



UNIVERSITY
OF TURKU

UNDERSTANDING COLLECTIVE INTERNATIONAL OPPORTUNITY RECOGNITION

Studies on Finnish SMEs exploring
maritime and offshore industry markets
in Norway and Russia

Eini Haaja



UNIVERSITY
OF TURKU

UNDERSTANDING COLLECTIVE INTERNATIONAL OPPORTUNITY RECOGNITION

Studies on Finnish SMEs exploring
maritime and offshore industry markets
in Norway and Russia

Eini Haaja

University of Turku

Turku School of Economics
Department of Marketing and International Business
International Business
Doctoral Programme of Turku School of Economics

Supervised by

Professor Kari Liuhto
Turku School of Economics
University of Turku
Finland

Professor Niina Nummela
Turku School of Economics
University of Turku
Finland

Reviewed by

Professor Tanja Leppäaho
School of Business and Management
LUT University
Finland

Professor Per Servais
School of Business and Economics
Linnaeus University
Sweden

Opponent

Professor Per Servais
School of Business and Economics
Linnaeus University
Sweden

The originality of this thesis has been checked in accordance with the University of Turku quality assurance system using the Turnitin OriginalityCheck service.

ISBN 978-951-29-8005-5 (PRINT)
ISBN 978-951-29-8006-2 (PDF)
ISSN 2343-3159 (Painettu/Print)
ISSN 2343-3167 (Verkkojulkaisu/Online)
Painosalama Oy, Turku, Finland 2020

UNIVERSITY OF TURKU

Turku School of Economics, Department of Marketing and International Business

EINI HAAJA: Understanding collective international opportunity recognition –
Studies on Finnish SMEs exploring maritime and offshore
industry markets in Norway and Russia

Doctoral Dissertation in International Business, Doctoral Programme of Turku
School of Economics, 282 pp., April 2020

ABSTRACT

This doctoral research was triggered by my interest in understanding why some Finnish maritime and offshore sector SMEs engage in a joint entry to new, challenging foreign markets, such as neighbouring Norway and Russia, while others do not. On this basis, the objective of the thesis is to explore the dynamics of the collective international opportunity recognition process among Finnish maritime and offshore industry SMEs that aim at joint internationalisation. This objective is divided into the following research questions: (1) How do individual entrepreneurs recognise collective international opportunities? (2) How do several entrepreneurs together recognise collective international opportunities? (3) How does the collective international opportunity recognition process evolve over time? These questions are answered in four empirical articles that constitute the core of the thesis. The employed theoretical framework builds on three streams of literature: international opportunity recognition, mental images and sensemaking, and network interaction. The qualitative data were collected primarily via biyearly interviews from 2015 to 2017 with representatives of Finnish maritime industry SMEs exploring business opportunities in Norway and Russia.

The thesis contributes particularly to the international entrepreneurship literature by providing insight into collective international opportunity recognition, a process critical to the joint internationalisation of SMEs yet highly understudied. First, by introducing mental images specific to opportunity contexts and by exploring the dynamics of auspicious and ominous sensemaking involved in an individual's recognition of collective international opportunities, this thesis sheds light on the individual-level aspects of the phenomenon. Second, by investigating two forms of inter-firm sensemaking, that is, collective and fragmented sensemaking, the study provides insight into how multiple individuals from different firms come to recognise, together, an opportunity for joint internationalisation. Third, by building on the process-based approach, this thesis provides understanding on the temporal dynamics of collective international opportunity recognition: mental images and sensemaking processes evolve over time through various kinds of events and determine whether managers recognise opportunities for joint internationalisation in the future. In addition, this thesis provides avenues for further research and offers managerial and policy recommendations for supporting the joint internationalisation of SMEs.

KEYWORDS: collective international opportunity recognition; mental image; sensemaking; maritime industry; SMEs; Norway; Russia

TURUN YLIOPISTO

Turun kauppakorkeakoulu, Markkinoinnin ja kansainvälisen liiketoiminnan laitos

EINI HAAJA: Understanding collective international opportunity recognition –
Studies on Finnish SMEs exploring maritime and offshore
industry markets in Norway and Russia

Väitöskirja, kansainvälinen liiketoiminta, Turun kauppakorkeakoulun tohtoriohjelma,
282 s., huhtikuu 2020

TIIVISTELMÄ

Tämä väitöskirjatutkimus sai alkunsa kiinnostuksestani ymmärtää miksi jotkin suomalaiset meri- ja offshore-teollisuuden pk-yritykset lähtevät yhteistyössä kansainvälistymään uusille haastaville markkinoille, kuten Norjaan ja Venäjälle, kun taas toiset eivät. Väitöskirjan tavoitteena onkin tutkia kollektiivisten kansainvälistymismahdollisuuksien tunnistamisen dynamiikkaa sellaisten suomalaisten meri- ja offshore-teollisuuden pk-yritysten keskuudessa, jotka pyrkivät kansainvälisille markkinoille yhteistyössä. Tämä tavoite jakautuu edelleen seuraaviin tutkimuskysymyksiin: (1) Miten yksittäiset yrittäjät tunnistavat yhteisen kansainvälistymisen mahdollisuuksia? (2) Miten useat yrittäjät yhdessä tunnistavat yhteisen kansainvälistymisen mahdollisuuksia? (3) Miten yhteisten kansainvälistymismahdollisuuksien tunnistaminen kehittyy ajan kuluessa? Vastaan näihin kysymyksiin neljässä empiirisessä artikkelissa, jotka muodostavat väitöskirjan ytimen. Tutkimuksen teoreettinen viitekehys yhdistää elementtejä kolmesta tutkimuskirjallisuudesta, jotka ovat kansainvälisten mahdollisuuksien tunnistaminen, 'mielikuvat' (mental images) ja 'järkeistäminen' (sensemaking), sekä vuorovaikutus yritysverkostoissa. Olen kerännyt tutkimuksen kvalitatiivisen aineiston haastatteleamalla Norjan ja Venäjän liiketoimintamahdollisuuksia tutkailevien suomalaisten meriteollisuusyritysten edustajia puolivuositain vuosina 2015–2017.

Väitöskirja edistää erityisesti kansainvälisen yrittäjyyden kirjallisuutta luomalla uutta ymmärrystä kollektiivisten kansainvälisten mahdollisuuksien tunnistamisesta, joka on pk-yritysten kansainvälistymiselle kriittinen, mutta silti vielä varsin tutkimaton ilmiö. Ensinnäkin, tutkimuksen mukaan eri mahdollisuuskonteksteihin liittyvät mielikuvat sekä hyväenteinen ja pahaenteinen järkeistäminen ovat keskeisiä yksilötason elementtejä yhteisten kansainvälisten mahdollisuuksien tunnistamisessa. Toiseksi, yritystenvälisellä tasolla hajautunut ja kollektiivinen järkeistäminen puolestaan määrittävät miten useat yksilöt yhdessä tunnistavat mahdollisuuksia kansainvälistyä yhteistyössä. Kolmanneksi, tämä prosessipohjainen tutkimus avaa ilmiön ajallista dynamiikkaa; miten mielikuvat ja järkeistäminen kehittyvät erilaisten tapahtumien myötä ja vaikuttavat siihen miten johtajat tunnistavat yhteisen kansainvälistymisen mahdollisuuksia tulevaisuudessa. Tutkimus tarjoaa myös jatkotutkimusehdotuksia sekä suosituksia pk-yritysten yhteisen kansainvälistymisen tukemiseksi.

AVAINSANAT: kollektiivisen kansainvälisen mahdollisuuden tunnistaminen; mielikuva; järkeistäminen; meriteollisuus; pk-yritykset; Norja; Venäjä

Acknowledgements

Conducting this research would not have been possible without the support of various people and institutions. Finally I get to express my sincere gratitude to them, even though I cannot name all the numerous people who have guided me along the way. To start with, I want to thank the firms whose representatives shared their views and experiences with me during the research process. This thesis would not exist without their stories and insights, and I wish them all the best in their business endeavours.

I am also highly grateful to the Pan-European Institute and Turku School of Economics for being my home at the University of Turku for more than 10 years. I highly appreciate the support and education provided to me over this time, all of which has brought me to this point. During the years of doctoral research, the projects that we worked on at the Pan-European Institute (*SmartComp – Smart competitiveness for the Central Baltic region*, co-funded by the EU Central Baltic INTERREG IV A Programme 2007–2013, and *Russia's final energy frontier – Sustainability challenges of the Russian Far North*, co-funded by the Academy of Finland grant 277961 and the Japan Society for the Promotion of Science) were of particular importance as I was able to collect and analyse most of the interview data while being employed in these projects. I also want to express my gratitude to the following foundations, whose financial support provided me the possibility to focus at times solely on doctoral studies and research: Fintra-säätiö, Foundation for Economic Education (grant of 9.12.2011), Jenny and Antti Wihuri Foundation (grants of 9.10.2013, 9.10.2016, and 9.10.2018), Pienyrityskeskusten tukisäätiö, TOP-Säätiö, Turun Kauppaopetussäätiö, and Werner Hacklinin Säätiö. In particular, I appreciate the flexibility of the Pan-European Institute and these foundations in enabling me to merge the work at the university, grant research, and parental leaves seamlessly over the past few years, whereby I have had the privilege to proceed in different areas of work and personal life simultaneously.

As regards the individuals that made this thesis possible along the way, my supervisors, Professor Niina Nummela and Professor Kari Liuhto, deserve my warmest gratitude. In particular, I thank Niina for providing me invaluable support and always kind advice in conducting doctoral research, and Kari for years of

collaboration and for trusting me with great responsibilities, for example in research, teaching, and project planning, at the Pan-European Institute. Thanks to you Niina and Kari, I have already had the privilege to gain experience and learn a great deal not only about conducting research but also about other areas of academic work. Moreover, I wish to thank the pre-examiners of this thesis, Professor Tanja Leppäaho and Professor Per Servais, for dedicating their time in giving me valuable feedback, through which I have been able to take this thesis into its final form. In addition, I thank Professor Servais for accepting the invitation to act as the official opponent in the public examination of my dissertation. Worth noting are also all the project partners, seminar opponents, journal manuscript reviewers, and other commentators who have contributed to this research by sharing their views and ideas.

I also want to thank the current and former colleagues at the Pan-European Institute for their support along the way. Special thanks goes to M.A. Hanna Mäkinen, a dear friend and the co-author of the first article in this thesis, and to M.A., M.Sc. Elisa Aro, a dear friend who helped me, for example, with handling the research data. Hanna and Elisa, your kind support in various forms has meant the world to me over the past years, and I hope we can continue working together for many years to come. Thanks also to those professors, teachers, researchers, fellow doctoral students, members of administrative staff at Turku School of Economics, and all others with whom I have had the pleasure to study and work with along this journey.

Last but not least, I want to thank my family and friends in Finnish. Äiti ja isä, kiitos että olette lapsuudesta asti rohkaisseet minua eteenpäin opiskelussa ja tukeneet siinä kaikin tavoin. Väitöskirjaprosessin aikana apunne on ollut korvaamatonta – näiden vuosien kuluessa saimme mieheni kanssa kaksi lasta ja rakensimme talon, eikä väitöskirja olisi nyt valmis ilman äitini Eevan apua lastenhoidossa, eikä kotimme olisi valmis ilman isäni Karin apua rakennustyömaalla. Kiitos myös appivanhemmilleni Annelle ja Tapsalle kaikesta avusta, sekä siskolleni Eijalle ja kaikille ystäväilleni tuesta ja välittämisestä. Lämpimimmät kiitokset kuuluvat kuitenkin omalle perheelleni: Rakas Sami, kiitos että olet aina uskonut minuun ja osaamiseeni. Sinä olet kallioni, jonka viereltä minun on hyvä tavoitella unelmiani. Rakkaat tyttäreni Siina ja Saini, kiitos siitä ilosta, valosta ja voimasta, mitä sädehditte jokaiseen päivääni. Te olette suurin ylpeyden aiheeni ja tärkeintä minulle maailmassa.

Turku, 5th of February 2020

Eini Haaja

Contents

List of original articles	12
1 Introduction.....	13
1.1 The internationalisation of SMEs	13
1.2 Internationalisation in the context of Finnish, Norwegian, and Russian maritime industries	16
1.3 Theoretical positioning of the study	21
1.4 Problem setting	24
1.4.1 Cognitive antecedents of international opportunity recognition.....	24
1.4.2 International opportunity recognition as a collective phenomenon	26
1.4.3 International opportunity recognition as a process.....	27
1.5 The objective and structure of the thesis	29
2 Literature review	32
2.1 International opportunity recognition.....	32
2.1.1 Defining international opportunity	32
2.1.2 Defining international opportunity recognition	35
2.1.3 The role of the individual in international opportunity recognition.....	40
2.1.4 The role of the firm and its environment in international opportunity recognition	44
2.2 Mental images and sensemaking in opportunity recognition...	47
2.2.1 Understanding mental images	47
2.2.2 Understanding sensemaking	50
2.2.3 The role of mental images in opportunity recognition...	52
2.2.4 The role of sensemaking in opportunity recognition.....	56

2.3	Networks in opportunity recognition	59
2.3.1	Understanding interaction in business networks.....	59
2.3.2	The role of networks in international opportunity recognition	61
2.4	International opportunity recognition as a process.....	65
2.5	Synthesising the literature on international opportunity recognition	68
3	Methodology	71
3.1	Research approach.....	71
3.1.1	Critical realist philosophy of science.....	71
3.1.2	Qualitative case study	74
3.1.3	Process-based case study	77
3.2	Research process	79
3.2.1	System-driven abductive path	79
3.2.2	Data generation.....	85
3.2.3	Data analysis	88
3.3	Quality of the study	92
3.3.1	Evaluation criteria.....	92
3.3.2	Limitations of the study.....	99
4	Discussion of findings	102
4.1	How do individual entrepreneurs recognise collective international opportunities?	102
4.2	How do several entrepreneurs together recognise collective international opportunities?	106
4.3	How does the collective international opportunity recognition process evolve over time?.....	108
4.4	Synthesis of the empirical findings	111
5	Conclusions.....	113
5.1	Theoretical contribution	113
5.2	Managerial and policy implications.....	119
5.3	Avenues for further research	125
	References	129

Appendices	141
Appendix 1 Literature review	141
Appendix 2 References of the literature review synthesis	146
Appendix 3 General interview guide	148
Appendix 4 Example of an emergent coding structure	149
Appendix 5 Example of data analysis logic	152
Original articles.....	155

Tables

Table 1	Summary of the four empirical articles	31
Table 2	Definitions of international entrepreneurship	33
Table 3	The domains of critical realism.....	72
Table 4	Redirections of the study	80
Table 5	Background interviews.....	85
Table 6	Template for mental image synchronisation	120
Table 7	Steps to support collective and auspicious sensemaking	122

Figures

Figure 1	Theoretical positioning of the study.....	22
Figure 2	Synthesis on the extant understanding of international opportunity recognition	70
Figure 3	The focus areas of the four articles	89
Figure 4	Synthesis of the elements and dynamics of collective international opportunity recognition	112

List of original articles

- I Mäkinen, H. – Haaja, E. (2018) Are Finnish firms willing to explore the Russian maritime and offshore industry? Perceptions of Finnish SMEs of the Russian market and export collaboration. In: *Russia's Far North: The Contested Energy Frontier*. Eds. V.-P. Tynkkynen, S. Tabata, D. Gritsenko and M. Goto, 147–161. Routledge: London.
- II Haaja, E. (2019) Why do some SMEs engage in joint internationalisation and others do not? Exploring the role of mental images in collective international opportunity recognition. *Journal of International Entrepreneurship* (forthcoming).
- III Haaja, E. (2019) Some see the light and some do not – Understanding the international opportunity recognition of Finnish SMEs in Russia through mental images. *Journal of East-West Business*, Vol. 25 (1), 52–83.
- IV Haaja, E. – Nummela, N. (under review) The flourish, failure and future phases of joint internationalisation: a longitudinal case study on collective international opportunity recognition. *European Journal of International Management*.

1 Introduction

*'The world is full of great and wonderful things
for those who are ready for them'.
(Moominpappa¹)*

1.1 The internationalisation of SMEs

Internationalisation refers to *'the process of increasing involvement in international operations'* (Welch & Luostarinen 1988, 36). Over recent decades, internationalisation has been studied from various perspectives and focusing on different types of firms. While the literature on the international firm has traditionally focused on large, multinational corporations (MNCs), today globalisation also drives small and medium-sized enterprises (SMEs) to engage in international business, whereby they have become active players in global markets (Rialp & Rialp 2001; Ruzzier et al. 2006).

Understanding the internationalisation of SMEs starts from quite different grounds than that of MNCs. Namely, the export behaviour of a small firm is strongly affected by an individual decision-maker, whereas the behaviour of larger firms is more structurally determined (Reid 1981). Moreover, the structures and processes of smaller firms are generally seen to be less rigid, sophisticated, and complex than those of larger firms. In particular, however, small firms differ from their large counterparts in that they usually face more internal and external constraints in business internationalisation because of their more limited capital and management system and due to the lack of time, experience, and information resources, for instance. (Rialp & Rialp 2001) They may face barriers such as difficulty in selecting reliable distributors, a lack of negotiating power, the poor organisation of exports department, the inability to access information, and only

¹ In the book *Moominpappa at Sea* (Jansson 2018, 58).

brief international experience, all of which challenge their internationalisation attempts in relation to large firms, which have broader capabilities and resources for entering foreign markets (Paul et al. 2017).

To overcome their resource scarcity, SMEs must rely on their networks to acquire external resources (Jarillo 1989; Partanen et al. 2018). Particularly organisational relationships established by the firm with its suppliers, distributors, and customers, for instance, provide access to market, human, reputational, and physical as well as technical resources that facilitate internationalisation (Andersson & Sundermeier 2019), allowing them to also share costs and risks (Welch et al. 2000). Since internationalisation is a demanding process, it often actually requires collaboration with other firms, sometimes even with competitors, whereby firms can benefit from each other's resources (Chetty & Wilson 2003; Luo 2004) and, consequently, find and develop new international opportunities (Kock et al. 2010).

While international business scholars have conceptualised the internationalisation of SMEs with influential theories and models such as the Uppsala internationalisation model, innovation-related models, network approaches, and the resource-based approach (Ruzzier et al. 2006), the research field titled 'international entrepreneurship' highlights the importance of opportunities and seeks to understand how to, when to, and why internationalise a business activity by discovering and exploiting opportunities in foreign markets (Zahra & George 2002; Jones et al. 2011). International entrepreneurship is a research field positioned at the intersection of the international business and entrepreneurship literature (McDougall & Oviatt 2000; Zahra & George 2002). While the first studies in international entrepreneurship, in the early 1990s, focused on born globals which did not fit the incremental internationalisation theories, scholars in the field today study a broad range of topics related to the internationalisation of both new and established ventures (Zahra & George 2002; Jones et al. 2011).

Given the widely acknowledged resource scarcity of SMEs and their need to often engage in inter-firm collaboration in order to enter new markets, surprisingly few studies have investigated international opportunity recognition as a collective phenomenon: how do multiple entrepreneurs together come to recognise an international opportunity? When internationalisation builds on an opportunity that can only be materialised in collaboration – a collective opportunity – it also needs to be recognised together in interaction, building on shared interests and on resources that can be shared (cf. Schweizer et al. 2010; Mainela 2012). Such collective international opportunity recognition is necessary for several SMEs to start entering a foreign market together and to continue the efforts towards it as success may not be achieved overnight. Indeed, when the

foreign market entry is dependent on inter-firm collaboration, the entrepreneur and the firm have to commit both to internationalisation and inter-firm collaboration in order to succeed in business internationalisation (Nummela & Pukkinen 2007). Before such commitment can emerge, all partners must together recognise the opportunity and act upon it.

Even though collaboration is of great importance to the internationalisation of SMEs, these underlying processes by which firms engage in and possibly continue collaboration for starting or expanding activities in foreign markets remain largely understudied. In particular, understanding collective international opportunity recognition requires further understanding on three aspects. Firstly, what are the underlying cognitive antecedents of international opportunity recognition? Despite the growing number of international business scholars highlighting the need for research on decision-makers' decision styles and cognitive processes (e.g. Zahra et al. 2005; Maitland & Sammartino 2015; Chandra 2017), much remains to be explored concerning the mental images and sensemaking processes through which entrepreneurs recognise opportunities in different contexts, including collaboration settings and foreign markets (e.g. Mitchell & Shepherd 2010). Secondly, how does international opportunity recognition emerge as a collective, inter-firm phenomenon that builds on the interaction of several people? The creation of collective opportunities for new business requires interaction to recombine the resources of several actors (Mainela 2012), but how the views of several actors with their own sensemaking processes come to interaction and are influenced by this interaction remains underexplored (Maitlis 2005). Thirdly, to provide true insight into the joint internationalisation of SMEs, collective international opportunity recognition needs to be studied via processes through which an individual person recognises an opportunity, processes through which multiple individuals recognise it collectively, and processes through which both these evolve over time along with opportunity development, exploitation, and the emergence of subsequent opportunities. Such process perspective has gained modest attention in prior research on international opportunity recognition, and much also remains to be explored in this respect (Zahra et al. 2005; Chandra et al. 2009; 2015; Lindstrand & Hånell 2017; Wood et al. 2017). This thesis aims to fill these gaps by exploring collective international opportunity recognition in a multi-layered, process-based empirical setting.

Indeed, despite these needs for further research in the extant literature on SME internationalisation and international opportunity recognition, the initial trigger for this doctoral research emerged as I noticed the phenomenon – how some SMEs together recognise opportunities for joint internationalisation and others do not – as a mysterious real-life issue. Therefore, this introductory chapter continues with presenting the research context of the study, that is, Finnish SMEs exploring

collective international opportunities in the Norwegian and Russian maritime and offshore markets, whereby the purpose of the study is further concretised. Then, the chapter proceeds to describing the theoretical positioning of the thesis, followed by the problem setting and specification of the targeted research gaps based on the selected fields of literature. The chapter concludes with a presentation of the research objective, the related research questions, and the structure of the overall doctoral thesis.

1.2 Internationalisation in the context of Finnish, Norwegian, and Russian maritime industries

Internationalisation is often the key to growth for SMEs, particularly in countries such as Finland, where the home market is rather limited, and exports are of great importance to the whole national economy. However, for SMEs, internationalisation requires considerable effort, risk-taking, new know-how, and possibilities for new financial arrangements, whereby succeeding in international markets depends on hard work, excellent timing, and sometimes also on good luck (PKYB 2018; PKYB 2019). Less than 10% of Finnish SMEs operate in international markets (Rikama 2017), and approximately 10% of Finnish SMEs have also utilised public internationalisation services² that provide them support in entering new foreign markets (Liski 2017). The five most important export countries for Finnish SMEs are Sweden, Germany, Norway, Russia, and Estonia (Finnvera 2018).

As regards different sectors, the maritime industry is one of the most important fields of economy in Finland and is also of great importance to Finnish exports. The industry's turnover has grown from EUR 6.5 billion in 2007 to EUR 8 billion in 2018, of which 90% are exports. Today the industry employs 30,000 people, and the approximate 1,000 companies in the industry comprise firms of various sizes and types, including marine equipment manufacturers, turnkey

² For example, the joint internationalisation projects supported by the Ministry of Economic Affairs and Employment of Finland and the Centre for Economic Development, Transport, and the Environment provide SMEs more efficient ways to promote exports than doing such projects individually – firms can share costs, participate in international fairs as a part of a larger and more credible entity, and widen their collaboration networks, whereby most of the participating firms gain new export sales as a result (Kinnunen 2015). Another example are the growth programmes of the Team Finland network that started to run by state-funded Finpro ry in 2014–2015. The aim of these programmes was to increase the internationalisation, international network integration, and exports of Finnish SMEs by compiling firms from the same industry into collaboration. Since 2018, a new organisation titled Business Finland provides Finnish firms with national innovation, internationalisation, and export promotion services. (Liski 2017)

suppliers, design offices, system suppliers, software providers, and shipbuilding, ship repair and offshore yards. (Finnish Marine Industry 2018; Vähäheikkilä 2018)

The maritime industry is highly cyclical in nature – for example, the financial crisis in 2008 stalled the building of new ships, which, for several years, threatened the existence of the whole Finnish shipbuilding industry. Moreover, during the past two decades, global shipbuilding has largely shifted from Europe to Asia, particularly to China, Japan, and South Korea. The increasing competition has forced the Western industry networks to specialise in niche areas and to develop high-tech expertise, for which European shipyards remain market leaders in the production of certain vessel types: cruise vessels, passenger ferries, icebreakers, and offshore vessels. (Pääkkönen 2011; Eerola 2017) The European maritime technology industry, comprising the shipbuilders together with their suppliers, remains the global leader in terms of the aggregated production value of shipbuilding and ship-systems production even though the shipbuilding production in Europe in terms of gross tonnes and deadweight tonnes is low (European Commission 2017).

However, when global competition also started to emerge in the high-technology areas of shipbuilding, the Finnish maritime industry started to seek new directions for future development. In the early 2010s, specialisation in arctic technologies and selling expertise in international markets was among the top priorities (e.g. Johansson 2013). At the time, relatively rapid industrialisation and economic development was taking place particularly in the northern parts of Norway and Russia, driven by oil and gas extraction in the coastal and offshore fields as well as expectations regarding the increasingly accessible Northeast Passage (ABF 2016), generating demand for foreign expertise. Indeed, arctic expertise was even considered to emerge as the ‘new Nokia’ for Finland (YLE 2012), and the internationalisation of Finnish maritime sector firms to the markets with such demand, particularly Norway and Russia, was strongly promoted. However, Norway and Russia constituted very different kinds of markets for foreign operators in the maritime sector; the Russian maritime sector was state-driven, stagnated, and in need of rapid modernisation (Laaksonen & Mäkinen 2013), whereas the booming and highly competed Norwegian maritime sector was characterised by state-of-the-art technology and strong international networks (Junnelius & Laaksonen 2013).

Taking a closer look at Russia, this neighbouring country has traditionally been a highly important trade partner for Finland (Finnvera 2018). As the holder of the largest Arctic continental shelf and unexplored hydrocarbon resources, Russia plays an important role in the development of the Arctic region and the Northern Sea Route. Russia has been considered to provide plenty of opportunities for foreign businesses in the process of materialising its ambitious development plans

in the maritime sector, such as opportunities in ship design, device, software and service provision, and various other fields of expertise in arctic maritime knowhow (Laaksonen & Mäkinen 2013; Mäkinen 2015). Naval engineering and armament are at a rather high level in Russia, but the civilian shipbuilding is modest, unable to satisfy the domestic demand, and uncompetitive in international markets. This is due to a scarcity of investments, a lack of highly qualified engineers, financial conditions, and problems with insurance, for instance. The Russian Federation has approved the state programme for the development of the shipbuilding industry by 2030 through the promotion of scientific research in marine technologies and modernisation of the shipbuilding capacity (including the creation of the United Shipbuilding Corporation, the largest and fully state-owned shipbuilding company in Russia that handles more than 80% of the national shipbuilding industry), but the development is neither rapid nor easy. Although the state measures have supported the development of the industry, and the demand for domestic civilian vessels has increased, the Russian market still depends on an imported supply. (Tulyakova et al. 2017; Efimova & Sutyurin 2019)

Moreover, the crisis in Ukraine, that is, the annexation of Crimea by the Russian Federation and the Russian military intervention in Eastern Ukraine in 2014, resulted in a series of international sanctions and counter-sanctions by the Western countries and Russia. The EU banned the exports of arms, dual-use products for military clients, and certain products related to the exploration for and production of deep-water arctic oil and shale gas projects. During the first three years of sanctions, the Russian imports declined, which was also a result of the low price of oil, the ruble's depreciation, and the decreasing demand, all of which influenced Russia's trade development. Despite the sanctions, the Russian economy was already recovering in 2017 as the ruble strengthened, and Russian imports from all countries increased, including countries that maintained sanctions. (Korhonen et al. 2018) However, the uncertain market situation had driven many Finnish firms to search for potential export markets elsewhere, yet some were and still are interested in entering Russia. (Finnvera 2018)

Norway, in turn, has traditionally been and remains an attractive target for Finnish firms in the construction, oil, gas, and energy industries, and the state of Finland has actively promoted the internationalisation of Finnish firms to Norway (Finnvera 2018). The maritime industry constitutes the second largest field of exports in Norway (15% of total exports) after the oil and gas sector, and partnering with the globally networked Norwegian maritime industry operators might open up doors for foreign actors to business not only in Norway but also around the world (Henriksson & Huhtinen 2013). Particularly the Norwegian offshore industry has been under extensive development, and substantial

investments have been directed into the related technology development, research, and education in order to ensure adequate resources for its needs. However, the Norwegian maritime sector suffers from labour costs that are higher than in most other maritime economies. Moreover, the low price of oil has also had an impact on the Norwegian maritime industry; the offshore segments have experienced extremely challenging market conditions since 2014, resulting in the stalling of large offshore projects and in a reduction in the demand for offshore service vessels, for instance. (OECD 2017)

Nevertheless, the Norwegian ship owners' revenues from markets outside Norway account for about 60% of total revenues, whereby shipping companies and also some offshore shipping companies continue to order new ships despite the challenging home market conditions. Particularly the latter consider the Norwegian shipyards for newbuilds, for which the Norwegian offshore shipping segment is of great importance for Norwegian shipyards and suppliers. The investment rate in the offshore shipping segment is also expected to slowly pick up, which will feed the order books of Norwegian shipyards and their suppliers. Moreover, Norway is currently investing in developing an increasingly green and digitalised maritime industry under private ownership. (Think Ocean 2018) Such recovery and planning are likely to also generate business opportunities for foreign maritime and offshore sector suppliers.

To summarise, particularly the general economic downturn, the low price of oil, and the economic sanctions have slowed down the investment projects in the European High North over the past few years. In the Russian maritime and offshore sector, which was partly exposed to the export sanctions by the EU, the sanctions have concretely prevented the exports of some products and complicated some Russian customers' access to international financing, for example. In Norway, the drop in oil price around the same time caused the stalling of large northern investment projects, likewise limiting business opportunities for foreign operators despite the underlying demand for their expertise. Even though the demand for foreign expertise and capacity remains in these markets, all this has resulted in the hesitance of foreign businesses to explore opportunities in Norway and Russia. Moreover, relatively small Finnish maritime sector firms should join together in order to provide large and demanding foreign customers with full solution packages and to create true customer value (Andrésen et al. 2013). Entering either the Norwegian or Russian market requires collective financial muscle and customer service capacity from foreign firms, further increasing the challenges and the effort required for successful entry.

How did foreign firms react to these downward conditions in these already somewhat challenging markets? The answer is quite heterogeneously – for example, after the EU set sanctions on Russia, Finnish firms had quite varying

reactions to the situation. According to a survey conducted in 2015 among Finnish business representatives doing business in Russia (VKB 2015), approximately one-third of them continued expansive actions by increasing their marketing and sales operations in Russia, one-third made no changes to their existing operations, and one-third reduced their operations by cutting staff as well as sales and marketing activities in Russia. Then, how come some firms still wanted to continue exploring business opportunities in Russia and some did not? In general, why do some recognise opportunities in a context where others do not? Moreover, given that the internationalisation to these markets often requires collective muscle in the form of expertise, skills, resources, capacity, and reputation, how do SMEs recognise the opportunity of exploring new markets together and start working on it in collaboration?

To add a temporal aspect to this interesting phenomenon, the market conditions both in Finland and in foreign markets have changed since 2015. In 2015, the German Meyer family bought full ownership of the STX Finland shipyard in Turku, which was a major employer in the region. Its customers started to believe in the yard under its new ownership, and the yard managed to get the order books filled for several years soon after. This boosted the domestic markets in the industry, creating more business and opportunities for the Finnish maritime industry SMEs in their home market. (Eerola 2017) For example, the order book of Meyer Turku Shipyard is filled up at least until 2024, providing plenty of work to its wide supplier network in Finland and abroad and also necessitating future-oriented investments to enable meeting the production schedules (Finnish Maritime Cluster Yearbook 2019). The economic upturn around Europe has also generated new European business potential, for which Finnish maritime industry SMEs now have more opportunities to choose from. Hence, the business environment in the maritime and offshore sector looks, only a few years after, different from what it was in 2015. According to the survey repeated in 2017 among Finnish firms operating in Russia (VKB 2017), more than half of the respondents now expected their operations to grow there during the coming half-year (in contrast to one-third stating the same in 2015). Thus, if the Finnish SMEs in 2015 had varying reactions to their changing business environment, how have they since reacted to all these changes and to the emerging opportunities in different markets, and why? How do they recognise and continue the exploration of opportunities for joint internationalisation in the long run? This evolving real-life phenomenon constitutes the initial trigger and core of this doctoral thesis.

1.3 Theoretical positioning of the study

The initiation and continuing of joint internationalisation among multiple firms originally caught my attention as I was involved in research projects that analysed the competitiveness and internationalisation of Finnish maritime sector SMEs. Given the SMEs' varying reactions to joint internationalisation opportunities, I wanted to take the inquiry further in my doctoral research to truly understand why some firms engage in joint internationalisation, and others do not. Conceptualising this real-life phenomenon and creating a theoretical framework for approaching it took place as an abductive process, which is described in detail in section 3.2.

Eventually, the theoretical conceptualisation for the studied phenomenon was found in the international entrepreneurship literature and in the concept of opportunity recognition, particularly that of collective opportunity recognition (Mainela 2012). To employ further insight also regarding the subjective as well as inter-firm aspects of the phenomenon, three streams of literature were eventually merged to form the theoretical framework for exploring the phenomenon in this thesis – it builds on prior international entrepreneurship research on opportunity recognition while also employing elements of the literature on mental images and sensemaking as well as network interaction and mobilisation. Thus, the phenomenon of interest, collective international opportunity recognition, is studied at their intersection. The theoretical positioning of the study is presented in Figure 1. Each of the three fields are briefly described next, and a detailed discussion on them follows in Chapter 2.

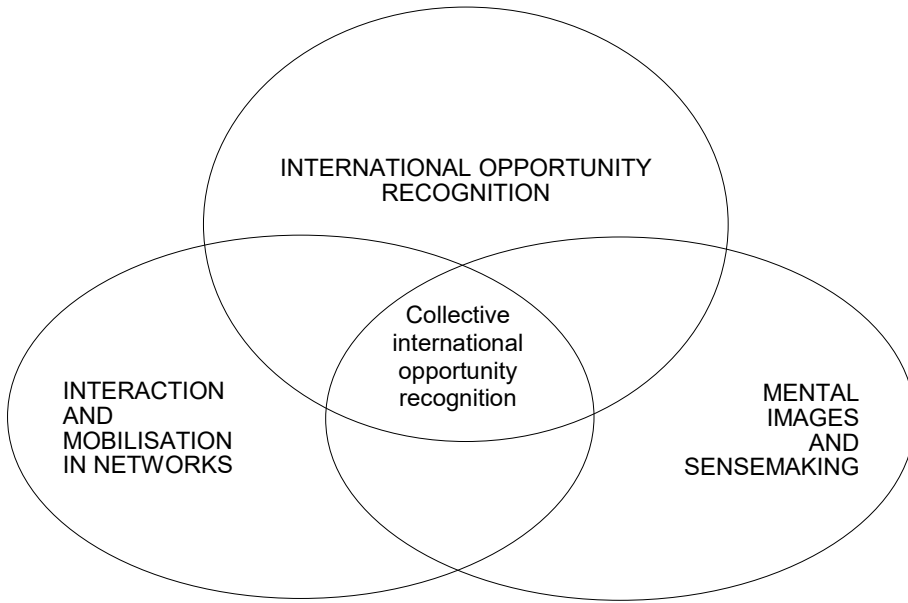


Figure 1 Theoretical positioning of the study

International opportunity is a central concept in international entrepreneurship. The recognition of international opportunities has been widely acknowledged as an important element in understanding the internationalisation behaviour of firms (Oviatt & MacDougall 2005; Zahra et al. 2005; Johanson & Vahlne 2009; Ellis 2011), and therefore, this and its associated processes have gained a great deal of attention from international entrepreneurship scholars. However, the plenitude of research on opportunity recognition deriving from different philosophical and conceptual starting points has resulted in ambiguous and fragmented conceptual development (Jones et al. 2011; Mainela et al. 2014; Muzychenko & Liesch 2015).

Nonetheless, it is widely accepted that an entrepreneur's recognition of an opportunity precedes internationalisation (Chandra 2009) and that we must study the individual-opportunity nexus in order to understand the entrepreneurial processes leading to internationalisation (Shane & Venkataraman 2000). On this basis, numerous studies have explored the characteristics, competences, and cognitive qualities of entrepreneurs to understand why some, and not others, recognise and act upon opportunities to enter foreign markets. At the same time, researchers have investigated what kind of firm characteristics and capabilities as well as environmental characteristics influence the recognition and exploitation

of international opportunities. The findings of all these studies shed light on the complex opportunity recognition phenomenon from different perspectives.

While the recognition of opportunities is a highly subjective phenomenon, I find it necessary to also employ psychology-rooted insight in studying it. Therefore, the prior literature on opportunity recognition is in this thesis complemented with the concepts of mental image and sensemaking. Mental images are information structures representing information on what the actor is doing, why and how, and what kind of progress is being made (Mitchell & Beach 1990). An individual's decision-making is based on the existence and compatibility of multiple, interlinked images of his/her circumstances (Beach & Mitchell 1987). In the entrepreneurial context, entrepreneurs create subjective images to represent circumstances as potential opportunities and make predictions about the attractiveness of those opportunities based on the images. When managers attempt to interpret and understand host locations, they use their mental models to frame what information is sought, how and when it is collected and analysed, and which information is acted upon (Maitland & Sammartino 2015).

Sensemaking, in turn, is the cognitive process through which mental images are utilised in comprehending circumstances. Sensemaking is the process through which people make sense of new, possibly confusing and chaotic issues or events that somehow violate their expectations and which they consider so significant and important that they require such attention (Weick 1995; Maitlis & Christianson 2014). In sensemaking, the individual views and structures the environment in light of his/her existing mental images, interprets the situation, and acts upon the circumstances accordingly (Weick et al. 2005). Through sensemaking, mental images evolve as the individual understands the circumstances in a new way and acts thinkingly. These actions, in turn, may alter the circumstances and trigger new sensemaking (Maitlis & Christianson 2014). In an organisational context, scholars have also introduced concepts such as sensegiving, which refers to attempts to influence the sensemaking of others toward a preferred understanding of the organisation's reality (Gioia & Chittipeddi 1991; Maitlis 2005), whereas sense-receiving refers to how individuals receive and internalise the sensegiving of others (Hoyte et al. 2019). Consequently, while sensemaking is a subjective process, we cannot ignore the inter-personal aspects related to it.

In fact, to also conceptualise this collective aspect of international opportunity recognition, I complement the aforementioned perspectives with literature on network interaction. A network is the framework of business relationships within which various kinds of interactions take place between various actors, and at the same time the network is a constantly evolving result of these interactions (Håkansson 1987; Håkansson & Waluszewski 2013). Internationalisation is pursued within a network (Johanson & Vahlne 2006), and the importance of networks has

been highlighted in international entrepreneurship research, particularly as a source of information, ideas, and opportunities for individual firms and entrepreneurs (Chandra et al. 2009; Chandra et al. 2012). Recently, scholars have also started to view inter-firm relationships not only as sources of input to opportunity recognition but as situated at the core of opportunity development – international entrepreneurship can be seen as a process of the co-exploitation of opportunities among a network of entrepreneurial actors in international markets (Chandra et al. 2015), and international opportunity development is a process of interacting in relationships to create shared interests (Mainela et al. 2014). Thus, this lens viewing individual entrepreneurs as a part of a wide network of more or less important relationships allows us to understand their thinking and actions as a part of a large, dynamic jigsaw puzzle.

1.4 Problem setting

The theoretical perspectives discussed above provide a useful framework for understanding the studied phenomenon, yet all also have their limitations and shortcomings. While utilising the useful insight gained so far in these fields of research, this thesis also aims at contributing to the related research gaps, particularly in the study of international opportunity recognition. Research on international entrepreneurship has flourished in the past two decades, and one of the guiding questions has been regarding why some people and not others identify and pursue particular international entrepreneurial opportunities (Shane & Venkataraman 2000). The answers have, however, been rather fragmented and the progress in solving this question, thus, limited (e.g. Chandra et al. 2015). This thesis attempts to tackle the following shortcomings in the international entrepreneurship literature: (1) the modest exploration of the cognitive antecedents of international opportunity recognition; (2) the lack of investigating international opportunity recognition as a truly collective, inter-firm phenomenon; and (3) the lack of examining the phenomenon from a truly process-based perspective.

