

*Lauri Haapanen*

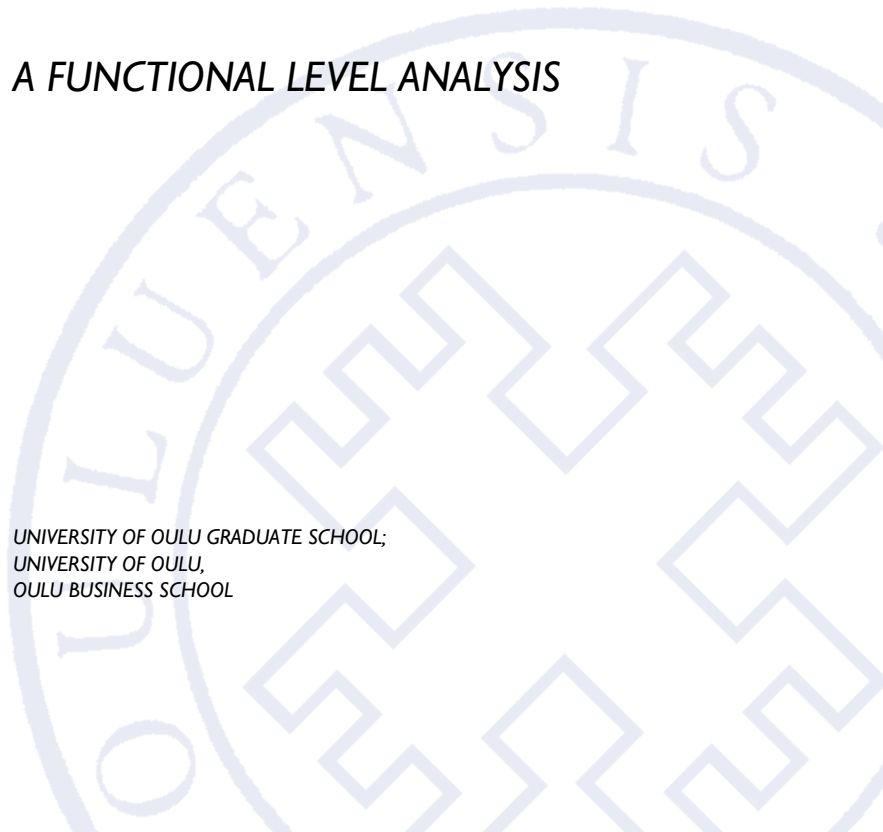
FIRMS' RESOURCE  
ALLOCATION BETWEEN  
R&D AND MARKETING  
IN THEIR INTERNATIONAL  
EXPANSION

*A FUNCTIONAL LEVEL ANALYSIS*

UNIVERSITY OF OULU GRADUATE SCHOOL;  
UNIVERSITY OF OULU,  
OULU BUSINESS SCHOOL

G

OECONOMICA





ACTA UNIVERSITATIS OULUENSIS  
G Oeconomica 95

*LAURI HAAPANEN*

**FIRMS' RESOURCE ALLOCATION  
BETWEEN R&D AND MARKETING  
IN THEIR INTERNATIONAL  
EXPANSION**

A functional level analysis

Academic dissertation to be presented with the assent of  
The Doctoral Training Committee of Human Sciences,  
University of Oulu for public defence in the Arina  
auditorium (TA105), Linnanmaa, on 1 December 2017, at  
12 noon

UNIVERSITY OF OULU, OULU 2017

Copyright © 2017  
Acta Univ. Oul. G 95, 2017

Supervised by  
Professor Pia Hurmelinna-Laukkanen

Reviewed by  
Professor Håkan Boter  
Professor Sami Saarenketo

Opponent  
Professor Per Servais

ISBN 978-952-62-1698-0 (Paperback)  
ISBN 978-952-62-1699-7 (PDF)

ISSN 1455-2647 (Printed)  
ISSN 1796-2269 (Online)

Cover Design  
Raimo Ahonen

JUVENES PRINT  
TAMPERE 2017

## **Haapanen, Lauri, Firms' resource allocation between R&D and marketing in their international expansion. A functional level analysis**

University of Oulu Graduate School; University of Oulu, Oulu Business School

*Acta Univ. Oul. G 95, 2017*

University of Oulu, P.O. Box 8000, FI-90014 University of Oulu, Finland

### ***Abstract***

For a small and medium size firm (SME), expansion into new foreign markets is a remarkable milestone, requiring specific resources and capabilities. The purpose of this study is to explore how management in internationalizing small and medium-size firms allocate their limited resources between key functions, in particular, between marketing and R&D. This thesis builds on a resource-based view of the firm, a dynamic capabilities perspective, and the SME internationalization literature, and therefore assumes that a firm's success in foreign markets is closely related to its internal resource and capability configurations.

The findings of this study suggest that SMEs need a capability portfolio in which the relative importance of key capabilities varies as international expansion proceeds. It appears that throughout the international expansion process, investments in developing R&D capabilities do not notably decrease, not even at the time when SMEs need to begin to develop other activities, such as marketing. Closer examination reveals that investments in the capabilities' underlying microfoundations, rather than the resource allocation between the key functions per se, determine the nature of the resulting competitive advantage.

Cross-border mergers are specific situations that reveal the strong influence of function-specific microfoundations on functional capabilities and thus, on an SME's dynamic capabilities. The results of this study show that in merger deals, each firm comes with distinctive cross-functional structures, processes, routines, and skills. Synergies might not be capitalized if management is not able to effectively align merging firms' underlying microfoundations.

The results in this thesis underline the invaluable role of SMEs' management. The findings show that even if the different phases of international expansion require diverse managerial capabilities, unanimity among the top management team executives is needed (surprisingly) only when these SMEs are making substantial resource commitments. Such adoption to changing conditions is an illustration of dynamic managerial capabilities that partly determines success in international markets.

**Keywords:** dynamic capabilities, dynamic capabilities' microfoundations, marketing function, R&D function, resource allocation



## **Haapanen, Lauri, Kansainvälistyvien yritysten rajallisten resurssien allokaatio tuotekehityksen ja markkinoinnin välillä. Funktiotasoon keskittyvä analyysi**

Oulun yliopiston tutkijakoulu; Oulun yliopisto, Oulun yliopiston kauppakorkeakoulu

*Acta Univ. Oul. G 95, 2017*

Oulun yliopisto, PL 8000, 90014 Oulun yliopisto

### ***Tiivistelmä***

Pienelle yritykselle kansainvälistyminen on merkittävä virstanpylväs, joka edellyttää erityisiä resursseja ja kyvykkyyskäytäntöjä. Tässä työssä on tarkoituksena tutkia, kuinka pienen kansainvälistyvän yrityksen johto kohdentaa yrityksen rajallisia resursseja tuotekehitys- ja markkinointifunktioihin. Väitöskirjassa oletetaan, että pienten ja keskisuurten yritysten menestyminen kansainvälisillä markkinoilla liittyy olennaisesti yritysten käytössä oleviin resursseihin ja kyvykkyysiin, ja tästä johtuen väitöskirjan teoreettinen osa rakennetaan resurssiteorian, dynaamisten kyvykkyyskäytäntöjen teorian sekä pienten yritysten kansainvälistymistä koskevien tutkimuksien yhdistelmänä.

Työn tulokset osoittavat, että pienet yritykset tarvitsevat erityisen kyvykkyysportfolion, jossa eri kyvykkyyskäytäntöjen suhteellinen osuus muuttuu yrityksen kansainvälistymisen edetessä. Näyttäisi siltä, että yritysten investoinnit tuotekehitykseen eivät juuri pienene silloinkaan, kun yritykset aloittavat markkinointiin panostamisen. Lähempi tarkastelu kuitenkin osoittaa, että investoinnit eri funktioihin eivät sinänsä määrää syntyvää kilpailuetua, vaan edun luonne määräytyy sen mukaan, kuinka resurssit kohdennetaan taustalla oleviin kyvykkyyskäytäntöjen (mikro)rakenteisiin.

Kansainväliset yrityskaupat ovat erityisiä tapahtumia jotka paljastavat funktiokohtaisten mikrorakenteiden merkittävän vaikutuksen. Työn tulokset osoittavat, että kussakin yksittäisessä fuusioituvassa yrityksessä on omanlaisensa, ajan myötä funktioiden välille muotoutuneet rakenteet, prosessit ja käytänteet. Yrityskauppojen hyödyt voivat jäädä saavuttamatta ellei näitä fuusioituvien yritysten funktioiden välisiä mikrorakenteita saada sujuvasti sulautettua yhteen.

Tutkimustulokset korostavat pienen yrityksen johdon merkitystä. Kasvu kansainvälisillä markkinoilla vaatii johdolta erityistä kyvykkyyskäytäntöä, mutta hieman yllättäen tulokset osoittavat, että johtoryhmän jäsenten yksimielisyys on tärkeää vain niissä kasvun vaiheissa, jotka edellyttävät erityisen merkittäviä sitoumuksia. Tällainen muuttuviin olosuhteisiin sopeutuminen on hyvä osoitus johdon dynaamisista kyvykkyyskäytäntöistä, jotka osaltaan määräävät yrityksen menestymisen kansainvälisillä markkinoilla.

