	-0.82
Controls on value creation	Firm age → Value creation	-0.001	-0.44
	Firm size → Value creation	0.000	-0.03
	Export → Value creation	-0.340	-3.13**
	Import → Value creation	0.173	1.37
	Production abroad → Value creation	-0.083	-0.44
Controls on impact of initiatives	Firm age → Initiatives	0.003	0.69
	Firm size → Initiatives	0.000	0.74
	Export → Initiatives	0.074	0.53
	Import → Initiatives	-0.191	-1.17
	Production abroad → Initiatives	0.036	0.15
Controls on income growth	Firm age → Income growth	-0.003	-1.97*
	Firm size → Income growth	-0.000	-1.99*
	Export → Income growth	-0.043	-0.82
	Import → Income growth	0.107	1.75
	Production abroad → Income growth	-0.130	-1.41
Controls on return on assets	Firm age → ROA	0.000	0.21
	Firm size → ROA	0.000	0.51
	Export → ROA	-0.035	-1.91
	Import → ROA	0.026	1.21
	Production abroad → ROA	-0.095	-2.88**

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$