1.4.1 Cognitive antecedents of international opportunity recognition

The cognitive processes underlying internationalisation decisions remain underexplored and poorly understood despite the growing number of international business scholars highlighting the need for research on decision-makers' decision styles, biases, and cognitive processes (e.g. Zahra et al. 2005; Maitland & Sammartino 2015; Chandra 2017). For example, recent empirical

investigations have shown that extant entrepreneurship theory is incomplete as it lacks an understanding of impulse-driven, non-deliberate, and relatively non-reasoned actions in entrepreneurship. Entrepreneurship research tends to focus on the reasoned, consciously driven and judgemental logic underlying action, and the presence and impact of non-reasoned and impulse- or stimulus-driven thinking underlying action remain underexplored aspects of the individual-opportunity nexus. The fact that individuals also make impulse-driven actions challenges the incremental opportunity recognition → evaluation → exploitation paradigm. (Lerner et al. 2018)

To comprehend the cognitive aspects of international opportunity recognition beyond objective evaluation and judgement, this study openly investigates the subjective mental images and sensemaking at play when individual entrepreneurs identify and enact potential opportunities. Zahra, Korri, and Yu (2005) suggest that understanding how entrepreneurs construct their mental models of the global competitive arena and identify their own niche there is one of the most fertile avenues for further research in international entrepreneurship, for instance through carefully researched case studies. As a particular example, Mitchell and Shepherd (2010) call for research to investigate how images of self, or other types of images, such as those of the environment, institutions, and other actors such as entrepreneurial teams and family members, affect entrepreneurs' opportunity images (i.e. what constitutes an ideal opportunity for me). Grégoire, Cornelissen, Dimov, and van Burg (2015), in turn, call for research on how, when, and why cognitions change. For instance, is it due to the entrepreneur's own maturation, or is it related to the environment in which he/she acts? How does this change influence entrepreneurial decisions, actions, and outcomes? On this basis, mental images influencing opportunity recognition are in this thesis approached broadly, involving the investigation of different image dimensions (including the self, the environment, the team) and image development as a result of continuous sensemaking concerning the changing environment and the entrepreneur's own circumstances.

As an important, potential source of bias in extant research, cognitive studies in entrepreneurship also tend to focus on the processing of ideas that turn out to be exploited business opportunities. However, it is impossible to forecast the value of opportunities beforehand, whereby examining the full range of entrepreneurial ideas under consideration and tracking their evolution would present a much less biased representation of entrepreneurial cognitions. (Hill & Birkinshaw 2010) This also suggests taking a broader and more open approach to understanding the cognitive process of opportunity recognition, and, when studying the thinking preceding, during, and after the recognition of an international opportunity, I do not distinguish between opportunities that actually materialise as profitable

opportunities and those that do not materialise or which do not turn out to be profitable. It is the recognition of a sensed opportunity that is of interest, not the opportunity itself.

1.4.2 International opportunity recognition as a collective phenomenon

Numerous studies have also highlighted the role of business networks in international opportunity recognition by showing that other actors in a firm's network constitute important sources of social capital and thereby influence the entrepreneur's international opportunity recognition, development, and exploitation (Chandra & Wilkinson 2017; Lindstrand & Hånell 2017). While the entrepreneur-centric view (e.g. Johanson & Vahlne 2009; Blankenburg Holm et al. 2015) has dominated prior research on international opportunity recognition, and the system-approach (e.g. Chandra & Wilkinson 2017; Mainela et al. 2018) has been gaining attention recently, it is surprising how few studies investigate opportunity recognition at the inter-firm level as dyadic interaction between two or more actors. Complex entrepreneurial opportunities often require the contribution of multiple actors to be transformed into viable business (Venkataraman et al. 2012), yet people and firms around the focal entrepreneur are active agents with their own views of opportunities, all evaluating whom to collaborate with and for what.

Collective opportunities would neither exist without the partners' interaction nor could they be exploited without the contributions of the collaborators. Opportunity as an object of collective action depends on shared interests that are built through action and interaction (Schweizer et al. 2010). The creation of collective opportunities for new business is an emergent process that requires interaction to recombine the resources of several actors (Mainela 2012) and convincing others of the better scenario and narrating the value of something novel, for instance (Mainela et al. 2015). From this outset, SME internationalisation may not depend only on the individual entrepreneur recognising international opportunities but on the collective recognition of opportunities among multiple entrepreneurs and firms. As interesting examples of the few empirical studies that investigate collaborative entrepreneurship, Andresen, Lundberg, and Wincent (2014) identify opportunity conceptualisation dialogue, resource mobilisation, and legitimacy-building as collective sub-processes taking place between the collaboration initiative and the resulting entrepreneurial venture, and Chandra, Styles, and Wilkinson (2015) argue that opportunity co-exploitation requires a strategic fit between the opportunity portfolios of several entrepreneurial actors. However, these prior studies do not go deeper into how multiple entrepreneurs or managers recognise or fail to recognise collective opportunities. To advance the

understanding on collective international opportunity recognition, this thesis combines and compares the views of several individuals involved in such a process (cf. Mainela et al. 2014).

When looking at prior studies of mental images in this respect, the interaction of mental models between individuals also seems a rather understudied phenomenon. There is emerging research on team entrepreneurial cognition and team mental models, for instance, but it tends to focus on intra-firm operations instead of inter-firm interaction. Moreover, the team mental models refer to shared views between the team members (Lim & Klein 2006), whereas for understanding the collective opportunity recognition process, and the lack thereof, the non-shared, controversial elements in the members' subjective mental images are also of high importance. In line with this, relatively little is known about the dynamics of sensemaking when different parties engage in such activities or about the ways in which the accounts they generate are reconciled or not. At the same time, most of what is known about interactive sensemaking among organisation members comes from studies on sensemaking under crisis or other kinds of intense pressure, while little is known about how heterogeneous parties interact in subsequent, ordinary sensemaking processes over extended periods of time. (Maitlis 2005) More research is needed on how sensemaking and sensegiving take place in interaction among multiple individuals, also across organisational boundaries and in less dramatic circumstances, and this thesis aims at shedding light on these dynamics by studying the collective recognition of collective international opportunities.

1.4.3 International opportunity recognition as a process

Coviello and Jones (2004; 2005) have suggested incorporating the role and influence of time in the study of entrepreneurial internationalisation, and they call for process research on international entrepreneurship. Entrepreneurial opportunity recognition in general has received plenty of attention from the process perspective (e.g. Lindsay & Craig 2002; Pech & Cameron 2006; Wood et al. 2017), yet the processual nature of the concept remains far less studied within international opportunity research. For instance, Chandra, Styles, and Wilkinson (2009) define the recognition of first-time international entrepreneurial opportunities as a process and state that empirical studies have so far given scant attention to the process perspective. However, when studying it themselves, their data build on retrospective case company interviews, not process data, and the findings are limited to defining factors that influence whether international opportunities are discovered or sought, producing no dynamic theory on the process evolvement. In fact, based on my literature review (see Appendix 1), only

a few of the extant empirical studies on international opportunity recognition can be defined as process-based studies, that is, building on process data and developing process theory (Welch & Paavilainen-Mäntymäki 2014; e.g. Blankenburg Holm et al. 2015; Chandra et al. 2015), although many articles describe the need for process-based research on the phenomenon and even claim to contribute to understanding the process.

Zahra, Korri, and Yu (2005) suggest that research applying the cognitive perspective to international entrepreneurship would particularly benefit from processual studies in seeing how certain mental models influence the pace, speed, and mode of internationalisation and, how, in turn, mental models change as a result of internationalisation. Muzychenko (2008) states that current research suffers from the tendency to investigate only actual behaviours, while researchers should identify the antecedents of entrepreneurial opportunity identification competence. Additionally, Santos-Álvarez and García-Merino (2010) note that much remains to be explored concerning the preliminary process of processing information in opportunity recognition, for example. To understand the overall opportunity recognition, the actual process, and its antecedents, there is a clear need for careful process-based studies.

Furthermore, supporting an even longer process perspective, it remains a largely overlooked question as to how firms are able to exploit business opportunities after the first international entry has been made (Lindstrand & Hånell 2017). Prior studies on opportunity recognition have almost solely focused on first-time international opportunity recognition although researchers have long referred to its possible impact on the development of subsequent opportunity recognition (e.g. Chandra et al. 2009; Wood et al. 2017). Researchers tend to focus on generating single opportunity explanations (Dimov 2007; Ellis 2011) and overlook the historical dynamics of opportunity development in an entrepreneur's career through failures and successes, that is, how one opportunity may influence the recognition of subsequent opportunities (Chandra et al. 2015; Wood et al. 2017). Recent research suggests that it is time to move from a single-opportunity to a multiple-opportunity lens, and scholars producing process models of opportunity recognition acknowledge the potential recognition of further opportunities. Thus far, however, only a few empirical studies have actually investigated the identification and evaluation of first-time as well as subsequent international opportunities (e.g. Oyson & Whittaker 2015, Zaefarian et al. 2016, and Chandra 2017; Wood et al. 2017 as an example of multiple opportunity evaluation concerning opportunities in general). To continue this emerging stream and fill this important methodological research gap, this thesis is conducted as a process-based study aiming at understanding the recognition of multiple business opportunities over time.

1.5 The objective and structure of the thesis

Inspired by this topical phenomenon and the aforementioned gaps in the related academic literature, this doctoral thesis aims at *exploring the dynamics of the collective international opportunity recognition process within SMEs that aim at joint internationalisation*. This objective is further divided into the following research questions:

1. How do individual entrepreneurs recognise collective international opportunities?
2. How do several entrepreneurs together recognise collective international opportunities?
3. How does the collective international opportunity recognition process evolve over time?

Through answering these questions, this doctoral thesis provides deep understanding on the complex process of collective international opportunity recognition and also new insights in the literature on international entrepreneurship, mental images and sensemaking, and network interaction. Simultaneously, the study enlightens the views and perceptions of Finnish SMEs on the business environment particularly in the maritime and offshore market context in Norway and Russia and provides concrete examples of the joint internationalisation paths to these markets and managerial recommendations on how such internationalisation could be further supported.

This doctoral thesis is an article-based dissertation, comprising the introductory part and four original, empirical articles. This introductory part presents the motivation and objective of the whole research and synthesises the findings and contributions of the four articles. The articles, in turn, explore collective international opportunity recognition deeper, each building on the findings of the preceding one and thus contributing to answering the research questions of the thesis from different angles. The articles are presented in Table 1.

This introductory part is divided into five chapters. After this chapter, the thesis continues with a detailed literature review on international opportunity recognition, mental images and sensemaking, and networks in Chapter 2. While international opportunity recognition is at the core of the theoretical positioning, the latter two fields are presented from the perspective of their relevance to international opportunity recognition, followed by insight into how it is conceptualised as an evolving process. As a conclusion to the chapter, this prior knowledge is summarised as a synthesis of the influential aspects and central dynamics identified as relevant to international opportunity recognition.

Chapter 3 introduces the research methodology, starting with the philosophical starting point and the general research approach. Then I present the empirical data generation and describe how the data analysis was conducted for each article. The chapter is concluded with an evaluation of the trustworthiness of the study.

The empirical findings of the study are presented in Chapter 4. The discussion is structured according to the aforementioned three research questions, whereby I respond to the questions one by one. The chapter concludes with a synthesis of the key findings.

Chapter 5 summarises the overall contributions of the thesis. Theoretical contributions are presented first, after which the managerial recommendations derived from the research are compiled. The dissertation ends with a discussion on the most promising avenues for further research.

Table 1 Summary of the four original articles

	Article 1	Article 2	Article 3	Article 4
Title	Are Finnish firms willing to explore the Russian maritime and offshore industry? Perceptions of Finnish SMEs of the Russian market and export collaboration	Why do some SMEs engage in joint internationalisation, and others do not? Exploring the role of mental images in collective international opportunity recognition	Some see the light and some do not – Understanding the international opportunity recognition of Finnish SMEs in Russia through mental images	The flourish, failure, and future phases of joint internationalisation: A longitudinal case study on collective international opportunity recognition
Author(s)	Hanna Mäkinen & Eini Haaja	Eini Haaja	Eini Haaja	Eini Haaja & Niina Nummela
My contribution	50%	100%	100%	80%
Publication status	Published in 2018	Published online in 2019, forthcoming	Published in 2019	Under review
Book/ Journal	<i>Russia's Far North: The Contested Energy Frontier</i> . Eds. V.-P. Tynkkynen, S. Tabata, D. Gritsenko, and M. Goto, 147–161. Routledge: London.	<i>Journal of International Entrepreneurship</i> . DOI: 10.1007/s10843-019-00253-4.	<i>Journal of East-West Business</i> , 25 (1), 52–83. DOI: 10.1080/10669868.2018.1519493.	<i>European Journal of International Management</i>
Objective(s)/ Research question(s)	Are Finnish SMEs willing to (1) explore the Russian maritime and offshore industry and (2) explore the possibilities for export collaboration with other companies?	Why do some entrepreneurs recognise collective international opportunities, while others do not? What distinguishes collective international opportunity recognition from the recognition of opportunities without collective involvement in domestic markets?	Firstly, how do managers' mental images of the Russian market affect Finnish SMEs' opportunity recognition in Russia? Secondly, how are these mental images shaped?	How does collective international opportunity recognition evolve over time, into and beyond experiences of success and failure?
Method	Qualitative study	Qualitative study	Qualitative, embedded case study	Qualitative, embedded case study
Contribution to the thesis	Presents the real-life phenomenon and introduction to the overall study	Addresses particularly research questions 1 and 2	Addresses particularly research questions 1 and 3	Addresses particularly research questions 2 and 3

2 Literature review

2.1 International opportunity recognition

2.1.1 Defining international opportunity

When entering foreign markets, firms are confronted with cultural, economic, institutional, and political settings that may differ from those that they are familiar with (Hohenthal et al. 2003). Entering foreign markets involves uncertainty and lack of knowledge (Johanson & Vahlne 1977) as foreign environments are relatively difficult to predict and control in comparison with local environments (Nowiński & Rialp 2016). Due to psychic distance (Johanson & Vahlne 1977) and outsidership (Johanson & Vahlne 2009), it generally takes time and effort to build international networks (Schweizer et al. 2010), and noticing opportunities tends to be more difficult in international settings than in domestic ones (Butler et al. 2010). On this basis, a specific stream of research, international entrepreneurship, creates new perspectives on how, when, and why entrepreneurs discover and exploit opportunities in foreign markets and thereby internationalise their business activities (Zahra & George 2002).

International entrepreneurship researchers have built much on international business and entrepreneurship theories, and, hence, this relatively young field of research is positioned at their intersection (McDougall & Oviatt 2000; Zahra & George 2002). The first studies emerged at the end of 1980s, focusing on venture types and internationalisation (Jones et al. 2011). The researchers focused on the growing role of young entrepreneurs' new ventures, the so-called born globals, which did not fit the extant understanding of businesses becoming international gradually over time as they accumulate resources to go global. Through the 1990s, studies explored the motivations for, the patterns of, and the pace of internationalisation by new ventures that often become active players in the global economy soon after birth. After almost a decade, the umbrella of international entrepreneurship started to also embrace the importance of international entrepreneurship in established firms – it is not only new firms that foster innovation, support venturing, and encourage risk-taking. (Zahra & George 2002)

To date, international entrepreneurship research covers a number of themes, such as venture types and patterns of internationalisation, networks and social capital in entrepreneurial internationalisation, and cross-country comparisons of entrepreneurship (Jones et al. 2011). Many such issues have already been under the focus of entrepreneurship and international business, but the uniqueness of international entrepreneurship research stems from the interplay of these theoretical views (Zahra & George 2002). While international entrepreneurship has been defined in multiple ways (see Table 2), a widely accepted definition by Oviatt and McDougall (2005, 540) presents it as *'the discovery, enactment, evaluation, and exploitation of opportunities – across national borders – to create future goods and services'*, highlighting the role of opportunities.

Table 2 Definitions of international entrepreneurship

<i>'a combination of innovative, proactive and risk-seeking behaviour that crosses national borders and is intended to create value in organisations'</i>	Oviatt & McDougall (2000, 903)
<i>'the discovery, enactment, evaluation, and exploitation of opportunities – across national borders – to create future goods and services'</i>	Oviatt & McDougall (2005, 540)
<i>'the process of creatively discovering and exploiting opportunities that lie outside a firm's domestic markets in the pursuit of competitive advantage'</i>	Zahra & George (2002, 261)
<i>'behavioral processes associated with the creation and exchange of value through the identification and exploitation of opportunities that cross national borders'</i>	Styles & Seymour (2006, 134)
<i>'the cognitive and behavioural processes associated with the creation and exchange of value through the identification and exploitation of opportunities that cross national borders'</i>	Peiris, Akoorie, & Sinha (2012, 296)

The literature on the concept on entrepreneurial opportunity in general has become vast and accompanied by a number of different associated processes (Short et al. 2010), resulting in considerable ambiguity and a multitude of definitions (Davidsson 2015; Angelsberger et al. 2017). The same challenge complicates the research on international opportunities although the recognition of international opportunities has been widely acknowledged as an important element in understanding the internationalisation behaviour of firms (Oviatt & MacDougall 2005; Zahra et al. 2005; Johanson & Vahlne 2009; Ellis 2011). Recognising international opportunities implies that an entrepreneur located in a domestic market recognises an opportunity located in a foreign market (Angelsberger et al. 2017). International opportunity has been defined as an acknowledged possibility of conducting exchange with new foreign partners, such as customers, distributors, or joint venture partners (Ellis 2008) or, more generally,

as *'the chance to conduct exchange with new partners in new foreign markets'* (Ellis 2011, 101). Mainela, Puhakka, and Servais (2014) describe how international opportunity can be divided into innovation opportunities and arbitrage opportunities, where the former refers to new solutions or technologies and the latter to fulfilling unsatisfied market needs with existing solutions in a new context. In addition, according to Muzychenko and Liesch (2015, 705), international opportunity is *'the likelihood of conducting exchange with new or existing partners, such as foreign intermediaries or foreign customers, in new international markets'*, indicating that international opportunities may also be recognised with existing customers in new markets abroad.

In more detail, the international entrepreneurship literature distinguishes between the following two types of international opportunities: (1) those that entail novel resource combinations through the combination of internationally dispersed resources and (2) those that entail novel market combinations by leveraging existing resources into new markets. Hence, besides foreign customer relationships, international opportunities are related to, for example, exploiting foreign-based resources through international outsourcing, technology transfer, human resource recruitment, and international partnerships. (Di Gregorio et al. 2008) For instance, Kock, Nisuls, and Söderqvist (2010) identify key opportunities, including access to international distribution networks, access to international contacts, reputation, and an increase in international knowledge, as well as other secondary opportunities, including an increase in international activities, reduced costs, increased speed of internationalisation, piggybacking on a partner's international reputation, increased product range, finding product niche, and sharing customers' inquiries. In contrast, however, Ellis (2011), for example, suggests a more restricted view by highlighting the importance of new international exchange with new partners in new foreign markets and states that while the firm's entry into a new market qualifies as an entrepreneurial act (or opportunity), the subsequent entries into the same market, even involving new partners, are less entrepreneurial. In the same vein, Chandra, Styles, and Wilkinson (2009) state that opportunities such as revising price or advertising strategy, purchasing raw materials at suddenly lower prices, or outsourcing a production capability to reduce costs should be considered as non-entrepreneurial opportunities as they do not lead to new means-ends relations but only modifications to the existing ones.

Hence, views on what should be considered as opportunities have become rather fragmented, while research on international opportunity has recently grown rapidly. Mainela, Puhakka, and Servais (2014) summarise how this research has separated into the following four streams: (1) the realisation of international opportunities in international new ventures and multinational companies,

focusing on factors influencing the process; (2) international market arbitrage discovery as the basis for international business, focusing on strategies and orientations regarding international market entry; (3) context-embedded international opportunity development over entrepreneurial processes, focusing on the role of entrepreneurial activity across different contexts; and (4) international opportunities resulting from actions and interactions in daily activities, focusing on opportunities developed in the very process of acting in internationalisation. This fourth view underlines the collective nature of international opportunity – in addition to the information flows that take place through network ties, interaction with others in the network creates new combinations of information and resources that may lead to new business opportunities. Through interaction and learning, firms are also more likely to commit to realising the opportunity together. (Mainela et al. 2014)

With interest in the fourth view, this thesis focuses on opportunities that entail novel market combinations through the acquisition of new, foreign customers (new means-ends combinations and solely new ends), yet the informants of this thesis also consider various secondary, indirect opportunities as being of great importance (new means whereby new means-ends combinations can be achieved). Moreover, given the process-based perspective, this study is also interested in the recognition of international opportunities that relate to subsequent entries in a foreign market towards new customers, for instance, thus focusing not only on international entry but on international expansion and on maintaining the presence in the market as well. On this basis, international opportunities are here defined as direct chances to conduct new exchange with partners in foreign markets as well as chances that support the creation of these exchange relationships, such as possibilities to get in touch with potential foreign customers or to participate in collaboration initiatives that are expected to help in meeting the needs of these customers.

2.1.2 Defining international opportunity recognition

Besides opportunity, a central aspect of international entrepreneurship is the entrepreneur's recognition of an opportunity, which precedes internationalisation (Chandra 2009). Namely, to understand entrepreneurial processes, we must study the opportunities, the individuals, and their fit – that is, the individual-opportunity nexus (Shane & Venkataraman 2000).

Chandra, Styles, and Wilkinson (2009, 31–32) define the recognition of first-time international entrepreneurial opportunities as *'the way people and firms discover opportunities to enter international markets for the first time, or to go into other international markets, and how and why they decide to exploit them'*. ... *'We describe*

opportunity recognition as a process that consists of both discovery as well as deliberate and systematic search'. Hence, they incorporate both the discovery of and search for opportunities in the definition. Grégoire, Barr, and Shepherd (2010, 415) emphasise the cognitive aspect in detail by defining opportunity recognition as *'efforts to make sense of signals of change (e.g., new information about new conditions) to form beliefs regarding whether or not enacting a course of action to address this change could lead to net benefits (for instance, in terms of profits, growth, competitive jockeying, and/or other forms of individual or organizational gains).'* Chandra, Styles, and Wilkinson (2012), in turn, introduce the continuity aspect and view opportunity identification and development as a cyclical process in which opportunities simulate subsequent ones through the gained learnings and exposure to new information, resources, and network ties. As a consequence, besides cognitive complexity, they see path dependence as a dimension affecting the pattern of international opportunity identification, refinement, development, and commitment to international markets. (Chandra et al. 2012)

Despite these related and complementary views, a widely accepted conceptualisation of international opportunity recognition has yet to emerge (Jones et al. 2011; Mainela et al. 2014; Muzychenko & Liesch 2015). The recognition of international opportunity is a concept surrounded by considerable ambiguity, and researchers often also fail to present what they mean with the term international opportunity or international opportunity recognition (Muzychenko & Liesch 2015). Different verbs related to international opportunity recognition (such as opportunity perception, recognition, development, identification, and discovery) are used interchangeably to label the process (sometimes even within a single study) and describe the relevant entrepreneurial activities, although opportunity recognition is the term generally used in the international business literature (Ardichvili et al. 2003; Renko et al. 2012; Muzychenko & Liesch 2015).

Perhaps the largest controversy concerns the ontology of opportunities in terms of whether they exist in the environment as waiting to be discovered (predominant view among positivist/realist North American researchers) or whether they are enacted depending on how the entrepreneurs perceive and make sense of their circumstances (predominant view among the social constructionist European researchers) (Gartner et al. 2003; Venkataraman et al. 2012; Angelsberger et al. 2017). A slightly different controversy concerns the Kirznerian, Schumpeterian, and Knightian views of entrepreneurial opportunities: the Kirznerian view sees entrepreneurship as a discovery process, the Schumpeterian view sees entrepreneurship as an innovation process, and the Knightian view sees entrepreneurship as an uncertainty bearing process.

Although these debates continue, all these views describe different aspects of the same underlying entrepreneurial process (Chandra et al. 2009), and recently

some scholars have admitted and embraced the co-existence of multiple aspects in the study of international opportunity recognition. According to Chandra, Styles, and Wilkinson (2009), opportunity recognition is composed of both discovery and deliberate search, and both aspects are, in turn, involved in the process. Johanson and Vahlne (2006), for their part, find it meaningless to make a distinction between opportunity recognition and development since those are interactive and gradual processes. Furthermore, following Oyson and Whittaker (2015), entrepreneurs discover international opportunities by knowing and/or also imagining them, whereby potential opportunities are first discovered and then transformed into concrete ones through creation. According to Klein (2008), opportunities are not discovered or created but fully imagined – they exist only in the minds of entrepreneurs. There are also controversial views on whether, or to what extent, other aspects, such as opportunity evaluation and exploitation, are included in or attached to the term recognition. Nevertheless, despite the multiplicity of aspects identified constituting the entrepreneurial process, it is broadly accepted that opportunity exploitation is preceded by the entrepreneur becoming somehow aware of the opportunity and by evaluating its suitability for him or her. According to Tang, Kacmar, and Busenitz (2012), the entrepreneur first believes in the existence of an opportunity and then evaluates whether it is an opportunity for him/her or some other actor. Then, if the opportunity is judged to be positive, and the entrepreneur is willing to bear the related uncertainties, the entrepreneur will exploit the opportunity by engaging in entrepreneurial action. In more detail, Ardichvili, Cardozo, and Ray (2003) suggest that opportunity recognition involves perceiving specific needs and resources, discovering a potential fit between them, and creating a business concept through which they can be matched. Then, opportunity recognition overlaps with opportunity evaluation and development processes, which follow repeatedly before the opportunity is materialised.

The highly different views of what opportunities are stems, in large part, from different philosophical assumptions: the formal and substantive conceptions of entrepreneurial behaviour. The traditional, formal view of opportunity as a chance to profitably introduce new goods, services, raw materials, markets, and organisational methods emphasises the objective existence of opportunities. This view has lately been challenged due to its inapplicability to individual cases and for the fact that it can only be fully articulated and explained retrospectively. Instead of such a bird's-eye level view, the other, substantive conception of opportunity view takes the perspective of individual entrepreneurs, accepting that opportunities are created by entrepreneurs. Opportunities represent a stream of continuously developed and modified ideas, they cannot be separated from the individual, and they are intertwined with the entrepreneur's beliefs and imagination. While the formal (realist) view is interested in how entrepreneurs

should act, the substantive (constructivist) conception aims at making sense in an inductive manner of how they indeed act. (Dimov 2011)

Between the objective and subjective world views, the critical realist view has recently entered the discourse (Ramoglou & Tsang 2016), and this mid-view is also applied in this thesis. According to the critical realist view, opportunities are unrealised abstract possibilities that need to be realised. They emerge at the following three levels: First, endless possibilities exist and can be found in the 'real world'. Second, in the 'actual world', un-actualised possibilities exist and can be found. Third, in the 'empirical world', which is the observable reality for the entrepreneur, there are possible opportunities that can be evaluated, enhanced (e.g. through market intervention), and actualised through action (e.g. mobilising resources or taking marketing efforts). At this third level, subjective opportunity beliefs (and their revisions) are of great importance, meaning the degree of confidence the entrepreneur has of the presence of an opportunity. (Chandra 2017) Thus, the critical realist view accommodates the key insights of subjectivism with empiricism by accepting the socially constructed nature of social reality as well as the propensities of the real world (Ramoglou & Tsang 2016). While the critical realist view has also been criticised for a lack of clarity regarding opportunity construct (Davidsson 2017a), and even the use of the whole opportunity concept for its confusing conceptions (Kitching & Rouse 2017), this thesis accepts the simultaneous existence of the real world and the empirical world in which opportunities are born – objective elements of the real world constitute potentially profitable means-ends combinations that can be subjectively sensed by individuals and then realised into business opportunities through enactment.

Consequently, employing the critical realist view and acknowledging the involvement of various aspects involved in or linked to the recognition of opportunities, international opportunity recognition is in this thesis viewed broadly as an iterative and complex process comprising interwoven aspects of search, discovery, imagination, and creation, and overlapping with evaluation, development, and exploitation. Following Venkataraman, Sarasvathy, Dew, and Forster (2012), who introduce entrepreneurship as 'a science of the artificial', opportunities are made as well as found, they are not only about new combinations but also about transformations, and they involve artefacts that ensue from the actions and interactions of the entrepreneurs and their stakeholders. They are not given but rather contingent and designed. (Venkataraman et al. 2012) Moreover, by taking a multiple opportunity perspective, I align with recent studies suggesting that the process of international opportunity development also involves a cycle of entrepreneurial learning that stimulates further intentions for opportunity development (Chandra et al. 2012; Peiris et al. 2013). Opportunities are

not recognised in isolation but as a part of a series of past and simultaneous opportunity considerations. Along the learning process that emerges through the recognition and exploitation of multiple opportunities, it is also important to notice that firms which have discontinued exporting to international markets should not necessarily be considered as failure cases or as poorly committed; instead, as entrepreneurship is about the discovery and exploitation of profitable opportunities (Shane & Venkataraman 2000), it may sometimes seem more profitable for managers to just focus on exploiting opportunities in their domestic markets in order to be successful (Crick 2003).

Indeed, Grégoire, Barr, and Shepherd (2010) distinguish between opportunity recognition and evaluation and state that an entrepreneur may recognise an opportunity and still come to a conclusion that acting upon it does not constitute an opportunity for him/her and his/her firm. Namely, the central question in recognising and enacting opportunities is whether the opportunity is an opportunity for 'me' (Mitchell & Shepherd 2010). Furthermore, prior studies also suggest that both deliberate and impulse-driven actions (Lerner et al. 2018) as well as emotions, such as anger, fear, and happiness (Ivanova et al. 2018), influence opportunity beliefs and entrepreneurial outcomes, for which it is important to acknowledge that not all considerations or actions are based on rational reasoning but that other forces are also at play when entrepreneurs enact opportunities in their surroundings.

With all these aspects involved, opportunity recognition is clearly a complex and easily confusing phenomenon to study, yet a broad understanding of it allows an open-minded approach to studying collective international opportunity recognition. I build on the term recognition since it is the term most commonly used to describe the phenomenon in international business and as it can be seen to encompass various aspects: the processes of making sense of the surroundings, discovering needs and resources in the setting that constitute the basis for the opportunity, imaging and creating the opportunity as a relevant business concept, and evaluating whether it is an opportunity for 'me'. From this perspective, the term recognition does not limit the exploration to any specific aspect of the overall phenomenon. In addition, opportunity recognition overlaps with opportunity development and exploitation, but the main focus of this research is in understanding the recognition – how it takes place before and aside opportunity development and exploitation. In this thesis, international opportunity recognition is defined as an individual entrepreneur discovering him/herself in circumstances which lead him/her to imaginatively create opportunities in a foreign market that he/she finds worth pursuing, developing and materialising. The role of the individual and that of his/her firm and environment in opportunity recognition will be discussed in detail next.

2.1.3 The role of the individual in international opportunity recognition

A plethora of studies on international opportunity recognition have focused on the entrepreneur's or manager's qualities and characteristics and their impact on whether and how specific individuals, and not necessarily others, recognise international opportunities. In particular, prior research has widely examined the role of the entrepreneur's knowledge and competence in international opportunity recognition. When operating in specific foreign markets, entrepreneurs gain experiential knowledge about the environment, which enables them to discover new opportunities in the market, enhancing their commitment to the market and thereby activities in the internationalisation process (Johanson & Vahlne 1977). Information on patterns of changing conditions, for instance in relation to economic, demographic, political, social, or technological circumstances, may constitute a source of opportunity recognition (Baron 2006).

Nordman and Melén (2008) focus on individuals' different kinds of knowledge – particularly international and technological knowledge – as factors influencing the proactive or reactive behaviour in discovering and exploiting foreign market opportunities. They define international knowledge as knowledge about conducting business in an international setting and about managing relationships with foreign counterparts. Technological knowledge, in turn, is defined as experiential knowledge about the technology underlying the firm's products. Firm founders and managers with high levels of both international and technological knowledge (termed 'born industrials') tend to have structured internationalisation strategies, whereby their opportunity discovery is driven by proactive behaviour. Firms with low levels of international knowledge but high levels of technological knowledge (termed 'born academics') do not have a structured internationalisation strategy but behave reactively and therefore discover opportunities by chance. Born industrials also exploit the discovered opportunities more rapidly by committing more resources to foreign markets, whereas born academics exploit opportunities more incrementally. However, at the same time, born academics are more open to discovering more unexpected opportunities as they are not constrained by structured search activities.

In line with Nordman and Melén (2008), Chandra, Styles, and Wilkinson (2009) argue that firms with little or no prior international knowledge tend to discover initial internationalisation opportunities. In contrast, firms with extensive prior experience and knowledge both discover and also deliberately search for their first international opportunities. Later on, Vandor and Franke (2016) argue that cross-cultural experience involving knowledge about customer problems, markets, and ways to serve them contributes to the discovery as well as cognitive creation of international opportunities. Zaefarian, Eng, and Tasavori (2016) also notice a

positive relationship between a family entrepreneur's prior knowledge and international opportunity identification and highlight the important role of prior knowledge of the surrounding network and of the family members working in the firm in the identification of international opportunities. Interestingly, however, Kontinen and Ojala (2010) do not see a direct relationship between the prior knowledge of the firms and their international opportunity recognition when studying the international opportunity recognition of family-owned SMEs. On the contrary, they find that new, external sources of information – particularly trade exhibitions where people can easily share essential knowledge and find business partners – form the primary context for the international opportunity recognition of these SMEs.

As regards competence and capabilities deeper than knowledge, Andersson and Evers (2015) suggest that dynamic managerial capabilities, including managerial cognition (i.e. how managers conceptualise information and make decisions on that basis), social capital (i.e. the actual and potential benefits of an individual's relationships), and managerial human capital (i.e. learned skills and learning skills), enable international new ventures' international opportunity recognition for international growth. International growth, in turn, influences the dynamic managerial capabilities, whereby the authors also indicate the dynamic and evolving nature of international opportunity recognition. Miočević and Morgan (2018) suggest that market-sensing capabilities positively influence the opportunity recognition capacity of an exporting SME and thereby the rate of exploited international opportunities, which leads to a higher growth. The market-sensing capabilities enable the firm to successfully monitor the properties of foreign business environments and thereby detect patterns that may result in new entrepreneurial opportunity. Moreover, Hurmerinta, Nummela, and Paavilainen-Mäntymäki (2015) argue that the linguistic knowledge of the decision-maker may create a knowledge corridor that either encourages international opportunity recognition and exploitation or prevents the opportunities from being seen through linguistic blinds, whereas Glavas, Mathews, and Bianchi (2016) introduce the importance of Internet capabilities together with international entrepreneurial orientation and international vision in international opportunity recognition and international performance in Internet-based environments.

Taking a little broader perspective, Muzychenko (2008) discusses the role of cross-cultural competence in international opportunity identification. She defines cross-cultural competence as a set of knowledge, skills, and abilities that leads to effective cognitive processes, appropriate effective behaviour, and an increased entrepreneurial self-efficacy perception in the process of opportunity identification in a cross-cultural environment. Thus, while highlighting the role of entrepreneurial self-efficacy, and the entrepreneur's perception of it, in

international opportunity recognition, she highlights the impact of cultural values in an entrepreneur's behaviour as well as cognitive scripts, heuristics, and biases related to opportunity identification. Muzychenko and Liesch (2015) continue along this line by studying what motivates an entrepreneur's behavioural activity in committing to a new market entry process; they suggest that international opportunity identification is determined by an individual's desire to build a world-class enterprise and by a passion for cross-cultural encounters. These attitudes are respectively underpinned by self-efficacy in opportunity identification and self-efficacy in cross-cultural inter-personal relationships. Overall, these attitudes and self-efficacies form a perceptual framework in which international opportunity identification is seen as a desirable and feasible activity.

When it comes to such subjective perceptions, international entrepreneurship scholars have also investigated the role of cognitive qualities in the recognition of international opportunities. Indeed, Zahra, Korri, and Yu (2005) highlight that a cognitive perspective can enrich our understanding of the mental models that guide and shape internationalisation decisions. This approach allows us to understand how entrepreneurs perceive and construct opportunities at home and in host countries (Zahra et al. 2005) by underlining the contextuality, rational and non-rational elements, and uniqueness of each entrepreneur's opportunity recognition and exploitation.

As an example, Butler, Doktor, and Lins (2010) suggest that an entrepreneur's ability to firstly absorb and secondly bear uncertainty influence the noticing and exploitation of opportunities in international settings. The ability to absorb uncertainty is important as it affects the entrepreneur's ability to even look for opportunities, whereas the ability to bear uncertainty is related to taking entrepreneurial action. Butler, Doktor, and Lins (2010) also argue that cognitive creativity plays a central role in opportunity identification; especially bisociative capability, the capability to match differing schemas, explains why some individuals are capable of seeing how to generate value through new resource combinations. Santos-Álvarez and Carcía-Merino (2010) investigate the role of cognitive variables when gathering relevant information for the internationalisation of the firm. Together these cognitive skills, including the entrepreneur's alertness, the centre of interest, causal logic, and matching with prototypes of prior experience, act as a filter that determines what information is recognised and what ignored as well as which aspects in the environment are considered to provide interesting opportunities and even gain a strategic response from the firm. Simultaneously, they note that the cognitive variables are affected by social factors, such as the social network and the institutional context.

Oyson and Whittaker (2015) add that imagination plays an important role in international opportunity discovery. While knowledge is always limited, the

international opportunity can be more or less imaginary – even if based on knowledge, the entrepreneur may mentally create the missing pieces. While opportunities discovered based on knowledge have a factual basis for their existence and are driven by logic and reason, imagined opportunities are largely subjective mental creations in the minds of entrepreneurs and driven by emotions and beliefs. Hence, they suggest that their lack of knowledge of international opportunities is not necessarily an obstacle to internationalisation: *‘it is not information on the opportunities that is paramount but the mental images and pictures that they are able to form’* (Oyson & Whittaker 2015, 328). Oyson and Whittaker (2015) suggest that entrepreneurs’ perception of subsequent international opportunities often differs from the way they recognise the initial opportunity; for example, if the firm went international based on a known opportunity, the next identified opportunity could be based on imagination, and vice versa. In addition, Oyson and Whittaker (2015) argue that both discovery and creation are involved in the process. Discovered opportunities tend to be potential only, that is, too broad and vague to be exploited directly. In order to be exploited, they need to be transformed and created into concrete, entrepreneurial opportunities comprising customers, product, and capabilities.

Peiris, Akoorie, and Sinha (2013) take a comprehensive view on factors that influence opportunity identification and bring together many of the entrepreneur-related factors discussed above that influence opportunity identification and development: alertness, personal and environmental circumstances, prior knowledge, creativity, self-efficacy, social networks, entrepreneurial competence, cognitive processes, experiential learning, and human capital. Overall, they conclude that prior knowledge, creativity, self-efficacy, and perseverance constitute the entrepreneurial capacity required to identify opportunities, whereas access to resources and social capital influences the whole opportunity identification, development, and exploitation process.

All in all, the individual-specific capabilities and cognitive qualities are an integral part of international opportunity recognition, whereby the role of the individual person is central in understanding international opportunity recognition. Different types of knowledge, capabilities, and competences as well as cognitive qualities in terms of information gathering, learning, uncertainty-tolerance, creativity, and imagination make entrepreneurs unique individuals, for which their preconditions for recognising opportunities differ from person to person. Moreover, those are complexly interlinked with the context the entrepreneur acts in. The role of the entrepreneur’s surroundings, that is, the firm and the environment in which it is embedded, is discussed in detail next.

2.1.4 The role of the firm and its environment in international opportunity recognition

Many researchers have searched for firm-level factors explaining why some firms and not others end up recognising and exploiting international opportunities. For instance, Zahra, Korri, and Yu (2005) suggest that international entrepreneurship is a fundamentally individual process yet rooted in the firm's organisational culture and external environment. Organisations are believed to constitute cognitive systems that exhibit the key members' shared beliefs and information (Daft & Weick 1984). Such systems further drive entrepreneurs to seek certain types of data, to weigh and interpret the data, and to emphasise particular international opportunities while also influencing the entrepreneur's decision rules, decision horizons, and risk preferences.

Chandra, Styles, and Wilkinson (2009) argue that firms with a stronger entrepreneurial orientation will be more likely to discover first-time international opportunities in international markets. Based on Lumpkin and Dess (1996; 2001) and Knight (1997), they define entrepreneurial orientation as comprising autonomy, innovativeness, risk-taking, proactiveness, and competitive aggressiveness. They propose that the innovativeness, autonomy, and proactiveness of the firm drive opportunity recognition in international markets, while risk-taking and aggressiveness in regard to leverage opportunities affect the willingness and ability of people and the firm to eventually exploit opportunities. Dimitratos, Voudouris, Plakoyiannaki, and Nakos (2012) advance the understanding on the international entrepreneurial culture that facilitates and accommodates the entrepreneurial activities of the firm internationally and the engagement in international entrepreneurial ventures seeking opportunities. Thus, taking also a firm-level perspective, they propose a six-dimensional operationalisation of international entrepreneurial culture, including (1) international entrepreneurial orientation (risk-seeking, proactive, and innovative propensity); (2) international market orientation (prioritises the customer and collects competitor information abroad); (3) international motivation (induces employees to propose ideas for foreign activities); (4) international learning orientation (effective dissemination and utilisation of intelligence between the firm departments); and (5) international networking orientation with competitors as well as with (6) non-competitors (pursuing joint manufacturing, research, advertising, and marketing activities). Through measuring these international entrepreneurial culture characteristics, managers may develop the firm's organisational culture in order to better pursue entrepreneurial ventures abroad. The SME type may also have an impact on opportunity recognition as, for instance, Kontinen and Ojala (2011) argue that family-owned SMEs are likely to recognise international opportunities on the basis of alertness to opportunities rather than

based on an active search for them. However, the high alertness seems to result from the small size and flexibility of the management teams concerned, which may also characterise other types of SMEs.