*Asiasanat:* dynaamiset kyvykkyyskäytänteet, markkinointifunktio, resurssien kohdentaminen, tuotekehitysfunktio





## Acknowledgements

I have always had the privilege of working with open-minded and visionary people with whom I have built my career, and at the same time, experienced breathtaking international adventures. During my years in rapidly growing firms, I was mostly heading these firms' research and development activities, but along with their expansions into foreign markets, on many occasions I also became responsible for these firms' international sales and marketing. In academia, too, I have had the luxury of being continuously and closely involved with firms that are expanding into international markets. Against this background, it is not surprising that this work focuses on internationalizing small and medium-size firms, and particularly these firms' management, research & development, and sales & marketing functions. Now I would like to express my deepest gratitude to all those people who have provided me with these opportunities and made writing of this thesis possible.

Foremost, I would like to thank my supervisor, Professor Pia Hurmelinna-Laukkanen. Your exceptional support, guidance, and feedback have had an invaluable impact on my thesis. I am most glad that you co-authored the three articles in this thesis. You have a gift for writing. Your skills to squeeze text into abstracts, and your abilities to make text alive and flow are amazing. You have been a great mentor. It has been inspiring to work with you.

I am very grateful to Professor Petri Ahokangas, who offered me an opportunity to join the ramping up of a new major, International Business in the Oulu Business School. Also, you pushed me to start my thesis. To get external funding for the new major, you made us, Sauli Pajari, Marjut Uusitalo, Pertti Paakkolanvaara, and me participate in several projects in Kuopio and Iisalmi to assist local SMEs to expand their businesses into foreign markets. These projects, particularly the endless road trips, resulted in an international business assessment model, and consequently, our university spin-off firm. The results of the three articles in this dissertation are based on the data from the model.

I would like to use this opportunity to express my gratitude to Professor Tuija Mainela, the Head of Department of Management and International Business. I highly respect the way you lead your people. Your determined grasp has made me do my best to finish my dissertation. I am also very grateful for the smooth and straightforward cooperation with Professor Vesa Puhakka and Associate Professor Sakari Sipola, who were assigned as my follow-up group by the University of Oulu Graduate School, UniOGS.

I would also like to show my gratitude to my pre-examiners, Professor Håkan Boter and Professor Sami Saarenketo, for investing your valuable time to evaluate my work. Your insightful comments have provided my thesis with significant improvements.

This thesis consists of an introduction and four research papers. During the research and publication processes, I have had the great pleasure to work and write with highly talented researchers. I would like to thank Dr. Mari Juntunen and Dr. Jouni Juntunen for the prosperous cooperation in getting the first paper published. We did succeed, after all, to follow the editors' persistent demands to get rid of all past tenses in our paper. I would also like to express my deepest gratitude to Professor Kaisu Puumalainen, Dr. Jan Hermes, Sakari Nikkilä, and Pertti Paakkolanvaara. Your contributions to the papers have been invaluable, and I have had a great time while working with you.

This research would not have been possible without the rich data from numerous case firms. I am very thankful to all those firms that have been involved in the data gathering process. In particular, I would like to thank all the people who I have interviewed for my thesis.

I would also like to thank all my colleagues in the Oulu Business School, in particular Professor Veikko Seppänen, Dr. Elina Pernu, Dr. Irene Lehto, Dr. Marko Juntunen, and Dr. Xiaotian Zhang, with whom I have had the great pleasure to work with.

For the financial support, I am grateful to the Yrjö Jahnesson Foundation and Martti Ahtisaari Institute of Global Business and Economics at Oulu Business School. I also wish to thank KAVA (the Finnish Doctoral Programme in Economics) and FIGSIB (the Finnish Graduate School of International Business) for providing me with an opportunity to participate in their highly advanced doctoral courses.

For language editing and proof reading, I wish to thank Leigh Ann Lindholm, Mark Phillips and two anonymous revisers at Lingsoft Language Services Oy.

I am most grateful for my family for their support. I would like to express my gratitude to my mother, my late father, and my two aunts. Finally, Monica, I thank you for your patience and love. This dissertation is dedicated to our three amazing children, Micaela, Aleksanteri, and Valtteri. You are my world.

Oulu, October 2017

Lauri Haapanen

## Original publications

This thesis is based on the following publications, which are referred throughout the text by their Roman numerals:

- I Haapanen, L., Juntunen, M., & Juntunen, J. (2016). Firms' capability portfolios throughout international expansion: A latent class approach. *Journal of Business Research*, 69(12), 5578-5586.
- II Haapanen, L., Hurmelinna-Laukkanen, P. & Hermes, J. (2018). Firm functions and the nature of competitive advantage in internationalizing SMEs. *International Journal of Innovation Management*. 22(2). April 2018. DOI: 10.1142/S1363919618500226. In press.
- III Haapanen, L., Hurmelinna-Laukkanen, P. & Puumalainen, K. (2017). Top management team and SME foreign market expansion. Manuscript. Paper was presented at the British Academy of Management Conference, Warwick, UK, in September 2017, and has been submitted to the *Management Decision* and is currently under review.
- IV Haapanen, L., Hurmelinna-Laukkanen, P., Nikkilä, S. & Paakkolanvaara, P. (2017). Microfoundations of Dynamic Capabilities in Cross-border M&As—Alignment within and between Merging Firms. Manuscript. Paper was presented at the 14th Vaasa Conference on International Business, Vaasa, Finland, August 2017, and has been submitted to the *International Business Review* and is currently under review.



# Contents

<b>Abstract</b>	
<b>Tiivistelmä</b>	
<b>Acknowledgements</b>	<b>7</b>
<b>Original publications</b>	<b>9</b>
<b>Contents</b>	<b>11</b>
<b>1 Introduction</b>	<b>13</b>
1.1 Background and justification for the research.....	13
1.2 Purpose of the study and research questions.....	17
1.3 Positioning and contribution of the study .....	20
1.4 Key concepts of the study .....	22
1.5 Structure of the study .....	23
<b>2 Theoretical framework</b>	<b>25</b>
2.1 Resource-based view of the firm.....	25
2.2 Dynamic capabilities perspective.....	27
2.2.1 Dynamic capabilities' microfoundations .....	29
2.2.2 Dynamic managerial capabilities.....	34
2.3 Dynamic capabilities and SME internationalization .....	36
<b>3 Research design</b>	<b>41</b>
3.1 Research process .....	41
3.2 Case selection and data collection.....	44
3.3 Data analysis .....	48
<b>4 Overview of the papers</b>	<b>53</b>
4.1 Firms' capability portfolios throughout international expansion: A latent class approach (Paper I).....	55
4.2 Firm functions and the nature of competitive advantage in internationalizing SMEs (Paper II) .....	57
4.3 Top management team and SME foreign market expansion (Paper III).....	59
4.4 Microfoundations of Dynamic Capabilities in Cross-border M&As – Alignment within and between Merging Firms (Paper IV).....	61
<b>5 Discussion and conclusions</b>	<b>65</b>
5.1 Summary of the results .....	65
5.1.1 Relative importance of key capabilities.....	65
5.1.2 Key capabilities' functional microfoundations .....	66

5.1.3	Managerial capabilities' impact on key capabilities and their microfoundations.....	68
5.1.4	Simultaneous management of functional resources and capabilities.....	70
5.2	Theoretical contribution.....	71
5.3	Managerial implications.....	74
5.4	Evaluation of the study.....	76
5.5	Limitations and suggestions for future research.....	78
	<b>References</b>	<b>81</b>
	<b>Original publications</b>	<b>95</b>

# 1 Introduction

*“In point of fact, firms that are both larger and older in any economy or industry do tend to have many competitive advantages over smaller or newer firms, no matter how able the management of the latter may be.” Edith Penrose (1959, p. 218).*

## 1.1 Background and justification for the research

Small and medium size firms (SMEs) are important for the economy; they generate jobs and income. Moreover, any increase in the SME sector has a positive impact on overall economic growth (Amini 2004). For small open economies like Finland, exports and SMEs' growth in international markets is highly important. However, too few SMEs succeed. To illustrate, in Finland less than 20 firms generate more than 40% of Finland's exports; and for almost 90% of the exporting firms, the value of exports is less than 100,000 euros (Ministry of Employment and the Economy 2014). Although globalization has lowered the thresholds for entering foreign markets, the downside is that increased competitive pressures, prolonged economic crises, and rapidly changing technologies have all made it more complicated for firms to compete in international markets (Zahra & Hayton 2008). As a consequence, the average period for which firms are able to sustain their competitive advantage is continuously decreasing, and thus expansion into new foreign markets involves increasing risks and costs (Barreto 2010). Nevertheless, it is important for both policy makers and firm managers to have a more comprehensive grasp of the means by which an SME can lower the threshold to enter and run operations in foreign markets.

Prior studies show that many firms that aim to expand into foreign markets face severe challenges; and in the worst case, these difficulties may lead to a firm's failure. In fact, the failure rate is high—approximately one-third of internationalizing firms go out of business (Mudambi & Zahra 2007). The failure rate exceeds 40% among young internationalizing firms, as their initially inadequate resources and capabilities allow only a relatively short period for trial and error (Centeno, Hart & Dinnie 2013; Thornhill & Amit 2003). Not surprisingly, scholars and public debate ask for the development of favorable conditions and support systems that would improve the success of existing firms, contribute to new venture creation, and enhance SMEs in their international growth (Boter & Lundström 2005; Paul, Parthasarathy & Gupta 2017). In this regard, Napier,

Johansson, Finnbjörnsson, Solberg and Pedersen (2013) raise a fair question about whether governments, despite numerous actions, are providing enough incentives, or the right ones, to support rapid global growth of firms.