Besides firm characteristics, the concrete actions taken by the firm also matter. Hohenthal, Johanson, and Johanson (2003) study the impact of ongoing activities (expansive or explorative in international markets) on the discovery of new market opportunities and present propositions on how the discoveries influence further the activities, learning, and international expansion of the firm. Chandra, Styles, and Wilkinson (2012) also emphasise the dynamic feedback processes involved in opportunity identification and development. They state that existing knowledge and resources stem from past actions, learning, and networks and that this history can play an important role in shaping a firm's ability and willingness to engage in international operations. The pace of learning and feedback processes, in turn, depends on the firm's resources and abilities as well as on the context in which it operates. In line with this, Hilmersson and Papaioannou (2015) suggest that the greater the international experience of the SME, the more systematically the SME will scout for international opportunities. Chandra (2017) highlights the overall firm evolution by suggesting that the time and resources available, the type of stakeholders, and the extent of professional managers' influence in firm decision making improve along the internationalisation path. Hence, the evaluation of early-stage international opportunities is based on simple rules, whereas at the late stage the rules have developed from simple to revised and, eventually, to complex rules that allow the firm to better identify successful opportunities and achieve higher performance.

Firms are also embedded in their environment in many ways, whereby the characteristics and dynamics of the surrounding business environment in which opportunities may be recognised have a considerable impact on opportunity recognition, too. Cuero Acosta, Adu-Gyamfi, Un Nabi, Noor, and Dornberger (2017) determine regulatory environment, culture and norms, and incentives in the market together with the entrepreneur's prior knowledge, contextual knowledge, and network as the framework conditions that influence entrepreneurial opportunity identification in the international market context although state that there is no agreement in the literature on how the various factors operate in contributing to opportunity identification. Mainela, Puhakka, and Sipola (2018) note that it is important to notice the cultural-historical context and the community in which opportunities are generated. The surrounding community is not only a facilitator or hinderer in an entrepreneur's journey, but through collective opportunity beliefs it creates the systemic favourability and the circumstances under which an opportunity is considered attractive or not, for instance in terms of risk perception or attitude towards failure.

Furthermore, also of considerable importance is the information the firm and the entrepreneur receives about the environment, including hints about potential business opportunities. Santos-Álvarez and Carcía-Merino (2010) discuss the following different stimuli leading to business internationalisation: the appeal of internationalisation, hurdles to internationalism, and support programmes available to facilitate internationalisation. They argue that besides the entrepreneur's cognitive skills, the processing of informative stimuli is affected by the content of the stimuli and the source of information. Referring to the debate on the nature of opportunities, scholars have differing views on whether such stimuli are discovered or sought on purpose.

Oyson and Whittaker (2015) state that in their study, serendipity played a role in the discovery of international opportunities and that this explains why some entrepreneurs discover opportunities and some do not, although entrepreneurs can also create their own luck in opportunity discovery through alertness and preceding entrepreneurial action. In contrast, Chandra, Styles, and Wilkinson (2009) argue that opportunity recognition which may first seem like luck turns out not to be eventually: even pure discovery of an international opportunity requires the firm to possess prior international and technical knowledge, intellectual property, openness and access to information, and firm characteristics such as entrepreneurial orientation, whereby the entrepreneur is capable of interpreting possible matches between pre-existing means (resources, skills, or technologies) and new ends (international markets). Ellis (2011) states that the majority of exchange opportunities are discovered rather than sought but also argues that the discoveries are intentional rather than accidental. In his study, none of the meetings of exchange partners was based on pure luck. He aligns with Chandra, Styles, and Wilkinson (2009) by stating that the role of luck has been exaggerated in the past research as researchers have not fully understood particularly the social exchanges that precede opportunity identification.

Thus, to summarise, the views on firm-level factors influencing opportunity recognition remain multitudinous and somewhat controversial. However, it is fair to say that both the firm and the surrounding environment in which an entrepreneur acts play an important role in his/her opportunity recognition, whereby the phenomenon is not only about the characteristics of an individual. Firms characterised by unique cognitive systems, entrepreneurial orientation, international entrepreneurial culture, international experience, stage of evolution, and ownership structure, let alone the learnings from prior actions and the feedback from ongoing activities, have an effect on how managers and other employees view their surroundings and how open they are to new opportunities. Moreover, beyond the firm, the historical, cultural, and regulatory environment as well as the information and stimuli concerning changes in it – together with

some serendipity – provide the circumstances in which opportunity recognition may take place. Hence, a synthesis of the prior literature shows that no single factor about the individual, the firm, or the environment can explain international opportunity recognition, but based on a mixture of various enablers, an individual may subjectively recognise an opportunity.

2.2 Mental images and sensemaking in opportunity recognition

2.2.1 Understanding mental images

As Krueger (2000, 7) puts it, *'we cannot lose sight of the reality that organizations do not see opportunities, individuals do'*. Krueger (2000) emphasises that opportunities are in the eye of the beholder, whereby perceptions and cognitive phenomena are critical to seeing and acting on opportunities. The cognitive approach towards understanding how entrepreneurs think and make decisions to identify and exploit entrepreneurial opportunities has its roots in psychology and sociology. Psychologists have demonstrated that person-specific attributes, such as tolerance of ambiguity, emotional stability, and risk-taking propensity, determine why some and not others identify certain entrepreneurial opportunities and why they act upon them differently. Sociologists, in turn, have shown that entrepreneurs are, nevertheless, embedded in a social context, whereby their interaction with their environment shapes their cognitive processes and behaviour. Hence, the entrepreneurs' cognitive styles reflect their experiences and their environment, whereby their history of success and failures together with their external cultural, institutional, political, and technological environments constitute the setting in which their psychological attributes are at play. (Zahra et al. 2005)

All in all, the application of cognitive approaches to entrepreneurship research is only growing in volume and breadth (e.g. Katz & Shepherd 2003; Muzychenko 2008; Grégoire et al. 2015). Scholars have examined how entrepreneurs make sense of the world to imagine, identify, and design ideas for new opportunities, how they evaluate the opportunities, and how they form intentions to develop and pursue them, from various angles, even to the extent that entrepreneurship research on cognition has started to suffer from fragmented, atomistic evolution with limited theoretical integration (Grégoire et al. 2015). Nevertheless, prior research has shown that *'the content of what entrepreneurs feel and think can influence not only their decision to engage in entrepreneurial behavior, but also the persistence of their effort and their ultimate success'* (Grégoire et al. 2015, 134–135).

One of the psychology-rooted concepts employed in the decision-making literature (e.g. Beach & Mitchell 1987) and recently also in entrepreneurship research is that of ‘image’ or ‘mental image’. Mitchell and Beach (1990, 7) define images as *‘information structures, with different kinds of images representing different kinds of information about what the actor is doing, why and how, and what kind of progress is being made’*. According to Beach and Mitchell (1987), images are schemata that are specific to decision behaviour and which represent the decision-maker’s guiding principles, goals, actions, and success of actions in some sphere of decision-making.

Mitchell and Beach (1990) note that in different streams of literature, images have been discussed under a diversity of other names, including ‘prototype’, ‘schema’, and ‘template’. Gentner and Stevens (1983) and Johnson-Laird (1983), for example, discuss ‘mental models’ in relation to human-computer interaction, and Norman (1983, 7) states that *‘in interacting with the environment, with others, and with the artifacts of technology, people form internal mental models of themselves and of the things with which they are interacting’*. He suggests that mental models are, for instance, incomplete and inaccurate (they only need to be functional), they do not have firm boundaries (they may get confused with one another), and they are unstable (they evolve naturally through interaction with the system they concern). Moreover, mental models are constrained by the user’s background and prior experiences with similar systems as well as the structure of the human information processing system. They reflect a person’s beliefs about the physical system.

In the social cognition literature, in turn, Gioia and Poole (1984) discuss the term ‘script’. They state that *‘a script is a schematic knowledge structure held in memory that specifies behavior or event sequences that are appropriate for specific situations’* (Gioia & Poole 1984, 449). Scripts enable an understanding of situations and provide a guide to appropriate behaviour in those situations. For instance, scripts related to support arrangements, venturing willingness, and abilities are associated with a venture-creation decision (Mitchell et al. 2000).

Further, entrepreneurship researchers have referred to mental models with terms such as ‘cognitive framework’, ‘cognitive image’, ‘cognitive map’, ‘cognitive representation’, ‘mental image’, ‘mental map’, ‘mental picture’, ‘mind-set’, and ‘schema’, nevertheless converging around the idea that entrepreneurs create subjective images to represent circumstances as opportunities and make predictions about the attractiveness of those opportunities based on the images. Managers’ capacity to process new information is limited, whereby they develop heuristics, that is, simplified models, that guide them in their decision-making. (Andersson & Evers 2015; Wood & McKelvie 2015)

Using the term 'image', Beach and Mitchell (1987) propose 'Image Theory' as a descriptive theory of how individuals make decisions that are of more than routine importance. The theory comprises four images. The first is the self-image, which consists of personal beliefs, values, morals, and ethics that one considers self-evidently desirable and true. These constituents of the self-image are called principles. The second image is the trajectory image, which consists of one's agenda for the future and sort of a strategic blueprint for where the individual is going in light of his self-image. The constituents of this image are called goals, and they can be concrete or abstract. Third, the action image comprises the plans and action tactics that are in use when pursuing the goals. Fourth, the projected image consists of the anticipated events and states one foresees occurring should he adopt a particular plan or should he continue with the currently implemented plans. Hence, they argue that decision-making is based on the existence and compatibility of multiple, interlinked images. Moreover, they suggest that the decision-maker is rarely aware of the violations between the images related to a decision, but, instead, the violations generate an emotional state of discomfort about the candidate goal, plan, or progress being made. Beach and Mitchell (1987, 206) describe how such discomfort is '*revealed in statements such as, "Somehow that just isn't right" or "I would feel bad about doing that", or "I don't feel like I'm getting anywhere on this"*'. Such emotional states are commonly regarded as intuition in decision-making (Mitchell & Beach 1990).

Beach and Mitchell (1987) also discuss the evolution of images and argue that many of the major image constituents are adopted quite early in life. Subsequent candidates for image membership are evaluated in terms of their compatibility with the earlier constituents, for which the earlier constituents have a strong impact on the evolution of images. The more 'mature' the image is, the more its earlier constituents constrain its adoption. New constituents are accepted through the following three processes: In 'assimilation', the individual's images are influenced by those of other people, books, television, and training, for instance. In 'emergence', the individual himself generates new additions to the images in order to fill in logical gaps. In 'accommodation', the candidate constituent is changed where necessary so that it can be incorporated in the image instead of being rejected. All in all, this interplay of images presented by Beach and Mitchell (1987) indicates that individuals build their views of the environment on deeply rooted views and thinking that contain rational and non-rational elements.

2.2.2 Understanding sensemaking

While mental images underlie the decisions that individuals make, sensemaking is the cognitive process through which the images are utilised and through which images evolve. Research on sensemaking emerged as a distinct topic of study in the late 1960s, challenging notions of an objective reality and investigating the social construction of reality. Sensemaking is the process by which people work to understand new issues or events that somehow violate their expectations and that are subjectively considered significant and important. Sometimes sensemaking can also be triggered by events that were anticipated and planned but which changed the operational circumstances. (Maitlis & Christianson 2014) Thus, sensemaking starts with chaos and disruptive ambiguity – the individual has confronted an unexpected or otherwise confusing situation in which he/she does not know how to act next. To be able to define what to do next in such circumstances, an individual has to make sense of what is going on. Active agents structure the unknown by making sense of it (Weick 1995). Sensemaking involves turning circumstances into a situation that is comprehensible in words and that serves as a springboard into action (Taylor & Van Every 2000).

Sensemaking is about placing stimuli into some kind of framework which allows one *‘to comprehend, understand, explain, attribute and extrapolate and predict’* the unknown (Starbuck & Milliken 1988, 51). In line with this view, mental images, as described above, can act as such frameworks, and hence sensemaking can be seen as a process in which individuals utilise existing mental images to comprehend uncertain and unfamiliar situations – to provide questions and answers in regard to the circumstances. Sensemaking is about developing a vision or mental model about how the environment works (Hill & Levenhagen 1995). However, a broader view of sensemaking sees the process including more activities than the placement of stimuli into frameworks – environmental scanning, meaning ascription, and associated responses and actions are also part of it. According to Weick (1995, 13), *‘the concept of sensemaking highlights the action, activity, and creating that lays down the traces that are interpreted and then reinterpreted’*. Weick, Sutcliffe, and Obstfeld (2005) later state that sensemaking is about (1) organising flux and chaos, (2) noticing and bracketing the variance from the normal through mental models, (3) labelling and categorising the abnormal portion of the stream of experience, (4) using retrospect to make sense of the observed circumstances, (5) presuming how the abstract is connected with the concrete that is to follow, (6) emerging as social and systemic as it is influenced by a variety of social factors, (7) acting thinkingly, and (8) organising through communication as the situation is somehow talked into existence. Thus, sensemaking is a complex, multidimensional process and should not be treated as a synonym for interpretation; for instance, interpretation is only a component of

sensemaking, which is about the interplay of action and interaction (Weick 1995; Weick et al. 2005). Action and cognition are linked as actions not only help people make sense of what is happening but also alter circumstances and thereby trigger new sensemaking (Maitlis & Christianson 2014). Building on this broader view, sensemaking is not only about utilising mental images but also about developing them through continuous re-interpretations and actions.

Besides employing a narrower or broader view, scholars have studied sensemaking from various angles during the past decades, and, as a result, it has been conceptualised in a range of definitions. According to Maitlis and Christianson (2014), one aspect of this is whether sensemaking is understood to take place within or between individuals. The first view frames sensemaking as a cognitive process of developing frameworks, schemata, or mental models, whereas the latter positions sensemaking as a social process that occurs between people through meaning construction, contest, and co-construction. People are likely to understand an issue or event differently due to their different backgrounds, interests, and positions, whereby such a shared meaning does not necessarily indicate a completely overlapping and mutually agreed understanding but understandings that are close enough to allow coordinated action. Maitlis and Christianson (2014) note that sensemaking is generally regarded as social because even individual sensemaking is embedded in sociomaterial contexts and influenced by the presence of others. On this basis, they define sensemaking as *'a process, prompted by violated expectations, that involves attending to and bracketing cues in the environment, creating intersubjective meaning through cycles of interpretation and action, and thereby enacting a more ordered environment from which further cues can be drawn'* (Maitlis & Christianson 2014, 67).

Sensemaking is a critical organisational activity as different stakeholders address various issues occurring in their everyday operations (Weick 1995). Thereby, sensemaking is, in fact, fundamentally a social process as *'organization members interpret their environment in and through interactions with others, constructing accounts that allow them to comprehend the world and act collectively'* (Maitlis 2005, 21). In fact, such processes are not only about sensemaking but also sensegiving, the latter referring to attempts to influence the sensemaking and meaning construction of others towards a preferred redefinition of the organisation's reality (Gioia & Chittipeddi 1991; Maitlis 2005). For example, according to Maitlis (2005), organisational sensemaking can be more or less controlled by active sensegiving by leaders and can be more or less animated through active sensegiving by stakeholders. Along with these two dimensions, organisational sensemaking can be categorised as guided (high control and high animation), fragmented (low control and high animation), restricted (high control and low animation), or minimal (low control and low animation). The form of

organisational sensemaking determines how unitary and rich accounts the sensemaking produces, and how many and how consistent actions it will result in in the organisation.

Besides sensegiving, sensemaking is also about making sense of how others make sense of things on occasions in which their behaviour does not make sense to the focal individual. On this basis, the social aspects of sensemaking are illustrated not only in sensegiving but also in sensebreaking, which refers to motivating others to reconsider the sense they have already made by breaking down the meaning (Pratt 2000), and in sensereceiving, through which individuals receive and internalise the sensegiving of others (Hoyte et al. 2019). Consequently, besides the individual-level cognitive aspect, the inter-personal aspect is highly relevant in organisational sensemaking.

2.2.3 The role of mental images in opportunity recognition

Prior studies in entrepreneurship have indicated that entrepreneurs make decisions about opportunities by comparing them with an ideal image of an opportunity, that is, an image of what constitutes an opportunity for 'me'. For example, Mitchell and Shepherd (2010) suggest that an entrepreneur's images of himself or herself impact one's images of opportunity. More specifically, they argue that an individual's image of his/her own vulnerability (fear of failure) and capability (human capital and entrepreneurial self-efficacy) impact his/her individual opportunity image and thereby what he/she considers as an opportunity for him/her. In general, Mitchell and Shepherd (2010) find that entrepreneurs prefer opportunities that are valuable (profitability dimension), that are based on knowledge similar to their own (feasibility dimension), and that have wide opportunity windows with many choices, but the view of an ideal opportunity (what is out there) also builds on the entrepreneur's view of his/her own vulnerability and capability (what he/she brings to it). Thus, they argue that individuals' attitudes and beliefs about themselves impact their images of opportunities and thereby opportunity recognition, evaluation, and pursuit. Hence, they acknowledge that the opportunity recognition and evaluation process entails multiple images of the self and an image of an ideal opportunity, against which the confronted situation is mirrored.

Maitland and Sammartino (2015) employ the mental model concept in studying how senior decision-makers in multinational enterprises think through and make sense of their surroundings in making internationalisation decisions. Drawing on extant international business models, they identify seven knowledge domains that constitute the decision-makers' mental models that are utilised in making sense of foreign direct investment opportunities – in other words, the

group of issues that they must cognitively deal with when evaluating and determining a location and expansion form. These knowledge domains comprise (1) firm-specific advantages, (2) capacity, (3) governance architecture, (4) operational aspects, (5) location, (6) value proposition, and (7) the overall opportunity consideration, involving the strategic resolution of how and whether the opportunity can be designed to deliver sufficient value and advantage to the firm. Maitland and Sammartino (2015) suggest that these knowledge structures or mental models and the managers' related sensemaking processes can impact internationalisation decisions during the screening of feasible locations, the collection and assessment of information, determining a preferred strategic option, and post-entry evaluation. Hence, in comparison with Mitchell and Shepherd (2010), Maitland and Sammartino (2015) present a more detailed construct of the potential elements constituting a mental image relevant to internationalisation decisions, involving both the opportunity context as well as the self through knowledge of the advantages and capacities of the focal firm. However, their study focuses on sensemaking differences between individuals when they make international business decisions, not at the point when a manager or entrepreneur is only about to recognise an initial opportunity for going international. Nevertheless, their study argues that *'as managers attempt to interpret and understand host locations, their mental models are consistently framing what information is sought, how and when it is collected and analyzed, and which information influences the final strategic decision'* (Maitland & Sammartino 2015, 756).

Focusing also on opportunity evaluation, and on how that evolves over time, Williams and Wood (2015) suggest that rule-based reasoning is a key mechanism by which entrepreneurs form personal mental representations of opportunities. The authors discuss the rules that entrepreneurs use as they decide which opportunities are attractive for them and their firms. Based on the rules, individuals cognitively compare the degree to which images of current circumstances or events fit with images of an ideal opportunity. Williams and Wood (2015) divide the rules into environmental factors (e.g. window of opportunity, number of opportunities, industry rates, and technological change), opportunity-related cues (e.g. magnitude, novelty, rarity, and riskiness), and individual differences (emotions, illusion of control, fear of failure, and prior knowledge). These factors determine the images of ideal opportunities as well as the images of actual opportunity; and once an opportunity has been recognised, these factors are used as rules to evaluate the attractiveness of the opportunity. The rules are inferences made from past experience, or learning from the experiences of others, and applied to the circumstances at hand, whereby they are subjective, contextual, and interpretive. Thus, along with Maitland and Sammartino (2015), Williams and Wood (2015) present a more fine-grained yet

different view of what the complex mental images relevant to opportunity evaluation are all about.

Moreover, to add to the complexity, Maitland and Sammartino (2015), Williams and Wood (2015), and even Baron and Ensley (2006) before them indicate that the mental models evolve over time through the experience gained by the individual. Baron and Ensley (2006) suggest that the opportunity prototypes (i.e. cognitive representations of the essential nature of opportunities) of experienced entrepreneurs were more clearly defined, richer in content, and more concerned with factors related to actually starting and running a new venture than those of novice entrepreneurs. In line with this, Maitland and Sammartino (2015) suggest that the variance in the richness and connectedness of the elements in decision-makers' mental models is related to the extent of international experience; more internationally experienced individuals draw on more detailed and extensive knowledge, which affects how they make sense of connections that are central to internationalisation decisions. Baron and Ensley (2006) state that experienced entrepreneurs may 'connect the dots' in their environment very differently from their novice colleagues, which influences their identification of business opportunities. Simultaneously, this also indicates that entrepreneurs may not see opportunities directly, but rather they see changes in variables that may lead to the identification of an opportunity. Hence, opportunity recognition is a complex, fine-grained, and dynamic cognitive process.

Providing another perspective to the complexity, opportunities are not recognised in isolation but in a world full of simultaneously existing multiple, even countless, potential opportunities that are more or less concrete in the mind of an entrepreneur. Referring to this, Hill and Birkinshaw (2010) introduce 'idea sets', referring to the complete stock of entrepreneurial ideas an individual has accessible within his/her memory at a given time. Hence, they take into account ideas that are well developed (towards opportunity recognition) as well as ideas that represent just the initial spark of possibility. The ideas within an idea set can be characterised by the content, volume, stage of development, strategic value logic, and novelty. Hill and Birkinshaw (2010) suggest that over time, new ideas enter the set, while others will be disregarded due to infeasibility or undesirability, or they will just fade away due to attention shifting to new stimuli. Focusing on attention, in turn, Shepherd, McMullen, and Ocasio (2017) study how the allocation of attention impacts the recognition of changes in the environment and the formation of opportunity beliefs. As a part of their findings, they discuss the role of knowledge structures in attention allocation; they define knowledge structures as mental templates that allow managers to give meaning and subjective representation of information about the environment and generate strategic action. Shepherd, McMullen, and Ocasio (2017) suggest that the likelihood of

noticing architectural change (a change that alters the way in which the components of a product are integrated and linked together, for instance) is higher when top managers' knowledge structures are more complex rather than less complex. Complex knowledge structures contain deep and rich connections that allow the individual to understand and notice architectural change, which is more difficult to see than incremental and discontinuous changes. Once a change has been noticed through transient attention, the manager must allocate sustained attention to it in order to form opportunity beliefs for strategic action. Hence, their study complements the prior findings in that through determining attention allocation, knowledge structures have an important role not only in the evaluation of changes but also in noticing them in the first place. On this basis, mental images influence not only how individual opportunities are recognised but also whether they are noticed in an environment full of changes and alternative opportunities.

When it comes to understanding collective opportunity recognition, it is fair to note that entrepreneurial cognition has also been studied at the team level. Based on a review of the extant literature on entrepreneurial cognition, Mol, Khapova, and Elfring (2015, 243) define it as *'an emergent state that refers to the manner in which knowledge is mentally organized, represented and distributed within the team and allows entrepreneurial team members to approach problem-solving and make assessments, judgements or decisions concerned with milestones and outcomes relevant to the entrepreneurial process, such as identifying and evaluating different opportunities, or defining and implementing launch and growth strategies'*. A recent stream of research has also focused on team mental models. Lim and Klein (2006) describe how when team members organise their knowledge of team tasks, equipment, roles, goals, and abilities in a similar fashion, they share mental models that then constitute team mental models. Team mental models allow the team members to anticipate each other's actions and to coordinate them, particularly when chances for joint extensive communication and strategising are limited.

Cannon-Bowers, Salas, and Converse (1993) suggest that team members share the following four mental models: (1) the equipment model, capturing the shared understanding of the possessed technology and equipment; (2) the task model, referring to the shared perceptions of the team procedures, strategies, and environment; (3) the team interaction model, which refers to the shared understanding of the members' responsibilities, norms, and interaction patterns; and (4) the team model, reflecting the members' understanding of each other's knowledge, skills, strengths, and weaknesses. Mathieu, Heffner, Goodwin, Salas, and Cannon-Bowers (2000) synthesise these four models under two – the task work mental model and the teamwork mental model. Later on, in studying the role of these two team mental models, Lim and Klein (2006) propose that the team members' mental model similarity and accuracy enhance team performance.

However, it must also be noted that findings from team-level research may not be directly applicable to inter-organisational groups of people, although they do provide some indication of how cognitive processes and mental images operate at the collective level between individuals.

To summarise, entrepreneurs' mental images play an important role in opportunity recognition. Prior literature suggests that images related to self, opportunity, and context, all comprising knowledge of various aspects, affect how entrepreneurs make sense of their environment and the potential opportunities within it. The role of this sensemaking in opportunity recognition will be discussed in detail next.

2.2.4 The role of sensemaking in opportunity recognition

While different mental images identified in the extant international entrepreneurship literature provide important insight into how opportunities are recognised, of equal importance are the scholarly attempts to understand how the images are formed and enacted in relation to international opportunity recognition. Building on Weick's (1995) sensemaking concept, Zahra, Korri, and Yu (2005) discuss how entrepreneurial international acts are preceded by sensemaking that enables the key actors in the firm to view their external environment in a new light. This means that the situation is new in a way that the actors do not have routine-like entrenched cognitive models for operating in this environment (indeed, the authors state that the execution of previously learned international entrepreneurship routines might not be an act of international entrepreneurship at all).

To be confronted with such new situations, Zahra, Korri, and Yu (2005) state that the entrepreneur must be exposed to and attentive to new information that is discordant with their existing cognitive models, and that thereby triggers sensemaking of what to do in the new circumstances. For example, noticing that few suppliers exist for a highly demanded product in a growing foreign market might make the situation puzzling for the entrepreneur given the opportunity to make a profit. The entrepreneur might start to analyse the industry, the competition in the market, and the value chain configuration. However, his/her attention patterns and cognitive models depend on the environment and his/her past experiences and skills as well as organisational characteristics. Thereby, for example, an entrepreneur with extensive international experience might instead focus on familiar cues and hold strong beliefs about what to do and not to do in international markets and thereby ignore the information that would trigger sensemaking and opportunity recognition. This way the mental models and distractive information may constitute the trigger for sensemaking and potential

opportunity recognition, or not. Zahra, Korri, and Yu (2005, 141) propose that international entrepreneurship should be, in fact, studied *'as a sensemaking process in which an opportunity unfolds over time and is often constructed through successful exploitation'*.

Going into more detail in sensemaking, Grégoire, Barr, and Shepherd (2010) describe how opportunity recognition involves the objective reality of one's context and the subjective interpretations that one makes of the context and his/her position in it. In opportunity recognition, the entrepreneur makes sense of signals of change to form beliefs of whether or not acting to address this change could lead to net benefits. This involves cognitive efforts to consider the resemblance between events in the outside world and the mental models of situations and contexts that are relevant for making sense of the new information and for identifying the profitable course of action. According to Grégoire, Barr, and Shepherd (2010), this comparison takes place through structural alignment. Structural alignment proceeds at two levels: the first concerning the superficial features, basic attributes, and characteristics of a mental representation and the second concerning the structural relationships that link different superficial features within the mental representation. For instance, the entrepreneur matches a technology and a market through aligning the superficial features and structural relationships of the technology and market to one another – in other words, by finding similarities between the information of the new technology and the context where this information might be meaningful. Grégoire and Shepherd (2012) further suggest that differences in the characteristics of opportunity ideas and in the characteristics of individuals influence the formation of opportunity beliefs but assume that opportunities (with specific characteristics) exist objectively, not building on the first-person opportunity perspective by which opportunities are recognised as opportunities for 'me', not for anyone (McMullen & Shepherd 2006).

Wood, McKelvie, and Haynie (2014), in turn, employ the first-person view and develop a model that focuses on the individuation of opportunity beliefs. They suggest that individuals form mental models of their surroundings through received information, and in individuation, they shape their impressions by filtering them through the lens of person-specific factors and thereby generate a personal meaning of a situation and an understanding of what can be done about it. In other words, an entrepreneur uses opportunity-related environmental data to paint a mental picture of the opportunity, and, simultaneously, the picture is shaped through individuation as the individual evaluates the viability of personally pursuing the opportunity. Wood, McKelvie, and Haynie (2014, 255) state that *'opportunity-related information is cognitively processed in terms of what it means for the individual given the linkages and outcome predications he/she can make based on*

his/her knowledge, experiences, and desires'. These person-specific factors come with some path-dependency, influencing the development of cognitive images that emerge as new situations are encountered. On this basis, Wood, McKelvie, and Haynie (2014) study how the interplay between environmental data and individual factors influences beliefs about the personal attractiveness of pursuing an opportunity and find that entrepreneurs' interpretation of industry data is influenced by their task motivation, prior experience, and cognitive dispositions. For instance, entrepreneurs who have experienced prior business failure are more conservative but not overly negative in their construction of opportunity images. Hence, individual differences in terms of related knowledge, motivation to evaluate the opportunity, prior failure, and fear of failure are key drivers of the formation of opportunity beliefs and shape the attractiveness of pursuing an opportunity.

Wood, Williams, and Drover (2017) continue this discussion and highlight the interconnectedness between initial opportunity decisions (action or inaction towards an opportunity) and subsequent opportunity judgements. They suggest that when entrepreneurs decide not to act on an opportunity, they are likely to also judge subsequent opportunities more negatively. Hence, the mental image qualified by doubt that underpinned the first opportunity inaction decision influences the subsequent mental images as the entrepreneur keeps in mind the doubt. In the face of a new opportunity, the entrepreneur is more likely to conclude that it is not worthy of action in light of the doubt that underpinned the decision about the prior opportunity. This interplay between mental models over time, from opportunity judgement and action to another, generates a negative spiral in opportunity evaluation. However, the relationship between the initial inaction decision and judgements of the following ones are moderated by the confirmation or disconfirmation of the first decision as well as the similarity of the first and subsequent opportunity. That is, if an opportunity that was not acted upon turned out to be a valuable one and the decision, thus, an error, the mental model and the doubt associated with it will be updated. And, if the subsequent opportunity is similar to the first one, the mental image is likely to carry over to the judgement of the following one, whereas previously held mental images are less relevant if the new opportunity is dissimilar to the first one. Thus, Wood, Williams, and Drover (2017) suggest that mental images of opportunities influence one another and opportunity evaluation over time, particularly when the opportunities in question are similar to each other and the sensemaking concerning an opportunity turns out to be correct.

To summarise, mental images and sensemaking are strongly interlinked – both influence the recognition of and acting on opportunities, and vice versa, in complex ways. Sensemaking allows an entrepreneur to build an understanding of

changes in his/her environment, which may include the recognition of and a decision to act upon a business opportunity. Thus, together with mental images, the role of an individual's sensemaking process is acknowledged as essential in the recognition of opportunities.

2.3 Networks in opportunity recognition

2.3.1 Understanding interaction in business networks

One of the most influential research streams on understanding business networks is termed markets as networks and network-actor relationships. While the network management research has extended and fragmented along with researchers studying business networks from various perspectives during the past 20 years (Möller & Halinen 2017), originally this research builds on the work carried out by the Industrial Marketing and Purchasing (IMP) Group. The researchers involved in the group were keen on finding out why buyers and sellers hold on to each other over long periods of time instead of constantly changing (or considering changing) their counterpart based on price levels. Consequently, the IMP Project emphasises the relationships that exist between buyers and sellers (Håkansson et al. 2009) and which may be based on economic as well as non-economic exchange.

Relationship development is a process in which the involved parties learn interactively and commit reciprocally to the relationship (Johanson & Vahlne 2009), and the network structure is under continuous change and development through the various interaction episodes (Araujo & Easton 1996). A network is the framework within which interaction takes place, but at the same time, it is the result of this interaction (Håkansson 1987). Therefore, this approach supports the view that networks cannot be fully controlled or managed by an individual firm – rather, companies should build capabilities for managing *in* networks (Håkansson & Ford 2002; Ritter et al. 2004).

Thus, the IMP view sees markets as networks of business relationships and various kinds of inter-firm interactions (Baraldi et al. 2012; Håkansson & Waluszewski 2013). The activity-resource-actor (ARA) model (Håkansson & Johanson 1992) provides a conceptual framework of the process and outcomes of business-to-business interaction. The model suggests that interaction can be described in terms of three layers, that is, (1) activity links, (2) resource ties, and (3) actor bonds, between the involved firms. The activity layer refers to the (shared) activities carried out by the companies, including production, logistics, and information handling, for instance, which again determine the strength of the

links of the counterparts. The resource layer refers to the adapting and combining of the companies' resources as the relationship develops. The actor layer, in turn, relates to the inter-personal linkages between the people involved in the cooperation activities – to their mutual trust in, appreciation of, and influence on each other.

The model also acknowledges that the inter-firm linkages have consequences for the companies' other relationships (Håkansson et al. 2009), for instance by tying up important resources or by supporting the expertise required in external encounters. As a consequence, the resources held by each company are characterised by path dependency, meaning that their use is 'locked in' by historical events. Due to this heaviness, engaging in new activities and resource interactions does not come without a cost – allocating resources to new activities means taking them away from some existing ones. However, resources are always also characterised by endless variety as new resource combinations provide new features. (Håkansson & Waluszewski 2002) To engage in new interactions, companies must acknowledge the new possibilities for utilising their resources. In the emergence of such potential, particularly in the face of uncertainty and pressure requiring action, organisations are forced to increase their internal efficiency and capitalise on the knowledge, technologies, and resources of other organisations. A company's relationships are prime assets in this process, and to implement initiatives that require collective actions, the relevant network actors must be mobilised. (Mouzas & Naudé 2007)

Mobilisation refers to the process of forming crowds, groups, associations, and organisations for the pursuit of collective goals (Lundgren 1992). From the perspective of a single company, network mobilisation is the outcome of utilising its relationships to move other organisations, such as customers, suppliers, agencies, partners, or even competitors, to work within its own plans. The propositions usually aim at concrete results, which might refer to product or service quality, prices, terms of payment, or the launch of a new product; or they might concern cooperative projects regarding some kind of inter-organisational change. (Mouzas & Naudé 2007) While mobilisation disturbs the existing activity patterns, it requires strong commitment from the involved actors and is therefore more likely to occur during periods of considerable uncertainty and when problems are recognised by a larger number of actors (Lundgren 1992; Brito 2001). In general, for the mobiliser, the challenges of mobilising a network relate to identifying the actors that should be mobilised based on their resistance bases and action likelihood, to reaching consensus for active participation among them, and to motivating the collective co-construction of the aimed system, reducing actor uncertainty as well as converging different or even competing perspectives (Van Bockhaven & Matthyssens 2017).

However, it is important that the goal of collective action is eventually formed collectively through jointly interpreting and constructing the meaning of a situation because then the network members are likely to accept it and perceive it as beneficial, which increases their commitment to pursuing it. This is moderated by the extent to which the members have similar operations, customers, goals, and knowledge bases and also by the mobilisation by the network architect – the strong individual or organisation that facilitates the formation of the joint goal and attempts to turn the collective interest of the whole network into the self-interest of each member organisation. (Matinheikki et al. 2017) Consequently, the view on markets as networks understands networks as continuously self-evolving structures of interacting partners which have their own resources, commitments, and interests, and the alignment of those for the achievement of new, shared goals is not easy.

2.3.2 The role of networks in international opportunity recognition

A great share of studies on international opportunity recognition either focuses on or at least touches upon the role of networks, that is, business networks or social networks, in the firm's internationalisation process. The role of particularly business networks in international opportunity recognition is notable since the networks surrounding a firm constitute sources of information and ideas that trigger international opportunity recognition, reduce the perceived risks of entering a new market through trusted information sources, and provide a gateway to resources external to the focal firm (Chandra et al. 2009). For instance, the language skills possessed by the partners, co-workers, and even family members of a focal firm or entrepreneur are significant in international opportunity recognition and exploitation, particularly in smaller firms (Hurmerinta et al. 2015). The networks are also important sources of referrals and chance encounters as well as events that may lead to the identification of opportunities and different paths to and paces of internationalisation (Chandra et al. 2012).

Johanson and Vahlne (2006) underline the view that internationalisation is pursued within a network. Partners in a relationship build knowledge of each other, and with this privileged knowledge, they can see and create business opportunities that others outside the relationship cannot. In the revised Uppsala internationalisation process model, Johanson and Vahlne (2009) highlight that networks have a considerable impact on a company's choice of the target market as well as entry mode because they make it possible to identify and exploit new opportunities. A firm's network position determines its access to knowledge

possessed in the network, including knowledge of opportunities. To benefit from the expertise possessed in the network, the company has to strengthen its network relationships to achieve an insider position in the network. Taking a step further, the 2010 revised version of the Uppsala model (Schweizer et al. 2010) suggests that international expansion is not an outcome of deliberate efforts but a by-product of entrepreneurial actions; if internationalisation takes place, it is because of relevant contextual factors, such as a partner, actual or potential, being located on the other side of a national border. Blankenburg Holm, Johanson, and Kao (2015) argue that path dependence affects how a firm exploits opportunity in the network as well as the recognition of a subsequent opportunity as both are contingent on the network position. In fact, they suggest that outsidership in relation to the foreign market network tends to lead to opportunity discovery, whereas insidership results in opportunity creation.

Besides various cooperative business relationships, worth noting is also the increasing importance of coopetitive relationships in which partners simultaneously compete and cooperate (Bengtsson & Raza-Ullah 2016). Indeed, Kock, Nisuls, and Söderqvist (2010) argue that weak but cooperation-dominated coopetitive relationships may provide significant continuous opportunities or sporadic international opportunities, while strong cooperation-dominated and equal coopetitive relationships may result in the identification of even more continuous and extensive international opportunities for the involved partners.

Overall, the network of an individual or a firm comprises strong and weak ties to other actors. The strength of a tie depends on the amount of time, emotional intensity, intimacy, and reciprocal services (Granovetter 1973). Chandra, Styles, and Wilkinson (2009) argue that weak ties play an important role in a firm's opportunity recognition as they may connect different knowledge networks and introduce the firm to new market knowledge. Hence, the greater the extent to which the weak ties of a firm span structural holes linking different international knowledge networks, the more likely the firm is to discover first-time international entrepreneurial opportunities. Strong ties, in turn, are important through their role in disseminating the information that enters a network. Hilmerston and Papaioannou (2015) characterise a network of strong and long-term relationships as a closed one and suggest that the more closed the network is in which an SME is embedded, the more systematically the SME will scout for international opportunities. By scouting they refer to the strategic behaviour of the international opportunity development process. Further on, they argue that the more systematically the SME scouts for international opportunities, the lower the novelty of the opportunities identified. Thus, prior studies show that the networks of a firm with strong and weak ties can have a considerable impact on the international opportunities it pursues.

Accordingly, Ellis (2011) proposes that international opportunity recognition is a highly subjective process that is shaped by an entrepreneur's existing ties with others. He further emphasises the role of social (i.e. inter-personal, not inter-organisational) ties as a means for identifying international exchange opportunities as, in fact, it is individuals and not firms that recognise opportunities, and social networks comprise all sorts of ties and are much broader than the network existing only with a focal firm's business partners. He argues that entrepreneurs in open economies are more likely to rely on social networks than entrepreneurs in less open economies. He also finds that the use of social ties somewhat increases with international experience and that tie-based opportunities lead to generally better exchanges than opportunities identified via non-network means (Ellis 2011), such as formal searches, participation in international trade fairs or exhibitions, or responses to advertisements (Ellis 2008). However, tie-based opportunities are constrained in terms of geographic, linguistic, and psychic distance, for which entrepreneurs relying solely on their social ties will miss opportunities outside the network's reach. Thus, social ties may also constrain the entrepreneur from discovering other opportunities beyond his/her communication horizons. (Ellis 2011)

Indeed, Söderqvist (2011) argues that relationships come with benefits and drawbacks as regards their impact on opportunity exploration and exploitation. However, she suggests that the benefits of relationships clearly exceed the drawbacks. The potential drawbacks, such as inefficiency, stem from bureaucratic relationships, conflicting visions, and passiveness. The benefits include, for instance, emotional support for the entrepreneur's brave decisions together with information, knowledge, and resources. Going deeper into the origin, type, and strength of relationships, Söderqvist (2011) argues that while direct relationships are most important in the pre-founding phase of an international new venture, indirect relationships become more extensively used within the start-up and internationalisation phases. Business and personal relationships, in turn, are of equal importance in opportunity exploration and exploitation. In addition, she finds that strong relationships are of greater importance and benefit than the weak in opportunity exploration and exploitation.

Kontinen and Ojala (2011) offer somewhat contradictory research results; instead of established network ties, the family-owned SMEs that they studied recognised international opportunities by establishing new ties. In particular, they suggest that forums with a high network density, such as trade fairs, are the primary context in which family SMEs recognise internationalisation opportunities. These SMEs recognise international opportunities through formal ties rather than informal ties or family ties and compensate their limited formal relationships by forming new ties that are more likely to lead to international

opportunity recognition. In line with this, Vasilchenko and Morrish (2011) studied the exploration and exploitation of internationalisation opportunities of ICT firms (not family-owned) and agree with Kontinen and Ojala (2011) that in the absence of personal connections, industry events can act as a proxy for social networks when SMEs explore new opportunities. Vasilchenko and Morrish (2011) further report that social networks can arise from serendipitous encounters (such as inbound inquiries). While established as well as newly formed social networks can be instrumental in the exploration of internationalisation opportunities, they may lead to collaboration and eventually become formalised business networks. According to Zaefarian, Eng, and Tasavori (2016), the majority of first-time international opportunities are identified in family firms through social networks, whereas subsequent opportunities tend to be recognised through business networks. Thus, even though most researchers distinguish between the roles of social and business networks, it is generally agreed that both have an important role in international opportunity recognition and that the two may be or may become strongly inter-linked over time through different kinds of evolving ties.

Consequently, prior studies underline how network ties contribute to and what they deliver to the process of a focal entrepreneur uncovering an international opportunity. However, the studies tend to approach these self-evolving structures as passive sources of inputs, and complexities related to interactions between people and organisations have largely been overlooked. Only recently have researchers acknowledged another perspective of the importance of the collective enactment, discovery, and exploitation of international opportunities (Mainela 2012; Andresen et al. 2014; Chandra et al. 2015); and, for instance, Mainela (2012) and Andresen, Lundberg, and Wincent (2014) call for further research on collaborative entrepreneurial processes. Taking a step forward, Mainela (2012) discusses the concept of collective international opportunity recognition: in contrast to opportunities existing and being recognised in markets by alert individual entrepreneurs, collective opportunities are created through interaction and joint acts with others. In the collective enactment of a business opportunity, the actors involved share the opportunity, but each views it from a different perspective and in the light of different interests (Ciabuschi et al. 2012).

The processes by which multiple partners are involved in identifying, forming, and exploiting an opportunity comprise opportunity conceptualisation dialogue, resource mobilisation, and legitimacy-building among several firms (Andresen et al. 2014). According to Chandra, Styles, and Wilkinson (2015), international entrepreneurship overall is essentially a process of the co-exploitation of opportunities among a network of entrepreneurial actors in international markets. The entrepreneur's opportunity portfolio processing is influenced by the strategic fit between his opportunity portfolio in relation to another actor's (or set

of actors') opportunity portfolio(s). According to Mainela, Puhakka, and Servais (2014), international opportunity development is a process of interacting in relationships to create shared interests, whereby the involved actors actually become parts of the collective opportunity. For such opportunities to emerge, entrepreneurs have to mobilise other people and firms to work towards the same idea, despite all viewing it differently in light of their own interests and resource constellations (cf. Ciabuschi et al. 2012). While allocating resources to new activities means taking them away from some existing ones (Håkansson & Waluszewski 2002), the others must also notice an opportunity that is worthy of changing the existing operations. Thus, other actors in a network should not only be viewed as passive sources of knowledge, capabilities, and resources but increasingly as active parts of international opportunity creation and content (Mainela 2012; Mainela et al. 2014).

Hence, joint internationalisation can be seen as a result of multiple firms recognising an opportunity for entering into a specific market in collaboration. Prior research has investigated the role of business and social networks in international opportunity recognition from various angles but mostly from the perspective of an individual firm only, overlooking the inter-personal and inter-firm dynamics related to collective opportunity recognition that are vital for several firms in starting to change their existing operations in order to achieve the (more or less) shared internationalisation goals. The view of network relationships as the core of international opportunity recognition in collective settings remains clearly understudied, for which this inter-firm aspect is emphasised in this thesis to provide new insight into the joint internationalisation processes of SMEs.

2.4 International opportunity recognition as a process

The review of prior literature on international opportunity recognition allows us to summarise that international opportunity recognition is a complex and multifaceted phenomenon that is influenced by various factors at different levels. Besides exploring the multitude of factors influencing the recognition of opportunities in foreign markets, few studies also emphasise the processual character of international opportunity recognition.

According to Zahra, Korri, and Yu (2005), international opportunity recognition is an iterative process as the entrepreneur revises his concept several times based on intuition, feedback from the market, and the results of trial and error. Johanson and Vahlne (2006) state that the process is interactive and gradual as the concretisation and realisation of an opportunity idea proceeds, whereby they also find it meaningless to make a distinction between opportunity

recognition and development. Chandra, Styles, and Wilkinson (2012) further emphasise the dynamic feedback characteristics involved in international opportunity recognition by viewing opportunity identification and development as a continuous, cyclical process in which one opportunity (also including failures and false opportunities) stimulates subsequent opportunities by exposing the entrepreneur to learning, new information, resources, and network ties. Hence, they see international opportunity identification, refinement, and development as path- and history-dependent, which shows also in the entrepreneur's commitment to international markets.

Besides the evolving character of an individual entrepreneur's opportunity recognition, the temporal aspect has also been highlighted regarding the network in which the entrepreneur and his/her firm are embedded. Johanson and Vahlne (2009) argue that the knowledge of opportunities depends on a firm's network position and that this knowledge determines whether the firm decides to increase or decrease its commitment to the extant relationships. The following activities result in learning, creating, and trust-building in relationships, which again influence the firm's network position. Ellis (2011), in turn, proposes that international opportunity recognition is a subjective process yet is shaped by entrepreneurs' existing ties with others. Chandra, Styles, and Wilkinson (2012) suggest that firms identify and respond to smaller opportunities in the initial stages and gradually shift to larger opportunities as their capabilities, resources, networks, and international entrepreneurial intentionality develop. Hence, while some scholars focus on individual-level aspects and some on the network perspective of international opportunity recognition, both indicate that opportunity recognition is a complex and iterative process in which opportunities are constructed through exploitation activities and trial and error over time.

Some studies have presented more comprehensive processual models of international opportunity recognition. As an example, Peiris, Akoorie, and Sinha (2012) propose an integrative model of international entrepreneurship in which international opportunity development is in the central position. According to this model, opportunity identification is, first of all, an intentional process. International opportunity development, then, is triggered by intention and influenced by entrepreneurial resources, firm resources, and social capital. The international opportunity development involves a cycle of entrepreneurial learning, entrepreneurial knowledge, and entrepreneurial capabilities which lead to competitive advantage and international performance, stimulating further intentions for opportunity development. The whole process is also influenced by environmental factors (competition, culture, industry, institutional, and market factors).

In their later work, Peiris, Akoorie, and Sinha (2013) continue developing this thinking and present an integrative framework of opportunity identification, development, and exploitation, whereby the exploitation is more explicitly integrated into the process. They state that learning, knowledge, and capabilities have the capacity to explain why some companies exploit international opportunities successfully, while others fail to do so, given that both are in the same situation. Learning is affected by access to resources, entrepreneurial capabilities, and social capital. These assets, in turn, are affected by the value creation resulting from successful opportunity exploitation. Hence, this model constitutes a dynamic cycle. While being rather comprehensive in compiling these aspects from prior research, the authors note the lack of incorporating firm-level variables such as structure, strategy, and environmental factors in their conceptualisation.

Blankenburg Holm, Johanson, and Kao (2015) present a dynamic conceptual model of opportunity development in foreign market networks, relating international opportunity recognition and exploitation to the focal firm's network position. According to this model, a firm's network position changes over time as a consequence of opportunity exploitation, which in turn allows the firm to recognise new opportunities. The network position (insidership or outsidership) also influences whether international opportunities are discovered or created – the more of an outsider the firm is, the more likely it is that opportunities will be discovered or occur surprisingly through the firm's indirect relationships since the firm does not yet have a lot of direct relationships with firms in the foreign market. When the firm becomes an insider, it starts to solve problems and share knowledge with others in the network, and thereby increasingly creates opportunities. Further on, the more the opportunity is discovered, the more the firm's network position changes through network expansion. On the contrary, the more the opportunity is created, the more its exploitation involves both direct and indirect relationships, and the more it leads to both strengthening and expanding the network. At the same time, there is path dependence between opportunity recognition and exploitation: a firm can only exploit the opportunities that are recognised, and it can only recognise further opportunities based on what it has exploited and what is visible from its network position at a given time.

Chandra, Styles, and Wilkinson (2015) provide another view on the process by introducing the concept of opportunity portfolio processing. Over time entrepreneurs discover, create, and develop mental images of opportunities, prune some of the existing opportunities, and enlarge sets or portfolios of opportunities to be pursued. The opportunity-pruning and enlargement process is shaped by the nature of the entrepreneurial logic that one adopts (effectual, causal, or hybrid quasi-effectual). Effectual entrepreneurs prune fewer

opportunities than highly strategic entrepreneurs and keep prototyping and enlarging the sets of opportunities they pursue in response to uncertainty. However, over time they may gradually shift towards the use of causal logic by pruning out more opportunities, consolidating opportunity sets, and pursuing opportunities that match certain prototypes (the entrepreneur becomes more selective and disregards less attractive opportunities that are misaligned with future objectives). The authors also introduce prototype matching, whereby entrepreneurs match their prior mental images of opportunity worthy of pursuing with the newly encountered opportunities and creative opportunity prototyping, which involves reinterpreting old and new means-ends relationships as new relationships. The opportunity portfolio processing is also influenced by the strategic fit between a focal entrepreneur's opportunity portfolio in relation to other actors' opportunity portfolios. Specifically, Chandra, Styles, and Wilkinson (2015) state that international entrepreneurship is essentially a process of the co-exploitation of opportunities among a network of entrepreneurial actors in international markets. For this to occur, the partners must have the capability to exploit the opportunity (networks, resources, and technological competence) and the willingness to do it based on a strategic fit between a new opportunity and existing opportunities in their portfolios – the higher the fit, the more likely it is that the opportunity will be co-exploited.

All in all, the reviewed studies provide various perspectives and complementary aspects relevant to understanding the processual dynamics of international opportunity recognition. While some studies focus more on the involvement of the individual and others more on that of the surrounding network, the importance of the temporal aspect in the recognition of opportunities after one another is quite widely accepted.

2.5 Synthesising the literature on international opportunity recognition

To summarise the findings of this overall chapter, a synthesis of all the issues found relevant to international opportunity recognition in prior literature is presented in Figure 2, including aspects related to the individual and his/her firm and environment, mental images and sensemaking, surrounding networks, and the processual character. The references for each factor are listed in Appendix 2.

Figure 2 combines, firstly, the factors that have been identified as influencing international opportunity recognition, and secondly, the process dynamics that have been identified as constituting or being involved in international opportunity recognition. The factors are grouped under individual-, firm-, network-, and environment-level factors, all having an impact on how the process dynamics of

opportunity recognition and then exploitation take place and proceed to outcomes which, in turn, contribute to the evolvement of the factors.

Thus, prior studies have taken into account versatile perspectives relevant to international opportunity recognition. While studies on all these aspects have brought valuable insight into understanding international opportunity recognition, they also brilliantly illustrate the complexity of the phenomenon – given all the issues influencing the process, it is fair to argue that the process is always unique and specific to an entrepreneur in his/her particular surroundings at a given time, which must be taken into account when attempting to understand the phenomenon.

Accepting an even broader challenge, this thesis aims at understanding the dynamics of collective international opportunity recognition. To understand how the subjective views and interests of several parties come (or do not come) to be aligned, this research employs the extant understanding of mental images and sensemaking in studying international opportunity recognition in a network setting.

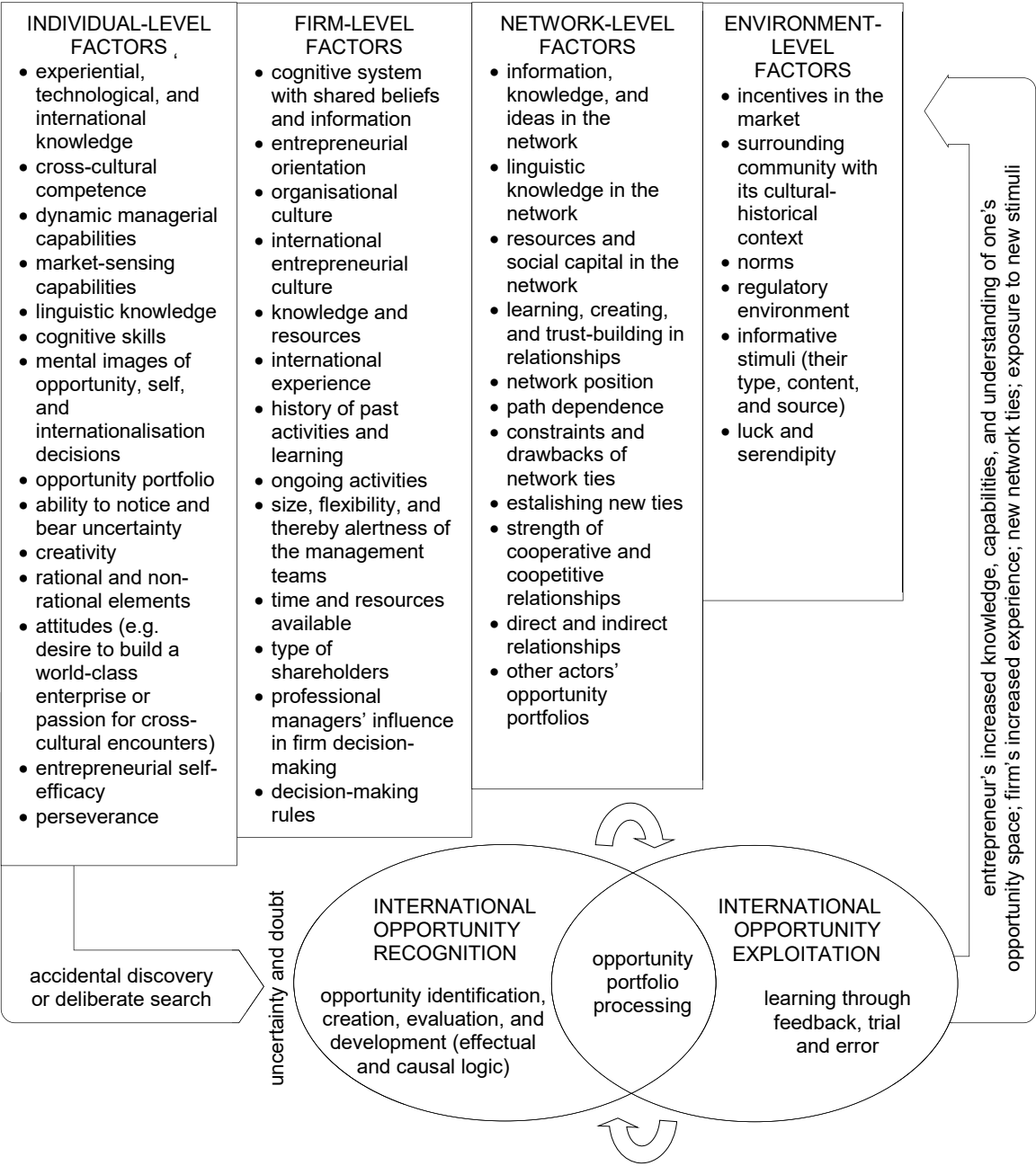


Figure 2 Synthesis on the extant understanding of international opportunity recognition

3 Methodology

3.1 Research approach

3.1.1 Critical realist philosophy of science

Philosophical assumptions have a strong influence on the research process – they shape both how we formulate our research questions and how we seek to answer them. However, researchers often underscore the importance of understanding the beliefs and theories that influence their research and also the importance of explicitly informing the reader of a study about its philosophical point of departure. (Creswell 2013) As regards the two main paradigms, for positivists theory is about explaining, predicting, and seeking causality, whereas for interpretivists it is about understanding and showing patterns and connections in a context (Charmaz 2006). Consequently, the paradigms differ in terms of ontology (i.e. assumptions about the nature of reality, ‘what is there to be known’), epistemology (i.e. evidentiary assessment and justification of knowledge claims, ‘what can we know’), and methodology (i.e. procedures by which the knowledge claims are created, ‘how can we know’) (Wynn & Williams 2012).

Between these two prevalent philosophical paradigms, critical realism leverages elements of both to develop knowledge (Bhaskar 1975; 2008), and it is becoming a viable philosophical paradigm for conducting social science research (Wynn & Williams 2012). Critical realism acknowledges the existence of independent structures as well as the subjective knowledge of social actors in a given situation – thus, the world is considered independent from our thoughts about it (Sayer 2000; Wynn & Williams 2012). In other words, the world is socially constructed, but that is not the whole truth as there is the objective reality behind it (Easton 2010). In critical realism, reality is stratified into the three following domains: (1) the real, (2) the actual, (3) and the empirical (Bhaskar 2008). The real comprises the entities and structures of reality and their independent causal powers. The actual is a subset of the real, including the events that occur when the real causal powers of structures and entities are activated. The empirical is a subset

of the actual, consisting of those events that a human observes and experiences via perception or measurement. (Wynn & Williams 2012) This stratified ontology comprises structures and their mechanisms, events resulting from activated mechanisms, and observed experiences, as illustrated in Table 3.

Table 3 The domains of critical realism (Bhaskar 2008, 13)

	Domain of real	Domain of actual	Domain of empirical
Mechanisms	X		
Events	X	X	
Experiences	X	X	X

Through experiences, we can study the events and increase our understanding of the mechanisms of the real world. Theories revolve around the independent reality, although humans are usually unable to fully understand or observe it (Wynn & Williams 2012). Thus, in critical realism, causality (the relationship between cause and effect) is about *‘detailing the means or processes by which events are generated by structures, actions, and contextual conditions involved in a particular setting’* (Wynn & Williams 2012, 789). In the open systems of the social world, the same causal power can produce different outcomes depending on the conditions, that is, the spatio-temporal relations that the mechanism has with other objects. Due to this contingency, many things can happen, and the future is open. (Sayer 2000) At the same time, *‘the socially constructed view of reality held by a given actor or actors may be incorrect’* (Wynn & Williams 2012, 790), which means that humans with their observations can be fallible about the structures and mechanisms of the reality (Easton 2010).

These acknowledged ontological limitations take us to the epistemology. Instead of the positivist aim to produce predictions, or the interpretivist aim to understand the social or cultural meaning between the events, critical realism aims at producing explanations of the mechanisms that generate certain events. The mechanisms are often not observable or measurable, so we must try to identify them based on observable experiences that we believe have been caused by them. We are not able to observe all the aspects of a phenomenon, for which it is typically impossible to identify the exact causes behind a given outcome, and we may come up with multiple possible explanations. (Wynn & Williams 2012) Our knowledge is mediated as there is the intransitive dimension of scientific knowledge, that is the world that we seek to explain, and the transitive dimension, comprising the researchers’ observations and theories about the world (Bhaskar 2008; Wynn & Williams 2012). Hence, *‘a perfect match between theories and reality is unlikely’* (Wynn & Williams 2012, 793), but by selecting the most likely cause of a given

phenomenon, we generate the most accurate representation of the real world, given our existing knowledge.

When it comes to methodology, in contrast to positivism and interpretivism, critical realism is compatible with a wide range of research methods, but the choices should be compatible with the nature of the object of study and what is to be learned about it. In the social sciences, the objects of the study cannot be studied under controlled conditions, for which we have to attempt to abstract and conceptualise the components and influences. (Sayer 2000) The methodological principles of critical realism start with the explication of events, including their detailed descriptions with details of key actions and outcomes (Wynn & Williams 2012). Hence, critical realists investigate events, that is, the visible behaviours of people, systems, and things as they occur or as they reportedly have happened. Also the non-occurrence of an expected event requires explanation and may give useful insight into the studied phenomenon. (Easton 2010) The study of events enables identifying the relevant elements of structure and context from which these events emerge and the mechanisms that were enacted. Through an iterative retrodution process, events are explained by mechanisms which are capable of producing them, and we can identify the most logical explanation of the observed events given the contextual conditions. Through empirical corroboration, we can further verify with data that the hypothesised mechanisms are sufficient to produce the effects, for example by evaluating whether the explanation holds across multiple cases. However, it must be noted that instead of statistical generalisation to broader populations, the aim under critical realism is rather to utilise the causal explanations of the mechanisms to obtain insights into how and why a similar mechanism could lead to similar or different outcomes in different settings. (Wynn & Williams 2012)

To concretise the discussed three philosophical paradigms, we may compare how the views of international opportunity differ based on the researcher's underlying philosophical assumptions: (1) For positivist empiricists, the world exists objectively, and opportunities exist out there to be found. Because opportunities exist objectively, they can be evaluated based on their attributes, such as production costs, labour supply, and stability of foreign government. (2) In contrast, the interpretivist, constructivist view sees the world as subjective and socially constructed, whereby opportunities are created or co-created through relationships and interactions in foreign markets. As was noted in Chapter 2, the debate between these two schools of thought continues in terms of whether opportunities are discovered or created. (Ramoglou & Tsang 2016; Chandra 2017) (3) The critical realist view, the one applied in this thesis, builds on both by assuming that *'opportunities are unrealized abstract possibilities that need to be concretized'* (Chandra 2017, 427). Following the domains of three-layered ontology,

in the real world of structures and mechanisms, there are endless raw opportunities. In the actual world, activated mechanisms generate un-actualised international business possibilities as a subset of the real world. In the empirical world, there are international business opportunities, possible and unlikely, that can be observed and enacted. Realists acknowledge un-actualised opportunities that can be found and evaluated, as positivists argue, and that entrepreneurs' efforts are necessary in actualising them by creation (e.g. through mobilising resources and marketing), as interpretivists argue. (Chandra 2017) For the actualisation to take place, the entrepreneur must first believe that he/she has recognised an opportunity (Ramoglou & Tsang 2016). Hence, critical realism concretely builds on both paradigms, seeing that opportunities can and need to be both found and created along the internationalisation process in order to be materialised as viable opportunities. Besides me as a researcher having assumptions of the world that are aligned with the critical realist world view, this broad view of opportunities is also fruitful for openly exploring the process of collective international opportunity recognition.

3.1.2 Qualitative case study

The label of qualitative methods has no precise meaning, but, instead, it is an umbrella term that covers interpretive techniques that seek to describe, decode, translate, and come to terms with the meaning, not the frequency, of certain naturally occurring phenomena in the social world (Van Maanen 1979). Thus, qualitative research refers to research that produces findings by means other than quantification and statistical procedures (Strauss & Corbin 1990). While qualitative research has often been contrasted with quantitative research, which seeks to investigate the frequency of phenomena, qualitative research can also be applied from a more positivist or more constructivist philosophical starting point. Although qualitative positivism is dominant in international business research, this thesis is conducted from the critical realist perspective, as described above.

Qualitative research is useful in uncovering and understanding phenomena of which little is yet known and also in giving fresh, novel insights into phenomena that have already been under scholarly investigation. In particular, qualitative research is often naturally employed in research that attempts to enlighten people's experiences with a given phenomenon. (Strauss & Corbin 1990) There are areas of social reality that statistics simply cannot measure (Silverman 2001), and qualitative research provides tools for such examination. As Miles and Huberman (1994, 1) put it, qualitative data *'are a source of well-grounded, rich descriptions and explanation of processes in identifiable local contexts'*. With qualitative data, one can preserve chronological flows of events and achieve fruitful explanations about

which events lead to which consequences, whereby researchers can also end up with unexpected findings and thereby come to generate or revise existing conceptual frameworks. Due to these aspects, qualitative research has become increasingly popular in disciplines such as business studies, organisational studies, psychology, and sociology. (Miles & Huberman 1994) As my focus is on a modestly investigated phenomenon which is strongly tied to people's subjective experiences and also to their development through events over time in a specific context, this thesis builds on qualitative research.

The term qualitative research comprises various approaches and methods, including observation, the analysis of text and documents, and interviewing, which are often combined (Silverman 2001). The thesis utilises the case study approach, which is frequently used in industrial network research as it provides a *'unique means for developing theory by utilizing in-depth insights of empirical phenomena and their contexts'* (Dubois & Gadde 2002, 555). Case research is an intensive research method that is, as Easton (2010) puts it, entirely compatible with critical realist ontology. He describes the critical realist case approach as *'particularly well suited to relatively clearly bounded, but complex, phenomena such as organisations, interorganisational relationships or nets of connected organisations'* (Easton 2010, 123). Case studies are useful in exploratory theory-building about complex phenomena, for understanding the processual nature of the phenomena, and for contextualising the phenomena. In particular, case studies are helpful in seeing issues from the emic perspective, that is, from the perspective of the people involved, reflecting their understandings of the world. The views of what a case study is remain, however, conflicting due to differences in philosophical assumptions that often remain implicit in studies. The differences in views relate to theorising (causal variable-oriented explanations versus contextual case-oriented explanations), case selection (replication versus richness), the multiplicity of data sources (convergence versus diversity), and boundary-setting (predetermined design versus emergent logic). (Piekkari et al. 2009) Moreover, some scholars understand case study as a methodological choice, as a choice of what is studied (Stake 2005), and some as a choice of how to report a study (Wolcott 2002). There are also controversial views on the extent to which a case study aims at an empirical generalisation to other events (George & Bennett 2004) and to analytical generalisation to theory (Mitchell 1983).

Despite this heterogeneity of views, the main authorities of the case study in business and management studies, Yin (1984) and Eisenhardt (1989), remain cited in most international business case studies irrespective of the philosophical stance applied in the study. Eisenhardt (1989, 534) defines case study as *'a research strategy which focuses in understanding the dynamics present with single settings'* and Yin (2009, 18) as *'an empirical enquiry that investigates a contemporary phenomenon in depth and*

within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident'. Yin builds on deductive, theory-based reasoning (Yin 1984; 2009), whereas Eisenhardt emphasises inductive theory-building (Eisenhardt 1989). However, they share a positivist view which, unlike the critical realist perspective employed in this study, does not aim at understanding personal meanings but at generalisation and prediction (Platt 1992). Nevertheless, following their work, case studies in international business tend to be implicitly positivist, interview-based, multiple case studies that are conducted at a single point in time. Single case studies and longitudinal case studies remain less applied alternatives even though critical realist and interpretivist studies have increased over the past 20 years. (Piekkari et al. 2009) Following the broad definition by Piekkari, Welch, and Paavilainen (2009) that accepts both positivistic and alternative conceptualisations, a case study is in this thesis viewed as *'a research strategy that examines, through the use of a variety of data sources, a phenomenon in its naturalistic context, with the purpose of "confronting theory" with the empirical world'*. This confrontation can either aim at theory-testing or at the holistic explanation of processes and causes in individual cases (Ragin 1992). On this basis, during a case study process, the relationship between theory and the empirical world is explored, destabilised, and reconstructed (Dubois & Gadde 2002).

There are also different ways of theorising based on case studies: inductive theory-building, natural experiment, interpretive sensemaking, and contextualised explanation (Welch et al. 2011). Inductive theory-building neither aims to study causal relationships nor emphasises the context of the study in order to produce generalisable results. Natural experiments are also de-contextualised but aim at causal explanation with a positivist orientation. Interpretive sensemaking, in turn, starts from a constructivist perspective and places strong emphasis on contextualisation and weak interest in explanation. The fourth alternative, contextualised explanation, is an emerging alternative building on critical realism. This approach rejects positivist notions of generalisability but builds contextually contingent relationships between causes and effects. Thus, the approach emphasises both contextualisation and causal explanation, appreciating context-specific idiosyncrasies and thereby creating powerful explanations (Tilly & Goodin 2006). Such good and rich stories about phenomena are also sometimes more powerful than plain constructs because they are understandable and memorable (Dyer & Wilkins 1991). This fourth approach to theorising is employed in this thesis as the aim is to understand why and how the studied phenomenon takes place in its context. In line with the critical realist perspective, causality here does not concern a fixed relationship between discrete events but the causal powers or mechanisms of objects, the activation of which depends on conditions in the context (Sayer 1992).

3.1.3 Process-based case study

Besides the overall circumstances, this research gives specific attention to time and to the temporal context, focusing on how the studied phenomenon evolves over time. Given that relationships and networks are not fixed but continuously re-created over time, paying specific attention to time is highly important in the study of collective international opportunity recognition. Moreover, in such a study, it is important to acknowledge and connect events and processes at the individual, firm, and network levels in order to understand how processes are enacted over time in a network setting even though it is challenging to incorporate multiple actors' views of processes and analyse them at different levels in a single study. (Halinen et al. 2012)

A longitudinal case study is about examining a case over an extended period of time in order to identify and explain patterns of change in its context (Pettigrew 1990) by analysing flows of events over time and by linking features of context and process to certain outcomes (Pettigrew 1997). More specifically, this research is conducted as a process-based study, meaning that it combines process data with process theorising, which is strongly recommended in the study of internationalisation processes; surprisingly, only a minority of the extant studies on them take a truly process-based approach (Welch & Paavilainen-Mäntymäki 2014). In contrast to variance approaches, which seek relationships between variables and aim at answering what-questions, a process approach seeks to trace how and why events unfold through events – through what kind of mechanisms different time points are connected and how and why the observed patterns occur (Dawson 2003; Welch & Paavilainen-Mäntymäki 2014). Process theories ask what the antecedents and consequences of an issue are and how the issue emerges, develops, and grows, or terminates, over time (Van de Ven 2007). *'The past contains the seeds for the future'*, whereby embeddedness and temporal interconnectedness are key features of process research (Mari & Meglio 2013, 208). Conducting a process study that truly embraces these features requires that the process be maintained under focus in the aim, data, analysis, and contribution of the study (Paavilainen-Mäntymäki & Welch 2013).

Process-based research is, however, not simple to conduct because of the required time commitment as well as the dominance of variance-based assumptions (Welch & Paavilainen-Mäntymäki 2014). In addition, the data provide challenges for the researcher due to their volume, ambiguity, and complexity, particularly when process research is conducted with an inductive approach, and what is relevant is often decided only along the process (Langley 1999). Given the complexity of longitudinal investigation, the majority of process studies are conducted with single-level analysis in management and organisation journals, mostly at the organisational level, while the network level of analysis is largely

unexplored (Mari & Meglio 2013). This may relate to the fact that conducting process research in a business network setting poses further challenges: the researcher needs to define the items on which data are collected in a multi-layered network setup, specify the time periods from which data are collected at the chosen levels, choose the case(s) in a way that the subjects of the studied phenomenon remain comparable over time, and eventually, build comparisons in the analysis of complex network data. All this is not straightforward as, in a business network, the actors and relationships change, whereby the informants and data sources may change, and hence, the data to be analysed can differ considerably from one period to another. (Halinen & Mainela 2013)

However, as process research is about understanding a changing phenomenon through the flow of events and activities, the change in the research process must be embraced and dealt with via methods that enable the illustration and explanation of change (Halinen & Mainela 2013). Such methods employed in this research include analysis tactics for narrative research in business networks (Makkonen et al. 2012) and temporal bracketing, whereby the longitudinal data can be split into successive, comparable periods, illustrating change (Langley 1999). At the same time, flexibility and a progressive focusing approach allowed me to react to and adjust the research according to the changes in the research setting and the evolving research phenomenon (Alfoldi & Hassett 2013). In addition, concerning the multi-level network analysis, processual researchers are often storytellers that combine the multiple informants' multiple stories as, over time, managers may adjust their views by reinforcing or downplaying some elements to the detriment of others when making sense of a past event, for instance. For this reason, it is important not to reconcile discrepancy but to embrace and look deeper into controversies within and between the views of individuals (Dawson 2013), which was followed in this thesis. All in all, the complex process data reflect the complexities of the industrial phenomenon we are trying to understand (Langley 1999), allowing the generation of strong process theories (Welch & Paavilainen-Mäntymäki 2014).

The timing and duration of a process study should be based on the phenomenon of interest – the process can be a short one, and what matters is not the timespan but the presence of a cause, an effect, and mechanisms in between, whereby the phenomenon can be explained (Paavilainen-Mäntymäki & Welch 2013). Hence, the length of the fieldwork depends on the length of the studied process. Most process studies in management and organisation research last up to three years (Mari & Meglio 2013), and also in this research the investigation period comprises three years, from the beginning of 2015 to the end of 2017, during which I was able to see the collective opportunity recognition and the ceasing of it as well as the paths that followed. Consequently, the attempt of this thesis is to produce

process theory through process data and thereby enhance the understanding on how collective international opportunity recognition unfolds over time.

3.2 Research process

3.2.1 System-driven abductive path

The research underlying this thesis has followed an ‘empirical path’, and it can be defined as ‘system-driven’, meaning that the starting point for the study arose from a need to understand an empirical phenomenon by combining the elements and relations in it with those of the methodological domain and then interpreting them with the elements and relations of the conceptual domain (cf. Brinberg & McGrath 1988). In line with the critical realist approach to case research (Easton 2010), a study starts with identifying a research phenomenon of interest in terms of observable events and asking what caused them to happen. Then the key entities are identified, and data on the ongoing or past events is captured by asking the entities why the events are happening or happened, also taking into account the issues associated with interpreting the data – reflection is important. At the end of the process, the result is the identification of one or more mechanisms that can be regarded as having caused the events. (Easton 2010)

The research process behind this thesis followed this approach although it was not straightforward. It turned out to be abductive, meaning that it proceeded by the continuous interplay between concepts and data (Van Maanen et al. 2007). While a standard conceptualisation of a research process involves pre-planned, subsequent phases, in abductive research the analytical framework is successively modified due to unanticipated empirical findings as well as theoretical insights gained during the process. Hence, it is not a mix between inductive and deductive approaches but a non-linear process of going backward and forward between data and theory (Dubois & Gadde 2002) and capturing surprises that provide new insight into the studied phenomenon (Timmermans & Tavory 2012). This allows the researcher to expand his/her understanding both of the empirical phenomenon and the theory – *‘theory cannot be understood without empirical observation and vice versa’* (Dubois & Gadde 2002, 555). The unanticipated yet related issues may create a need to redirect the theoretical framework by expanding or changing it. The matching of theory and reality, and when there is no match, directing and redirecting the work, is referred to as systematic combining (Dubois & Gadde 2002), which took place along this research process more or less consciously. While the objective of a researcher is to find new things (such as variables and relationships), an empirical phenomenon must be considered in the light of a certain initial framework, and the further needs for the theory are

created along the research as new, surprising empirical findings and theoretical insights emerge in the combining process (Dubois & Gadde 2002). The surprising, abductive moments experienced during this overall research process are summarised in Table 4. Through these redirections, the doctoral research evolved into its final form.

Table 4 Redirections of the study

Time	Phase	Source of redirection	The noticed issue	New focus of the study
2013 (start)	Background data generation	Data	The Finnish maritime sector is in need of rapid restructuring and increasingly international networks to remain competitive and exploit e.g. Arctic business opportunities.	Business networks in the internationalisation of Finnish maritime firms.
2013		Theory	Discovering literature on coopetition – cooperation of competing firms for achieving joint goals.	The dynamics of coopetition relationships in international project business – the perspective of Finnish maritime firms.
2014		Data	Business opportunities in the Arctic are strongly advertised; some firms go to explore them and some do not.	Why do some firms go international to explore the Arctic business opportunities in collaboration while others do not?
2014		Theory	Discovering literature on international opportunity recognition and mobilisation in business-to-business networks.	Mobilising international opportunity exploration in business networks – an empirical study on Finnish maritime industry networks in front of Arctic business opportunities.
2015	Pilot study	Theory	Discovering calls for research on collective opportunity recognition.	Collective recognition of international opportunity – Finnish maritime firms in the Arctic.
2015	Longitudinal case studies	Data	Firms not only target the Arctic but whole countries or specific customers.	Collective recognition of international opportunity – Finnish maritime firms in Norway and Russia.
2016		Data	The groups of firms fail in their internationalisation attempts.	Progress from collective international opportunity recognition to the lack thereof.

2017		Data	Identifying subjective mental images that underlie opportunity recognition and the lack thereof.	The role of mental images in collective international opportunity recognition.
2017		Theory	Discovering literature on mental images.	How do mental images evolve over time in relation to collective international opportunity recognition?
2018		Theory	Literature suggests that mental images evolve through sensemaking.	Mental images and sensemaking in collective international opportunity recognition.
2018		Data	Identifying two kinds of sensemaking processes involved in collective international opportunity recognition.	Individual and inter-firm sensemaking processes in collective international opportunity recognition and exploitation.
2019		Theory	Exploring collective entrepreneurial processes and their role in collective sensemaking.	Collective sensemaking in collective international opportunity recognition.
2019		Data	Identifying different types of events, mental images, and sensemaking processes affecting collective international opportunity recognition.	The elements and processual dynamics of collective international opportunity recognition.

The doctoral research process began in 2013 as I was employed in a research project studying the competitiveness and networks of the maritime cluster in the Central Baltic region.³ During the project, I conducted various expert interviews

³ *SmartComp – Smart competitiveness for the Central Baltic region*: The SmartComp project ran from 2012 to 2013 with co-funding from the EU Central Baltic INTERREG IV A Programme 2007–2013. The project aimed to unite the maritime clusters of the region and to strengthen existing networks as well as to create new ones in order to improve the competitiveness of the sector and to create sustainable growth possibilities for it through triple helix cooperation. During the project, the situation of the maritime cluster and its future in the Central Baltic region was analysed on sectoral, corporate, and regional levels. The project created an understanding of the opportunities and challenges faced by the cluster and, based on that, resulted in future scenarios about the development of the Central Baltic maritime cluster. Hence, the project was more practice-oriented than academically oriented. More information about it is available at <<http://www.cb-smartcomp.eu>>. Most of the interviews listed in Table 5 as providers of background information were interviewed during this project. I was personally involved in applying the project funding and afterwards employed in the project as Project Researcher.

that exposed me to the underlying need behind this thesis – how to support the joint internationalisation of maritime and offshore industry SMEs to Russia and Norway? Thus, working in the project taught me a lot about the maritime and offshore sector developments, particularly from the Finnish perspective, which drove me to plan the doctoral research around horizontal collaboration in business networks.

At the same time, I was taking my first doctoral courses and learned a lot about suitable research questions and theoretical literature. As I was going through the literature about business networks, I came across studies about partnerships and strategic alliances but felt that they did not provide me ways to push further in finding the theoretical gap and research question that would help me to meet my original objective. Then I discovered studies about cooperative relationships and found them highly interesting in this context – namely, internationalisation among maritime sector SMEs often involved collaboration between firms that sometimes served the same customers, whereby the setting involved simultaneous collaboration and cooperation. Understanding and easing this tension might provide a perspective to narrow down the focus of the study. Hence, the doctoral research was redirected towards understanding cooperative relationships.

However, as I continued conducting interviews in the research project, the data started to point in another direction. The plenitude of business opportunities in the Arctic region was strongly promoted in the maritime industry, and all Finnish SMEs were encouraged to explore them, especially because the situation in the domestic markets was rather poor at the time. Firms were increasingly pressured to seek opportunities in foreign markets, and for SMEs, this often required inter-firm collaboration. At the same time, I had noticed that the literature on cooperation did not guide me further – it appeared that, in practice, the cooperative tension between partly competing firms was not that critical of an issue for their cooperation, whereby it seemed that focusing on that aspect and literature would not provide a very fruitful framework for a doctoral thesis in this empirical context. Instead, in a doctoral course focusing on business networks, I was faced with the concept of mobilisation which strongly triggered my interest – how can one organisation make others move towards its own goals? Given the data's emphasis on opportunities, I also looked for literature around that theme. Then I found the international entrepreneurship literature and the vast amount of studies on international opportunity recognition and combined that with mobilising in business networks – thereby, a new objective for the doctoral research was set again.

As I was presenting my research plan in international business seminars, I was pointed to very recent studies that looked into international opportunity recognition particularly in an inter-firm setting – namely, the study by Mainela

(2012) discussing collective opportunities. This was a treasure, and with it the research objective was crystallised. The thesis would explore collective international opportunity recognition, that is, how multiple firms recognise a joint opportunity in collaboration. Understanding this emerging research phenomenon would be of academic interest and also likely to result in ideas by which the joint internationalisation of SMEs could be promoted.

After the first research project ended, we received financing for a second one that focused particularly on the developments in the Arctic region.⁴ As I was involved in the project since the application phase, I had the privilege of designing a part of it so that it met the objectives of my doctoral research. Thereby, I was able to directly utilise the interviews that I collected in the project for my doctoral thesis and built them around understanding collective international opportunity recognition, that is, how the studied firms come to see international as well as collaboration opportunities along the project in the arctic maritime industry context. On this basis, the pilot study of the thesis took place based on the first round of interviews conducted in the project.

However, the data generation again resulted in redirections of the study. Firstly, it soon became clear that the respondents did not see the Arctic as such having any particular meaning – it was more generally about doing international business with specific potential customers, mostly in Russia or Norway. Moreover, it seemed that the widely advertised business opportunities in the Arctic remained far off on the horizon due to the postponement of important offshore projects, and there was no immediate business specifically in the Arctic region into which

⁴ *Russia's final energy frontier – Sustainability challenges of the Russian Far North*: This two-year (2014–2016) research project, co-funded by the Academy of Finland (grant 277961) and the Japan Society for the Promotion of Science, analysed the role of internal factors, foreign businesses, and international Arctic politics in the formation of energy policy in the Russian Far North, towards which the centre of gravity of Russia's hydrocarbon production is shifting. The project also examined how this policy affects socioeconomic development and the environmental situation in the area. The focus of the University of Turku was to study the future role of foreign companies in the development of the Russian Far North, particularly in the maritime and offshore sector, and how they enter the markets and engage in the complex networks in the Russian Far North as well as how they cooperate with other actors in this respect. Some of the interviews listed in Table 5 took place during this project, and the pilot study was also conducted along with this project. I was involved in applying the project funding and planned our work in a way that also met my aims for conducting a doctoral dissertation. Once the funding was granted, I was employed in the project as University Teacher, and my research for this doctoral thesis also contributed to the project's objectives; for example, I approached the pilot study firms personally, asking for interviews that would be part of the research project as well as my dissertation. None of the studied firms was a beneficiary in the project.