International expansion is a process in which a firm starts new operations in a new country or increases its commitment in existing foreign markets. The core tenet of international business states that firms expanding into foreign countries are worse off than their local competitors, and therefore these entrants face the liability of foreignness (Hymer 1976; Zaheer 1995). Since local firms are better informed about their markets and can make use of their existing business relationships, an entrant needs some sort of competitive advantage to offset this handicap. The resource-based view of the firm (RBV) and the more recent dynamic capabilities perspective suggest that appropriate firm-internal resources and capabilities might provide a firm with such a competitive advantage (Barney 1991; Teece, Pisano & Shuen 1997; Thornhill & Amit 2003; Wernerfelt 1984). However, not all firms are able to sustain their competitive advantage. The management literature acknowledges the existence of two types of firms: those that are able to exploit their firm-specific competitive advantages to create market disruptions, and firms that successfully adapt to such exogenous shocks (Augier & Teece 2009; Eisenhardt & Martin 2000; Sapienza, Autio, George & Zahra 2006; Teece *et al.* 1997; Winter 2003). Hence, in order to help SMEs' international expansion, it is important to understand the underlying factors influencing the different types of the competitive advantage. However, there is a gap in the current literature as it does not explain what firm-internal mechanisms, capabilities or managerial actions distinguish between those two types of firms.

The prior literature suggests that dynamic capabilities and competitive advantage, accordingly, emerge from firm management and key functions, particularly in research and development (R&D) and in marketing (cf. Eisenhardt & Martin 2000 and Teece *et al.* 1997). Capabilities develop within these functions over time, and as a result, they become highly function-specific. Yet, such function-specific capabilities are difficult to transfer between firm functions (Lecerf 2012; Teece 2014; Zahra, Sapienza & Davidsson 2006). With respect to the two key functions, R&D and marketing, the prior literature commonly agrees that investments in R&D have a positive influence on international expansion (Cassiman & Golovko 2010; Filatotchev & Piesse 2009; Zaheer 1995; Hauser, Tellis & Griffin 2006; Kotabe, Srinivasan & Aulakh 2002; Ripollés, Blesa & Monferrer 2012; Ripollés Melia, Blesa Pérez & Roig Dobon 2010; Rodriguez & Rodriguez 2005; Zahra & Hayton 2008), and furthermore, investments in



marketing have a positive influence on international expansion (see the review by Aspelund, Koed Madsen & Moen 2007). In addition, prior studies also show that investments in R&D and marketing often lead to a mutually reinforcing virtuous cycle in which improved marketing capabilities enhance R&D, and vice versa (see the review by Datta, Reed & Jessup 2013). However, as scholars note, the literature would benefit from integrating separate streams of studies and from unbundling the role of key firm functions in international expansion (Cavusgil & Zou 1994; Katsikeas, Leonidou & Morgan 2000; Knight & Kim 2009; Regnér & Zander 2014; Wales, Parida & Patel 2013; Zahra *et al.* 2006).

The management and international business literature generally agree that the existence and wise exploitation of firm-internal resources, capabilities, and dynamic capabilities can explain how firms may achieve and sustain their competitive advantages. More recent studies aim at explaining more explicitly where and how dynamic capabilities emerge. In order to reveal their origins, scholars disaggregate dynamic capabilities into distinctive managerial sensing, seizing, and reconfiguration capabilities and into their microfoundations (Felin, Foss & Ployhart 2015; Foss 2011; Teece 2007). So far, the literature suggests that microfoundations of dynamic capabilities stem from a firm's structures, processes, systems, and decision rules (Helfat & Martin 2014; Teece 2007). Such activities are embedded and shaped in firm functions. However, prior studies do not explicate the role of underlying function-level capabilities, the role of the functional capabilities' microfoundations, or their mutual dynamics, indicating a gap in the literature. Confirming this, Paruchuri and Eisenman (2012), Angwin, Paroutis and Connell (2015), and Nummela and Hassett (2015) are among the few seeking the microfoundations' role, particularly in merger and acquisition (M&A) deals. The results so far imply that studies on dynamic capabilities' microfoundations are in the early stages and especially call for more qualitative research.

Yet, SMEs' expansion into international markets is closely related to R&D and marketing function capabilities. Prior results show that successful international expansion requires solid cross-functional cooperation (Brown & Eisenhardt 1995; Fain & Wagner 2014; Haverila 2013; Hughes, Martin, Morgan & Robson 2010). In other words, marketing and R&D functions are far from independent; and for this reason, they should not be studied in isolation (Tanriverdi & Venkatraman 2005). Large firms have the luxury of investing in needed capabilities. However, for SMEs, international expansion is more complicated when acknowledging the fact that they come with limited resources. Their limited resource endowment, in turn, narrow down their available options (Jane Hewerdine, Rumyantseva & Welch 2014;

Knight & Kim 2009; Teece *et al.* 1997), and as Pisano (2015, p. 32) points out, “Strategic choices, by definition, involve trade-offs.” Despite the fact that the fundamental question is how resources are best allocated (Teece 2014), only a few studies (Chen & Hsu 2010; Filatotchev & Piesse 2009; Hughes *et al.* 2010; Yalcinkaya, Calantone & Griffith 2007) make an attempt to explain how SMEs allocate their limited resources between their marketing and R&D functions.

SMEs that are not experienced in international business and lack adequate financial assets need to compensate for these resource shortages by using their managerial capabilities (Knight & Kim 2009). To succeed in their international endeavors, managers need to make wise resource allocation decisions, since investments in one function often reduce resources from another function or from another activity. Yet resource allocation and resource reconfiguration calls for specific managerial capabilities. The prior literature shows that initiating international activities is an investment-intensive process, and thus managerial incompetence and wrong strategic decisions may even jeopardize a firm’s survival (Nummela, Saarenketo, Jokela & Sloane 2014; Sapienza *et al.* 2006). Scholars note that the routines and actions of the top management offer a rich and important area for research. Some studies even suggest that all dynamic capabilities can be reduced to firm-specific routines (Eisenhardt & Martin 2000; Feldman & Pentland 2003; Zollo & Winter 2002). However, opposite views also exist, and these note that many managerial decisions, like the initiation of international expansion, can hardly be considered as routines (Teece 2012).

The management literature is increasingly interested in the role of management and is therefore shifting focus toward dynamic managerial capabilities (Adner & Helfat 2003; Helfat & Martin 2014). In particular, studies on top management teams (TMT) suggest that heterogeneity between individual executives eventually leads to heterogeneity between firms’ performances (Adner & Helfat 2003; Eisenhardt 2013; Francioni, Musso & Cioppi 2015; Helfat & Martin 2014; Segaro, Larimo & Jones 2014). However, prior studies do not reveal how executives in the top management teams share their understanding and how these individuals interact, and moreover, whether the common understanding or the lack of such understanding has an impact on the success of international expansion. Thus, there is a gap in the prior literature. Yet, how the TMT’s internal dynamics influence an SME’s resource allocation and subsequent international expansion calls for attention.

Not too many dynamic capabilities studies focus on SMEs. Because of this, there is little evidence on how these firms with limited resources develop their

dynamic capabilities (Zahra *et al.* 2006). Moreover, those studies that connect SMEs' dynamic capabilities to their international expansion are even rarer, as pointed out by Markman and Waldron (2014) and Zachary, Gianiodis, Payne and Markman (2015). Yet SMEs' internationalization process provides an interesting context for further research on capabilities, as Sapienza *et al.* (2006) note. Contrary to large, established multinational enterprises (MNEs), SMEs with limited financial resources often internationalize relying on exporting. Further, mergers and acquisitions offer an alternative for SMEs. The fact that only a few studies explicate the role of dynamic capabilities in merger deals (Angwin *et al.* 2015; Nummela & Hassett 2015; Paruchuri & Eisenman 2012) indicates a gap in the prior literature. More research is needed to illustrate how dynamic capabilities' microfoundational aspects influence the outcome of merger deals, particularly in the context of SMEs.

This study aims to address the above-mentioned interlinked gaps in the prior literature. Consequently, this thesis focuses on SMEs' managerial and functional resources, capabilities, and their underlying microfoundations, and in particular, their mutual relationship as these firms expand into international markets.

## **1.2 Purpose of the study and research questions**

Considering the above-mentioned gaps in the prior management and international business literature, the purpose of this study is to explore how management in internationalizing small and medium-size firms allocate their limited resources between key functions, in particular, between marketing and R&D. Expanding a business into new foreign markets is a remarkable milestone for an SME which calls for specific resource and capability configurations (Sapienza *et al.* 2006). Therefore, all efforts to better explain the dynamics between the distinctive resources and capabilities needed in international expansion are valuable for the practitioners, the academics, and the economies. In particular, marketing and R&D are a firm's two key functions that deploy such specific capabilities. Since SMEs have fewer available resources and capabilities than large, established MNEs, the role of managerial capabilities in orchestrating firm functions and activities become crucial. Management in internationalizing SMEs need to allocate scarce resources wisely between R&D, marketing, and internationalization activities; and yet, in each trade-off decision, they have to carefully weigh the related costs against the possible benefits.

The basic assumption is that SMEs' limited resource endowments narrow their investment possibilities, but some specific capabilities may compensate these shortages in resources. Hence, the main research question of this study is:

*How do firms with a limited resource endowment simultaneously manage their functional resources and capabilities when executing an international expansion strategy?*

The main research question implies a dynamic perspective that captures causality and a change over time, a function-specific perspective that targets the focus on a firm's key functions, and a managerial perspective that links these two perspectives. Furthermore, as noted above, the current management literature suggests that a firm's marketing and R&D are the main functions in which the key capabilities emerge. Accordingly, considering those two key functions in particular, the main research question is answered through the following three sub-questions (SQ):

SQ 1: How does the relative importance of key capabilities change as international expansion proceed?