Finnish SMEs could move. Therefore, I decided not to highlight the Arctic context any longer but to focus instead on international opportunity recognition in these two foreign country contexts, Norway and Russia, as the firms themselves also did.

Secondly, as I was able to collect data and follow the developments of the studied firms and their collaboration longitudinally along the project, it turned out that several of the collaboration attempts failed. This drove me to modify the research objective towards understanding the processual character, failure, and multiple-opportunity perspective in collective international opportunity recognition, whereby I felt that the study became eventually much richer – I would not only investigate how firms collectively recognise opportunities but also how they no longer do, which would be critical to continued joint internationalisation efforts.

Thirdly, the inductively collected data started to indicate that collective international opportunity recognition (or lack thereof) was not a result of any physical, concrete factors but a result of something highly subjective and cognitive, which I termed mental images. Soon afterwards, I discovered that there is plenty of prior research on mental images and thereby brought a new theoretical concept to the heart of the doctoral research.

Even though the latter research project ended in 2015, I continued interviewing the same firms independently for two more years, until the end of 2017. During that time, I completed the doctoral courses and wrote articles 1, 2, and 3 of this thesis. While working on Article 4 after the data generation, I found in the literature that mental images evolve through sensemaking and realised that I would need to look into this concept in more detail in order to better understand the temporal dynamics of collective international opportunity recognition. As I looked at the data anew through this lens, I discovered two kinds of sensemaking processes underlying the phenomenon – individual and inter-firm sensemaking. As inter-firm sensemaking was quite an understudied process, I searched for more literature that I could utilise in getting a hold of it. I decided to employ the literature on collective entrepreneurial processes (Andresen et al. 2014) in order to understand what happens at the collective level in collective international opportunity recognition – that is what I really needed to understand in order to understand the whole phenomenon. As the work on Article 4 proceeded, this led me to identify different types of events, mental images, and sensemaking processes affecting collective international opportunity recognition. Through this path, the overall objective and structure of the study was finally set – understanding the elements and processual dynamics of collective international opportunity recognition.

Consequently, the path through which this doctoral thesis emerged consists of redirecting the study multiple times along the research process, based on my own

learning and new insights gained from the theoretical literature as well as through data gathering. The data generation will be discussed in detail next.

3.2.2 Data generation

In the overall doctoral research project, the data were collected in the following three phases: (1) interviewing industry experts and collecting background data to become well informed about and identify the empirical phenomenon for the study, (2) a pilot study with interviews of selected firms considering internationalisation to Norway and/or Russia in the maritime and offshore sector to get deeper insight into the issue, and (3) repeatedly interviewing firms of three groups attempting joint internationalisation to Norway and/or Russia to be able to follow the emergence and development of the phenomenon over time. To start with, the background interviews were conducted with various industry experts (see Table 5) in 2013–2015 in the research projects that I was involved in at the time.

Table 5 Background interviews

Name	Title	Organisation	Time
Backman, Mikael	CEO	Viking Line	3.4.2013
Heikinheimo, Juha	President	Napa Oy	9.4.2013
Lainio, Ulla	Leading Advisor	Finpro	7.11.2014
Manner, Olli	President & CEO	Elomatic	26.4.2013
Mustamäki, Esko	CEO	Arctech Helsinki Shipyard	8.4.2013
Mälkiä, Jussi	President	Meriaura	23.4.2013
Rytkölä, Ilkka	General Manager	Wärtsilä Ship Power	3.4.2013
Rönneback, Rainer	Internationalisation Expert	Viexpo	24.2.2015
Takkinen, Markko	Commercial Director	Antti-Teollisuus Oy	17.4.2013
Vauraste, Tero	President & CEO	Arctia Shipping	10.4.2013
Viitanen, Ari	Director, Customer Solutions	Cargotec	30.4.2013
Windischhofer, Richard	Business Development Manager	ABB Marine and Crane Services	10.4.2013

Through these interviews, and by attending seminars and project meetings in Finland, Norway, and Russia concerning the developments in the maritime industry and the Arctic region, the studied phenomenon was identified and crystallised, and the basis for the coming phases of the research was set. At the end of 2014, I asked one of the industry experts, a representative of a national export promotion organisation, to provide a list of Finnish maritime and/or offshore

sector SMEs attempting or having attempted internationalisation to Norway and Russia during the previous five years. I approached the listed firms first by email and then by phone, and through discussions with them also obtained connections with additional firms suitable for the study. On this basis, the first interviews were conducted in February–April 2015 with 20 firms based on both criterion and snowball sampling (Fletcher & Plakoyiannaki 2011). This number of interviews was considered adequate as the data started to saturate in terms of views and, given that the number of Finnish SMEs operating in the maritime and offshore industries in both Russia and Norway totalled only 30–40 in 2015 according to the export promotion agency, the number of interviewed firms was considered to cover this population quite well.

The interviewees were CEOs or other persons identified in the firms as responsible for their international operations. It is generally accepted that opportunities are recognised by individuals instead of firms, whereby opportunity recognition should be analysed at the individual or inter-personal level (Ellis 2011). Although many organisational members notice and interpret information about the environment, it is the top manager level where the information converges and is interpreted for organisational action. Opportunity beliefs that lead to strategic action are shaped by top managers' attention allocation, knowledge structures, and cognitive modes, often irrespective of whether others in the organisation notice similar changes or how they evaluate them. (Shepherd et al. 2017)

The semi-structured interview questions (see Appendix 3) concerned the informants' views of their firm's prior, current, and future operations and collaborations towards the Norwegian and/or Russian market, thereby allowing the informants to openly express their views and evaluate their past and future actions. The interviews took place face-to-face or by phone. They were recorded, and the permission for recording was requested and obtained at the beginning of each interview. The interviews constitute the primary data for the pilot study, which were complemented with documents such as information from the firms' websites and news articles. To respect the anonymity of the interviewees and the firms they represent, names and detailed business information are not disclosed.

Based on the findings of the first round of interviews, I wanted to continue the longitudinal investigation of collective international opportunity recognition (or the lack thereof). For such a study, I had to select inter-firm cases, that is, groups of firms potentially recognising a collective international opportunity, to follow. Five groups of firms were identified based on the pilot interviews, and again through criterion sampling (Fletcher & Plakoyiannaki 2011); three of them were selected for longitudinal observation based on their establishment within the previous two years, whereby the members could recall the process from the beginning. The identified groups were the following: 'Alpha' with three key

members, 'Beta' with three members, and 'Omega' with five members. Some of the interviewed firms were members in more than one group, and altogether six firms were interviewed regularly during the longitudinal investigation period. In addition to those, I continued observing the actions of an eighth firm as it had strong interest in entering the studied market context, either alone or in collaboration with others.

The data generation took place by interviewing the informants of each firm twice a year, altogether from the beginning of 2015 to the end of 2017. This followed the point-mapping technique introduced by Halinen, Medlin, and Törnroos (2012), whereby data are collected as snapshots twice a year, allowing the interviewees to recall the key events well yet also allowing the progress and the emergence of new events between the study points. The interviews were conducted following the same open interview guide and the same practices as described for the pilot study. Unfortunately, it was not possible to interview all the people in every interview round due to the busy schedules of the informants, but with the data gained I received adequate information about the managers' mental image development in relation to the encountered events and thereby an understanding of how they saw the progress of (collective) internationalisation over time. Eventually, this third longitudinal dataset comprised 29 interviews, whereby the pilot study and longitudinal study phases totalled 49 firm interviews. This dataset was also complemented with information from the websites of the firms and the groups and relevant news articles from the media.

Getting back to selecting a case or multiple ones for the study, the question often arises as to what constitutes a suitable sample size. However, in case study research, the question should not be how many but what for. This does not mean that the number is irrelevant, but the information richness of the cases is an important aspect, too, and overall the cases must be sufficient for the enquiry of which they are part and for the explanation derived from the research. Moreover, it is important to note that what we sample in the beginning of the research project may not be what we realise we 'cased' eventually. (Emmel 2013) Instead of fixing the case beforehand, casing takes place along the research process, whereby cases can actually be considered as products of research operations instead of empirical units or theoretical categories. When members of an empirical category, such as firms, are declared to be relevant objects for examining a theoretical idea, they are cased and manipulated by ignoring irrelevant aspects and focusing on theoretically relevant aspects – the empirical world must always be narrowed for practical reasons. Then, the interplay of linking theoretical ideas and empirical evidence produces theoretically structured, meaningful, and useful descriptions of the empirical world, and, eventually, these dynamic cases may be used to refine

the theory that provided the initial guidance (Ragin 1992). A case evolving during a study is a product that cannot be planned in advance (Dubois & Gadde 2002).

In the beginning of the longitudinal data generation, I decided to focus on following the operations and views of three groups of firms, but eventually only one of them was fully reported in this doctoral thesis (in Article 4) due to the limited possibilities for analysing multiple complex cases in one article. The reported case group was selected based on intensity sampling (Fletcher & Plakoyiannaki 2011) as I had the best access to the key informants in this group and had gained the richest data on their views. At the same time, I employed context-sensitive (Poulis et al. 2013), phenomenon-driven case selection (Fletcher et al. 2018) as this case seemed to best exemplify the studied phenomenon in its context based on the overall multi-level story captured about it along the longitudinal interviewing. Consequently, the cases studied in the original articles emerged along with the data analysis and the abductive research process.

3.2.3 Data analysis

In qualitative research, the data analysis begins along the data generation. In this thesis, the aim was to understand collective international opportunity recognition. To build understanding on the individual and collective levels, ultimately an embedded case study (Yin 1984) was employed, considering groups of firms going international in collaboration as cases and individual firms within them as sub-cases. However, although this approach was held from the beginning to the end, the casing took place as the theoretical concepts and empirical data were combined and as new concepts were employed along the process. In the beginning, the research was about multiple cases of individual firms recognising collective international opportunities, while in the final article of the thesis, it is an embedded case of individual and inter-firm sensemaking in the recognition and exploitation of collective international opportunities. This casing and evolution of the research took place along the abductive research process and the writing of the empirical articles.

Eventually, Article 1 reports data from the pilot study and the following two rounds of focused interviews describing the empirical context and background for studying collective international opportunity recognition. Article 2 focuses on analysing the data from the first (pilot) interview round in relation to collective international opportunity recognition concept, thus aiming at the generation of the first theoretical insights on the phenomenon, resulting in proposing the central role of relevant mental images. Article 3 builds on a comparison of two longitudinal internationalisation cases – one SME choosing to continue entry to Russia and the other one choosing to quit – whereby the aim is to analyse how

managers' international opportunity recognition processes can be very different and how mental images of the foreign market context (in this article Russia) underlie this process over time. Thus, the article dives deeper into the constituents of mental images relevant to opportunity recognition in an international setting. Focusing further on the collective aspect of collective international opportunity recognition, in turn, Article 4 reports longitudinal data on one of the observed groups (an embedded case), focusing eventually on the individual and inter-firm sensemaking processes relevant to collective international opportunity recognition over time. The roles of each article in this thesis are illustrated in Figure 3.

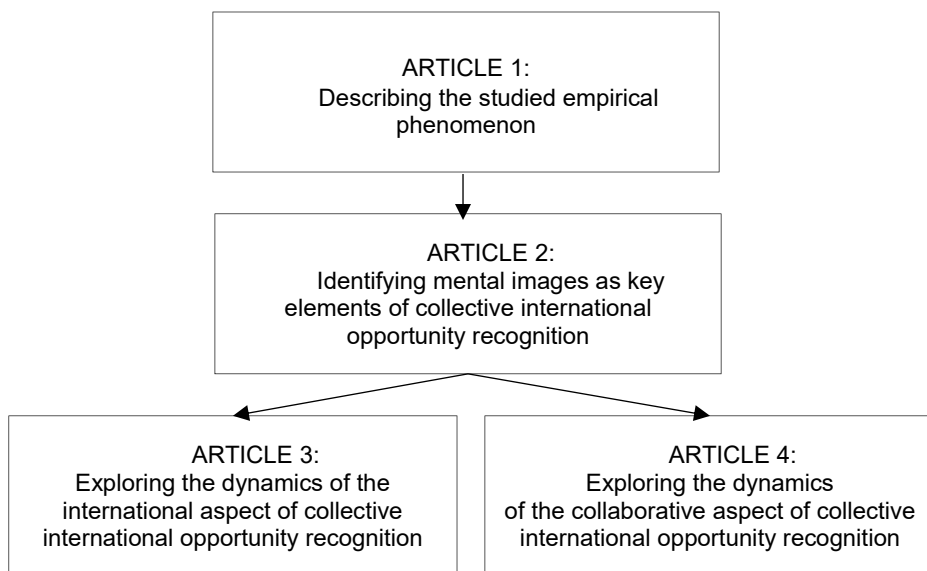


Figure 3 The focus areas of the four articles

Since all of the articles had slightly different focus areas, the ways of utilising and analysing the above described data also varied. In Article 1, the data were coded openly and organised systematically to enable a thorough description of the perceptions held by Finnish maritime and offshore sector SMEs concerning the Russian market and export collaboration. For the more theoretically oriented Article 2, the data were coded in detail via the computer-assisted qualitative data analysis software NVivo, which is recommended for the systematic analysis of qualitative data (Sinkovics et al. 2008). The coding took place rather inductively, 'in vivo', whereby it was data-driven instead of building on a predetermined coding structure (Miles & Humberman 1994); in the beginning, the initial theoretical

framework was used only for inspiration and the conceptualisation of the phenomenon but left open for modifications based on openly collected empirical data (cf. Andersen & Kragh 2010). After the first round of coding, another round took place to investigate the data in more detail and to understand the context better instead of stripping it (cf. Welch et al. 2011; Wynn & Williams 2012), resulting in sub-codes (see the emergent coding structure in Appendix 4). Then, the codes from the first round were grouped to understand the more abstract level elements of the studied phenomenon. On that basis, the factors constituting relevant mental images were grouped under experiences, current strategies and resources, and attractiveness, with a detailed insight of the various constituent factors within them. The broad groups provided the structure for the further analysis of mental images relevant to collaboration and foreign markets. Mirroring the information on individual constituent factors against each interviewee's general view of opportunities enabled an analysis of how the factors affected the overall mental images.

Article 3 focuses on two firm internationalisation cases, and the analysis began with writing descriptions of both cases. Based on the mental image construct created in Article 2, the longitudinal data were coded in detail. Then, the informants' mental images of the Russian market were constructed for each interview time point and complemented with an evaluation of the overall status of the mental image regarding how promising Russia seemed in terms of business opportunities for the interviewee. This evaluation was based on the amounts of positive and negative constituent factors in the mental images. To analyse image evolution and associated causes, I re-analysed the data by creating trajectories of relevant events in both firms' international opportunity exploration in Russia. Following the network-process analysis framework introduced by Makkonen, Aarikka-Stenroos, and Olkkonen (2012), the events were classified in terms of their relation to micro (focal firm), meso (focal firm's direct network), and macro (business environment in Russia and elsewhere) levels. Thereby I was able to analyse what kind of events caused mental image changes that influenced opportunity recognition in the Russian market.

Article 4 also builds on the mental image construct developed in Article 2, and, with the most complex research focus, its data analysis resulted in a complex, multi-stage path. Based on the mental image construct and the coding work conducted accordingly, the mental images held by each interviewee were constructed for each interview time point, complemented with the evaluation of the overall status of the mental images in terms of how promising Norway and inter-firm collaboration seemed to be in the informant's opinion for his/her firm regarding business opportunities. Building on the meta-framework of network processes and the narrative research techniques suggested by Makkonen, Aarikka-

Stenroos, and Olkkonen (2012), I again identified micro, meso and macro level events relevant to international and collaboration opportunity recognition and drew a trajectory of relevant events in each firm's collective international opportunity exploration in Norway, after which the trajectories were mirrored against the mental images. This allowed the identification of the events that triggered each manager's sensemaking and development of the images.

Based on the events and overall statuses of the mental images, it was possible to draw a path of how the internationalisation attempts developed in each firm over the investigation period. To look at the process at the group level, the firm-level stories were next merged into a macro story. By temporal bracketing (Langley 1999), I was able to transform the data under the following three successive periods: (1) the flourish, (2) failure, and (3) future phases of inter-firm collaboration in the group. This allowed the identification of conflicting views on the overall status of the collective international operations at each point in time, indicating different interpretations of the same events and differences in the then-current mental images. This showed how the image content evolved over time, leading to the recognition of collective international opportunities and to the failure and potential resurgence of joint internationalisation efforts. Finally, to also study the inter-firm-level sensemaking in detail, the events were once more analysed from the perspective of collaborative entrepreneurial processes, through which we could see how the individual as well as inter-firm sensemaking influenced collective international opportunity recognition over time, resulting in the identification of different kinds of events and sensemaking processes affecting collective international opportunity recognition.

All the four articles thus utilised different approaches and cases to understand aspects of collective international opportunity recognition. While the units of observations in the articles comprised individual views of the interviewed firm representatives, the units of analysis varied from general perceptions about foreign markets and collaboration to managers' mental images, sensemaking, and thereby opportunity recognition at the individual and collective levels, also including temporal phases and events and their impact on the aforementioned elements. Consequently, through the path from noticing the empirical phenomenon, increasingly detailed framing and inquiry, systematic combining (matching theory and data, cf. Dubois & Gadde 2002), and retroduction (seeking the most complete explanation for the experienced events, cf. Wynn & Williams 2012), the thesis provides detailed insight into the elements and dynamics of the collective international opportunity recognition process.

3.3 Quality of the study

3.3.1 Evaluation criteria

While the views on qualitative research and case study vary, so do the criteria based on which they are to be evaluated. The first-generation criteria in the 1950s and 1960s applied the same criteria and procedures to the evaluation of quantitative and qualitative studies, and the second-generation criteria applied the same criteria but different procedures to the study of both. The third-generation contingent criteriology is nowadays increasingly accepted, acknowledging that suitable evaluation criteria and procedures also depend on the researcher's philosophical position (Johnson et al. 2006). Even within qualitative research, the ways to conduct studies are so diverse that it is important for researchers to draw on those elements of quality that they consider most relevant to their research and explicitly illustrate such quality goals that they set for themselves (Symon & Cassell 2012). This means that each research project should be evaluated from a position of its own instead of necessarily and strictly following any universal evaluation criteria (Eriksson & Kovalainen 2008).

The quality evaluation of this thesis builds on the widely applied third-generation quality criteria by Lincoln and Guba (1985) formulated for assessing qualitative research through its trustworthiness. The criteria comprise the following four aspects: (1) credibility, (2) transferability, (3) dependability, and (4) confirmability, through which a researcher can show the reader that his/her findings are worth paying attention to. I will next discuss my research in light of these criteria and describe the application of relevant methodological means recommended to enhance the trustworthiness of qualitative research.

Credibility refers to achieving fit between the constructed realities of research participants and the interpretations and reconstructions of the researcher, which relates to internal validity criterion in quantitative research (Lincoln & Guba 1985; Symon & Cassell 2012). This means showing the reader that the data and the arguments based thereon are logically linked, whereby the data can merit the claims made (Eriksson & Kovalainen 2008). According to Lincoln and Guba (1985) and Symon and Cassell (2012), credibility in qualitative research can be supported by (1) prolonged engagement, (2) persistent observation, (3) progressive subjectivity, (4) member checking, (5) peer debriefing, (6) triangulation, (7) referential adequacy, and (8) negative case analysis.

Prolonged engagement refers to advocating enough time to the interaction with the informants so that one can claim having established a relationship that allows going beyond superficial observation in the data generation (Lincoln & Guba 1985; Symon & Cassell 2012). The longer one engages in fieldwork, the more

the researcher can build trust with the informants, the better understanding she/he will gain of the context of participant views, and the better she/he can solidify the evidence by comparing multiple sets of data, all generating a more holistic case (Creswell & Miller 2000). In this research, the primary data comprise interviews with firm representatives over a longitudinal three-year investigation period, during which I managed to build a rather easy-going and trusting discussion relationship with them. The interviewees got more familiar with me and vice versa, and they felt increasingly comfortable in expressing and disclosing even sensitive views of their firms and partners, for example, and sometimes really got carried away when passionately talking about issues important to them. However, it must be noted that some of the interviewed firm representatives changed along the three-year period, and with some it was challenging to organise the interviews due to their extremely busy schedules, for which I was not able to establish such a relationship with everyone. However, in those cases where the firm representatives for the study changed, I still managed to build the discussions with new informants on well-established grounds as I was able to directly show how familiar I was with their operational context and the views of their colleagues. Although I was not able to interview each individual repeatedly, the longitudinal perspective allowed me to see how the operations in the studied firms evolved over different kinds of events, including changes in key personnel.

While prolonged engagement is conducted in order to expose the researcher to multiple influences about the studied phenomenon, the purpose of persistent observation is to identify the most relevant characteristics and elements of the phenomenon, thus allowing the researcher to focus on them in depth. Indeed, the interviews were conducted as openly as possible, encouraging the informants to express their views as freely and thoroughly as possible. These discussions were held in Finnish, which was the native language of all the interviewees, and hence they were also able to express their views with rich vocabulary. Some secondary data, including firm websites and news articles, were also used to complement the interview data by providing further information about the firms' activities, for example, but not to verify the responses of the interviewees since the aim was to grasp and understand their subjective accounts of their past, current, and future circumstances. This way I generated as rich data as possible, yet along the process, I was able to focus on the themes and questions that were of most relevance to the studied phenomenon, which, along the abductive process, was also continuously crystallised.

When it comes to data interpretation and the role of the researcher, it is undeniable that the findings are the researcher's interpretation of the data (Easton 2010; Wynn & Williams 2012) reported in the light of a chosen theoretical perspective. As noted by Zahra, Korri, and Yu (2005, 138), '*entrepreneurial cognition*

is not directly observable and therefore hard to measure'. Due to the intangibility and idiosyncratic qualities of entrepreneurial cognition, Zahra, Korri, and Yu (2005) state that international entrepreneurship researchers may impose their interpretations on entrepreneurs' behaviours and therefore draw false conclusions. However, to enhance the credibility of the study, the data were not collected based on observing the behaviour of the informants but by regularly discussing their thoughts on how they saw their own and their firm's objectives, ongoing operations, and the environment in terms of business opportunities. I also continuously reminded myself of this issue along the research process in order to remain as reflective (Creswell & Miller 2000) and objective as possible with my own interpretations, although while conducting research based on a critical realist approach I cannot claim that I as a researcher would not have any role in interpreting these rich data. However, I avoided influencing the interviewees' thinking in any way, for instance by asking every time neutrally about the same themes, such as the business environment in a specific country, even though I was already well aware of their attitudes towards it based on prior interviews. Moreover, to really understand why they thought the way they did, I often asked '*why do you think so?*' to find out more about the underlying issues and events and to avoid assuming any reasons for their thinking. On this basis, the data turned out to be rich and multi-layered.

As regards the recommendation for progressive subjectivity, it refers to keeping record of the researcher's evolving constructions and developing understanding (Symon & Cassell 2012). My reconstructions of the views of each interviewee were visualised in the form of mental images (for articles 2–4), which were created anew after each interview, allowing me to see how the informants' thinking evolved over time and also to critically reflect upon and reconsider my own interpretations along the way. At the end of the data generation, I synthesised my reconstructions of their views and actions over the investigation period in the form of case firm summaries. Building on the next recommendation to enhance credibility, the summaries were sent to the interviewees for member checking (Lincoln & Guba 1985), whereby the data and interpretations are taken back to the informants so that they can confirm the credibility of the information gained (Creswell & Miller 2000). Only one correction request was received and taken into account concerning the pilot data generation phase. Through member checking, I was able to verify the factual processes and views of the informants, yet the interpretation in terms of theoretical findings was conducted by me and my co-authors.

Peer debriefing refers to discussing the ongoing research with colleagues to enhance the researcher reflexivity and to challenge possible assumptions concerning the study (Lincoln & Guba 1985; Symon & Cassell 2012). In practice, it

is about someone familiar with the explored phenomenon or the relevant research reviewing the research process and providing constructive feedback on it (Creswell & Miller 2000). Keeping this in mind, I discussed my interpretations and findings on several occasions with more experienced academic colleagues, particularly with the co-authors who participated in this research in analysing and writing articles 1 and 4. This also relates to another technique discussed by Lincoln and Guba (1985), triangulation, which refers to the use of multiple (1) sources, (2) methods, (3) researchers, and (4) theories (Denzin 1970; Eriksson & Kovalainen 2008). This researcher triangulation provided me plenty of new insight particularly on the perspectives through which the data could be looked at and analysed anew in order to get a more comprehensive and multidimensional understanding of the studied phenomenon. Such valuable insight was also received during the review processes of the four articles, whereby anonymous academic experts challenged my interpretations and recommended new ways to look into the data, and in seminars and conferences in Finland and abroad, in which I presented my research and findings to numerous experts in international business and international entrepreneurship.

As regards the other forms of triangulation, given the abductive approach (cf. Dubois & Gadde 2002; Van Maanen et al. 2007) applied in the study and the iterative progressing of data generation and analysis, I also independently looked for alternative theoretical perspectives along the way to widen my interpretations of the phenomenon. By eventually involving theoretical insight from three fields of literature – international opportunity recognition, mental images and sensemaking, and network interaction – I tried to interpret and understand the data through the triangulation of theories. However, it is fair to note that the triangulation of theories was applied only to some extent as the data were not separately looked at from different perspectives but rather the literature from three fields was merged in the overall framework to understand collective international opportunity recognition. In fact, Lincoln and Guba (1985) note that research results are theory-dependent and question the idea of results having more weight if they are consistent with multiple theories, for which they do not see the triangulation of theories reasonable. Triangulation in terms of extending the sources of data was not taken further from the use of interviews and some complementary secondary data, either, because the study focuses on the informants' subjective views and because of the rich and complex dataset that the interviews had already resulted in (only a part of which could even be reported in the articles and this thesis). As regards the triangulation of methods, the use of multiple research designs was also not seen to be applicable here as the design applied was emergent, as Lincoln and Guba (1985) say often is the case with naturalistic research. Hence, although employing several data analysis techniques,

for instance, their use is based only on achieving a deeper understanding of the studied phenomenon instead of somehow cross-checking whether the findings are the same if analysed with different tools. In the same vein, the next technique to enhance credibility, referential adequacy, could not be fully employed; it refers to the storage of the raw data in archives for later recall and comparison, and as the data were collected confidentially, it cannot be shared with other researchers. However, if critique were to be received concerning the focal findings, I have stored the interview data carefully for my own later use, which allows it to be rechecked afterwards.

The final recommendation to enhance credibility is negative case analysis, which means continuing to also analyse cases that do not fit the interpretations and explanations made up to that point, which would lead the researcher to reach the most inclusive explanation of the phenomenon (Lincoln & Guba 1985; Symon & Cassell 2012). Given the unique and context-specific research setting, the employment of negative case analysis was not directly applicable here, but the evolvments during the research process (e.g. the sudden ceasing of the joint international operations in group Omega) drove me to reconsider my perspective and findings during the process, thus contributing to the comprehensiveness of the overall research results. Thus, I did not intentionally seek out negative cases, but the empirical setting evolved in a way that it drove me to investigate the phenomenon from the opposite perspective in relation to the original approach, and hence challenge the initial ideas. For instance, my first findings focused on how an international opportunity is collectively recognised, but as the case evolved in a way that the joint internationalisation attempts failed, it led me to also take into account how an international opportunity is not collectively recognised, which enriched my understanding on the dynamics whereby collective international opportunity recognition emerges. The case of success turned to a case of failure, both of which contribute strongly to the understanding of how opportunities are recognised individually and collectively over time.

All in all, based on these methodological means, I maximised the credibility of my reconstructions and the findings of the overall thesis. By also describing the abductive research process in detail in section 3.2.1, by showing the interview guide and examples of the coding structure and data analysis logic in appendices 3, 4, and 5, and by discussing in each article the methodological choices and data utilised in them, I have attempted to establish a credible research path and chain of evidence for this thesis.

Transferability refers to providing sufficient detail about the research situation so that readers can evaluate the relevance and applicability of the findings to other contexts, thus resembling the generalisability criterion applied in quantitative research (Lincoln & Guba 1985; Symon & Cassell 2012). As the study is highly

contextual and focuses on the informants' subjective views, the findings concerning, for instance, mental image contents are clearly unique and exact replications of responses cannot be expected in other study contexts or cases. However, as the study aims at contextualised explanation (Welch et al. 2011) and thereby understanding the researched phenomenon, the gained understanding of the elements and dynamics underlying collective international opportunity recognition could and should also be studied in other contexts where several firms might have potential for joint internationalisation. For example, the process involves individual and collective sensemaking processes, which are based on subjective mental images and influenced by encountered events through sensemaking. Similar constituent factors in mental images can be probably encountered in different temporal, geographical, industry, and collaboration contexts, for instance, but the views of a certain opportunity context are always specific to the individual, due to his/her unique mental image. Moreover, a similarly fragmented sensemaking process can probably be found behind some other collaboration failures as well, yet the events leading to it and the members' interpretations of it are always unique.

Although I was not able to disclose information by which the interviewed people and their firms could be identified (this was agreed with them at the beginning of the interviews), I have done my best in providing in the articles thick descriptions of their surroundings and relevant conditions under which the studied phenomena emerged and evolved, as recommended by Lincoln and Guba (1985). This allows other researchers to evaluate the extent to which their work should be informed about the focal findings. To enable further studies of the gained research results and the elements that are expected to be transferable to other study contexts, I have highlighted the unique context in which these studies were conducted (particularly Article 1 presents the industrial and geographical context of the overall thesis; other relevant contextual aspects are discussed in each article respectively) and I recommend further research in similar contexts to examine the relevance of the elements and dynamics in other settings. Moreover, in order to show the applicability of the focal findings to other research contexts, I discuss the similarities and differences between my findings and those of prior research (cf. Eriksson & Kovalainen 2008) and the overall theoretical contribution of the thesis in Chapter 4 and Chapter 5, respectively. Indeed, I see that the elements of collective international opportunity recognition identified here can give insight into similar as well as other related theoretical contexts, such as into the recognition of potential for product innovation collaboration or shared system development. In addition, besides the study context, the underlying philosophical and theoretical framework and the chain of evidence have also been described in detail in this thesis in order to allow possible broader transferability. On this basis,

I believe I have provided the reader details based on which the extent of the results' transferability can be evaluated and further explored.

Dependability is about describing the path and changes in the methodological processes followed, and it resembles the reliability criterion often used in quantitative studies (Lincoln & Guba 1985; Symon & Cassell 2012). The researcher has to show the reader that the research process has been logical, traceable, and documented (Eriksson & Kovalainen 2008), which, in practice, rises from a successful demonstration of the credibility of the study (Lincoln & Guba 1985). Hence, in this study, the dependability is observable through the detailed description of how the abductive research process was conducted all the way from problem setting to data generation, analysis, and the reporting of the findings. The research process is described in this chapter, and the methodological choices and phases relevant to each article are respectively discussed in more detail in each of them. The focus of the research evolved along the longitudinal process, but this allowed the investigation of the studied phenomenon with increasingly sharpened focus and cumulating understanding, and also the observation of the phenomenon over time, whereby I was able to examine in real time how the individuals recognised opportunities and how the collaboration failed, for example. The studied firms were selected based on pre-defined criteria (Fletcher and Plakoyiannaki 2011), and, eventually, their stories constituted very rich cases of international opportunity recognition and the lack thereof. The general interview guide utilised in the repeated interviews is presented in Appendix 3, enhancing the repeatability of the study (Sinkovics et al. 2008). The interview data, in turn, were tape recorded and transcribed verbatim and thereafter organised and coded with NVivo, a computer-assisted qualitative data analysis software, the use of which enhances the trustworthiness of a study by helping researchers to systematically conduct their analysis (Sinkovics et al. 2008). While the focus was on the subjective views of the informants, the use of other data sources was limited, yet some information concerning the encountered events, for example, was also sought from secondary sources.

The data generation and analysis took place iteratively along the abductive research process, in which an important element was also the feedback received from co-authors, several anonymous reviewers, and other experts in international business and international entrepreneurship. On this basis, the findings of the study are grounded in an abductive but carefully considered, frequently evaluated, and openly presented research process, which enhances the stability of the focal results over time (Sinkovics et al. 2008).

Confirmability refers to grounding the conclusions in data by showing where the data came from and how they resulted in the reported findings, which resembles the objectivity criterion in quantitative research and relates also to the

dependability criterion (Lincoln & Guba 1985; Symon & Cassell 2012). In other words, the researcher needs to show that the findings are not imagined but rooted in the data (Eriksson & Kovalainen 2008). To disclose how the conclusions are grounded in the data, the discussion of the empirical findings is complemented by excerpts from the interviews to the extent it was possible given the limited space in the articles. The anonymous reviewers of the articles were also provided additional material illustrating examples of how the findings were derived from the data (see Appendix 5 as an example of the data analysis logic). The research process is also described in each article, and the overall doctoral research process in more detail in this thesis, whereby the reader can see and evaluate the logic through which the reported findings were achieved. These steps enhance the confirmability of this thesis.

Overall, the contingent quality evaluation criteria (Lincoln & Guba 1985; Symon & Cassell 2012) were kept in mind throughout the research process (cf. Eriksson & Kovalainen 2008). The methodological means recommended to support the trustworthiness of a qualitative study were employed to the extent possible in order to guarantee the conduction of a high-quality academic dissertation.

3.3.2 Limitations of the study

Although I made an effort to maximise the quality of this dissertation along the research process, I must also acknowledge the limitations of the study and the learnings that I gained along the process. The key limitations concern the data generation – in particular, I would have hoped for deeper discussions with some of the informants, but due to their tight business schedules, I had to be grateful even for the shorter conversations I got to have with them. Occasionally it was highly challenging to get the interviews conducted, and I had to call some of the firm representatives several times before reaching them for a conversation. But once I reached them, they were mostly very pleased to share their thoughts. Sometimes, however, we could not find a time for the interview at all, and in some cases the firm representatives also changed, which prevented the conducting of regularly repeated interviews with all firm representatives.

On one hand, these events challenged the longitudinal examination of how the mental images of each informant evolved over time, but, on the other hand, changes in top management allowed me to see how completely new people took the role in the firm and made sense of it and its surroundings from a new perspective and background. Changes in personnel are obviously part of business life, and surprising changes can be inevitable when conducting real-time process research in a business network: it is not uncommon that the studied network relationships may cease to exist, and informants may leave the focal organisations,

which requires flexibility (Halinen & Mainela 2013) and progressive focusing (Alfoldi & Hassett 2013) from the researcher. What matters is that the case, such as the firm, the inter-firm relationship, a net of firms, or a related process remains the same throughout the study so that its change and development can be seen over time (Halinen & Mainela 2013). However, when reflecting on how I could possibly have gained deeper interviews with some of the informants and how I could have gained easier access to them, I have come to the conclusion that I should have established a deeper personal relationship with them right from the beginning, for instance through visiting all of them physically despite the long distance. Namely, some of the informants kept in touch with me only by phone, but for most of them it was the most convenient and preferred way and also served as a sort of a therapy session when they got to share their enthusiasm and worries about business to a faceless listener by phone along a long drive to a business meeting, for instance.

From a theoretical perspective, if I had known at the beginning of the research what the cases would turn out to be about, I could have begun with a more detailed theoretical framework and could have formulated some of the initial research questions and the coding structure, for example, differently and more specifically, knowing better what to look for. For instance, the concept of sensemaking was employed only at the writing of the final article, by which time I had already conducted all the interviews, having not asked questions specifically from that perspective. As the concept, however, turned out to be important for understanding the phenomenon, it was applied to the analysis afterwards, and this is the nature of abductive research – the case evolves along the research project, and so do the theoretical views. When evaluating it retrospectively, I consider that the abductive research approach – although enabling the emergence of fruitful surprises – resulted in ‘reinventing the wheel’ on some occasions as something that I found from the data, thinking it was a new idea, had already been discussed in some stream of literature of which I was not aware in the beginning. Nevertheless, if I had set a fixed framework for the study in advance, I believe I would not have been able to arrive at as multidimensional findings as I eventually did and therefore still consider the chosen approach appropriate for this research. When conducting further research in the future after this educational process, I will be better acquainted with all related and also not-that-related streams of literature, which will help in creating a more solid theoretical framework right from the beginning.

The methodological approaches stayed mostly the same throughout the process, and no major changes or weaknesses were noticed in that respect. As the research and my doctoral studies proceeded, I was informed about new analysis methods along the way, for instance, and applied suitable ones. However, if I had

been further along in my doctoral studies in the beginning of the research, I could have perhaps considered the application of some other specific research techniques suitable for a network process analysis, for instance, right from the beginning, which might have affected my data generation. However, the selected data generation and analysis methods ultimately proved to be suitable and fruitful for the purpose of this study. Given the vast dataset and particularly the still-unreported parts of it, it is possible to employ some alternative methods in the examination of those data in the future.

All in all, I learned a lot from the doctoral research project, both in terms of conducting research and on the content of and literature on the studied phenomenon, which gives me excellent grounds to continue studying collective international opportunity recognition (see the ideas in section 5.3). Despite the described limitations, this dissertation sheds light on this understudied phenomenon, and the key findings are presented next.

4 Discussion of findings

The four articles constituting the empirical part of this thesis all provide different perspectives on the studied phenomenon, each taking a step further to understanding it better. Article 1 opens the discussion by introducing the phenomenon in its industrial and geographical context: it presents the perceptions held by Finnish maritime and offshore SMEs concerning the Russian market, implying the interlinked nature of perceptions towards inter-firm collaboration and a foreign market when they consider potential opportunities there. The three following articles take a deeper look into the theoretical concepts employed in the study. Article 2 asks why some entrepreneurs recognise collective international opportunities while others do not, and what distinguishes collective international opportunity recognition from the recognition of opportunities without collective involvement in domestic markets. Article 3 proceeds to ask how managers' mental images of a specific foreign market, Russia, affect Finnish SMEs' opportunity recognition there, and how these mental images are shaped. With a particular focus on the collaborative dynamics, in turn, Article 4 concludes the research by asking how collective international opportunity recognition evolves over time, into and beyond experiences of success and failure.

My answers to the three theoretically driven research questions of this thesis build on these three latter articles. The key findings of these studies are synthesised in the following sub-chapters, organised by the three research questions set for the dissertation.

4.1 How do individual entrepreneurs recognise collective international opportunities?

While prior literature explaining why some recognise international opportunities but not others (cf. Shane & Venkataraman 2000) has focused on examining the role of specific factors in the process, my research suggests that the multitude of factors affecting an individual's opportunity recognition in a specific context is much broader and that the recognition of opportunities is not determined by any individual character. Namely, this thesis introduces the important role of complex mental images in individual entrepreneurs' or managers' recognition of

opportunities (see Article 2). Mental images concern the contexts in which opportunities may be recognised, and in the case of collective international opportunities, these contexts are specific foreign markets and collaboration groups. While prior studies have investigated the role of specific mental images in opportunity recognition, such as that of the self and that of the opportunity (Mitchell & Shepherd 2010), this study suggests that it is highly challenging to distinguish such images. Instead, I suggest that of great importance is the image of the overall opportunity context, which includes images of the self and opportunity entangled through its constituent factors. To get a hold of these factors, I suggest grouping them under the three following groups: (1) prior experiences regarding the context (i.e. specific foreign market or collaboration group), (2) attractiveness of the context, and (3) personal/firm strategies and resources. The constituent factors under all these groups can be either positive or negative, altogether constituting more or less a positive mental image of the context (see Article 2 and Article 3). This influences how the person interprets information and events concerning the context.

Indeed, the findings of this thesis suggest that the overall status of the mental image impacts the sensemaking processes by which an entrepreneur or manager generates meaning from and decides to act upon changes in a specific opportunity context (see Article 4). The sensemaking may manifest as auspicious or ominous sensemaking, the former indicating that the individual wants and decides to engage in the context and the latter indicating that s/he wants to distance him/herself from it. In other words, the context is viewed either as favourable and attractive or as harmful and unattractive, respectively. Consequently, with auspicious sensemaking, the individual views his/her circumstances in a favourable way, focusing on positive issues and considering the environment promising for his/her business. In contrast, in ominous sensemaking, the individual views the circumstances sceptically by placing emphasis on negative issues, being suspicious about positive issues, and by being disinterested in even trying to find opportunities in the context. This mental image-based sensemaking has a strong influence on opportunity recognition – auspicious sensemaking gives fruitful grounds for the individual to recognise opportunities in the context in question, whereas ominous sensemaking is likely to prevent it. Hence, the results of this thesis suggest that mental images and sensemaking have a great impact on the recognition of opportunities in international collaboration contexts. Overall, acknowledging this cognitive, subjective perspective on international opportunity recognition is of great importance in understanding the initiation and progress of business internationalisation.