SQ 2: How do key capabilities emerge in a firm's functions?

SQ 3: How managerial capabilities impact on the relative importance of key capabilities and their microfoundations as international expansion proceeds?

To answer the above research questions, this study starts with reviewing the resource-based view, the dynamic capabilities literature, and the SME internationalization literature in order to build a theoretical framework. The aim of this framework is to link functional capabilities into dynamic capabilities' microfoundations. The context of this research is internationalizing SMEs with limited financial resources and finite capability endowments, and the unit of analysis is a firm function, in particular the firm management, marketing, and R&D function. The empirical part of this thesis consists of four individual research papers and applies multiple methods to collect and analyze data. Each research paper provides answers to the sub-questions, illustrated in Table 1. The ABS rating (1-4) in Table 1 refers to the Academic Journal Guide by the Association of Business Schools (Harvey, Kelly, Morris & Rowlinson 2010).

**Table 1. Research papers of the thesis.**

Paper	Contribution of the author	Answers
<p>Paper I: Haapanen, L., Juntunen, M., &amp; Juntunen, J. (2016). Firms' capability portfolios throughout international expansion: A latent class approach. Published in the Journal of Business Research (ABS rating 3).</p>	<p>The author had the primary responsibility for planning the paper. The authors cooperated in writing the paper. The author wrote the majority of the theory part and the conclusions. The author has been involved in designing the framework that was used in the data collection. The author was solely responsible for the data collection. The data analysis section of the paper was written by Juntunen and Juntunen.</p>	<p>SQ 1</p>
<p>Paper II: Haapanen, L., Hurmelinna-Laukkanen, P. &amp; Hermes, J. (2018). Firm functions and the nature of competitive advantage in internationalizing SMEs. International Journal of Innovation Management (ABS rating 2). In press.</p>	<p>The author had the primary responsibility for planning the paper. The authors cooperated in writing the paper. The author has been involved in designing the framework that was used in the data collection. Over a long period, the author has also been collaborating with the firms in the sample. The author was solely responsible for the data collection. The author wrote the majority of the data analysis section.</p>	<p>SQ 1, SQ 2, and SQ 3</p>
<p>Paper III: Haapanen, L., Hurmelinna-Laukkanen, P. &amp; Puumalainen, K. (2017). Top management team and SME foreign market expansion. Submitted to the Management Decision, currently under review (ABS rating 1).</p>	<p>The author had the primary responsibility for planning the paper. The authors cooperated in writing the paper. The author has been involved in designing the framework that was used in the data collection. The author was solely responsible for the data collection. The data analysis section of the paper was written by Puumalainen.</p>	<p>SQ 2 and SQ 3</p>
<p>Paper IV: Haapanen, L., Hurmelinna-Laukkanen, P., Nikkilä, S. &amp; Paakkolanvaara, P. (2017). Microfoundations of Dynamic Capabilities in Cross-border M&amp;As – Alignment within and between Merging Firms. Submitted to the International Business Review, currently under review (ABS rating 3).</p>	<p>The author had the primary responsibility for planning the paper. The authors cooperated in writing the paper. The author wrote the majority of the theory part, the data analysis section, and the conclusions.</p>	<p>SQ 2</p>

The main research question is answered based on the results from the individual research papers.

### 1.3 Positioning and contribution of the study

This study approaches the phenomenon—the allocation of limited resources between a firm’s key functions—mainly by using a prior resource-based view and the dynamic capabilities literature. The resource-based view of the firm provides this thesis with a suitable and solid foundation, as it assumes that a firm’s competitive advantage stems from firm-internal resources and capabilities. Along with the resource-based view, the management literature has moved from industrial organization theory and industry-level analyses (Bain 1959; Porter 1980, 1985; Schmalensee 1985) to firm-level analysis in explaining how firms can achieve and sustain competitive advantages (Amit & Schoemaker 1993; Barney 1991; Penrose 1959). Over the past decade, the dynamic capabilities perspective, building on the resource-based view of the firm, has become one of the most influential theoretical approaches in strategic management. The dynamic capabilities perspective (Eisenhardt & Martin 2000; Teece *et al.* 1997), and the more recent discussions on dynamic capabilities’ microfoundations (Foss 2011; Teece 2007), complement the prior literature and provide a more refined illustration of capabilities’ origins and mutual relationships.

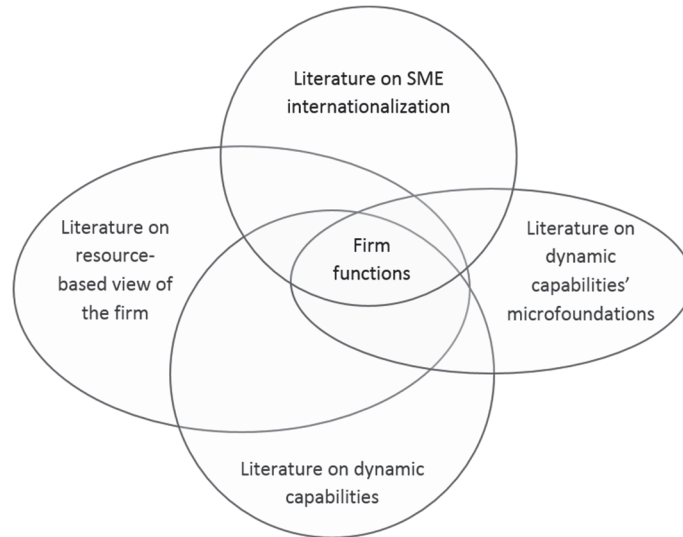
As noted above, research on dynamic capabilities is mainly carried out among large firms instead of SMEs. While this literature acknowledges distinctions between firm functions, scholars typically do not address function-level capabilities or their microfoundations. Furthermore, the discussions on managerial capabilities and their microfoundations are not focusing on management team dynamics, but rather on the individual management team members’ demographic characteristics. Also, while multinational enterprises (MNEs) are examined in the dynamic capabilities literature, the combination of internationalization and capabilities at the function level has not been studied in the SME context.

The main contribution of this study is targeted to the dynamic capabilities literature by explaining how dynamic capabilities that originate from firm functions influence SMEs’ competitive advantage. In particular, this study adds to existing knowledge by studying how different resource allocations between firm functions may result in a different nature of competitive advantage as SMEs internationalize. Marketing, R&D, and firm management are interconnected, but an event such as international expansion requires specific resources and capabilities from each function. For this reason, the interfaces and the joint dynamics of the capabilities under international expansion deserve attention. Yet, function-level studies on

dynamic capabilities, particularly in the internationalizing SME context, add new knowledge to the prior management literature on dynamic capabilities.

This study also contributes to the more recent literature on dynamic capabilities' microfoundations by explaining how SMEs' resource allocation influences the development of the underlying microfoundations, which in turn has an impact on the nature of the competitive advantage. Literature suggests that dynamic capabilities' microfoundations emerge in firm management and in key functions, especially in marketing and R&D (Helfat & Martin 2014). Current research, however, does not explicate the mutual dependencies between these function-specific microfoundations, and moreover does not show how different configurations in such relationships result in the nature of the competitive advantage.

Scholars note that dynamic capabilities are context-specific (Kay 2010). Some activities may illustrate ordinary capabilities for one firm, while the same activities may represent dynamic capabilities for another firm (*ibid.*). The context of this study is internationalizing SMEs. In order to position this research in its context, this study also makes use of the relevant SME exporting and SME internationalization literature. Several SME exporting studies apply the resource-based view as their theoretical framework; and when doing this, they show that internationalizing SMEs need to possess specific capabilities in order to succeed in foreign markets (Bauer & Matzler 2014; Bonaccorsi 1992; Kafouros, Buckley, Sharp & Wang 2008; Kim & Finkelstein 2009; Kumar 2009). However, these discussions are scattered. Different streams of the literature focus on different aspects of SMEs' resources and capabilities.



**Fig. 1. Theoretical positioning of the study.**

Figure 1 shows that this thesis builds on the intersection of the above-mentioned literature. Deviating from the previous literature, this thesis focuses on firm functions. For this purpose, this study combines the most suitable concepts from the underlying theories in order to build a more holistic view on how SMEs' management allocates their limited resources, and eventually how this resource allocation results in those firms' competitive advantage, and therefore, in their international expansion. Hence, a combination of the above literature provides the most suitable theoretical starting point for this study.

#### **1.4 Key concepts of the study**

In this thesis, the following key concepts are used:

*Resources:* Resources are available factors in markets and they consist of tradeable know-how such as patents and licenses, financial and physical assets as facilities and equipment (Amit & Schoemaker 1993), human capital, and organizational capital (Barney 1991). A firm has the control over resources, and strategically valuable resources strengthen the implementation of strategies (Barney 1991). Resources that prevent a firm from implementing valuable strategies, reduce efficiency, or have no impact on a firm's processes are not strategically relevant (ibid.).



*Capabilities:* Capabilities refers to a set of skills, complex routines, or best practices that deploy and exploit a firm's resources to produce desirable outcomes, simply allowing products and services to be made, sold, and serviced (Teece 2014) in a reliable and at least minimally satisfactory manner (Helfat & Winter 2011). This study uses the terms capability (Eisenhardt & Martin 2000; Teece *et al.* 1997), capacity (Teece 2007), ordinary capability (Winter 2003), operational capability (Helfat, Finkelstein, Mitchell, Peteraf, Singh, Teece & Winter 2009), and zero-order or lower-level capability (Felin, Foss, Heimeriks & Madsen 2012), first-order capability (Danneels 2002), and substantive capability (Zahra *et al.* 2006) interchangeably.

*Dynamic capabilities:* Dynamic capabilities means the managerial ability to integrate, build, and reconfigure a firm's existing competences to preserve a sustainable competitive advantage (Teece *et al.* 1997); and more precisely, dynamic capabilities is a firm's capacity to purposefully create, extend, or modify its resource base (Helfat *et al.* 2009). Hence, dynamic capabilities refers to the management's ability to combine ordinary capabilities into higher-level capabilities (Eriksson, Nummela and Saarenketo 2014). Such higher-order capabilities typically enable firms to anticipate, shape, and adapt to shifting competitive landscapes (Felin & Powell 2016).

*Firm function:* Firm function covers activities undertaken in order to achieve a certain goal. In particular, this study focuses on two key firm functions—marketing and R&D. Firms may not have formal, separate organizational entities, but they still carry out such function-specific activities (Biemans, Brencic & Malshe 2012). Thus, a firm function does not necessarily follow any departmental borders.

*International expansion:* In this study, international expansion refers to a process during which a firm initiates new operations in a new country or increases its commitment in existing foreign markets. The terms international expansion and internationalization refer to similar phenomena and are used in this thesis interchangeably, despite the term internationalization being strongly associated with stage (e.g. Bilkey & Tesar 1977) and behavioral process models (e.g. Johanson & Vahlne 1977), which is not the main issue here.

## **1.5 Structure of the study**

This research is structured as follows. Chapter 1 is an introduction and it begins with justifying the importance of the topic and shows the research gaps in the prior literature. Building on the identified gaps, this chapter presents the research

questions and explains how this study aims to answer these questions. The end of the chapter indicates this study's contribution to existing knowledge.

Chapter 2 reviews the relevant resource-based view, dynamic capability, and the SME exporting literature. The literature review focuses on identifying such key studies that help explain the resource allocation between firm functions and how different emphases in allocations result in SMEs' international expansion.

Chapter 3 presents the research design of this thesis. The chapter explains how the results of this study are derived from empirical data. In respect to data gathering, the chapter illustrates the mutual relationship between the four individual research papers. The case selection and data collection explicates the justification for the empirical setting, and lastly, data analysis explains the methods that are used when analyzing the resulting data from the surveys and multiple-case studies.

Chapter 4 provides an overview of the four research papers. The chapter shortly reviews each paper, summarizing the aim, identified gaps in the prior literature, methods, data collection, and results.

Chapter 5 collects and combines the results from the individual research papers. The chapter begins by answering each sub-question and, on the basis of these findings, provides an answer to the main research question. Next, the theoretical contribution of this thesis and consequential managerial implications are discussed. This chapter ends with an evaluation of the study, a discussion of limitations, and further research possibilities that arise from the findings.

Finally, four individual, original research papers are presented.

## **2 Theoretical framework**

This thesis builds its theoretical framework on the resource-based view of the firm (RBV) and the dynamic capabilities perspective, and therefore assumes that a firm's competitive advantage stems from firm-internal resources and capabilities. By making this fundamental assumption, the theoretical framework in this study focuses on endogenous, firm-specific factors and on the relationships between these factors. The RBV and dynamic capabilities literature provides a solid and sufficient theoretical basis for explaining the phenomenon of how the allocation of functional capabilities influences SMEs' competitive advantage and subsequent international expansion. Yet, the specific interest of this study is in firm management and in key functions, in particular in marketing and R&D. The context of this thesis is internationalizing SMEs with limited resource endowments. Hence, this study also reviews and deploys such literature on SME internationalization and SME exporting that helps in answering the research questions.

### **2.1 Resource-based view of the firm**

The resource-based view of the firm states that firms' performances differ since firms have different resources. The origins of the RBV stem from Penrose (1959), who noted in her early work that for any given scale of operations, a firm needs resources, and as these resources are unique, they render heterogeneous services that are not repeatable. She also pointed out that resources come in discrete amounts, and a purchase of a resource may lead to a situation in which all resources (managerial resources, for example) are not fully used. Hence, if a firm is able to employ these 'free' resources, the resulting services can yield a competitive advantage (Penrose 1959). This notion of possible slack resources also implies that acquiring of new resources is relatively more risky and costly for a small firm than for a large firm. Regarding this, Kyläheiko, Jantunen, Puumalainen, Saarenketo and Tuppurä (2011) show that international expansion may benefit from such unused managerial capabilities even more than a firm's other innovation activities.

Following Penrose (1959), Wernerfelt (1984), in a similar vein, defines resources as tangible and intangible assets that are tied semi-permanently to a firm and at the same time carry a potential for high returns. Thus, firms aim at building resource endowments that give rise to such competitive advantages and subsequent value-creating strategies that competitors cannot imitate (Wernerfelt 1984). The RBV suggests that in such situations—in which competitors cannot replicate the

benefits of the firm's value-creating strategy—the underlying competitive advantage is sustainable (Barney 1991). To hold a potential for a sustainable competitive advantage, a firm's resources need to be valuable, rare, imperfectly imitable, and be such that their potential can be exploited in organizational processes (Barney 1991; Barney 1997; Barney & Hesterly 2012). Yet, the nature of a firm's competitive advantage depends in a critical way on the firm-specific resource endowment (Barney 1991).

Some assets are freely available on markets while some are not. Obviously, a sustainable competitive advantage cannot originate from commonly available resources but comes from a firm's ability to capitalize on them (Amit & Schoemaker 1993; Penrose 1959). So, it is not the accumulated stock of resources per se but accumulated stock of capabilities to exploit these resources that determine firms' competitive positions (Dierickx & Cool 1989). Such capabilities that improve the productivity of the underlying resources often develop in firm functions, in particular, in top management, marketing, and R&D (Amit & Schoemaker 1993; Barney & Hesterly 2012; Castanias & Helfat 1991; Grant 1991; Morgan, Kaleka & Katsikeas 2004). The very fact that these capabilities evolve in firms' functional processes and routines makes capabilities highly firm- and function-specific.

Capabilities that develop in firm functions over time are sticky, that is, they are very difficult to transfer from one firm function to another (Fain & Wagner 2014; Lecerf 2012), or even from domestic to foreign operations (Amit & Schoemaker 1993; Kumar 2009; Lu & Beamish 2001; Roper & Love 2002). Thus, such high quality function-specific resources and capabilities are invaluable. Since they are difficult to transfer between functions or from one activity to another, they are also less easy to imitate, and therefore might provide a firm with a remarkable competitive edge (Kogut & Zander 1993; Zander & Kogut 1995). Yet some resources are fungible, that is, they can be shifted to some alternative use and thus, such resources may replace to some extent the quantity of available resources. Generic fungible resources such as time and money can be allocated and transformed into specific resources such as sales and distribution (Danneels 2007). Such fungible resources provides a firm with flexibility in developing new routines and capabilities (Sapienza *et al.* 2006).

The downside is that development of invaluable capabilities takes time and involves investments. SMEs with fewer financial resources have only limited possibilities to acquire resources or develop needed capabilities (Baker & Nelson 2005; Cavusgil 1984; Freeman, Edwards & Schroeder 2006; Jane Hewerdine *et al.*

2014; Katsikeas *et al.* 2000; Knight & Kim 2009; Welch & Luostarinen 1988). And building a range of specific capabilities that an SME needs (especially in international expansion) is costly. Limited transferability of capabilities between firm functions pushes an internationalizing SME to make, at least to some extent, irreversible investments in such resources and capabilities that enable the firm's international expansion (Chen & Hsu 2010; Day 2014; Eriksson 2014; Johanson & Mattsson 1988). Yet such firms need to follow narrower paths and rely more on path-dependent routines (Saarenketo, Puumalainen, Kuivalainen & Kyläheiko 2004; Teece *et al.* 1997). Hence, in most cases SMEs need to optimize and make the most of the resources and capabilities at hand (Baker & Nelson 2005).

## **2.2 Dynamic capabilities perspective**

The dynamic capabilities perspective “...starts where the RBV has left off” (Cavusgil, Seggie & Talay 2007, p. 163). The distinction between resources and capabilities already made in the RBV enables scholars with more refined explanations of the origins of (sustainable) competitive advantage. Whereas capabilities can be described as doing things right, dynamic capabilities are an illustration of doing right things, changing a way to solve problems (Teece 2014; Zahra *et al.* 2006). In its original context, dynamic capabilities refers to sources of competitive advantages of those firms that are continuously successful in creating changes and responding to exogenous shifts in their business environments (Teece & Pisano 1994). According to the original definition (Teece *et al.* 1997, p. 516), dynamic capabilities is “the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments,” and they enable a firm to modify and reconfigure its routines, process, organizational skills, functional competences, resources, and capabilities to respond to changes in a turbulent market environment (Sapienza *et al.* 2006; Teece *et al.* 1997; Teece 2007; Winter 2003). The above definition implies that control over scarce resources is the source of economic profits; and for this reason, skill acquisition, knowledge management, know-how, and learning become highly important and fundamental strategic issues (Teece *et al.* 1997).