Besides identifying mental images and sensemaking processes as central elements of collective international opportunity recognition, my analysis suggests

that the recognition of collective international opportunities depends on the recognition of opportunities both in the focal foreign market and in the inter-firm collaboration initiative in question. Moreover, it further reveals that recognising an opportunity either in the foreign market exploration or in inter-firm collaboration may lead the manager to see opportunities in the respective market or cooperative setting. For example, in Article 4, Jonquil's CEO was largely driven towards Omega collaboration based on his urge to explore the Norwegian market. Trillium, in turn, ended up seeing opportunities in Russia based on the opportunity to join the Sigma group, which provided access to this market that was previously considered as impossible to enter. Nevertheless, to enact a collective international opportunity, an entrepreneur or manager has to see both the market and cooperation simultaneously as adequately promising in order to find the engagement worthy of its costs and trade-offs. Collaboration is not seen as an opportunity if its target market is not promising enough, and vice versa, the target market does not seem promising if there is no collaboration opportunity to lead a firm into the market. The two images are thus distinct but strongly interlinked in collective international opportunity recognition.

This thesis also provides findings that relate to the opportunity concept itself. For instance, while Chandra, Styles, and Wilkinson (2015) focus on actionable entrepreneurial opportunities with the term opportunity sets, this study suggests that of equal, or even higher, importance in international opportunity recognition are the underlying idea sets. Idea sets refer to the stock of entrepreneurial ideas an individual has in his/her memory at a given time (Hill & Birkinshaw 2010), comprising well-developed ideas as well as initial sparks of possibility. I find that these entrepreneurial ideas constitute the necessary basis for the recognition of actionable entrepreneurial opportunities. Furthermore, as the mental image concept depicts, it is not only entrepreneurial ideas but views and interpretations of a broader variety of relevant issues that precede and determine the recognition of concrete business opportunities. In order to understand the internationalisation paths of SMEs, I see no reason to limit the research to the recognition of direct entrepreneurial opportunities but instead suggest taking a more fine-grained approach by also acknowledging the importance of entrepreneurs and managers recognising and acting upon secondary, indirect opportunities, which may lead them to recognise larger opportunities that allow them to actually enter a foreign market (see Article 3). One could even argue the international opportunity is always comprised of small indirect opportunities, such as a change to get involved in a publicly supported internationalisation group, to join a promotion tour abroad, or to employ a new person with international experience and connections, which can bring the SME in front of a concrete internationalisation opportunity. Thus, I argue that focusing only on broad entrepreneurial opportunities may lead

scholars to disregard the recognition and exploitation of minor steps that take SMEs forward, or backward, in internationalisation. While the concept of opportunity as such was not in the focus of this study, considering this aspect might provide us new understanding on SME internationalisation. Alternatively, the discovered emphasis on the perceptions related to potential opportunity contexts may also suggest that, in line with Kitching and Rouse (2017), the concept of opportunity as such is not even of as strong relevance as the recognition of possible steps that an entrepreneur or manager may take at a specific point in time in a specific environment in order to meet his/her and the firm's then-current objectives. Nevertheless, the context-specific and subjective mental images together with the subjective sensemaking processes that build on mental images allow us to understand the actions of individual entrepreneurs and managers and explain why some and not others see opportunities for them in specific foreign market and collaborative contexts.

These findings also provide researchers food for thought concerning how we understand the recognition of opportunities. For example, the existence and importance of context-specific mental images in opportunity recognition implies that opportunity individuation and evaluation (employing the self) take place not only after the recognition of an opportunity, but instead those elements are involved already in the recognition process as they are rooted in the constituents of the mental images which determine what issues an individual even finds interesting and attractive in his/her surroundings (see Article 2 and Article 3). Thus, opportunity recognition and evaluation not only precede but also overlap with opportunity development, and the image of self is entangled with the image of the opportunity context. At the same time, this study also acknowledges the presence of non-rational elements in entrepreneurial action (cf. Lerner et al. 2018). As entrepreneurs view the world through their mental images that may contain attitudinal and even emotional factors, opportunity recognition is not necessarily based on intended reasoning and evaluation but may be at times based more on 'gut feelings' about the context. Moreover, the information on which individuals make sense of their changing circumstances may be more or less limited and biased – they are continuously in the middle of information overload and must make decisions based on the limited information they have on specific events and issues (see Article 2). This in line with Weick (1995), who suggests that sensemaking is driven by plausibility rather than accuracy, which is not necessarily a negative issue – what matters is that the entrepreneur or manager is capable of making sense of his/her situation to the extent that he/she can take actions that he/she believes will take him/her towards the long-term goals. In practice, the emotional and rationally limited considerations and the resulting actions are of equal importance in the firm's internationalisation path as the entrepreneurs' subjective

considerations and actions truly determine the firm's steps forward, the outcomes of which unfold only afterwards (Weick et al. 2005).

All in all, opening the investigation to take into account the context-specific mental images and related sensemaking processes underlying collective international opportunity recognition, and also indicating the importance of non-entrepreneurial indirect opportunities as well as the mixed phases and non-rational aspects of opportunity recognition and exploitation, gives a more realistic and comprehensive approach to understanding what international entrepreneurship is about and how the SME internationalisation processes actually unfold. Consequently, based on the findings of this overall thesis and synthesising the views I have gained along the way, I define the recognition of collective international opportunities as individual entrepreneurs or managers making sense of their emergent circumstances based on mental images of the foreign market and collaboration group in an auspicious way that drives them to see opportunities for themselves in this context – opportunities worth their joint actions integrating their firms into business in this foreign market.

4.2 How do several entrepreneurs together recognise collective international opportunities?

Chandra, Styles, and Wilkinson (2015) suggest that international entrepreneurship is essentially a process of the co-exploitation of opportunities within a network of entrepreneurial actors in international markets. They argue that two conditions must be met for this to happen: the partners must have the capability to exploit the opportunity, and they must be willing to exploit the opportunity, which depends on whether there is a strategic fit between a new opportunity and the entrepreneurs' opportunity portfolios – the higher the degree of fit, the more likely it is that the opportunity will be co-exploited. My thesis supports this yet shows that the co-exploitation of an opportunity must be preceded by the collective recognition of the opportunity, which again depends on the mental images and sensemaking of each individual involved (see Article 2 and Article 4). On this basis, I define the collective recognition of collective international opportunities as entrepreneurs or managers from multiple firms making sense of their emergent circumstances, based on mental images of the foreign market and collaboration group, collectively in an auspicious way at the same time, which drives them to jointly see opportunities for themselves in this context – opportunities worth their joint actions that integrate their firms into business in this foreign market.

While mental images determine whether an individual entrepreneur or manager recognises a collective international opportunity, at the inter-firm level, I argue that the collective recognition of a collective international opportunity takes place through the alignment of the mental images of several people (see Article 4). The managers should collaborate and must all have a positive view of the group and of the foreign market in order to recognise the collective international opportunity and possibly act upon it. When the managers do not, or no longer, see the collective international opportunity, one or several key managers have a negative image of the focal collaboration or the market, whereby they do not see the initiative as worthy of their effort. This may result in individual members abandoning the joint internationalisation efforts or even the whole group falling apart. In the case of a potential new collaboration initiative, the members will not even get started with it.

Prior research on team mental models (e.g. Lim & Klein 2006) shares some aspects of this argument, but my research emphasises the subjective mental images held by the partnering individuals instead of a mental model that would be shared between all of them. However, this thesis supports team mental model research in that the more there are shared elements between the partners' subjective mental images, the easier it is for the partners to maintain a shared understanding of the joint opportunity and to align their goals and work procedures. The firms studied along this doctoral research were not found to possess a shared mental model, or if it just consists of the aspects that were similar in their individual images, the team mental model was quite thin. In opportunity recognition, it is important how each member views the circumstances for him/her (mental image of the opportunity context) although in collective opportunity recognition there has to be a somewhat shared view of the existence and of the way to pursue an opportunity. The team mental models refer to shared views between the team members (Lim & Klein 2006), whereas for understanding the collective opportunity recognition process of high importance are also the non-shared, controversial elements in the members' subjective mental images. This study embraces both, and they manifest in inter-firm-level sensemaking.

There is no consensus on whether sensemaking takes place at the individual or collective level – in other words, whether it is a cognitive or a social process (Maitlis & Christianson 2014). My findings (see Article 4) indicate that collective international opportunity recognition involves sensemaking at both levels: Sensemaking occurs in an individual person's head, and when working in collaboration, an individual has to also make sense of how other people make sense of things (Weick et al. 2005). Inter-firm-level sensemaking, in turn, is a process through which multiple individuals try to merge their views of the situation and come to agreement about what their next actions are, also including attempts to

mobilise others to think and act as they would prefer (i.e. sensegiving). Inter-firm-level sensemaking takes place along the entrepreneurial processes by which the group tries to materialise the jointly recognised opportunity (Andresen et al. 2014). This study suggests that both individual and inter-firm-level sensemaking processes exist and influence each other as people try to construct an understanding of the changing circumstances together and on their own.

Hence, collective international opportunity recognition is about the interplay and balancing of individual-level and inter-firm-level sensemaking, and the former always rules since individuals continue to make sense of their circumstances, whereas the latter may become highly limited and fragmented. Indeed, the findings of this thesis illustrate two types of inter-firm-level sensemaking processes: collective sensemaking and fragmented sensemaking (see Article 4). Collective sensemaking brings individual, subjective sensemaking processes and mental images to interaction and supports the generation of a shared meaning. It is supported by intensive and flexible collaborative entrepreneurial processes (cf. Andresen et al. 2014), whereas inflexible, superficial, and uncontrolled collaborative entrepreneurial processes easily result in fragmented sensemaking. If the collective sensemaking falls apart, so do the partners' mental images, and they will likely arrive at different interpretations about the changing environment and take differing actions towards it. Such fragmented sensemaking results in multiple narrow and individualistic accounts of the context and in an emergent series of inconsistent actions (Maitlis 2005). Collective sensemaking is necessary for maintained collective international opportunity recognition over the materialisation of a joint opportunity in foreign markets, which in business internationalisation can take a long time.

4.3 How does the collective international opportunity recognition process evolve over time?

Once the firms have jointly recognised the collective international opportunity, they begin to materialise and exploit it. Over this time, they encounter different kinds of events at the micro, meso, and macro levels (see Article 3 and Article 4). Micro events refer to changes that take place at the firm level, meso events refer to changes in the firm's collaboration with other partners, and macro events refer to changes taking place in the environment in which the firm and the group operate. Events may also be self-generated at the micro and meso levels, whereas events at the macro level are external to the entrepreneur and, thus, uncontrollable. When these events change the circumstances of the entrepreneur to the extent that they are relevant and critical to his/her operations, they trigger

new sensemaking. Besides such critical events, the non-occurrence of expected events, such as concluding a deal with a long-pampered foreign customer, also results in a need to make sense of the emerged situation. As discussed above, sensemaking of the new situation takes place based on the individual's existing mental image of the context – sensemaking that may result in the individual (and group of individuals) to see or no longer see an opportunity for collective action in the foreign market.

Besides identifying this general event-based evolution of collective international opportunity recognition, this research also reveals other aspects relevant to the recognition and exploitation of multiple opportunities. Firstly, despite the continuous emergence of new events, the sensemaking and thereby opportunity recognition is somewhat path-dependent due to slowly evolving mental images (Beach & Mitchell 1987). Sensemaking influences the respective mental images as the manager internalises the newly constructed meaning, but at the same time, sensemaking is rather strongly tied to mental images (see Article 4). For this reason, an individual is likely to view certain foreign markets as unattractive over time or to continue favouring inter-firm collaboration instead of working alone, for instance, irrespective of what happens. However, despite this cycle of image-based interpretation and internalisation, my research indicates that such path dependence is not decisive as past actions only influence the experiences section of the mental image in a specific context, whereby the development of image constituents in other sections (i.e. the attractiveness of the context and the strategy and resources of the firm) may surpass the doubt retained from past opportunity judgements, for example. Namely, information external to the firm impacts the manager's views of the context's attractiveness, and information internal to the firm impacts his/her views of the firm's strategy and resources, whereby different mental image contents evolve based on different kinds of events. Consequently, despite negative experiences of a specific opportunity context, encountering events that positively change the image content in the respective attractiveness section and/or strategy and resources section may result in the manager still seeing opportunity in the context and trying to continue in the environment in some other way, based on learning gained from prior negative experiences, for example.

Secondly, in addition to evolving mental images, the images are context-specific, which breaks the path dependence as an entrepreneur or manager proceeds from one context to another over time (see Article 2, Article 3 and Article 4). In other words, sensemaking builds on different mental images in different contexts (including different foreign markets and new collaborative settings). For example, in Article 4, the partners' images of collaboration were quite different in future-phase collaboration contexts than with the Omega group, mostly due to

different attractiveness factors, even though the prior experiences of collaboration as well as the firm's strategy and resources were largely the same, irrespective of the context. The subsequent opportunity recognition and enactment depends on how the managers make sense of the new situation they find themselves in and what kind of mental images they build of it based on their subjective experiences, the perceived attractiveness of the focal context, and their understanding of their and the firms' then-current strategies and resources.

Thirdly, although indicating a learning experience that contributes to opportunity evaluation in a specific context (cf. Chandra et al. 2015), this research suggests that experience gained in one foreign market does not necessarily make the recognition of opportunities in the same or other similar contexts more likely (see Article 2 and Article 4). Mental images seem to operate in the opportunity recognition process like binoculars; due to cumulated knowledge, they may allow the manager to see the environment more clearly and evaluate it in more detail, but they may also allow too detailed of an evaluation, which blocks the manager from seeing potential opportunities outside the lens. Thus, I argue that a richer mental image may also work counterproductively if it is negative, resulting in ominous sensemaking instead of auspicious sensemaking and, hence, constituting a burden for opportunity recognition. Moreover, each market context is different, whereby there is no general international market image but numerous market-specific images. Therefore, this study contradicts prior studies which suggest that increased international social capital and market-specific social capital would directly lead to a firm exploiting more business opportunities in a specific foreign market (cf. Lindstrand & Hånell 2017). This partly explains why internationalisation does not take place linearly such that one would somehow be better equipped each time for opportunity evaluation than before; instead, the path often consists of zigzag movements between successful and failed project entries in different markets. Moreover, one internationalisation or collaboration failure is only an event among a stream of events influencing opportunity recognition and only one context among many in the world in which managers potentially recognise opportunities.

Thus, fourthly, this research questions whether striving to exploit opportunities in a specific context further and further is even ideal. For example, Peiris, Akoorie, and Sinha (2013) argue that higher perseverance leads to enhanced learning capabilities, self-efficacy, and survival of the firm, which supports new opportunity identification and exploitation. However, a less perseverant entrepreneur may easily abandon one context and continue exploiting opportunities in another one, which might support his/her identification and exploitation of even better opportunities. In fact, as was the case with some of the longitudinally studied firms, the entrepreneurs or managers may even choose to

focus on their previously identified domestic business opportunities and ignore international opportunities (see Article 3 and Article 4). No one is to say which path is (or even retrospectively, was) the right one since the opportunities that one sees may or may not be productive eventually, and no one knows which opportunities would have been better and what would have been available at the end of each path. While making sense of changing circumstances, managers determine how to act next, and once their actions or external events again change the situation, there is a need for new sensemaking and thereby a possibility for new opportunity recognition as well. This view underlines the importance of opportunity recognition not only in specific, pre-determined contexts but in the world full of opportunities with multiple contexts and respective mental images and makes it acceptable that internationalisation to specific markets, for instance, is not stubbornly pursued if the sight of opportunities there is lost and alternatives seem more promising. Abandoning one opportunity context is not necessarily a failure but a possible start for something even better.

4.4 Synthesis of the empirical findings

To compile the previously discussed findings, mental images and sensemaking processes at the individual and collective levels, triggered by various events, help us to understand the dynamics by which collective international opportunity recognition evolves over time. These dynamics are synthesised in Figure 4 and provide new, hopefully more comprehensive insight into the mechanisms underlying international opportunity recognition and the multitude of narrower issues studied before in relation to it (see the synthesis in Figure 2).

All in all, the collective international opportunity recognition process illustrated in Figure 4 is repeated several times as the opportunity materialisation proceeds and starts anew as further opportunities are recognised based on changing circumstances. Taking into account the dynamics preceding and influencing collective international opportunity recognition in the long run – from one opportunity to the recognition of a subsequent one – provides an important perspective for understanding sometimes serendipitous and non-linear business internationalisation, the literature of which still tends to focus on how resources and skills develop continuously and internationalisation proceeds forward linearly (e.g. Chandra 2017). However, in reality, people employed in a firm, the firm itself, and its environment change, and interpreting these changes is highly subjective, contextual, and time-bound. As the cases studied in this doctoral research show, internationalisation can be very incidental and unique, based on where, when, and with whom individual entrepreneurs and managers recognise international opportunities.

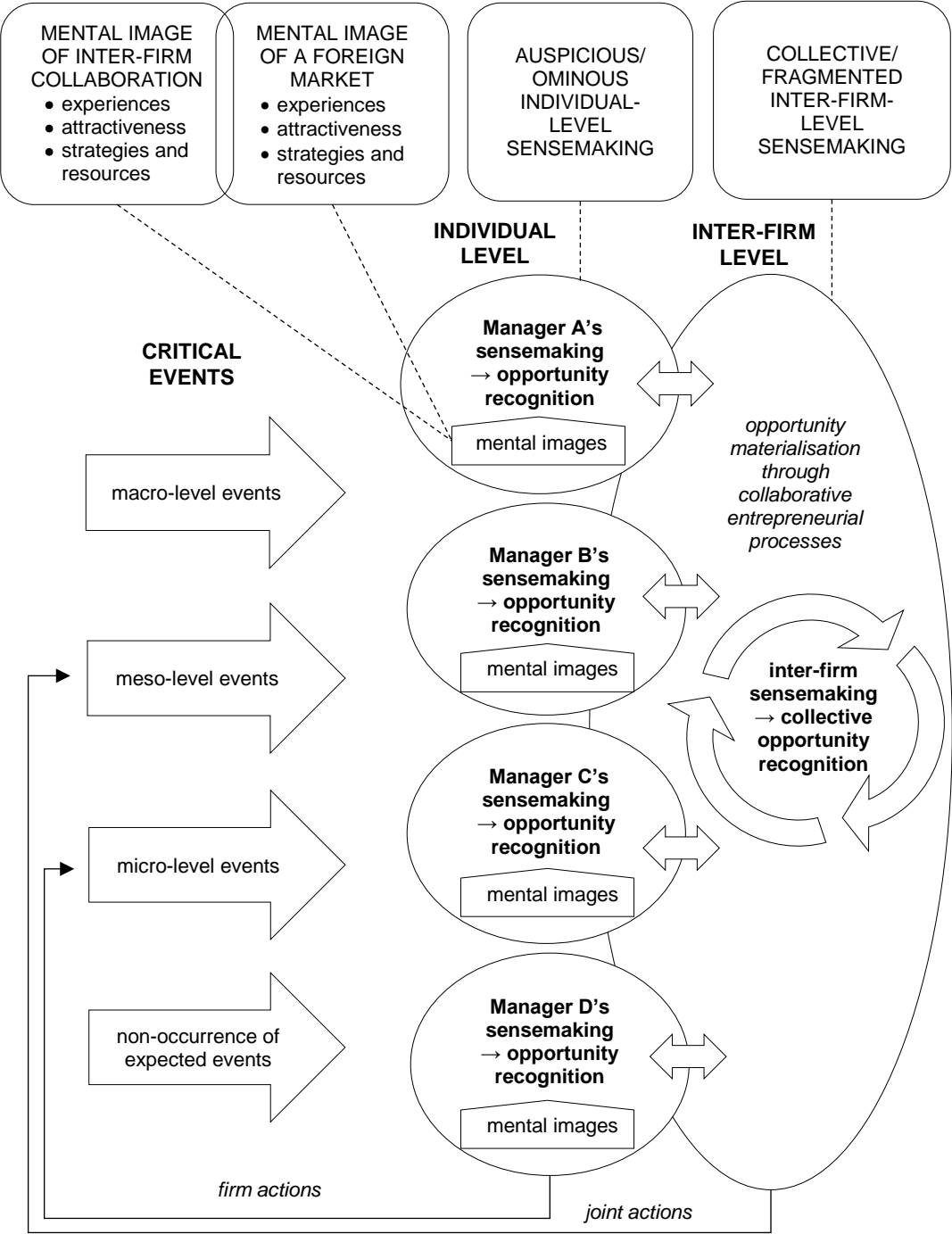


Figure 4 Synthesis of the elements and dynamics of collective international opportunity recognition

5 Conclusions

5.1 Theoretical contribution

Inter-firm collaboration is of great importance to the internationalisation of SMEs (e.g. Chetty & Wilson 2003; Luo 2004; Kock et al. 2010; Andersson & Sundermeier 2019). However, the processes by which firms engage in and continue collaboration for starting or expanding activities in foreign markets remain largely understudied. This thesis does its part in filling this broad research gap and focuses on the joint internationalisation of SMEs by exploring the dynamics of the collective international opportunity recognition process among Finnish maritime and offshore industry SMEs that aim at joint internationalisation. This is achieved by studying (1) how individual entrepreneurs recognise collective international opportunities, (2) how several entrepreneurs together recognise collective international opportunities, and (3) how the collective international opportunity recognition process evolves over time. The investigation of these questions resulted in the following conclusions.

First, by introducing the elements of mental images and dynamics of sensemaking involved in an entrepreneur's or manager's recognition of collective international opportunities, this thesis sheds new light on the individual-level aspects of the phenomenon. Thus far the cognitive aspects underlying internationalisation decisions have remained poorly understood even though international business scholars have highlighted the need for research on decision-makers' decision styles, biases, and cognitive processes (e.g. Zahra et al. 2005; Grégoire et al. 2015; Maitland & Sammartino 2015; Chandra 2017; Cuero Acosta et al. 2017). This thesis provides insight into how such cognitive processes are tied to the underlying context-specific mental images that manifest and evolve when an individual makes sense of his/her changing circumstances auspiciously or ominously.

Second, by investigating the role and forms of inter-firm sensemaking in collective international opportunity recognition, the study provides insight into how multiple individuals from different firms come to recognise an opportunity for joint internationalisation together. Numerous studies have highlighted the role of business networks in international opportunity recognition (e.g. Chandra

& Wilkinson 2017; Lindstrand & Hånell 2017), but still only few investigate opportunity recognition at the inter-firm level in interaction between two or more actors. While opportunity as an object of collective action depends on shared interests built through action and interaction (Schweizer et al. 2010), it is of growing importance to enhance the understanding on the inter-firm dynamics of collective international opportunity recognition. This thesis opens the door to understanding these dynamics through inter-firm-level sensemaking in which the partnering individuals' mental images and individual sensemaking processes come to interaction and which can be characterised as collective or fragmented sensemaking.

Third, this thesis provides understanding on the temporal dynamics through which the mental images and sensemaking processes evolve over time. International entrepreneurship scholars have called for studies employing the process perspective in order to generate understanding on how international opportunity recognition evolves (e.g. Coviello & Jones 2004; 2005; Zahra et al. 2005; Chandra et al. 2009), yet much remains to be explored in this respect. By building on the process-based approach, this thesis presents how different kinds of events, and lack thereof, trigger the sensemaking processes that underlie opportunity recognition. Through this sensemaking, mental images evolve and provide the lens through which entrepreneurs and managers recognise opportunities in different contexts over time.

Overall, the theoretical contribution of this thesis crystallises into describing the 'what' and 'how' of collective international opportunity recognition and explaining the 'why' in between (cf. Whetten 1989). The findings of this thesis suggest that collective international opportunity recognition builds on the following elements ('whats'): events that an entrepreneur or manager encounters at different levels, individual-level sensemaking that is based on the mental images relevant to the opportunity context, and inter-firm-level sensemaking which occurs along collaborative entrepreneurial processes within a group of partners exploring a potential opportunity. All these elements are interlinked as the events trigger sensemaking processes at both levels, the sensemaking processes impact each other, and the resulting actions generate new events (these relations constitute the 'hows').

As regards the 'why', the study indicates the existence of a complex, dynamic interplay between the aforementioned 'whats' and 'hows'. This multidimensional circle of events, sensemaking and action, is, nevertheless, triggered by different kinds of events that change circumstances and start the process anew repeatedly over time, always in a unique context and always resulting in new events. Hence, the 'why' is not a specific event causing things to happen but the fact that the world changes constantly, and managers more or less deliberately make sense of

these changes and act accordingly, based on the more detailed dynamic aspects identified in this thesis.

In fact, in line with the objective and methodological approach of the study, the aim here was not to identify testable causal relationships but to provide contextual explanation (Welch et al. 2011) and insight into the mechanisms of the objects (Sayer 1992; Easton 2010) underlying this complex phenomenon, whereby its dynamics could be understood in this setting and further explored in both managerial and academic arenas. This study builds on cases in a specific industrial and geographical setting (which is discussed in Article 1 and also illustrated in the other three articles) but shows that instead of the industry or country context, of higher importance in understanding collective international opportunity recognition is considering the unique and subjectively experienced context of every individual. On this basis, the identification of the dynamics described above provides insight into the collective international opportunity recognition phenomenon also in general and thereby enlightens the complex preconditions for joint business internationalisation among all SMEs.

As a result, the thesis contributes to each of the literature streams that were utilised as an evolving theoretical framework along the research process. Starting with the literature on *international opportunity recognition*, the findings related to mental images and sensemaking at the individual level generate insight that responds to calls for further research on decision-makers' decision styles, biases, and cognitive processes (e.g. Zahra et al. 2005; Maitland & Sammartino 2015; Chandra 2017), also embracing the emergence of impulse-driven and relatively non-reasoned actions in entrepreneurship (Lerner et al. 2018). The findings show that the sensemaking does not build on fact-based templates on how one should act but instead on subjective perceptions about the context and one's position in it, whereby the recognition of opportunities may also be based on more or less biased, subjective, and even emotional thinking. Moreover, the findings of the thesis shed light on the role and contents of mental images in opportunity recognition (cf. Mitchell & Shepherd 2010) in a collaborative internationalisation setting, thereby showing in detail how opportunity recognition is connected to the surrounding environment (Zahra et al. 2005) and the historical-cultural context (Mainela et al. 2018) through the images and illustrating how the images and sensemaking evolve over time along with the recognition of multiple opportunities (cf. Zahra et al. 2005; Chandra et al. 2015; Wood et al. 2017). Consequently, the study highlights the essential role of evolving mental images and sensemaking in understanding international opportunity recognition.

At the same time, the presented findings allow international entrepreneurship scholars to understand how international opportunity recognition in a collective setting is about balancing subjective and inter-personal sensemaking and to view

collective international opportunity recognition as an iterative element of the collaborative opportunity development process. This thesis emphasises the importance of both individuation (Wood et al. 2014) and inter-firm interaction (Mainela 2012; Andresen et al. 2014; Chandra et al. 2015) in the opportunity recognition process. Collective international opportunity recognition necessarily involves both although the individual level dominates as it, through merging the individual views of several people, constitutes the basis for the respective inter-firm-level process. Moreover, the thesis presents collective international opportunity recognition as an iterative element of the collaborative opportunity development process, suggesting that after the initial recognition of an opportunity, the recognition must continue repeatedly over the changing circumstances in order for the group to continue developing and exploiting the opportunity. These identified collective and temporal aspects offer a new, eye-opening conceptualisation of international opportunity recognition, which I consider is realistic in its complexity. Moreover, the thesis also synthesises previously studied perspectives on international opportunity recognition, and by looking into its elements with an open approach and by providing a new, rather comprehensive definition of it both at the individual and inter-firm levels (see sections 4.1 and 4.2), it offers a new possible perspective to overcome the extant ambiguity in the definitions of international opportunity recognition (cf. Ardichvili et al. 2003; Renko et al. 2012; Muzychenko & Liesch 2015). Simultaneously, the thesis also provides ideas on how international opportunity recognition, particularly in collaborative settings, could and should be approached in further international entrepreneurship research (see section 5.3).

When it comes to the literature on *mental images and sensemaking*, this thesis contributes to prior research regarding the role of mental images and sensemaking in opportunity recognition (cf. Zahra et al. 2005; Grégoire et al. 2010; Maitland & Sammartino 2015) by introducing the contents of mental images concerning collaboration and foreign market opportunity contexts. At the same time, it provides support to prior literature suggesting the role of mental images as slowly evolving lenses through which the environment is interpreted (Baron & Ensley 2006; Maitland & Sammartino 2015; Williams & Wood 2015). This interpretation takes place through sensemaking, which this research suggests takes place both at the individual and inter-firm levels, the latter being a merger of multiple individual-level sensemaking processes. The focal findings suggest that successful collective opportunity recognition and exploitation are supported by auspicious, collective sensemaking, while a failure can be a result of ominous and fragmented inter-firm sensemaking. By introducing different types of sensemaking processes involved in collective international opportunity recognition, the thesis provides

new perspectives for the further study of mental images and sensemaking in opportunity recognition.

Moreover, by highlighting the importance of separate individual mental images and sensemaking processes instead of shared mental models (Lim & Klein 2006; Rafaeli et al. 2009) in the recognition of opportunities, this thesis informs prior studies about the existence, importance, and dynamics of an inter-personal sensemaking process (cf. Maitlis 2005) that brings individual mental images to interaction and feeds them simultaneously but does not necessarily result in any kind of shared image of the circumstances. Hence, the ideas derived about mental image evolvment and sensemaking at different levels in the context of opportunity recognition in a network setting may also provide useful insight for the study of such cognitive phenomena in other personal, inter-personal, inter-organisational, and even system-wide cases.

As regards the third stream of literature employed in this thesis, that on *interaction and mobilisation in business networks*, this thesis meets the calls for research on collaborative entrepreneurial processes (Mainela 2012; Andresen et al. 2014) and provides a new perspective for understanding the initiation as well as continuation of inter-firm collaboration based on interactive sensemaking processes that take place on more or less ordinary events experienced over extended periods of time (cf. Maitlis 2005). In other words, the emphasis on subjective and evolving mental images together with the related sensemaking processes and the resulting opportunity recognition (or lack thereof) provides a new perspective for understanding why firms do or do not collaborate and share resources for common good. In particular, the findings of this thesis build on and add insight into the dynamics of collaborative entrepreneurial processes presented by Andresen, Lundberg, and Wincent (2014): if the potential partners do not (continue to) see an opportunity for them in a collaborative venture, they do not invest in pursuing it, which easily results in counterproductive events, in fragmented sensemaking about the circumstances, and even in the failure of collaborative efforts.

Hence, this thesis indicates that collective opportunity recognition also relates to inter-firm interaction in general and to the related phenomena, such as to collective goal formation in a business network. Namely, the findings of this thesis support the views presented in the recent network management literature, for example, in that the processes of forming and committing to the enactment of a collective goal is moderated by the extent to which network actors have similar operations, customers, goals, and knowledge bases and by the mobilisation by a single actor, the network architect (Matinheikki et al. 2017). The data examined in this thesis confirm the importance of these factors (for instance, the lack of a clear group leader, the network architect, was one of the issues leading to the failure of

inter-firm collaboration). However, the focal findings encourage adding to the list the importance of opportunity recognition and the underlying image-based individual and collaborative sensemaking processes. This is because the issues influencing collective goal formation and enactment are all subjectively viewed by the relevant individuals, which determines whether or not they see such a collective process as a worthy opportunity and whether they proceed in pursuing it together through resource-sharing. Likewise, subjective sensemaking processes determine whether one individual finds it worthwhile to mobilise others towards his/her goals and whether the ones to be mobilised are accepting it. Consequently, the study provides insight into the initiation of resource-sharing as well as mobilisation in business networks and indicates the importance of (continued) opportunity recognition in all kinds of collaborative actions.

All in all, by answering the three research questions, the thesis contributes to the three streams of literature utilised as a theoretical framework. In particular, it provides new insight for international entrepreneurship scholars, encouraging further research on the introduced elements and dynamics of collective international opportunity recognition. The results of this research also inform research in the other two fields of research, as discussed above. Consequently, it may be concluded that the utilisation of these somewhat already linked fields of prior research was in many ways useful in building the understanding of collective international opportunity recognition. Thus, the merging of these fields may also constitute a fruitful basis for further research on topics related to subjective perceptions and opportunity recognition in network settings, no matter in which stream the studied question is rooted.

As a final note on contribution, the process-based methodological approach (Welch & Paavilainen-Mäntymäki 2014) proved useful in generating new, multidimensional insight into the studied phenomenon. Indeed, further research with such an approach has been recommended in all the three employed fields of research. Hence, despite the acknowledged methodological limitations (see section 3.3.2), the focal research also provides a methodological contribution by offering researchers an example of how to conduct a process-based, embedded case study in such a complex empirical setting. While resulting in processual insight into collective international opportunity recognition and thus in a process-based contribution to each of the three fields of literature, I hope this thesis also constitutes a trigger for further similar research projects. Through the open description of the research path and procedures, this thesis allows other scholars to build on these methodological means and related learnings when conducting research in similar complex settings.

5.2 Managerial and policy implications

According to Davidsson (2017b), the research on entrepreneurial opportunities has largely failed to develop interesting tools and concepts for practical use. This may be due to the attention that scholars have given to debating about the related terminology and construct clarity, while practitioners, the real and potential business representatives, are only interested in ideas, tools, and concepts that can be useful to their work (Davidsson 2017b). While the point of departure for this thesis was a phenomenon-driven exploration of an unstudied phenomenon, one of the key contributions set for the study was to also provide ideas and recommendations that could be of use to practitioners in business and relevant policy institutions.

Given that this research discovered the importance of subjective mental images and collective sensemaking in collective opportunity recognition, it is strongly recommended that entrepreneurs and managers aiming at and already working towards joint internationalisation, firstly, openly discuss the mental images underlying their thinking and, secondly, actively build a shared meaning of their shared circumstances through collective sensemaking.

To support the first recommendation, Table 6 serves as a template that can be used as a tool for discussing and ‘synchronising’ the mental images of each partner. To start with, it might be useful for each one to carefully consider the questions presented in the template individually, and thereafter, set up a joint workshop in which everybody’s views are shared and discussed in an organised manner. This would allow the partners to see where each one is truly coming from and with what kinds of expectations instead of jointly discussing only formal, technical matters of collaboration – that is, based on the cases studied here, personal views and expectations can play a surprisingly large role in SMEs along with the inevitably changing circumstances, and the controversies in collaboration stem largely from such views and expectations (see Article 4). Moreover, this template may be of use, for example, in strategic planning inside a firm and in hiring new personnel to key positions – when employing new people, it would be important to study how their mental images are aligned with those of others and the firm strategy as the mental image is the heart driving a person forward in his/her actions, both in new markets and in collaboration with others (see Article 3).

Table 6 Template for mental image synchronisation

Theme		Questions for discussion
Mental image of a foreign market	Experiences	<ul style="list-style-type: none"> • What kind of activities are you currently undertaking towards this market? • What kind of prior experience do you have of entering/operating in this market? • What kind of experiences have your trusted colleagues reported to you from this market? • What are your learnings on this basis? What do you think it takes to enter/operate in this market?
	Strategies and resources	<ul style="list-style-type: none"> • What kind of human resources do you have available for exploring this market? • What kind of financial resources do you have for exploring this market? • What kind of production/service capacity do you currently have for meeting the needs of customers in this market? • What kind of expertise and contacts do you have that could be useful in exploring this market? • What kind of strategy does your firm have for entering/operating in this market? • What are your personal objectives in terms of entering/operating in this market and in what time period?
	Attractiveness	<ul style="list-style-type: none"> • How do you see the general business environment in this market? • How do you see the sales potential and other opportunities in this market? • What kind of challenges do you see for entering/operating in this market? • How do you see opportunities in alternative markets (including domestic ones) and how do you prioritise where to invest your time and effort?
Mental image of inter-firm collaboration	Experiences	<ul style="list-style-type: none"> • What kind of experience do you have of inter-firm collaboration in entering/operating in foreign markets? How did the others do? How did you do? • What kind of respective collaborations are you currently involved in? How are those progressing?
	Strategies and resources	<ul style="list-style-type: none"> • What kind of human resources do you have available for putting effort in this inter-firm collaboration? • What kind of financial resources do you have for putting effort in this inter-firm collaboration? • What kind of strategy does your firm have for this collaboration initiative? • What are your personal objectives in terms of this inter-firm collaboration and in what time period? • On this basis, what level (how intensive) of effort do you expect from yourself and from the others in this collaboration?
	Attractiveness	<ul style="list-style-type: none"> • How do you see this partner consortium? What are its strengths and weaknesses? • What kind of relationship do you have with each of these partners (firms/firm representatives)? • What do you expect can be gained from this collaboration? • What kind of costs and trade-offs will it require from you and from the others?

The questions introduced in the template have not been tested with business practitioners but stem from the diverging mental images that the studied firm representatives had in terms of international collaboration and which troubled their collaboration in the long run. Discussing these issues in advance is expected to prevent the appearance of such controversies. Moreover, at the individual level, reflecting on these issues independently might open entrepreneurs and managers to question, for example, their own long-term strategies. For instance, during economic upturns, SMEs have their hands full with their everyday business with existing customers and do not see the need for new customer acquisition. This is understandable if there are no resources with which to take further deals, but preparing for the future downturns might be reasonable. Within the period investigated in this thesis, the joint internationalisation efforts began when the times in domestic shipbuilding were poor after 2010, but at the end of the investigation period in 2017, the opportunities in foreign markets no longer seemed attractive as domestic business had started to boom, and some of the studied firms ceased their new customer acquisition efforts (see Article 3). It remains to be seen how these firms will react when the next downturn arrives.

When it comes to the second recommendation, another important aspect particularly in regard to opportunity exploitation and the proceedings of joint international operations is ensuring collective sensemaking. Through collective sensemaking, partners collectively generate a shared understanding of their circumstances as those evolve through different kinds of events. This way the partners are best equipped to react to the changing environment in ways that meet the needs and expectations of all, whereby all partners can commit themselves to the evolving operations and objectives. The results of this thesis indicate that collective sensemaking requires an active and controlled contribution from all stakeholders not only at the beginning of the process (i.e. at the first opportunity recognition and at the initiation of the joint work) but also during the collaborative entrepreneurial processes, including the opportunity conceptualisation, resource mobilisation, and legitimacy-building. Should the collaboration end at some point (it is of no use to continue joint efforts stubbornly when the markets no longer seem to provide opportunities for the partners), it would also be useful for the partners to make sense of the exit situation in a controlled manner, through ominous, collective sensemaking, if possible. This is because in the cases studied here (see Article 4), even at the moment of failure, some partners still saw opportunities in continuing collaboration with some of the others, and reaching a shared understanding of what happened and why might provide avenues for some further collaboration in other contexts, at least to some of the partners. Table 7 presents steps that might be taken in order to support collective sensemaking during opportunity materialisation.

Table 7 Steps to support collective and auspicious sensemaking

Phase of opportunity materialisation		To-do
Initiation		<ul style="list-style-type: none"> • Review the relevant mental images held by each involved individual (see the template in Table 6). • Agree on your joint goals, steps, and timeline in writing. • Agree on your roles (including who is the lead, who provides which resources) in this process. • Agree on regular meetings and procedures by which you continue reviewing the aforementioned issues in an organised manner.
Opportunity exploitation	Opportunity conceptualisation dialogue	<ul style="list-style-type: none"> • Review the goals of the collaboration. • Discuss the micro-, meso-, and marco-level events that have possibly changed the circumstances of the collaboration. • Consider whether your shared objectives should be changed on this basis. • Discuss what kind of potential opportunities you see for this collaboration group in other contexts, now and in the future.
	Resource mobilisation	<ul style="list-style-type: none"> • Review the resources needed for materialising the collective opportunity. • Discuss the micro-, meso-, and marco-level events that have possibly changed the resources needed and offered. • Consider whether the roles in terms of resource-sharing should be modified or whether some resources should be sought outside the group. • Review how the resource-sharing works and whether some changes are required in related processes.
	Legitimacy-building	<ul style="list-style-type: none"> • Review how you promote and build legitimacy in your collaboration operations externally (including advertising, media visibility, and events). • Review how you promote and build legitimacy in your collaboration operations internally (including regular meetings with active discussion about mental images, opportunity conceptualisation, resource mobilisation, and legitimacy-building). • Discuss the micro-, meso-, and marco-level events that have possibly changed the needs for legitimacy-building. • Consider changes in your external and internal legitimacy-building procedures accordingly.
Exit		<ul style="list-style-type: none"> • Review the steps that took you to this point. • Discuss what can be learned from it. • Evaluate the future opportunities for joint activities with all the involved partners (separately) in other contexts – are there possibilities for continuing with some of them?

As with the questionnaire template for opening mental images, the steps introduced in this latter template have not been tested with business practitioners but are derived from the problems that appeared particularly over the collaborative entrepreneurial processes (Andresen et al. 2014) of the studied case firms. The points sound self-evident, but, at least within the studied firms, these issues were not discussed openly and in detail, neither in the beginning nor during the collaboration process. Testing and modifying these templates is strongly recommended. As a more general notion, it is nevertheless important for partners to share their views concerning their experiences, their expectations, and their own strategies and resources both at the beginning and along the collaboration and to continue this discussion in an organised manner to maintain and strengthen the mutual understanding of what they are collaborating for and how.

Besides recommendations concerning opportunity recognition, the data allow the identification of some ideas more specific to entering foreign markets that can be of value to policy-makers aiming at supporting SME internationalisation. It appears that in principle, most of the studied firms valued collaborative internationalisation attempts and saw the role of export promotion organisations and related public financial support as highly important in the initiation of such ventures. Consequently, the continuation of such support is strongly recommended in various public institutions, while at the same time it is important to make sure that the partnering firms understand the need to also put their own effort adequately into such initiatives. Thus, it is important for the coordinators of such activities to ensure that all partners know what it takes for them to succeed in an export ring, for example, while it requires that the partnering firms also take these initiatives seriously and with adequate patience and commitment (cf. Welch et al. 2000; Nummela & Pukkinen 2007). The membership fee or even equity investment does not guarantee active participation, and to get all partners to comprehend what is expected from them, the discussion templates introduced above might be of value.

As regards the composition of collaborative ventures, the findings of this thesis indicate that export rings can work well when the partnering firms want to share their marketing costs but sell their expertise individually, whereas for gaining together larger deals, deeper collaboration is required, such as in the form of an established cooperative. Moreover, the informants of this thesis also prefer a natural consortium that follows the lead company in everyday business; artificially compiled SME groups without complementary expertise and natural roles are highly challenging to transform into a strong group that can in collaboration generate true customer value – that is, to enable the customer to make better deals with their own customers (see Article 2 and Article 4). Nevertheless, of particular importance is assigning the lead firm role to a firm with adequate expertise, and

all agreeing on this settlement. In addition, it might be wise to build the export collaboration based on pre-identified customer needs instead of just synthesising the interests of potential partner firms. Instead of exploring a specific geographical area for business opportunities, focusing entry efforts on meeting the needs of specific customer(s) would make it a lot easier to specify the objectives and steps of joint internationalisation. These notions are expected to be of importance for externally constructed as well as self-developed collaboration groups.

In addition, as indicated in all the four articles, SMEs taking part in such collaborative attempts often have modest experience in international business, which hinders the progress of the joint efforts. It appeared in the cases studied here that not all partner firms knew what it takes to enter the Norwegian and/or Russian markets, even as a part of a larger group of firms. As each firm needs to be able to represent and sell their own part, they must be aware of the certificates and other documentary requirements often necessary in the Norwegian offshore business, for example. Similarly, they should be aware of how the sales processes take place in Russia, where you need to start the selling from the top management and where it is not only technological expertise that leads to success. Moreover, besides technological expertise, conquering foreign markets anywhere requires sheer sales expertise, that is, a good understanding of what customer value is and how one can contribute to it – and such selling cannot be easily outsourced to an external sales agent. SME representatives must know how to approach customers and present their offerings so that the customers see what they would be paying for and why it would be worth the money (which might be more than what competitors charge for respective products or services). Another simple yet highly important issue worth continuous improvement is fluent English presentation skills, which did not seem to be self-evident among the mostly domestically operating maritime sector SMEs.

Consequently, besides supporting inter-firm collaboration by paying attention to mental images and by strengthening collective sensemaking, and thereby the (continued) emergence of collective international opportunity recognition, the findings of this thesis highlight the importance of knowing the targeted business environment, customer requirements, and networking habits once a firm gets in touch with a potential customer. Moreover, one needs to be ready instantly, and starting the study of these aspects at that point is too late as customers expect rapid reactions and responses to their enquiries (see Article 4). Firms targeting foreign markets must be active themselves in preparing their marketing material accordingly, in checking how their products and services align with customer requirements, and in establishing relationships with customer representatives, both in Norway and Russia (see Article 2). Namely, when firms look for large multi-

million euro deals together, it is not necessarily any easier for an individual firm as the requirements and demands from customers are also higher. The unequipped SMEs do not know what skills they are lacking and are not always able to ask for help in that respect, so such preparatory issues are something that they could use increasing external help with. Export promotion organisations should continue actively providing such valuable support for resource-constrained SMEs in this respect.

These notions are expected to be of value both to business practitioners as well as to various organisations trying to foster the internationalisation of Finnish maritime and offshore sector SMEs. Through well-prepared and communicated collaboration between firms and industry experts, joint entry attempts to foreign markets can be successful and lead to the materialisation of collective international opportunities.

5.3 Avenues for further research

Diving into the dynamics of the collective international opportunity recognition phenomenon provided plenty of valuable ideas for further research as many of the identified aspects deserve more detailed attention. First of all, further studies should follow a similar process-based case study methodology (cf. Welch & Paavilainen-Mäntymäki 2014) to further embrace the multiple-opportunity lens (Wood et al. 2017) and path dependence of mental image development (Mitchell & Shepherd 2010) and sensemaking, for instance. Returning to the limitations of this study, I believe that future studies could benefit from more intensive fieldwork, for instance through more frequently conducted interviews among firm representatives exploring collective international opportunities or by combining interviews with other data-generation methods such as observing group meetings and discussions. Both of these would require the establishment of an even deeper and more committed relationship between the researcher and the informants so that the data can be collected repeatedly over a long investigation period. Should such a relationship be established, an interesting complementary approach would also be to ask the informants to draw network pictures (Henneberg et al. 2006) to visualise their understanding of their more and less important collaboration relationships, which has been linked to research on managerial sensemaking in business networks (Henneberg et al. 2010).

Moreover, examining the phenomenon and the results of this thesis also with a different philosophical and methodological approach might open up new insight into understanding collective international opportunity recognition. While this thesis employed, to some extent, the triangulation of data, theories, and researchers, future research might also benefit from triangulation of

methodologies and/or methods (Lincoln & Guba 1985; Eriksson & Kovalainen 2008). For example, conceptualising and operationalising the mental image contents in detail might allow the quantitative investigation of how different contents of mostly negative or positive mental images are related to ominous and auspicious sensemaking and opportunity recognition. However, given the evident complexity and subjectivity of the phenomenon, testing these findings with quantitative methods can be highly challenging and would probably require at least a combination of mixed quantitative and qualitative approaches.

As regards the objectives of further research, it would be important to explore mental images and individual and inter-firm-level sensemaking in international opportunity recognition in different environments – it would be interesting if further qualitative case studies investigating the phenomenon in different industrial and geographical contexts were undertaken to determine what kind of contents are relevant to mental images in different opportunity settings and whether the sensemaking processes before and along the opportunity materialisation process also differ somehow in different settings. For example, this study focused on SMEs exploring neighbouring markets which are challenging to enter yet in many ways in close proximity. It would be interesting to see if the mental images and sensemaking processes differ somehow from those described in this study in a foreign market context that involves greater geographical and psychic distance, such as on the Chinese and South Korean markets, where the maritime industry is now booming and where firms of different sizes are now increasingly aiming.

Moreover, it would be interesting to see what kinds of images are at play with opportunities concerning other partnering contexts, such as in collaboration with consultants and export promotion organisations, and how those images of both parties influence the internationalisation of SMEs. Studying the collective dynamics of mental images and sensemaking in completely different settings than internationalisation, such as in inter-firm product or service development, could also provide new insight into the initiation and development of business-to-business collaboration. In addition, further studies should explore how people inside and across organisations influence each other's mental images and opportunity recognition since people feed each other's sensemaking and thereby opportunity recognition, and the exploitation of an opportunity often requires that multiple people inside a firm recognise it and find pursuing it worth the effort. For example, what kind of inter-personal sensemaking and mobilisation (Mouzas & Naudé 2007; Matinheikki et al. 2017; Van Bockhaven & Matthyssens 2017) takes place within a single firm concerning its potential actions towards collective international opportunities, and what are the means and motivations for it for people in different positions in the firm?

Although prior research on opportunity recognition has focused on the cognitions and characteristics of individual entrepreneurs, and studies have approached this from multiple perspectives, this thesis provides ideas for further research at the individual level, too. For instance, investigating the sources and types of information on which entrepreneurs build their sensemaking (cf. Santos-Álvarez & Carcía-Merino 2010) might provide new insight into why some and not others perceive their surroundings the way they do. Given the constantly increasing information overload, it would be intriguing to find out the extent to which entrepreneurs are aware of and reflect upon their sources of information and the related sensemaking.

It would also be interesting to see if there are similarities in mental images and sensemaking between specific foreign markets depending on the origin of the entrepreneur and depending on different kinds of experiences from specific markets, for example. Namely, the entrepreneurs' perceptions of themselves affect their recognition of opportunities in foreign markets and, hence, international entrepreneurial actions (Mitchell & Shepherd 2010). Even though the data from this thesis show that the views of the self are complexly entangled with other contents of mental images concerning international opportunity contexts, I believe that the aspect of the self deserves further attention within the dynamics identified in this research. For example, it would be intriguing to see how the different experience-bound scripts that entrepreneurs have of themselves (Korhonen & Leppäaho 2019) manifest in and influence sensemaking and opportunity recognition both in international and collaborative settings.

In the same vein, it would be highly interesting to study the impact of emotions on collective international opportunity recognition. In recent years scholars have acknowledged the potential influence of emotions on sensemaking, both at the individual and collective levels (Maitlis & Christianson 2014). For instance, according to the findings of Rafaeli, Ravid, and Cheshin (2009), positive emotions in a team are likely to lead to a higher-quality team mental model, which will also be better shared among the members, whereas Liu and Maitlis (2014) discovered that emotional dynamics that are negatively valenced or mixed are related to superficial sensemaking and to a failure to act collectively. Even though emotions are somewhat visible in mental images, investigating their role in detail in collective and international opportunity settings might open new doors to understanding why some and not others end up going international to specific markets in collaboration at specific moments of time.

To conclude, this exploratory thesis provides the basis for understanding collective international opportunity recognition. It is a complex, continuous, and highly contextual phenomenon which in today's collaboration-intensive business environment deserves attention from international business researchers. Such

insight is expected to be of increasing value in supporting the joint internationalisation of SMEs – in Finland, in the maritime sector, and in any geographical and industrial context – whereby they will be better prepared to recognise and make the most of the great and wonderful things that international opportunities may entail.

References

- ABF (2014) *Arctic Business Forum – Yearbook 2014*. Ed. Timo Rautajoki. Lapland Chamber of Commerce: Rovaniemi.
- Alfoldi, E. A. – Hassett, M. E. (2013) Dealing with unpredictability and change in longitudinal studies of organisations: a priori versus progressive focusing approach. In: *Handbook of Longitudinal Research Methods in Organisation and Business Studies*. Eds. M. E. Hassett and E. Paavilainen-Mäntymäki, 271–294. Edward Elgar Publishing Ltd: Cheltenham, UK.
- Andersen, P. H. – Kragh, H. (2010) Sense and sensibility: Two approaches for using existing theory in theory-building qualitative research. *Industrial Marketing Management*, Vol. 39 (1), 49–55.
- Andersson, S. – Evers, N. (2015) International opportunity recognition in international new ventures – a dynamic managerial capabilities perspective. *Journal of International Entrepreneurship*, Vol. 13 (3), 260–276.
- Andersson, S. – Sundermeier, J. (2019) Firms' use of organizational, personal, and intermediary networks to gain access to resources for internationalization. *Thunderbird International Business Review*, Vol. 61 (4), 609–621.
- Andrésen, A. – Junnelius, J. – Laaksonen, E. – Mäkinen, H. (2013) Maritime companies and their business networks in the Central Baltic region. In: *Maritime companies and their business networks in the Central Baltic region*. SmartComp Research Report No 2, June 2013, 21–35. <<http://www.cb-smartcomp.eu/index.php/materials>>, retrieved 5.6.2019.
- Andresen, E. – Lundberg, H. – Wincent, J. (2014) Processes in collaborative entrepreneurship: a longitudinal case study of how multiple actors exploit a radically new opportunity. *International Entrepreneurship and Management Journal*, Vol. 10 (4), 713–726.
- Angelsberger, M. – Kraus, S. – Mas-Tur, A. – Roig-Tierno, N. (2017) International Opportunity Recognition: An Overview. *Journal of Small Business Strategy*, Vol. 27 (1), 19–36.
- Araujo, L. – Easton, G. (1996) Networks in Socio-Economic Systems: A Critical Review. In: *Networks in Marketing*. Ed. D. Iacobucci, 63–107. Sage: Thousand Oaks CA.
- Ardichvili, A. – Cardozo, R. – Ray, S. (2003) A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, Vol. 18 (1), 105–123.
- Baraldi, E. – Gressetvold, E. – Harrison, D. (2012) Resource interaction in inter-organizational networks: Foundations, comparison, and research agenda. *Journal of Business Research*, Vol. 65 (2), 266–276.
- Baron, R. A. (2006) Opportunity Recognition as Pattern Recognition: How Entrepreneurs “Connect the Dots” to Identify New Business Opportunities. *Academy of Management Perspectives*, Vol. 20 (1), 104–119.
- Baron, R. A. – Ensley, M. D. (2006) Opportunity Recognition as the Detection of Meaningful Patterns: Evidence from Comparisons of Novice and Experienced Entrepreneurs. *Management Science*, Vol. 52 (9), 1331–1344.
- Beach, L. R. – Mitchell, T. R. (1987) Image theory: Principles, goals, and plans in decision making. *Acta Psychologica*, Vol. 66 (3), 201–220.
- Bengtsson, M. – Raza-Ullah, T. (2016) A systematic review of research on coopetition: Toward a multilevel understanding. *Industrial Marketing Management*, Vol. 57, 23–39.

- Bhaskar, R. (1975) *A Realist Theory of Science*. Harvester Press: Hassocks, England.
- Bhaskar, R. (2008) *A Realist Theory of Science*. Routledge: Oxon.
- Blankenburg Holm, D. – Johanson, M. – Kao, P. T. (2015) From outsider to insider: Opportunity development in foreign market networks. *Journal of International Entrepreneurship*, Vol. 13 (3), 337–359.
- Brinberg, D. – McGrath, J. E. (1988) *Validity and the research process*. (2nd pr.). Sage: Newbury Park, CA.
- Brito, C. M. (2001) Towards an institutional theory of the dynamics of industrial networks. *Journal of Business and Industrial Marketing*, Vol. 16 (3), 150–166.
- Butler, J. E. – Doktor, R. – Lins, F. A. (2010) Linking international entrepreneurship to uncertainty, opportunity discovery, and cognition. *Journal of International Entrepreneurship*, Vol. 8 (2), 121–134.
- Cannon-Bowers, J. A. – Salas, E. – Converse, S. A. (1993) Shared mental models in expert team decision making. In: *Individual and group decision making: Current issues*. Ed. N. J. Castellan. Jr., 221–246. Lawrence Erlbaum Associates Inc: Hillsdale, NJ.
- Chandra, Y. (2017) A time-based process model of international entrepreneurial opportunity evaluation. *Journal of International Business Studies*, Vol. 48 (4), 423–451.
- Chandra, Y. – Styles, C. – Wilkinson, I. (2009) The recognition of first time international entrepreneurial opportunities – Evidence from firms in knowledge-based industries. *International Marketing Review*, Vol. 26 (1), 30–61.
- Chandra, Y. – Styles, C. – Wilkinson, I. F. (2012) An Opportunity-Based View of Rapid Internationalization. *Journal of International Marketing*, Vol. 20 (1), 74–102.
- Chandra, Y. – Styles, C. – Wilkinson, I. F. (2015) Opportunity portfolio: Moving beyond single opportunity explanations in international entrepreneurship research. *Asia Pacific Journal of Management*, Vol. 32 (1), 199–228.
- Chandra, Y. – Wilkinson, I. F. (2017) Firm internationalization from a network-centric complex-systems perspective. *Journal of World Business*, Vol. 52 (5), 691–701.
- Charmaz, K. (2006) *Constructing grounded theory: a practical guide through qualitative analysis*. Sage: Thousand Oaks, CA.
- Chetty, S. K. – Wilson, H. I. M. (2003) Collaborating with competitors to acquire resources. *International Business Review*, Vol. 12 (1), 61–81.
- Ciabuschi, F. – Perna, A. – Snehota, I. (2012) Assembling resources when forming a new business. *Journal of Business Research*, Vol. 65 (2), 220–229.
- Coviello, N. E. – Jones, M. V. (2004) Methodological issues in international entrepreneurship research. *Journal of Business Venturing*, Vol. 19 (4), 485–508.
- Coviello, N. E. – Jones, M. V. (2005) Internationalisation: Conceptualising an Entrepreneurial Process of Behaviour in Time. *Journal of International Business Studies*, Vol. 36 (3), 284–303.
- Creswell, J. W. (2013) *Qualitative Inquiry & Research Design: Choosing Among Five Approaches* (3rd ed). Sage Publications: Thousand Oaks, CA.
- Creswell, J. W. – Miller, D. L. (2000) Determining validity in qualitative inquiry. *Theory into Practice*, Vol. 39 (3), 131–156.
- Crick, D. (2003) The International Entrepreneurial Decision of UK SMEs to Discontinue Overseas Activities: A Research Note Reporting Practices Within the Clothing Industry Eighteen Months on. *Journal of International Entrepreneurship*, Vol. 1 (4), 405–413.
- Cuero Acosta, Y. A. – Adu-Gyamfi, R. – Un Nabi, M. N. U. – Dornberger, U. (2017) Analysing the Role of Framework Conditions Influencing International Entrepreneurial Opportunity Identification Process. *Entrepreneurial Business and Economics Review*, Vol. 5 (3), 9–29.
- Daft, R. L. – Weick, K. E. (1984) Toward a Model of Organizations as Interpretation Systems. *The Academy of Management Review*, Vol. 9 (2), 284–295.
- Davidsson, P. (2015) Entrepreneurial opportunities and the entrepreneurship nexus: A re-conceptualization. *Journal of Business Venturing*, Vol. 30 (5), 674–695.
- Davidsson, P. (2017a) Entrepreneurial opportunities as propensities: Do Ramoglou & Tsang move the field forward? *Journal of Business Venturing Insights*, Vol. 7, 82–85.

- Davidsson, P. (2017b) Opportunities, propensities, and misgivings: Some closing comments. *Journal of Business Venturing Insights*, Vol. 8, 123–124.
- Dawson, P. (2003) *Reshaping Change: A Processual Perspective*. Routledge: London.
- Dawson, P. (2013) The use of time in the design, conduct and write-up of longitudinal processual case study research. In: *Handbook of Longitudinal Research Methods in Organisation and Business Studies*. Eds. M. E. Hassett and E. Paavilainen-Mäntymäki, 249–268. Edward Elgar Publishing Ltd: Cheltenham, UK.
- De Clercq, D. – Sapienza, H. J. – Crijns, H. (2005) The Internationalization of Small and Medium-Sized Firms. *Journal of World Business*, Vol. 50 (4), 704–717.
- Denzin, N. K. (1970) *Sociological methods: a sourcebook*. Aldine: Chicago.
- Di Gregorio, D. – Musteen, M. – Thomas, D. E. (2008) International new ventures: The cross-border nexus of individuals and opportunities. *Journal of World Business*, Vol. 43 (2), 186–196.
- Dimitratos, P. – Voudouris, I. – Plakoyiannaki, E. – Nakos, G. (2012) International entrepreneurial culture—Toward a comprehensive opportunity-based operationalization of international entrepreneurship. *International Business Review*, Vol. 21 (4), 708–721.
- Dimov, D. (2007) From opportunity insight to opportunity intention: The importance of person-situation learning match. *Entrepreneurship Theory & Practice*, Vol. 31 (4), 561–583.
- Dimov, D. (2011) Grappling With the Unbearable Elusiveness of Entrepreneurial Opportunities. *Entrepreneurship Theory and Practice*, Vol. 35 (1), 57–81.
- Dubois, A. – Gadde, L.-A. (2002) Systematic combining: an abductive approach to case research. *Journal of Business Research*, Vol. 55 (7), 553–560.
- Dyer, W. G. – Wilkins, A. L. (1991) Better Stories, Not Better Constructs, To Generate Better Theory: A Rejoinder to Eisenhardt. *Academy of Management Review*, Vol. 16 (3), 613–619.
- Easton, G. (2010) Critical realism in case study research. *Industrial Marketing Management*, Vol. 39 (1), 118–128.
- Eisenhardt, K. M. (1992) Building theories from case study research. *Academy of Management Review*, Vol. 14 (4), 532–550.
- Ellis, P. (2008) Social ties and international opportunity recognition. Unpublished manuscript, Hong Kong Polytechnic University. (For reference see Kontinen & Ojala 2011.)
- Ellis, P. (2011) Social ties and international entrepreneurship: Opportunities and constraints affecting firm internationalization. *Journal of International Business Studies*, Vol. 42 (1), 99–127.
- Eerola, V. (2017) *Kun rauta kelluu – Välähdyksiä suomalaisen meriteollisuuden vuosisadasta*. Finnish Marine Industries.
https://meriteollisuus.teknologiateollisuus.fi/sites/meriteollisuus/files/file_attachments/Meriteoll_historiikki_web.pdf, retrieved 11.6.2019.
- Efimova, E. – Sutyryn, S. (2019) *Government support for the Russian shipbuilding industry: Policy priorities and budgetary allocations. Some recommendations for the policy-makers*. BSR Policy Briefing series, 5/2019. <www.centrumbalticum.org/files/4341/BSR_Policy_Briefing_5_2019.pdf>, retrieved 14.8.2019.
- Emmel, N. (2013) *Sampling and Choosing Cases in Qualitative Research: A Realist Approach*. Sage: London.
- Eriksson, P. – Kovalainen, A. (2008) *Qualitative Methods in Business Research*. Sage: London.
- European Commission (2017) *Study on new trends in globalisation in shipbuilding and marine supplies – Consequences for European industrial and trade policy*. EU Publications, Executive Agency for Small and Medium-sized Enterprises, European Commission.
<https://publications.europa.eu/en/publication-detail/-/publication/bc5fa041-bac0-11e7-a7f8-01aa75ed71a1/language-en>, retrieved 5.6.2019.
- Finnish Marine Industry (2018) *Finnish marine industry in a nutshell*. Finnish Marine Industries.
https://meriteollisuus.teknologiateollisuus.fi/sites/meriteollisuus/files/file_attachments/mt-kortti_digi_eng.pdf, retrieved 11.6.2019.
- Finnish Maritime Cluster Yearbook (2019) FMC – Finnish Maritime Cluster. <https://fmc-yearbook.com/wp-content/uploads/2019/04/fmcYearbook2019_full.pdf>, retrieved 5.6.2019.

- Finnvera (2018) These countries are exporters interested in – What is the outlook for export financing? *Finnvera News*, 31.08.2018. <<https://www.finnvera.fi/eng/finnvera/newsroom/news/these-countries-are-exporters-interested-in-what-is-the-outlook-for-export-financing>>, retrieved 8.5.2019.
- Fletcher, M. – Plakoyiannaki, E. (2011) Case selection in international business: key issues and common misconceptions. In: *Rethinking the Case Study in International Business and Management Research*. Eds. R. Piekkari and C. Welch, 171–191. Edward Elgar Publishing Limited: Cheltenham, UK.
- Fletcher, M. – Zhao, Y. – Plakoyiannaki, E. – Buck, T. (2018) Three Pathways to Case Selection in International Business: A Twenty-Year Review, Analysis and Synthesis. *International Business Review*, 27 (4), 755–766.
- Gartner, W. – Carter, N. – Hills, G. – Steyaert, C. – Hjorth, D. (2003) The language of opportunity. In: *New movements in entrepreneurship*. Eds. C. Steyaert and D. Hjorth, 103–125. Edward Elgar: Cheltenham, UK.
- Gentner, D. – Stevens, A. L. (1983) *Mental models*. Erlbaum: Hillsdale, NJ.
- George, A. L. – Bennett, A. (2004) *Case Studies and Theory Development in the Social Sciences*. MIT Press: Cambridge, Massachusetts.
- Gioia, D. A. – Chittipeddi, K. (1991) Sensemaking and Sensegiving in Strategic Change Initiation. *Strategic Management Journal*, Vol. 12 (6), 433–448.
- Gioia, D. A. – Poole, P. P. (1984) Scripts in organizational behavior. *Academy of Management Review*, Vol. 9 (3), 449–459.
- Glavas, C. – Mathews, S. – Bianchi, C. (2016) International opportunity recognition as a critical component for leveraging Internet capabilities and international market performance. *Journal of International Entrepreneurship*, Vol. 15 (1), 1–35.
- Gomes, E. – Barnes, B. – Mahmood, T. (2016) A 22 year review of strategic alliance research in the leading management journals. *International Business Review*, Vol. 25 (1), 15–27.
- Granovetter, M. S. (1973) The Strength of Weak Ties. *American Journal of Sociology*, Vol. 78 (6), 1360–1380.
- Grégoire, D. A. – Barr, P. S. – Shepherd, D. A. (2010) Cognitive processes of opportunity recognition: the role of structural alignment. *Organization Science*, Vol. 21 (2), 413–431.
- Grégoire, D. A. – Cornelissen, J. – Dimov, D. – van Burg, E. (2015) The Mind in the Middle: Taking Stock of Affect and Cognition Research in Entrepreneurship. *International Journal of Management Reviews*, 17 (2), 125–142.
- Grégoire, D. A. – Shepherd, D. A. (2012) Technology-Market Combinations and the Identification of Entrepreneurial Opportunities: An Investigation of the Opportunity-Individual Nexus. *Academy of Management Journal*, Vol. 55 (4), 753–785.
- Halinen, A. – Mainela, T. (2013) Challenges of longitudinal field research in process studies on business networks. In: *Handbook of Longitudinal Research Methods in Organisation and Business Studies*. Eds. M. E. Hassett and E. Paavilainen-Mäntymäki, 185–203. Edward Elgar Publishing Ltd: Cheltenham, UK.
- Halinen, A. – Medlin, C. J. – Törnroos, J.-Å. (2012) Time and process in business network research. *Industrial Marketing Management*, Vol. 41 (2), 215–223.
- Henneberg, S. C. – Mouzas, S. – Naudé, P. (2006) Network pictures – concepts and representations. *European Journal of Marketing*, Vol. 40 (3/4), 408–429.
- Henneberg, S. C. – Naudé, P. – Mouzas, S. (2010) Sense-making and management in business networks – some observations, considerations, and a research agenda. *Industrial Marketing Management*, Vol. 39 (3), 355–360.
- Henriksson, M. – Huhtinen, H. (2013) *Arktisen alueen meriliikenteen kehitys vahvistaa Norjan asemaa*. Suomen ulkoministeriön edustustojen raportit, 2.7.2013. <https://um.fi/edustustojen-raportit/-/asset_publisher/W41AhLdTjdag/content/arktisen-alueen-meriliikenteen-kehitys-vahvistaa-norjan-asemaa/384951?curAsset=0&stId=47307>, retrieved 12.6.2019.

- Hill, S. A. – Birkinshaw, J. M. (2010) Idea Sets: Conceptualizing and Measuring a New Unit of Analysis in Entrepreneurship Research. *Organizational Research Methods*, Vol. 13 (1), 85–113.
- Hill, R. C. – Levenhagen, M. (1995) Metaphors and Mental Models: Sensemaking and Sensegiving in Innovative and Entrepreneurial Activities. *Journal of Management*, Vol. 21 (6), 1057–1074.
- Hilmersson, M. – Papaioannou, S. (2015) SME international opportunity scouting – empirical insights on its determinants and outcomes. *Journal of International Entrepreneurship*, Vol. 13 (3), 186–211.
- Hohenthal, J. – Johanson, J. – Johanson, M. (2003) Market discovery and the international expansion of the firm. *International Business Review*, Vol. 12 (6), 659–672.
- Hoyte, C. – Noke, H. – Mosey, S. – Marlow, S. (2019) From venture idea to venture formation: The role of sensemaking, sensegiving and sense receiving. *International Small Business Journal: Researching Entrepreneurship*, Vol. 37 (3), 1–21.
- Hurmerinta, L. – Nummela, N. – Paavilainen-Mäntymäki, E. (2015) Opening and closing doors: The role of language in international opportunity recognition and exploitation. *International Business Review*, Vol. 24 (6), 1082–1094.
- Håkansson, H. (1987) *Industrial Technological Development: A Network Approach*. Croom Helm: London.
- Håkansson, H. – Ford, D. (2002) How should companies interact in business networks? *Journal of Business Research*, Vol. 55 (2), 133–139.
- Håkansson, H. – Ford, D. – Gadde, L.-E. – Snehota, I. – Waluszewski, A. (2009) *Business in Networks*. John Wiley & Sons: Chichester, West Sussex, UK.
- Håkansson, H. – Johanson, J. (1992) A Model of Industrial Networks. In: *Industrial Networks: A New View of Reality*. Eds. B. Axelsson and G. Easton, 28–34. Routledge: London.
- Håkansson, H. – Waluszewski, A. (2002) Path dependence: restricting or facilitating technical development. *Journal of Business Research*, Vol. 55 (7), 561–570.
- Håkansson, H. – Waluszewski, A. (2013) A never ending story – Interaction patterns and economic development. *Industrial Marketing Management*, Vol. 42 (3), 443–454.
- Ivanova, S. – Treffers, T. – Langerak, F. (2018) Emotional paths leading to opportunity desirability and feasibility beliefs through controllability. *International Small Business Journal: Researching Entrepreneurship*, Vol. 36 (5), 546–573.
- Jansson, T. (2018) *Moominpappa at Sea* (Collector's Edition). Sort of Books: London.
- Jarillo, J. C. (1989). Entrepreneurship and growth: The strategic use of external resources. *Journal of Business Venturing*, Vol. 4 (2), 133–147.
- Johanson, J. – Vahlne, J.-E. (1977) The Internationalization Process of the Firm – A Model of Knowledge Development and Increasing Foreign Market Commitments. *Journal of International Business Studies*, Vol. 8 (1), 23–32.
- Johanson, J. – Vahlne, J.-E. (2006) Commitment and opportunity development in the internationalization process: a note on the Uppsala internationalization process model. *Management International Review*, Vol. 46 (2), 165–178.
- Johanson, J. – Vahlne, J.-E. (2009) The Uppsala internationalization model revisited – from liability of foreignness to liability of outsidership. *Journal of International Business Studies*, Vol. 40 (9), 1411–1431.
- Johansson, O. (2013) *Meriteollisuus 2020 -kilpailukykyryhmän mietintö 17.6.2013*. Ministry of Economic Affairs and Employment, Finland. <<https://docplayer.fi/3514909-Meriteollisuus-2020-kilpailukykyryhma-mietinto.html>>, retrieved 12.6.2019.
- Johnson, P. – Buehring, A. – Cassell, C. – Symon, G. (2006) Evaluating Qualitative Research: Towards a Contingent Criteriology. *International Journal of Management Reviews*, Vol. 8 (3), 131–156.
- Johnson-Laird, P. N. (1983) *Mental models: Towards a cognitive science of language, inference, and consciousness*. Cambridge University Press: Cambridge.
- Jones, M. V. – Coviello, N. – Tang, Y. K. (2011) International Entrepreneurship research (1989–2009): A domain ontology and thematic analysis. *Journal of Business Venturing*, Vol. 26 (6), 632–659.
- Junnellius, J. & Laaksonen, E. (2013) Norway – World-leading expertise in offshore and subsea operations in the High North. In: *Maritime sector developments in the global markets*. SmartComp

- Research Report No 3, October 2013, 52–57. <<http://www.cb-smartcomp.eu/index.php/materials>>, retrieved 5.6.2019.
- Katz, J. A. – Shepherd, D. A. (2003) Cognitive Approaches to Entrepreneurship Research. In: *Cognitive Approaches to Entrepreneurship Research* (Advances in Entrepreneurship, Firm Emergence and Growth, Volume 6). Eds. Jerome A. Katz and Dean A. Shepherd, 1–10. Emerald Group Publishing Limited.
- Kinnunen, J.-P. (2015) *Kansainvälistymisavustus yritysten yhteishankkeisiin – Selvitys avustuksen toimivuudesta yritysten viennin ja kansainvälistymisen edistämiseksi*. Työ- ja elinkeinoministeriön julkaisuja, Innovaatio 24/2015. <http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/74985/TEMjul_24_2015_web_1304_2015.pdf>, retrieved 11.6.2019.
- Kitching, J. – Rouse, J. (2017) Opportunity or dead end? Rethinking the study of entrepreneurial action without a concept of opportunity. *International Small Business Journal*, Vol. 35 (5), 558–577.
- Klein, P. G. (2008) Opportunity discovery, entrepreneurial action, and economic organization. *Strategic Entrepreneurship Journal*, Special Issue: Opportunities, Organizations, and Entrepreneurship: Theory and Debate, Vol. 2 (3), 175–190.
- Knight, G. A. (1997) Cross cultural reliability and validity of a scale to measure firm entrepreneurial orientation. *Journal of Business Venturing*, Vol. 12 (3), 213–225.
- Kock, S. – Nisuls, J. – Söderqvist, A. (2010) Co-opetition: a source of international opportunities in Finnish SMEs. *Competitiveness Review: An International Business Journal*, Vol. 20 (2), 111–125.
- Kontinen, T. – Ojala, A. (2011) Network ties in the international opportunity recognition of family SMEs. *International Business Review*, Vol. 20 (4), 440–453.
- Korhonen, S. – Leppäaho, T. (2019) Well-trodden highways and roads less traveled: Entrepreneurial-oriented behaviour and identity construction in international entrepreneurship narratives. *Journal of International Entrepreneurship*, in press.
- Korhonen, I. – Simola, H. – Solanko, L. (2018) Sanctions, counter-sanctions and Russia – Effects on economy, trade and finance. *BOFIT Policy Brief*, 2018, No. 4. <<https://helda.helsinki.fi/bof/handle/123456789/15510>>, retrieved 1.6.2019.
- Krueger, Jr N. F. (2000) The Cognitive Infrastructure of Opportunity Emergence. *Entrepreneurship Theory and Practice*, Vol. 25 (3), 5–23.
- Laaksonen, E. – Mäkinen, H. (2013) Russia – The awakening giant. In: *Maritime sector developments in the global markets*. SmartComp Research Report No 3, October 2013, 58–62. <<http://www.cb-smartcomp.eu/index.php/materials>>, retrieved 5.6.2019.
- Langley, A. (1999) Strategies for theorising from process data. *Academy of Management Review*, Vol. 24 (4), 691–710.
- Laufs, K. – Schwens, C. (2014) Foreign market entry mode choice of small and medium-sized enterprises: A systematic review and future research agenda. *International Business Review*, Vol. 23 (6), 1109–1126.
- Lehto, I. (2015) International entrepreneurial selling as construction of international opportunities. *Journal of International Entrepreneurship*, Vol. 13 (3), 277–302.
- Lerner, D. A. – Hunt, R. A. – Dimov, D. (2018) Action! Moving beyond the intendedly-rational logics of entrepreneurship. *Journal of Business Venturing*, Vol. 33 (1), 52–69.
- Lim, B.-C. – Klein, K. J. (2006) Team mental models and team performance: a field study of the effects of team mental model similarity and accuracy. *Journal of Organizational Behavior*, Vol. 27 (4), 403–418.
- Lincoln, Y. S. – Guba, E. G. (1985) *Naturalistic inquiry*. Sage: Newbury Park, CA.
- Lindsay, N. J. – Craig, J. (2002) A Framework for Understanding Opportunity Recognition: Entrepreneurs versus Private Equity Financiers. *The Journal of Private Equity*, Vol. 6 (1), 13–24.
- Lindstrand, A. – Hånell, S. M. (2017) International and market-specific social capital effects on international opportunity exploitation in the internationalization process. *Journal of World Business*, Vol. 52 (5), 653–663.

- Liski, L. (2017) *Pk-yritysten vienninedistäminen: Pk-yritysten vientiedellytysten edistäminen vuoden 2018 talousarvioehdotuksessa; määrärahamuutokset ja uudet toimet sekä arvio näiden vaikutuksista*. Ministry of Economic Affairs and Employment, Finland. <<https://www.eduskunta.fi/FI/vaski/JulkaisuMetatieto/Documents/EDK-2017-AK-151805.pdf>>, retrieved 11.6.2019.
- Liu, M. – Maitlis, S. (2014) Emotional Dynamics and Strategizing Processes: A Study of Strategic Conversations in Top Team Meetings. *Journal of Management Studies*, Special Issue: Strategy as Discourse: Its Significance, Challenges and Future Directions, Vol. 51 (2), 202–234.
- Lumpkin, G. T. – Dess, G. G. (1996) Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, Vol. 21 (1), 135–172.
- Lumpkin, G. T. – Dess, G. G. (2001) Linking two dimensions of EO to firm performance: the moderating role of environment and industry life cycle. *Journal of Business Venturing*, Vol. 16 (5), 429–451.
- Lundgren, A. (1992) Coordination and mobilisation processes in industrial networks. In: *Industrial Networks: A New View of Reality*. Eds. B. Axelsson and G. Easton. Routledge: London.
- Luo, Y. (2004) *Coopetition in International Business*. Copenhagen Business School Press: Copenhagen.
- Mainela, T. (2012) From internal resources to collective opportunities. *Journal of Business Research*, Vol. 65 (2), 230–231.
- Mainela, T. – Puhakka, V. – Servais, P. (2014) The Concept of International Opportunity in International Entrepreneurship: A Review and Research Agenda. *International Journal of Management Reviews*, Vol. 16 (1), 105–129.
- Mainela, T. – Puhakka, V. – Servais, P. (2015) Boundary crossing for international opportunities. *Journal of International Entrepreneurship*, Vol. 13 (3), 173–185.
- Mainela, T. – Puhakka, V. – Sipola, S. (2018) International entrepreneurship beyond individuals and firms: On the systemic nature of international opportunities. *Journal of Business Venturing*, Vol. 33 (4), 534–550.
- Maitland, E. – Sammartino, A. (2015) Managerial cognition and internationalization. *Journal of International Business Studies*, Vol. 46 (7), 733–760.
- Maitlis, S. (2005) The social processes of organizational sensemaking. *Academy of Management Journal*, Vol. 48 (1), 21–49.
- Maitlis, S. – Christianson, M. (2014) Sensemaking in Organisations: Taking Stock and Moving Forward. *The Academy of Management Annals*, Vol. 8 (1), 57–125.
- Makkonen, H. – Aarikka-Stenroos, L. – Olkkonen, R. (2012) Narrative approach in business network process research – Implications for theory and methodology. *Industrial Marketing Management*, Vol. 41 (2), 287–299.
- Mari, C. – Meglio, O. (2013) Temporal issues in process research. In: *Handbook of Longitudinal Research Methods in Organisation and Business Studies*. Eds. M. E. Hassett and E. Paavilainen-Mäntymäki, 204–228. Edward Elgar Publishing Ltd: Cheltenham, UK.
- Mathieu, J. E. – Heffner, T. S. – Goodwin, G. F. – Salas, E. – Cannon-Bowers, J. A. (2000) The influence of shared mental models on team process and performance. *Journal of Applied Psychology*, Vol. 85 (2), 273–283.
- Matinheikki, J. – Pesonen, T. – Artto, K. – Peltokorpi, A. (2017) New value creation in business networks: The role of collective action in constructing system-level goals. *Industrial Marketing Management*, Vol. 67, 122–133.
- McDougall, P. P. – Oviatt, B. M. (2000) International entrepreneurship: the intersection of two research paths. *Academy of Management Journal*, Vol. 43 (5), 902–906.
- McMullen, J. S. – Shepherd, D. A. (2006) Entrepreneurial Action and the Role of Uncertainty in the Theory of the Entrepreneur. *Academy of Management Review*, Vol. 31 (1), 132–152.
- Miles, M. B. – Huberman, A. M. (1994) *Qualitative Data Analysis: An Expanded Sourcebook*. Sage: Thousand Oaks, CA.