Teece *et al.* (1997) suggest that dynamic capabilities are a source of competitive advantage per se; and if they cannot be imitated, they may be a source of sustainable competitive advantage. It must be noted here that a stream of the dynamic capabilities literature strongly disagrees with Teece *et al.* (1997), by claiming that in a turbulent market environment, dynamic capabilities yield a

sustainable competitive advantage. Eisenhardt and Martin (2000) argue that under such high-velocity markets, dynamic capabilities become simple, experiential, and iterative processes, and therefore firms need to make decisions by relying on rules and routines. Since such routines are like best practices, they are commonly available. And since best practices are commonly available, any competitive advantage based on such practices is likely to be rather small or insignificant, and therefore dynamic capabilities cannot be sources *per se* of sustainable competitive advantage (ibid.). In high-velocity markets, firms aim at building a series of fresh temporary competitive advantages (ibid.). To bridge this gap, Helfat *et al.* (2009, p. 4) suggest that dynamic capabilities are “the capacity of an organization to purposefully create, extend, or modify its resource base.” Yet scholars to a large extent agree that dynamic capabilities emerge regardless of whether or the market environment is turbulent; however, the nature of resulting advantage might be different (Eisenhardt & Martin 2000; Helfat & Peteraf 2003; McGrath 2013; Schilke 2014; Winter 2003).

Changes and modifications of firm routines and processes result in capabilities that have the potential to improve firm performance at a time when change is needed (Zahra *et al.* 2006). Hence, by definition, dynamic capabilities are higher-order capabilities that influence the development of lower-level operational capabilities; and if these dynamic capabilities cannot be imitated, they may provide a firm with sustainable competitive advantage (Eriksson 2014; Teece *et al.* 1997). The prior literature on dynamic capabilities acknowledge the existence of two types of firms with different natures of competitive advantage. Teece (2007) notes that that dynamic capabilities are about building competitive advantages and shaping competition. Hence, dynamic capabilities allow some firms to execute their own strategies when modifying routines and exploiting operational capabilities (Sapienza *et al.* 2006; Teece *et al.* 1997; Winter 2003). In contrast to these firms, some other firms are compelled to respond to competitive changes in a patterned way and preferably not with an ad-hoc problem-solving way (Augier & Teece 2009; Easterby-Smith *et al.* 2009; Ritala, Heiman & Hurmelinna-Laukkanen 2016; Winter 2003).

Similarly as with capabilities, dynamic capabilities also develop over time and become highly firm-specific (Amit & Schoemaker 1993; Autio, George & Alexy 2011; Helfat & Peteraf 2003; Katkalo, Pitelis & Teece 2010). Prior studies show that available resource endowment, especially the level of financial assets, is an internal antecedent of developing dynamic capabilities (Eriksson 2014; Teece *et al.* 1997). Hence, for SMEs, building and developing dynamic capabilities is relatively

more costly compared to their larger counterparts. Identification of opportunities and subsequent purposeful creation, extension, or modification of a firm's resource base call for resources and capabilities (Barney, Ketchen Jr. & Wright 2011; Day 1994; Teece 2014; Teece & Pisano 1994). Yet, in SMEs with less resources, dynamic capabilities arise more often from trial and error and improvisation, whereas large firms often have the luxury of relying on their experience (Jane Hewerdine *et al.* 2014; Zahra *et al.* 2006).

Not only might changing the firm's routines and processes lead to quasi-irreversible commitments—new boundaries for future strategies—but this might also lead to misjudgments (Teece *et al.* 1997; Zahra *et al.* 2006). This being said, SMEs are willing to invest in building dynamic capabilities only if the expected outcomes exceed the anticipated costs, whereas MNEs have better possibilities to protect against mismanagement and are more able to take larger risks (Markman & Waldron 2013; Schilke 2014; Teece 2007). For this reason, dynamic capabilities in SMEs are typically simpler and might emerge, for example, from changes in functional processes to improve specifications (Zahra *et al.* 2006). An SME's entry into a foreign market, in particular, calls for remarkable resource and capability reconfigurations (Bauer & Matzler 2014; Kafouros *et al.* 2008), and thus is a manifestation of dynamic capabilities as such.

In sum, the dynamic capabilities perspective underlines the management's role (Teece & Pisano 1994; Zott 2003) and refers it as a managerial ability (Eisenhardt & Martin 2000; Helfat *et al.* 2009; Sapienza *et al.* 2006; Teece & Pisano 1994; Teece *et al.* 1997). Yet, literature commonly agrees that firm resources and capabilities do not yield a sustainable competitive advantage, sustainability stems from how firm resources are configured by management (Cavusgil *et al.* 2007). Firm management skills and abilities are indispensable to deploy and leverage dynamic capabilities into resource configurations; otherwise they do not capitalize (Cavusgil *et al.* 2007; Harrell, O'Reilly & Tushman 2007). Hence, scholars are suggesting that dynamic capabilities studies should be targeted more to firm management and focused on the impact of managers, that is, on dynamic managerial capabilities (Adner & Helfat 2003).

### **2.2.1 Dynamic capabilities' microfoundations**

Definitions of dynamic capabilities do not imply what constitutes a firm's ability to wisely and purposefully reconfigure asset bases or where these capabilities originate from (Easterby-Smith *et al.* 2009). Separate prior studies imply what

comprises dynamic capabilities. For example, Eisenhardt and Martin (2000) suggest that cross-functional R&D teams, new product development routines, or quality control routines illustrate elements behind a firm's dynamic capabilities. Many studies use R&D, in particular (Danneels 2007; Eisenhardt & Martin 2000; Schilke 2014; Teece & Pisano 1994) and outcomes of R&D, that is, new product development (Fainshmidt, Pezeshkan, Lance Frazier, Nair & Markowski 2016) as manifestations of the existence of dynamic capabilities.

Felin and Foss (2009) note that the management literature has moved to higher-order constructs, that is, dynamic capabilities, without first explaining what the underlying constructs are (as routines, for example). In order to reveal how functional dynamic capabilities emerge from underlying constructs, the contemporary management literature is shifting the focus to dynamic capabilities' microfoundations (Felin, Foss & Ployhart 2015; Felin & Powell 2016; Foss 2011; Teece 2007). Felin and Foss (2009) make an attempt to illustrate how routines aggregate and emerge from microfoundations and suggest that the external environment is the source of routines, and their derivations such as capabilities, as individuals within an organization make choices on how to deal with emerging change. In general, microfoundations are about decomposing aggregate phenomena to more refined components (Felin, Foss & Ployhart 2015; Foss 2011).

The contemporary management literature suggests that microfoundations emerge in lower, micro-level phenomena as individuals, processes, structures, and in their interaction (Felin *et al.* 2012). To illustrate the origins of the dynamic capabilities' microfoundations, Teece (2007), for analytical purposes, disaggregates dynamic capabilities into managerial capacities of sensing and shaping opportunities and threats, seizing opportunities, and consequent asset reconfiguring. These elements—sensing, shaping, and reconfiguring—undergird the sustainability of a firm-level competitive advantage over time (Katkalo *et al.* 2010; Teece 2007).

According to Teece (2007), the sensing of opportunities is, on the one hand, about understanding customers' expressed and latent needs, and on the other hand, about screening and identifying future technological possibilities. Hence, market sensing takes place with individuals at the market interface (Felin & Powell 2016), that is, in the firm's marketing function. The R&D function has the main responsibility for sensing and shaping technological opportunities. Hence, the sensing and shaping of opportunities require simultaneous complementary capabilities (Teece 1998). The international business and management literature, particularly international entrepreneurship, uses the concept of opportunity in



various ways (see the extensive review in Mainela, Puhakka & Servais 2014) and it often comes with components of luck, alertness, and flexibility, as Denrell, Fang and Winter (2003) point out.

The marketing function embodies a variety of resources, such as brands and customer relationships that are intangible in their nature and are therefore difficult for competitors to imitate (Menguc & Barker 2005; Ramaswami, Srivastava & Bhargava 2009). Moreover, marketing resources are often complementary in their nature, that is, the presence of one resource strengthens the presence of another. For internationalizing SMEs, marketing capabilities offer a tool to interact with customers and in general with the external business environment (Knight, Koed Madsen & Servais 2004).

The marketing function's close proximity to markets allows for the sensing of market opportunities and threats. The function's skills of sensing, scanning, and filtering market opportunities manifest dynamic capabilities that are embedded in the marketing function, and hence enhance competitive advantage (Kozlenkova, Samaha & Palmatier 2014; Teece 2007). The abilities to identify target market segments, changing customer needs, and customer innovations illustrate microfoundations that emerge from the marketing function's processes and structures (Teece 2007).

The marketing literature makes a distinction between the marketing function's ability to sense changes and the function's skill in creating buyer-supplier relationships to provide a firm with sales revenues (Day 1994). These scholars also suggest that since market sensing and customer-linking employ two distinct sets of capabilities, these activities should also be separated into two distinct functions (see Day 1994; Ramaswami, *et al.* 2009). Moreover, the relative importance of the two capabilities depends on the product and market context. A standardized product with market pull obviously requires more capabilities related to satisfying customers, whereas in the opposite situation in which a firm is introducing new technologies and thus creating the market, the firm also needs strong market sensing capabilities (Ruokonen, Nummela, Puumalainen & Saarenketo 2008). Prior studies on SMEs suggest that in small firms, sales and marketing are rarely separated and thus, they are rather difficult to distinguish (Lehto 2015; Pitkänen, Parvinen & Töytäri 2014). This study discusses sales and marketing separately on occasions in which such a distinction is relevant in explaining the phenomenon.

The microfoundations of sensing and shaping are closely related to suitable firm processes of garnering new technical information, tapping developments in exogenous science, monitoring customer needs and competitor activity, and

shaping new products and process opportunities (Teece 2007). Furthermore, the microfoundations of sensing and shaping also include to a large degree an individual's capabilities to interpret, accumulate, and filter available information in order to create opinions on the likely evolution of technologies, customer needs, and marketplace responses (Teece 2007).

Seizing opportunities, according to Teece (2007), is about transforming realized opportunities into commercial products, processes and, services (Teece 2007). The microfoundations of seizing involve the design and performance specification of products; the capabilities to design, adjust, hone, and replace business models; and, if needed, managerial capabilities to adjust the firm's boundaries (Teece 2007). Moreover, seizing requires such a firm-internal environment in which the firm management involves individuals in decision-making where they feel free to offer their honest opinions (Teece 2007). Foss and Lindenberg (2013) point out that by paying attention to government structures, the firm's management may create and maintain a high level of joint production motivation among the organization, and thus, value creation.

A key element in seizing is the transfer of filtered market information to R&D. The R&D function has a mandate to be alert to new technological possibilities and, moreover, to execute innovation and product strategies to convert recognized opportunities into commercially successful products (Baregheh, Rowley & Sambrook 2009; Ernst, Hoyer & Rübсаamen 2010; Garcia & Calantone 2002; Harmancioglu, Droge & Calantone 2009; Hauser *et al.* 2006; Song & Parry 1997).

The downside is that R&D is technology-intensive and often comes with risks. Not all products are likely to yield commercial success (Chen & Lin 2011; Kafouros *et al.* 2008). Moreover, if product-based advantages are more temporary in nature, firms need to come up with new updates more frequently, which in turn requires even more R&D resources and capabilities (Dutta, Narasimhan & Rajiv 1999). Especially in SMEs, limited financial resources restrict investments in developing capabilities, and accordingly, narrow down commercialization possibilities (Cavusgil 1984; Jane Hewerdine *et al.* 2014; Katsikeas *et al.* 2000; Lecerf 2012; Welch & Luostarinen 1988; Wolff & Pett 2006). Hence, SMEs are more path-dependent, and they invest in incremental rather than radical innovations (Teece 2007; Wolff & Pett 2006). For these firms, asset reconfiguration is costly, and emerging opportunities lie close to their existing businesses (Knight & Kim 2009; Teece *et al.* 1997).

In almost all cases, the discovery of an opportunity and the transfer of this opportunity to new products, processes, and services require investments in both

development and commercialization activity (Teece 2007). Commercialization can only be successful if services and products from R&D function to meet customers' needs. Yet, the seizing of an opportunity demands close cross-functional cooperation between marketing and R&D (Cooper & Kleinschmidt 1995; Garcia & Calantone 2002). This implies that R&D cannot be done in isolation. Invaluable market and competitor information need to be incorporated in those R&D processes in which firms design their product strategies and make operative product development decisions (Baregheh *et al.* 2009; Barrales-Molina, Martínez-López & Gázquez-Abad 2014; Garcia & Calantone 2002; Griffin & Hauser 1996; Harmancioglu *et al.* 2009; Teece 2007). Prior studies show that the more intertwined the R&D and marketing functions are, the more difficult it is for competitors to imitate the origins of the competitive advantage (Barney 1991; Chen 2007; Cooper & Kleinschmidt 1995; Ernst *et al.* 2010; Garcia & Calantone 2002; Griffin & Hauser 1996; Menguc & Auh 2006; Olson, Walker, Ruekert & Bonner 2001; Song & Parry 1997). Furthermore, these two functions' complementary capabilities and mutually supportive differences may also create additional synergies (Bauer & Matzler 2014; Kim & Finkelstein 2009; Tanriverdi & Venkatraman 2005).

The last component, asset reconfiguring, is about changing routines, asset orchestration, and corporate renewal by minimizing internal conflicts and by maximizing complementarities and productive exchange inside the firm (Teece 2007). Microfoundations of asset reconfiguration include governance, decentralization in decision-making, efficient communication, and utilization of cospecialized assets (Teece 2007). Asset reconfiguration underlines the managerial capabilities of continuously aligning strategies and structures that enable the sensing, shaping, and seizing of market opportunities (Felin & Powell 2016). The capitalizing of opportunities might call for relatively large investments in developing functional capabilities, and therefore presumes managerial orchestration skills (Teece 2007; Teece 2014). Thus, as Augier and Teece (2009) note, in order to transform and reconfigure, the firm management must act entrepreneurially, think strategically, and execute flawlessly.

In SMEs with limited resources, asset reconfiguration to preserve or achieve new forms of competitive advantage very likely means asset reallocation from one function to another, or from one activity to another, for example from domestic operations to international expansion. Hence, such trade-offs in resource reallocations that enhance SMEs' international expansion are manifestations of dynamic capabilities.

### **2.2.2 Dynamic managerial capabilities**

As noted above, sustaining dynamic capabilities presumes strong managerial capabilities. The absence of such managerial capabilities dilutes the benefits from sensing and seizing capabilities. Hence, continuous asset orchestration and renewal is one of the most important managerial functions (Teece 2012). Teece (2012) notes that even if the microfoundations of dynamic capabilities are embedded within the functions, the capability of evaluating and making changes to the configuration of assets rests on the shoulders of top management. SMEs typically have lean organizational structures, and for this reason it is very likely that in these firms, top management is the body that is mainly responsible for asset reconfiguration-related decisions.

Asset reconfiguration, divestment of resources, corporate renewal, and redesign of routines require effective decision-making (Teece 2007; Trahms, Ndofor & Sirmon 2003). Microfoundations of assets orchestration involve some level of collective organizational (complex) problem-solving and the top management teams' ability to create value in conjunction with other, possibly external, assets (Augier & Teece 2009; Schreyögg & Kliesch-Eberl 2007; Teece 2007). In accomplishing such tasks, managerial capabilities are foundational, as they enable management to utilize weak signals, integrate available information, and make relevant resource allocation decisions (Eriksson *et al.* 2014). The downside of managerial capabilities is that they are person-specific and they develop slowly (*ibid.*).

Dynamic managerial capabilities refer to “capabilities with which managers build, integrate, and reconfigure organizational resources and competences” (Adner & Helfat 2003, p. 1020). Dynamic managerial capabilities develop through prior experience. Hence, individual executives come with differing interpretations of firm strategies (Adner & Helfat 2003; Helfat & Martin 2014; Ritala *et al.* 2016; Rodenbach & Brettel 2012). The relationship between dynamic managerial capabilities and firm performance is important, particularly in internationalizing SMEs, which have less available resource allocation options and have to rely more on executives' abilities (Friedman, Carmeli & Tishler 2016; Kor & Mesko 2013). Internationalizing SMEs might even be able to compensate for their lack of financial resources with strong managerial capabilities coupled with a strong international orientation (Knight & Cavusgil 2004; Knight & Kim 2009; Ripolles Meliá *et al.* 2010). This said, in SMEs in particular, dynamic capabilities build on

dynamic managerial capabilities (Adner & Helfat 2003; Helfat & Martin 2014; Sirmon & Hitt 2009).

The recent literature on dynamic managerial capabilities' microfoundations focuses on individual managers' skills to have an impact on firm performance as market environments change (Adner & Helfat 2003; Helfat & Martin 2014). Scholars suggest that the microfoundations of dynamic managerial capabilities originate from executive's individual abilities and capabilities. From this, it follows that heterogeneity between individual executives leads to different strategic decisions and eventually to heterogeneity between firms' performances (Adner & Helfat 2003; Eisenhardt 2013; Francioni *et al.* 2015; Helfat & Martin 2014; Segaro *et al.* 2014). Yet, executives' heterogeneous cognitive managerial capabilities may explain heterogeneous firm performance, even in the same industries (Helfat & Peteraf 2015).

A firm's top management team (TMT) is a body that consists of individual executives with different backgrounds. Scholars point out that when the top management team makes decisions, each member typically has some unique information, but no individual has enough information to make collective decisions (Felin & Powell 2016). The risk is that executives become too 'fine-sliced' and manage very small entities of business activities (Buckley 2009). However, as Buckley (2009) points out, if the top management team is capable of utilizing and combining such pieces of knowledge, the control of the complex flow of information on external conditions and internal competences may even become more important than the control of physical assets. Yet, the current literature on top management teams focuses on how decision-making processes (Bourgeois & Eisenhardt 1988; Eisenhardt 2013; Eisenhardt, Kahwajy & Bourgeois 1997), the role of available information in decision-making (Eisenhardt 1989a), and differences in joint decision-making (Friedman *et al.* 2016) influence organizational outcomes. However, studies explicating top management teams' internal dynamics, that is, how individual executives in such a body make decisions, are rare.

Cross-border mergers and acquisitions among SMEs offer an interesting context for showing the relevance of managerial capabilities and the related dynamic managerial capabilities. Cross-border mergers especially provide internationalizing SMEs with an opportunity to acquire such resources and capabilities that would otherwise be impossible to obtain (Helfat *et al.* 2009; Makadok 2001; Thorgren, Wincent & Boter 2012). Hence, mergers may be an appealing opportunity to escape from path dependency. Deals may result in wider

commercial and technological capability bases which in turn allow merging firms to redirect their R&D (Anand & Delios 2002; Bertrand & Zuniga 2006; Paruchuri & Eisenman 2012; Szücs 2013). At the same time, the other side of the coin is that cross-border mergers come with double-layered acculturation (Barkema, Bell & Pennings 1996; Shimizu, Hitt, Vaidyanath & Pisano 2004). In these deals, merging firms have to align their organizational cultures, and in addition, they need to adapt to different national cultures. Both differences are likely to introduce to managerial challenges. In the post-merger phase, asset orchestration, divestment of resources, corporate renewal, and redesign of routines demand strong managerial capabilities and outstanding skills in organizational problem-solving (Schreyögg & Kliesch-Eberl 2007; Teece 2007; Trahms *et al.* 2003). Related to this, the prior literature indicates that, in particular, the management of different functional practices and management styles is one of the most challenging issues in cross-border M&As (Denison, Adkins & Guidroz 2011; Reus & Lamont 2009; Sinkovics, Zagelmeyer & Kusstatscher 2014). In spite of the vast available knowledge, studies show that most merger deals fail (see e.g. Cartwright & Schoenberg 2006). Interestingly, Vaara, Junni, Sarala, Ehnrooth and Koveshnikov (2014) show that firm management, over time, may learn and even begin to use cultural differences as an excuse for unsuccessful cross-border merger deals. Yet, success in such deals, by definition, requires dynamic managerial capabilities (Adner & Helfat 2003).