- Miocevic, D. – Morgan, R. E. (2018) Operational capabilities and entrepreneurial opportunities in emerging market firms: Explaining exporting SME growth. *International Marketing Review*, Vol. 35 (2), 320–341.
- Mitchell, J. C. (1983) Case and situation analysis. *The Sociological Review*, Vol. 31 (2), 187–211.
- Mitchell, T. R. – Beach, L. R. (1990) “... Do i love thee? Let me count ...” toward an understanding of intuitive and automatic decision making. *Organizational Behavior and Human Decision Processes*, Vol. 47 (1), 1–20.
- Mitchell, J. R. – Shepherd, D. A. (2010) To thine own self be true: images of self, images of opportunity, and entrepreneurial action. *Journal of Business Venturing*, Vol. 25 (1), 138–154.
- Mitchell, R. K. – Smith, B. – Seawright, K. W. – Morse, E. A. (2000) Cross-Cultural Cognitions and the Venture Creation Decision. *The Academy of Management Journal*, Vol. 43 (5), 974–993.
- Mol, de E. – Khapova, S. N. – Elfring, T. (2015) Entrepreneurial Team Cognition: A Review. *International Journal of Management Reviews*, Special Issue: The Mind in the Middle: Taking Stock of Affect and Cognition Research in Entrepreneurship, Vol. 17 (2), 232–255.
- Mouzas, S. – Naudé, P. (2007) Network mobilizer. *Journal of Business & Industrial Marketing*, Vol. 22 (1), 62–71.
- Muzychenko, O. (2008) Cross-cultural entrepreneurial competence in identifying international business opportunities. *European Management Journal*, Vol. 26 (6), 366–377.
- Muzychenko, O. – Liesch, P. W. (2015) International opportunity identification in the internationalisation of the firm. *Journal of World Business*, Vol. 50 (4), 704–717.
- Mäkinen, H. (2015) The Russian maritime industry and Finland. *Electronic Publications of the Pan-European Institute*, 2/2015.
 <https://www.utu.fi/sites/default/files/media/drupal/PEI%20Pub%20Makinen%202_2015.pdf>, retrieved 12.6.2019.
- Möller, K. – Halinen, A. (2017) Managing business and innovation networks – From strategic nets to business fields and ecosystems. *Industrial Marketing Management*, Vol. 67, 5–22.
- Nordman, E. R. – Melén, S. (2008) The impact of different kinds of knowledge for the internationalization process of Born Globals in the biotech business. *Journal of World Business*, Vol. 43 (2), 171–185.
- Norman, D. A. (1983) Some Observations on Mental Models. In: *Mental Models*. Eds. Dedre Gentner and Albert L. Stevens, 7–14. Lawrence Erlbaum Associates: Hillsdale, NJ.
- Nowiński, W. – Rialp, A. (2016) The Impact of Social Networks on Perceptions of International Opportunities. *Journal of Small Business Management*, Vol. 54 (2), 445–461.
- Nummela, N. – Pukkinen, T. (2007) What Makes Export Co-Operation Tick? Analysing the Role of Commitment in Finnish Export Circles. *Journal of Euromarketing*, Vol. 16 (1–2), 23–35.
- OECD (2017) Peer review of the Norwegian shipbuilding industry. *OECD Publications*.
 <http://www.oecd.org/sti/ind/PeerReviewNorway_FINAL.pdf>, retrieved 5.6.2019.
- Oviatt, B. M. – McDougall, P. P. (2005) Defining international entrepreneurship and modelling the speed of internationalization. *Entrepreneurship Theory and Practice*, Vol. 29 (5), 537–553.
- Oyson, M. J. – Whittaker, H. (2015) Entrepreneurial cognition and behavior in the discovery and creation of international opportunities. *Journal of International Entrepreneurship*, Vol. 13 (3), 303–336.
- Paavilainen-Mäntymäki, E. – Welch, C. (2013) How to escape an unprocessual legacy? A viewpoint from international business research. In: *Handbook of Longitudinal Research Methods in Organisation and Business Studies*. Eds. M. E. Hassett and E. Paavilainen-Mäntymäki, 229–248. Edward Elgar Publishing Ltd: Cheltenham, UK.
- Partanen, J. – Kauppi, O.-P. – Sepulveda, F. – Gabrielsson, M. (2018) Turning strategic network resources into performance: The mediating role of network identity of small- and medium-sized enterprises. *Strategic Entrepreneurship Journal*, 1–20.
- Paul, J. – Parthasarathy, S. – Gupta, P. (2017) Exporting challenges of SMEs: A review and future research agenda. *Journal of World Business*, Vol. 52 (3), 327–342.

- Pech, R. J. – Cameron, A. (2006) An entrepreneurial decision process model describing opportunity recognition. *European Journal of Innovation Management*, Vol. 9 (1), 61–78.
- Peiris, I. K. – Akoorie, M. E. M. – Sinha, P. (2012) International entrepreneurship: A critical analysis of studies in the past two decades and future directions for research. *Journal of International Entrepreneurship*, Vol. 10 (4), 279–324.
- Peiris, I. – Akoorie, M. – Sinha, P. (2013) Conceptualizing the Process of Opportunity Identification in International Entrepreneurship Research. *South Asian Journal of Management*, Vol. 20 (3), 7–38.
- Pettigrew, A. M. (1990) Longitudinal Field Research on Change: Theory and Practice. *Organization Science*, Vol. 1 (3), 267–292.
- Pettigrew, A. M. (1997) What is processual analysis? *Scandinavian Journal of Management*, Vol. 13 (4), 337–348.
- Piekkari, R. – Welch, C. – Paavilainen, E. (2009) The Case Study as Disciplinary Convention: Evidence from International Business. *Organizational Research Methods*, Vol. 12 (3), 567–589.
- PKYB (2018) *Pk-yritysbarometri syksy 2018*. Suomen Yrittäjät, Finnvera Oyj, työ- ja elinkeinoministeriö. <https://www.yrittajat.fi/sites/default/files/sy_pk_barometri_syksy2018.pdf>, retrieved 11.6.2019.
- PKYB (2019) *Pk-yritysbarometri kevät 2019*. Suomen Yrittäjät, Finnvera Oyj, työ- ja elinkeinoministeriö. <https://www.yrittajat.fi/sites/default/files/pk_barometri_kevat2019.pdf>, retrieved 11.6.2019.
- Platt, J. (1992) “Case Study” in American Methodological Thought. *Current Sociology*, Vol. 40 (1), 14–48.
- Poulis, K. – Poulis, E. – Plakoyiannaki, E. (2013) The role of context in case study selection: An international business perspective. *International Business Review*, 22 (1), 304–314.
- Pratt, M. G. (2000) The good, the bad, and the ambivalent: Managing identification among Amway distributors. *Administrative Science Quarterly*, Vol. 45 (3), 456–493.
- Pääkkönen, K. (2011) *Laivanrakennusteollisuuden valtiontuki. Yhteismarkkinoille soveltuvan tuen muodot, mahdollisuudet ja rajoitukset*. Kauppaoikeuden opinnäyte, Turun yliopisto. <<http://www.varsinais-suomi.fi/images/tiedostot/Edunvalvonta/telakkatutkielma%20pkkn.pdf>>, retrieved 11.6.2019.
- Rafaeli, A. – Ravid, S. – Cheshin, A. (2009) Sensemaking in virtual teams: the impact of emotions and support tools on team mental models and team performance. *International Review of Industrial and Organizational Psychology*, Vol. 24, 151–182.
- Ragin, C. C. (1992) “Casing” and the Process of Social Inquiry. In: *What is a Case? Exploring the Foundations of Social Inquiry*. Eds. C. C. Ragin and H. S. Becker, 217–226. Cambridge University Press: Cambridge, New York.
- Ramoglou, S. – Tsang, E. W. K. (2016) A Realist Perspective of Entrepreneurship: Opportunities as Propensities. *Academy of Management Review*, Vol. 41 (3), 410–434.
- Reid, S. D. (1981) The Decision-Maker and Export Entry and Expansion. *Journal of International Business Studies*, Vol. 12 (2), 101–112.
- Renko, M. – Shrader, R. C. – Simon, M. (2012) Perception of entrepreneurial opportunity: a general framework. *Management Decision*, Vol. 50 (7), 1233–1251.
- Rialp, A. – Rialp, J. (2001) Conceptual frameworks on SMEs' internationalization: Past, present and future trends of research. In: *Reassessing the Internationalization of the Firm* (Advances in International Marketing, Vol. 11). Eds. C. Axinn and P. Matthyssens, 49–78. Emerald Group Publishing Limited: Bingley.
- Rikama, S. (2017) *Pk-yritysten kansainvälistyminen – syksy 2017*. TEM-analyyseja, 82/2017. Ministry of Economic Affairs and Employment, Finland. <julkaisut.valtioneuvosto.fi/bitstream/handle/10024/80701/Pk-yritysten%20kansainv%c3%a4listyminen%20syksy%202017.pdf>, retrieved 11.6.2019.
- Ritter, T. – Wilkinson, I. F. – Johnston, W. J. (2004) Managing in complex business networks. *Industrial Marketing Management*, Vol. 33 (3), 175–183.

- Ruzzier, M. – Hisrich, R. D. – Antoncic, B. (2006) SME internationalization research: past, present, and future. *Journal of Small Business and Enterprise Development*, Vol. 13 (4), 476–497.
- Santos-Álvarez, V. – García-Merino, T. (2010) The role of the entrepreneur in identifying international expansion as a strategic opportunity. *International Journal of Information Management*, Vol. 30 (6), 512–520.
- Sayer, A. (1992) *Method in Social Science: A Realist Approach* (2nd edition). Routledge: London.
- Sayer, R. A. (2000) *Realism and social science*. Sage: Thousand Oaks, CA.
- Schweizer, R. – Vahlne, J.-E. – Johanson, J. (2010) Internationalisation as an entrepreneurial process. *Journal of International Entrepreneurship*, Vol. 8 (4), 343–370.
- Shane, S. – Venkataraman, S. (2000) The Promise of Entrepreneurship as a Field of Research. *Academy of Management Review*, Vol. 25 (1), 217–226.
- Shepherd, D. A. – McMullen, J. S. – Ocasio, W. (2017) Is that an opportunity? An attention model of top managers' opportunity beliefs for strategic action. *Strategic Management Journal*, Vol. 38 (3), 626–644.
- Short, J. C. – Ketchen, Jr. D. J. – Shook, C. L. – Ireland, R. D. (2010) The Concept of “Opportunity” in Entrepreneurship Research: Past Accomplishments and Future Challenges. *Journal of Management*, Vol. 36 (1), 40–65.
- Silverman, D. (2001) *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction* (2nd edition). Sage: London.
- Sinkovics, R. – Penz, E. – Ghauri, P. (2008) Enhancing the Trustworthiness of Qualitative Research in International Business. *Management International Review*, Vol. 48 (6), 689–714.
- Stake, R. E. (2005) Qualitative Case Studies. In: *The Sage handbook of qualitative research*. Eds. N. K. Denzin and Y. S. Lincoln, 443–466. Sage Publications Ltd: Thousand Oaks, CA.
- Starbuck, W. H. – Milliken, F. J. (1988) Executives' perceptual filters: What they notice and how they make sense. In: *The executive effect: Concepts and methods for studying top managers*. Ed. D. C. Hambrick, 35–65. JAI: Greenwich, CT.
- Strauss, A. – Corbin, J. (1990) *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Sage: Newbury Park, CA.
- Styles, C. – Seymour, R. G. (2006) Opportunities for marketing researchers in international entrepreneurship. *International Marketing Review*, Vol. 23 (2), 126–145.
- Symon, G. – Cassell, C. (2012) Assessing Qualitative Research. In: *Qualitative Organizational Research: Core Methods and Current Challenges*. Eds. G. Symon and C. Cassell, 204–223. Sage: London.
- Söderqvist, A. (2011) *Opportunity exploration and exploitation in international new ventures: a study of relationships' involvement in early entrepreneurial and internationalisation events*. Hanken School of Economics: Helsinki.
- Tang, J. – Kacmar, K. M. – Busenitz, L. (2012) Entrepreneurial alertness in the pursuit of new opportunities. *Journal of Business Venturing*, Vol. 27 (1), 77–94.
- Taylor, J. R. – Van Every, E. J. (2000) *The emergent organization: Communication as its site and surface*. Erlbaum: Mahwah, NJ.
- Think Ocean (2018) *Think Ocean: Maritime Outlook Report 2018*. Norwegian Shipowners' Association. <<https://rederi.no/DownloadFile/?file=214989>>, retrieved 2.6.2019.
- Tilly, C. – Goodin, R. E. (2006) It depends. In: *The Oxford Handbook of Contextual Political Analysis*. Eds. R. E. Goodin and C. Tilly, 3–32. Oxford University Press: Oxford.
- Timmermans, S. – Tavory, I. (2012) Theory construction in qualitative research: From grounded theory to abductive analysis. *Sociological Theory*, Vol. 30 (3), 167–186.
- Tulyakova, I. R. – Gregova, E. – Dengov, V. V. (2017) *Assessment of Competitiveness of Shipbuilding Industry in Russia*. DOI 10.17818/NM/2017/3.6. <<https://hrcak.srce.hr/file/277683>>, retrieved 2.6.2019.
- Van Bockhaven, W. – Matthyssens, P. (2017) Mobilizing a network to develop a field: Enriching the business actor's mobilization analysis toolkit. *Industrial Marketing Management*, Vol. 67, 70–87.
- Van de Ven, A. H. (2007) *Engaged Scholarship: A Guide for Organizational and Social Research*. Oxford University Press: New York, NY.

- Van Maanen, J. (1979) Reclaiming Qualitative Methods for Organizational Research: A Preface. *Administrative Science Quarterly*, Vol. 24 (4), 520–526.
- Van Maanen, J. – Sørensen, J. B. – Mitchell, T. R. (2007) Introduction to Special Topic Forum: The Interplay between Theory and Method. *The Academy of Management Review*, Vol. 32 (4), 1145–1154.
- Vandor, P. – Franke, N. (2016) See Paris and... found a business? The impact of cross-cultural experience on opportunity recognition capabilities. *Journal of Business Venturing*, Vol. 31 (4), 388–407.
- Vasilchenko, E. – Morrish, S. (2011) The Role of Entrepreneurial Networks in the Exploration and Exploitation of Internationalization Opportunities by Information and Communication Technology Firms. *Journal of International Marketing*, Vol. 19 (4), 88–105.
- Weick, K. E. (1995) *Sensemaking in Organizations*. Sage: Thousand Oaks, CA.
- Weick, K. E. – Sutcliffe, K. M. – Obstfeld, D. (2005) Organizing and the Process of Sensemaking. *Organization Science*, Vol. 16 (4), 409–421.
- Welch, L. S. – Luostarinen, R. (1988) Internationalization: evolution of a concept. *Journal of General Management*, Vol. 14 (2), 34–55.
- Welch, C. – Paavilainen-Mäntymäki, E. (2014) Putting Process (Back) In: Research on the Internationalization Process of the Firm. *International Journal of Management Reviews*, Vol. 16 (1), 2–23.
- Welch, C. – Piekkari, R. – Plakoyiannaki, E. – Paavilainen-Mäntymäki, E. (2011) Theorising from Case Studies: Towards a Pluralist Future for International Business Research. *Journal of International Business Studies*, Vol. 42 (5), 740–762.
- Welch, D. – Welch, L. – Wilkinson, I. – Young, L. (2000) An export grouping scheme. *Journal of Euromarketing*, 9 (2), 59–84.
- Venkataraman, S. – Sarasvathy, S. – Dew, N. – Forster, W. R. (2012) Reflections on the 2010 AMR decade award: Whither the promise? Moving forward with entrepreneurship as a science of the artificial. *Academy of Management Review*, Vol. 37 (1), 21–33.
- Whetten, D. A. (1989) What Constitutes a Theoretical Contribution? *The Academy of Management Review*, Vol. 14 (4), 490–495.
- Williams, D. W. – Wood, M. S. (2015) Rule-Based Reasoning for Understanding Opportunity Evaluation. *Academy of Management Perspectives*, Vol. 29 (2), 218–236.
- VKB (2015) *Venäjän kaupan barometri, kevät 2015*. Suomalais-Venäläinen kauppakamari and Taloustutkimus Oy. <http://www.svkk.fi/uutishuone/lehdistotiedotteet/venajankaupan_barometri_kevat_2015_venajan_kaupassa_ollaan_kasvuhakuisia.24431.news>, retrieved 13.3.2018.
- VKB (2017) *Venäjän-kaupan barometri, syksy 2017*. Suomalais-Venäläinen kauppakamari and Taloustutkimus Oy. <<https://www.svkk.fi/wp-content/uploads/2017/11/Ven%C3%A4j%C3%A4n-kaupan-barometri-S2017-FI.pdf>>, retrieved 13.3.2018.
- Wolcott, H. F. (2002) Writing Up Qualitative Research... Better. *Qualitative Health Research*, Vol. 12 (1), 91–103.
- Wood, M. S. – McKelvie, A. – Haynie, J. M. (2014) Making it personal: Opportunity individuation and the shaping of opportunity beliefs. *Journal of Business Venturing*, Vol. 29 (2), 252–272.
- Wood, M. S. – McKelvie, A. (2015) Opportunity Evaluation as Future Focused Cognition: Identifying Conceptual Themes and Empirical Trends. *International Journal of Management Reviews*, Special Issue: The Mind in the Middle: Taking Stock of Affect and Cognition Research in Entrepreneurship, Vol. 17 (2), 256–277.
- Wood, M. S. – Williams, D. W. – Drover, W. (2017) Past as prologue: Entrepreneurial inaction decisions and subsequent action judgments. *Journal of Business Venturing*, Vol. 32 (1), 107–127.
- Wynn, D. – Williams, C. K. (2012) Principles for conducting critical realist case study research in information systems. *MS Quarterly*, Vol. 36 (3), 787–810.

- Vähäheikkilä, E. (2018) *Meriteollisuus - Finnish Marine Industries*. Presentation on 15.3.2018. <www.technogrowth.fi/File/Suomen_meriteollisuus_Elina_Vähäheikkilä.pdf?694759>, retrieved 11.6.2019.
- Yin, R. K. (1984) *Case study research: Design and methods*. Sage: Newbury Park, CA.
- Yin, R. K. (2009) *Case study research: Design and methods* (4th ed.). Sage Publications: Los Angeles.
- YLE (2012) *Katainen: Arktinen osaaminen on uusi Nokia*. YLE News, 27.11.2012. <<https://yle.fi/uutiset/3-6393407>>, retrieved 8.5.2019.
- Zaefarian, R. – Eng, T.-Y. – Tasavori, M. (2016) An exploratory study of international opportunity identification among family firms. *International Business Review*, Vol. 25 (1), 333–345.
- Zahra, S. A. – George, G. (2002) International Entrepreneurship: The Current Status of the Field and Future Research Agenda. In: *Strategic Entrepreneurship: Creating a New Mindset*. Eds. M A. Hitt, R. D. Ireland, S. M. Camp and D. L. Sexton, 255–288. Blackwell Publishing: Oxford, UK.
- Zahra, S. A. – Korri, J. S. – Yu, J. (2005) Cognition and international entrepreneurship: implications for research on international opportunity recognition and exploitation. *International Business Review*, Vol. 14 (2), 129–146.

Appendices

Appendix 1 Literature review

The systematic literature review on international opportunity recognition was conducted through searching the key journal databases provided by the Nelli portal⁵ in the field of business and economics, comprising ABI/INFORM Global (ProQuest), Business Source Complete (EBSCO), Emerald Journals (Emerald), JSTOR, SAGE Journals, SocINDEX with Full Text (EBSCO), Springer LINK, and Wiley Online Library. I conducted an advanced search in each database separately, limiting the results to peer-reviewed journal articles. There was no need to limit the results in terms of publication date since the stream of research on international opportunity recognition is relatively new. Both conceptual and empirical studies were included. Furthermore, some studies were added to the review after conducting an additional search specifically at the Science Direct database and based on the literature review by Mainela, Puhakka, and Servais (2014).

In terms of key words, I used ‘international opportunity’ alone and together with ‘opportunity recognition’, ‘opportunity discovery’, and ‘opportunity identification’, which are close synonyms or closely related terms describing the phenomenon under study. Opportunity exploitation, in turn, is the phase of enacting an opportunity and in this sense follows the opportunity recognition (Muzychenko & Liesch 2015), and therefore it was left outside the scope of this review. I also searched separately for ‘collective opportunity’, but, as was expected, this relatively new concept did not bring new results and hence did not enable focusing the review solely on that concept.

The searches resulted in large numbers of results, but the relevance of the results decreased rapidly. Following the example of Laufs and Schwens (2014), the following specific criteria were defined for the studies to be eligible for review: (1) their focus had to be in *international opportunity recognition*, and (2) the studies had

⁵ Via the Nelli search portal one can access the electronic resources available at Turku University Library. Nelli provides simultaneous cross-searches of multiple databases and links services from databases to full-text resources.

to be published or in press in peer-reviewed journals. A total of 51 studies were downloaded from the databases, and, after a first reading, altogether 25 studies met the criteria and were considered fully eligible for the analysis. The studies left out at this phase (1) focused on international opportunity but not on the recognition process; (2) discussed international opportunity recognition but did not have it in the focus of the study,⁶ or (3) focused on the opportunity recognition process but not specifically in the context of international opportunities. The searches were conducted in late October 2015, and the identification of eligible articles took place in early November 2015. Following the example of Gomes, Barnes, and Mahmood (2016) and Laufs and Schwens (2014), the articles were further content-analysed in terms of predetermined key areas (methodologies, thematic focus areas, and international opportunity recognition conceptualisations). An Excel database was created for managing the data. To update the literature review along the research process, the systematic review was repeated in autumn 2018 with the same criteria through the Volter library service,⁷ resulting in the inclusion of five additional articles.

The following articles were included in the review of the international opportunity recognition literature:

- ⁶ Studies which did not meet these specific criteria were left out of the detailed review, such as the following examples: De Clercq et al.'s (2005) study on how experiential learning affects internationalisation intent and thereby perceptions of opportunities; Di Gregorio et al.'s (2008) and Mainela and Puhakka's (2009) studies on international opportunity/opportunity discovery in the emergence/organising of an INV; Schweizer et al.'s (2010) study on how international opportunity recognition functions as a part of the business network internationalisation process; Lehto's (2015) study on international entrepreneurial selling as a construction of international opportunities; Nowiński and Rialp's (2016) study on the impact of social networks in assessing opportunities; and Lindstrand and Hånell's (2017) focus on the role of social capital in opportunity exploitation in the internationalisation process.
- ⁷ The Nelli portal was replaced at the University of Turku with the broader Volter service. In the search for international journal articles, this service uses the Primo Central Index, which contains references from more than 900 different databases, including Web of Science, Scopus, JSTOR, Pubmed, and DOAJ.

Year	Author(s)	Title	Journal	Methodology
2003	Hohenthal, Johanson & Johanson	Market discovery and the international expansion of the firm	International Business Review	Single case study
2005	Zahra, Korri & Yu	Cognition and international entrepreneurship: implications for research on international opportunity recognition and exploitation	International Business Review	Conceptual paper
2006	Johanson & Vahlne	Commitment and opportunity development in the internationalization process: a note on the Uppsala internationalization process model	Management International Review	Conceptual paper
2008	Muzychenko	Cross-cultural entrepreneurial competence in identifying international business opportunities	European Management Journal	Conceptual paper
2008	Nordman & Melén	The impact of different kinds of knowledge for the internationalisation process of born globals in the biotech business	Journal of World Business	Multiple case study
2009	Chandra, Styles & Wilkinson	The recognition of first time international entrepreneurial opportunities: evidence from firms in knowledge-based industries	International Marketing Review	Multiple case study
2009	Johanson & Vahlne	The Uppsala internationalization process model revisited: From liability of Foreignness to Liability of Outsidership	Journal of International Business Studies	Conceptual paper
2010	Butler, Doktor & Lins	Linking international entrepreneurship to uncertainty, opportunity discovery, and cognition	Journal of International Entrepreneurship	Conceptual paper
2010	Kock, Nisuls & Söderqvist	Co-opetition: a source of international opportunities in Finnish SMEs	International Business Journal	Multiple case study
2010	Santos-Álvarez & Carcía-Merino	The role of the entrepreneur in identifying international expansion as a strategic opportunity	International Journal of Information Management	Single case study
2011	Ellis	Social ties and international entrepreneurship: opportunities and constraints affecting firm internationalisation	Journal of International Business Studies	Quantitative study
2011	Kontinen & Ojala	International opportunity recognition among small and medium-sized family firms	Journal of Small Business Management	Multiple case study

2011	Vasilchenko & Morrish	The role of entrepreneurial networks in the exploration and exploitation of internationalization opportunities by information and communication technology firms	Journal of International Marketing	Multiple case study
2012	Chandra, Styles & Wilkinson	An opportunity-based view of rapid internationalisation	Journal of International Marketing	Multiple case study
2012	Dimitratos, Voudouris, Plakoyiannaki & Nakos	International entrepreneurial culture – toward a comprehensive opportunity-based operationalization of international entrepreneurship	International Business Review	Quantitative study
2012	Peiris, Akoorie & Sinha	International entrepreneurship: a critical analysis of studies in the past two decades and future directions for research	Journal of International Entrepreneurship	Conceptual paper
2013	Peiris, Akoorie & Sinha	Conceptualizing the process of opportunity identification in international entrepreneurship research	South-Asian Journal of Management	Conceptual paper
2015	Andersson & Evers	International opportunity recognition in international new venture – a dynamic managerial capabilities perspective	Journal of International Entrepreneurship	Conceptual paper
2015	Blankenburg Holm, Johanson & Kao	From outsider to insider: opportunity development in foreign market networks	Journal of International Entrepreneurship	Single case study
2015	Chandra, Styles & Wilkinson	Opportunity portfolio: moving beyond single opportunity explanations in international entrepreneurship research	Asia Pacific Journal of Management	Single case study
2015	Hilmersson & Papaioannou	SME international opportunity scouting – empirical insights on its determinants and outcomes	Journal of International Entrepreneurship	Multiple case study with mixed methods
2015	Hurmerinta, Nummela & Paavilainen-Mäntymäki	Opening and closing doors: the role of language in international opportunity recognition and exploitation	International Business Review	Mixed methods
2015	Muzychenko & Liesch	International opportunity identification in the internationalisation of the firm	Journal of World Business	Multiple case study
2015	Oyson & Whittaker	Entrepreneurial cognition and behavior in the discovery and creation of international opportunities	Journal of International Entrepreneurship	Multiple case study
2016	Vandor & Franke	See Paris and... found a business? The impact of cross-cultural experience on opportunity recognition capabilities	Journal of Business Venturing	Quantitative study

2016	Zaefarian, Eng & Tasavori	An exploratory study of international opportunity identification among family firms	International Business Review	Multiple case study
2017	Chandra	A time-based process model of international entrepreneurial opportunity evaluation	Journal of International Business Studies	Multiple case study
2017	Cuero Acosta, Adu-Gyamfi, Nabi & Dornberger	Analysing the Role of Framework Conditions Influencing International Entrepreneurial Opportunity Identification Process	Entrepreneurial Business and Economics Review	Conceptual paper
2018	Mainela, Puhakka & Sipola	International entrepreneurship beyond individuals and firms: On the systemic nature of international opportunities	Journal of Business Venturing	Qualitative study
2018	Miocevic & Morgan	Operational capabilities and entrepreneurial opportunities in emerging market firms: Explaining exporting SME growth	International Marketing Review	Quantitative study

Appendix 2 References of the literature review synthesis

INDIVIDUAL-LEVEL FACTORS	
ability to notice and bear uncertainty	Butler et al. (2010)
attitudes (e.g. desire to build a world-class enterprise or passion for cross-cultural encounters)	Mzychenko & Liesch (2015)
cognitive skills	Santos-Álvarez & Carcia-Merino (2010)
creativity	Peiris et al. (2013)
cross-cultural competence	Muzychenko (2008)
dynamic managerial capabilities	Andersson & Evers (2015)
entrepreneurial self-efficacy	Peiris et al. (2013); Muzychenko & Liesch (2015)
experiential technological and international knowledge	Nordman & Melen (2008); Chandra et al. (2009); Peiris et al. (2013); Vandor & Franke (2016); Zaefarian et al. (2016)
linguistic knowledge	Hurmerinta et al. (2003)
market-sensing capabilities	Miocevic & Morgan (2018)
mental images of opportunities, self, and internationalisation decisions	Chandra et al. (2015); Mitchell & Shepherd (2010); Maitland & Sammartino (2015)
opportunity portfolio	Chandra et al. (2015)
perseverance	Peiris et al. (2013)
rational and non-rational elements	Zahra et al. (2005)
FIRM-LEVEL FACTORS	
cognitive system with shared beliefs and information	Zahra et al. (2005)
decision-making rules	Chandra (2017)
entrepreneurial orientation	Chandra et al. (2009)
history of past activities and learning	Hohenthal et al. (2003)
international entrepreneurial culture	Dimitratos et al. (2012)
international experience	Hilmersson & Papaioannou (2015)
knowledge and resources	Chandra et al. (2012)
ongoing activities	Hohenthal et al. (2003)
organisational culture	Zahra et al. (2005)
professional managers' influence in firm decision-making	Chandra et al. (2017)
size and flexibility, and thereby alertness, of the management teams	Kontinen & Ojala (2011)
time and resources available	Chandra (2017)
type of shareholders	Chandra (2017)

NETWORK-LEVEL FACTORS	
constraints and drawbacks of network ties	Ellis (2011); Söderqvist (2011)
direct and indirect relationships	Söderqvist (2011)
establishment of new ties (via trade fairs, formal searches, and serendipitous encounters)	Kontinen & Ojala (2011); Vasilchenko & Morrish (2011)
information, knowledge, and ideas possessed in the network	Chandra et al. (2009); Zaefarian et al. (2016)
learning, creating, and trust-building in relationships	Johanson & Vahlne (2006)
linguistic knowledge possessed in the network	Hurmerinta et al. (2015)
network position	Johanson & Vahlne (2006)
other network actors' opportunity portfolios	Chandra et al. (2015)
path dependence	Blankenburg Holm et al. (2015)
resources and social capital possessed in the network	Chandra et al. (2009); Peiris et al. (2013)
strength of cooperative and competitive relationships	Kock et al. (2010); Chandra et al. (2009); Söderqvist (2011); Hilmersson & Papaioannou (2015)
ENVIRONMENT-LEVEL FACTORS	
culture and norms	Butler et al. (2010); Cuero Acosta et al. (2017)
incentives in the market	Cuero Acosta et al. (2017)
informative stimuli (their type, content, and source)	Santos-Álvarez & Carcia-Merino (2010)
luck and serendipity	Oyson & Whittaker (2015)
regulatory environment	Cuero Acosta et al. (2017)
surrounding community with its cultural-historical context	Mainela et al. (2018)

Appendix 3 General interview guide

Background

- In what kind of business and in which geographical markets does your firm operate?
- How did you begin your foreign business operations?
- What is your personal background in this respect?

Specific markets (Norway/Russia)

- When and how did you enter/start entering these markets?
- Where did the idea stem from?
- What kind of prior experiences do you have of this market?
- How did you acknowledge potential business opportunities there?
- How do you feel about your current operations? What kind of challenges/possibilities do you see?
- What does the future of the market look like?

Collaboration towards specific markets (Norway/Russia)

- Have you engaged in collaboration with other firms in order to enter this market? Why/why not? How? Who initiated it?
- Who are involved in this collaboration? What are their roles in terms of work and the sharing of resources, for instance?
- How is your collaboration proceeding towards this market?
- Do you think (continuing) collaboration is necessary for the entry? Why/why not?
- What kind of prior experiences do you have of inter-firm collaboration?
- Do you have other collaboration engagements/initiatives currently? Why/why not? With whom? With what kind of objectives?

Appendix 4 Example of an emergent coding structure (for Article 2)

1 st -level categories	2 nd -level categories	3 rd -level categories
attitudes	Norwegian market	ease of doing business elsewhere, patience, risk-taking, willingness to grow
	Russian market	ease of doing business elsewhere, criminality, trustworthiness, openness, willingness to grow, flexibility, patience, faith, close distance, risk-taking, willingness to do something new
	inter-firm collaboration	greed and envy regarding others' benefit, fear of working with more powerful partners, we-spirit, flexibility, patience
entrepreneur characteristics	Norwegian market	contacts, resources, language skills, personal experience
	Russian market	contacts, resources, language skills, personal experience
	inter-firm collaboration	contacts, resources, language skills, personal experience
firm characteristics	Norwegian market	size, strategy, contacts, resources, management, employees, partner network, international experience, competitiveness
	Russian market	size, strategy, contacts, resources, management, employees, partner network, collaboration experience, competitiveness
	inter-firm collaboration	size, strategy, contacts, resources, management, employees, partner network, collaboration experience, competitiveness
factual references	Norwegian market	oil price, logistics, progress of offshore projects, business environment, demand, history, sales, visits, offers, price levels, competition, resellers
	Russian market	oil price, sanctions, currency, politics, proximity, logistics, business environment, industry development, demand, history, sales, visits, offers, resellers, price levels, competition
	inter-firm collaboration	current or past participation in export rings, current or past membership in joint ventures, membership in associations, joint presence in trade fairs or tours, keeping in touch with partners, requests for collaboration, one's own approaches towards potential partners
learnings	Norwegian market	how to access the customer, how to convince the customer, how to provided added value to the customer, how to win competition, importance of and how to build local presence in the market, which customer segments to approach first, need for patience, need for persistence, importance of focusing resources, what kind of products are in demand

	Russian market	how to access the customer, how to convince the customer, need for patience, need for persistence, importance of focusing resources, importance of and how to build local presence in the market
	inter-firm collaboration	how to meet the needs of the customer together, importance of agreeing on objectives, importance of agreeing on working methods, new skills and working methods, importance of group leader, importance of complementarity, importance of investing in collaboration, importance of collaboration intensity, importance of one's own activity
motivation	Norwegian market	possibilities of accessing the customer, demand for one's own products, need for patience, logistical challenges, need for presence, oil price, business environment, appreciation for Finnish know-how, comparison with other markets, possibility for large sales, possibility for quick sales, enquiries, technical requirements, bureaucracy
	Russian market	the Ukrainian crisis, enquiries, market distance, competitive advantage, existing contacts, gaining learnings, business history, business culture, ways of thinking, need for new customers, experience of doing business
	inter-firm collaboration	customer persuasion, customer demands, personal relations, partner characteristics, competition, complementary products/services for customers, complementary resources, gaining contacts, costs, risk-sharing, possibility to focus on one's own core competence, method of collaboration, possibility for learning, characteristics of the leader, shared investments, common needs and objectives, distance to the customer when not in direct contact
prior and current operations (experiences)	Norwegian market	accessing the customer, convincing the customer, working on offers, technical requirements, demand for products, competition, changes in business environment, luck, others' experiences
	Russian market	accessing the customer, convincing the customer, technical requirements, demand for products, changes in business environment, market unpredictability, bureaucracy, corruption, customs, need for personal relationships, understanding customer decision-making, language issues, competition, luck, others' experiences
	inter-firm collaboration	gaining sales, gaining new contacts, gaining new knowledge and know-how, gaining new resources, activeness and capabilities of the leader, work division, serving the same customer, same owner, knowing the people personally, bonding, one's own effort, openness, capability to take advantage of collaboration, partners' know-how, enthusiasm, partners' references, partners' effort, complementarity, alignment of working methods, alignment of interests and objectives, roles, communication

sources of information	Norwegian market	existing or prior business relationships, consultants, Internet search, public calls for offers, enquiries from potential customers, enquiries from other Finnish firms, trade fairs and other events, newspapers, newsletters, other media, personal acquaintances and connections, employees' connections, mergers and acquisitions, one's own enquiries
	Russian market	existing or prior business relationships, consultants, Internet search, enquiries from potential customers, trade fairs and other events, newspapers, newsletters, other media, personal acquaintances and connections, one's own enquiries
	inter-firm collaboration	prior collaboration activities, consultants, personal acquaintances, prior business contacts, association membership

Appendix 5 Example of data analysis logic (for Article 4; individual-level sensemakings at the moment when the inter-firm-level sensemaking turns fragmented in spring/summer 2015)

Firm	Mental images	Illustrative quotations from the interviews	Individual-level sensemaking
JONQUIL	Norwegian market: Fairly positive mental image	<p>Interviewer: <i>'So how do you see the situation in Norway, do you think you could get sales there in the future?'</i></p> <p>Interviewee: <i>'Yes, absolutely. If only we had references from this field of industry.'</i></p> <p>Interviewer: <i>'So it is a different situation in Norway?'</i></p> <p>Interviewee: <i>'Yeah, yes, definitely. You know, they do not want to do anything themselves anymore; they just go to their mountain cottages.'</i></p>	Auspicious sensemaking: Good sales opportunities, but references are needed first.
	Omega collaboration: Neutral mental image	<p>Interviewer: <i>'So how do you feel about it that you have been running this for some two years already but you have not got any sales yourself?'</i></p> <p>Interviewee: <i>'Yeah, I mean, I think this is the last year we are running it, I think.'</i></p> <p>Interviewer: <i>'Ok, so that is your view then.'</i></p> <p>Interviewee: <i>'Yeah, well, it's not free of costs so... One cannot continue endlessly if it's not taking you anywhere. One needs to come up with new tricks.'</i></p> <p>...</p> <p><i>'This is it you know, we were first very excited that let's make a strategy of how we generate growth and get lots of customers, but now others are just waiting, as perhaps someone will call soon.'</i></p>	Ominous sensemaking: In principle collaboration is good, but the others need to be active as well.
LAVATERA	Norwegian market: Fairly positive mental image	<p>Interviewer: <i>'Do you have some activities towards Norway or Russia currently?'</i></p> <p>Interviewee: <i>'Yes, to both. We work with both to get sales there.'</i></p>	Auspicious sensemaking: Entry efforts to Norway with a long-term strategy.
	Omega collaboration: Very positive mental image	<p>Interviewee: <i>'We are pleased to collaborate. We are stronger together than individually.'</i></p> <p>Interviewer: <i>'Well, do you have, how do you personally have time for all this export efforts? You are involved in so many [export collaborations]?'</i></p> <p>Interviewee: <i>'Poorly.'</i></p> <p>Interviewer: <i>'Haha.'</i></p> <p>Interviewee: <i>'Haha.'</i></p> <p>Interviewer: <i>'But still you persistently try in many directions?'</i></p> <p>Interviewee: <i>'Yeah. True, yes.'</i></p> <p>Interviewer: <i>'You seem to find that time worth it and...?'</i></p>	Auspicious sensemaking: Inter-firm collaboration is interesting; the firm is involved in many initiatives.

		Interviewee: <i>'Yeah, it is interesting work, so no problem'.</i>	
TRILLIUM	Norwegian market: Fairly negative mental image	<p>Interviewer: <i>'Have you tried to enter the Norwegian market somehow before the Omega group?'</i></p> <p>Interviewee: <i>'Yes we have, since 2008 we had a two-year push, trying to enter the market. But then the problem was the collapse of the world economy, and even the existing suppliers there got in deep shit; no one had anything in their order books. It did not materialise and now, when there has been a boom, we still haven't got there to implement any projects. And the Finnish firms just do not understand to invest too much, we have too many of these damn engineers leading companies, who then think that it's just about counting offers and technical issues, with what you do business; but it isn't like that. Even though it is also... Most of the sales are based on personal relationships with the buyers and on communicating with them. Of course the technical part plays a significant role, but still, it is the people who do business'.</i></p>	<p>Ominous sensemaking: Norway is challenging to enter, and there is limited sales potential.</p>
	Omega collaboration: Fairly negative mental image	<p>Interviewee: <i>'The firms who are now involved in this [Omega], they have not understood that what the offering operations and winning the customer's trust take from one's own organisation. Some have like imagined that well, now that we have this James [Omega salesman] who travels in Norway and seeks contacts, all we need to do is to stay in Finland and wait, that requests for offers will come and then we offer and do business'.</i></p> <p>...</p> <p><i>'When there are no results, the export ring is quite, quite close to facing its end'.</i></p> <p>Interviewer: <i>'Is the ring going to end in the summer or...?'</i></p> <p>Interviewee: <i>'Well probably, I mean if we cannot get any results, it's not worth wasting money'.</i></p>	<p>Ominous sensemaking: The partners did not meet his expectations; not worth continuing.</p>
URSINIA	Norwegian market: Fairly positive mental image	<p>Interviewee: <i>'But it easily takes a long time to even get in from the company's [i.e. potential customer] gates into the lobby, and even that is nothing'.</i></p> <p>...</p> <p><i>'But now that the oil price is low, they have projects stalled, so now some competition emerges, which means that Finnish firms have currently a brilliant opportunity to enter the market. Now they [potential customers] have time, when I previously said that they did not have time as they had so many projects and pushed forward full steam, so, they did not have time to come audit you. Now they have time'.</i></p> <p>Interviewer: <i>'Ok, I see'.</i></p> <p>Interviewee: <i>'So now it is the best moment to be there'.</i></p>	<p>Auspicious sensemaking: Norway is challenging to enter, but he wants to continue entry.</p>

	<p>Omega collaboration: Fairly positive mental image</p>	<p>Interviewer: <i>'Have you gained sales yet from Omega?'</i> Interviewee: <i>'Yes we have'.</i> Interviewer: <i>'Ok, so it has produced monetary value then'.</i> Interviewee: <i>'Well I don't know about that, if it's value worth the money, but we have got sales'.</i></p> <p>...</p> <p><i>'It [who in the group gets sales] depends a lot from one's own activity, and, we know each other enough in terms of who can do and what, to whom it [the job] is most suitable. So it is so that it goes automatically to the one who is most suitable'.</i></p> <p>...</p> <p><i>'In the old times, the general assumption was that such export rings are not productive. Well, according to my experience, yes, that's the way it is, but then I also have opposite experiences that when it works as it should, it can be very valuable'.</i></p> <p>Interviewer: <i>'So do you think is this a group of which you can get the group value that we talked about in the beginning? Meaning that one needs group power to get into the lobby?'</i></p> <p>Interviewee: <i>'Well, on paper, yes. It can often get you in the lobby. It's been hard work'.</i></p>	<p>Auspicious sensemaking: He sees that Omega works okay and produces some sales; he wants to see where it can lead.</p>
--	--	---	--



**UNIVERSITY
OF TURKU**

ISBN 978-951-29-8005-5 (PRINT)
ISBN 978-951-29-8006-2 (PDF)
ISSN 2343-3159 (Painettu/Print)
ISSN 2343-3167 (Verkojulkaisu/Online)