### **2.3 Dynamic capabilities and SME internationalization**

The current literature on SME internationalization and SME exporting provides a fertile ground for connecting discussions on resources, capabilities, and dynamic capabilities to SMEs' international expansion. In particular, research on SME internationalization differs from studies on multinational enterprises, as the SME internationalization literature in general acknowledge SMEs' limited resources, experiences, and skills (Kahiya & Dean 2016; Nummela, Saarenketo & Puumalainen 2004). As firm size increases, the propensity to internationalize also increases (Agarwal & Ramaswami 1992; Buckley & Casson 1976; Coad & Tamvada 2012). The literature typically assumes that these small firms internationalize by using modes that are less risky than exporting (Agarwal & Ramaswami 1992; Bonaccorsi 1992; Lado, Martínez-Ros & Valenzuela 2004; Leonidou, Katsikeas, Fotiadis & Christodoulides 2013; Ripollès *et al.* 2012), whereas large, established MNEs have the luxury of more advanced modes (Dimitratos, Johnson, Slow & Young 2003). Not surprisingly, the majority of SME

internationalization studies focus on SME exporting. Scholars in international business explain SME internationalization using product life cycle theories, the Uppsala model, network theories, born global theories, but they also to some extent apply eclectic paradigm and transaction cost theories (see Andersson 2000; Hitt, Hoskisson & Kim 1997; Paul *et al.* 2017). The RBV and dynamic capabilities perspectives focus mainly on MNEs, and therefore scholars are asking for more studies on small firms' entry-related dynamic capabilities (Boter 2003; Markman & Waldron 2014; Zachary *et al.* 2015).

As noted earlier, the international business literature builds on the assumption that an internationalizing firm needs to untangle the liability of foreignness (Hymer 1976, Zaheer 1995), the liability of smallness (Aldrich & Auster 1986; Buckley 1989), and the liability of outsidership (Johanson & Vahlne 2009). With respect to this, internationalization also involves costly, irreversible resource commitments (Fichman & Levinthal 1991; Johanson & Vahlne 1977). The SME exporting literature acknowledges such challenges, especially for SMEs with limited financial resources (Crick & Spence 2005). The literature also suggests that function-specific resources cannot be shifted from one function to another (Lecerf 2012), not to mention from domestic to foreign operations (Kumar 2009). Hence, SMEs have difficulties in developing and harnessing such a portfolio of resources and capabilities that would be needed for international expansion (Bauer & Matzler 2014; Bonaccorsi 1992; Kafouros *et al.* 2008; Kim & Finkelstein 2009; Knight & Cavusgil 2004; Kumar 2009). Thus, internationalizing SMEs need to rely more on their intangible resources and capabilities (Kumar 2009); and in the absence of sufficient resources and capabilities, internationalization might even jeopardize the existence of an SME (Sapienza *et al.* 2006).

The prior literature widely suggests that R&D and related innovative activities improve SMEs' probabilities to overcome the above-listed liabilities, at least to some extent. Studies show that a firm's innovative activities have a positive influence on SMEs' international performance, especially their exporting performance (Brown & Eisenhardt 1995; Cassiman & Golovko 2010; Filatotchev & Piesse 2009; Hauser *et al.* 2006; Kotabe *et al.* 2002; Lecerf 2012; Love, Roper & Zhou 2016; Paul *et al.* 2017; Raymond & St-Pierre 2013; Ripolles Melia *et al.* 2010; Rodriguez & Rodriguez 2005; Zahra & Hayton 2008). Innovative activities and internationalization also positively reinforce each other in a dynamic virtuous circle (Golovko & Valentini 2011). Furthermore, international expansion has better odds to succeed in cases in which an SME is capable of matching its strategic strengths with market opportunities, and at the same time, is capable of neutralizing

its strategic weaknesses to overcome threats in foreign markets (Beamish, Craig & McLellan 1993; Boter & Holmquist 1996; Cavusgil *et al.* 1993; Kaleka 2012; Knight *et al.* 2004; Lado *et al.* 1994). Such strategic strengths may include unique or superior product qualities, price-competitive products (Bonaccorsi 1992), or close functional integration and complementarities between marketing and R&D (Tanriverdi & Venkatraman 2005; Welter, Bosse & Alvarez 2013).

Moreover, international expansion is a process. The prior literature shows that during this process, the relative importance shifts from R&D to the marketing function regarding the origins of a competitive advantage (Ernst *et al.* 2010; Gnizy & Shoham 2014; Griffin & Hauser 1996). In other words, product orientation dominates early internationalization; and as the expansion progresses, SMEs begin to allocate their resources to processes that generate customer understanding (Ruokonen *et al.* 2008). Such a shift in resource allocation is elementary. Rasmussen, Møller Jensen and Servais (2011) show that internationalization of a firm's marketing activities increases flexibility and enhances international performance, whereas internationalization of R&D makes a firm more rigid and sticky. Moreover, prior studies show that investments in marketing capabilities is a prerequisite in the long run for SMEs to make a commitment to more advanced modes of international expansion (Ripollés *et al.* 2012). As internationalization proceeds, SMEs are likely to have more available financial resources. An improved financial position enables an SME to choose from a wider range of entry modes. Yet, as transaction costs dictate the entry mode selection, firms choose such a mode where the related benefits offset the costs (Buckley & Casson 1979; Ripollés Melia *et al.* 2010). In a similar vein, Kyläheiko *et al.* (2011) indicate that for exporting firms, internationalization and R&D activities may be substitutes, but along with more advanced entry modes, the cost of exploiting external knowledge acquired from foreign markets also decreases. Hence, the international expansion and R&D activities begin to benefit from each other.

Prior results also indicate that, with respect to the internationalization process, the earlier an SME is able to develop an internationally applicable competitive advantage and the longer period the firm survives in the foreign markets, the more it is able to learn and develop those valuable capabilities that are needed in foreign markets (Fichman & Levinthal 1991; Moen & Servais 2002; Thornhill & Amit 2003). This said, *de novo* entrants are especially vulnerable to rivalry (Markman & Waldron 2014), and these less experienced firms also often underestimate the costs and complexity of managing international expansion (Cavusgil *et al.* 1993; Hitt *et al.* 1997). Furthermore, prior studies also show that in contrast to SMEs with



exporting experience, firms with less exporting experience are less capable of finding (and lack) adequate capabilities to exploiting external (business support) resources (Boter 2003).

As international expansion proceeds, the threat of failing diminishes. Firms are able to start covering the costs from international expansion and are getting familiar with the new markets. However, Knudsen and Madsen (2002) note that results of expansion and development of capabilities do not materialize immediately. Also, Kahiya and Dean (2016), for example, show that over time, constraints and barriers lessen, and in particular exporting, becomes more manageable. Thus, constraints and barriers are somewhat dependent on the export stage (Paul *et al.* 2017). Experience and learning from foreign markets, combined with continuous innovative activities, begin to improve international performance (Contractor 2007; Kafouros *et al.* 2008; Kyläheiko *et al.* 2011). Quite intriguingly, growing literature on international entrepreneurship show that some SMEs not only succeed in their internationalization, but in some cases, grow even faster than their large counterparts (see, e.g., Madsen & Servais 1997, Oviatt & McDougall 1994, initiating the literature on international new ventures / born globals).

Hence, international expansion not only requires financial resources, but it is also relatively dependent on specific managerial capabilities (Leonidou *et al.* 2013; Nummela *et al.* 2004; Welch & Luostarinen 1988; Zachary *et al.* 2015). The literature suggests that such key managerial capabilities that drive SME internationalization, such as a manager's global mindset, build on prior experience (Madsen & Servais 1997; Nummela *et al.* 2004). Such managerial capabilities that are especially related to prior international experience may even have a greater impact on internationalization than other capabilities, like innovation and marketing capability (Oura, Zilber & Lopes 2016). Hence, a lack of suitable managerial capabilities may obviously become a barrier for an SME to internationalize (Cahen, Lahiri & Borini 2016).

In sum, SME's international expansion, as such, is a manifestation of dynamic managerial capabilities, involving the extensive sensing and seizing of opportunities and the orchestration of scarce assets and capabilities (Augier & Teece 2009; Teece 2007; Trahms *et al.* 2003). Dynamic capabilities help internationalizing SMEs to face foreign competition and moreover to lower these firms' threshold for making international commitment (tangible or intangible) decisions (Gabrielsson & Gabrielsson 2013; Vahlne & Johanson 2013). When competing with large, established MNEs, SMEs need to make use of available advantages, for example, being quick and flexible in their decision-making, and

develop conditions for favorable competitiveness (Etemad 2004; Paul *et al.* 2017). Yet, relevant dynamic capabilities may provide SMEs with such competitive advantages that are also likely to overcome the liabilities they face on foreign markets (Beleska-Spasova, Glaister & Stride 2012; Eriksson *et al.* 2014; Knudsen & Madsen 2002).

### **3 Research design**

Research design links the research questions, data, and findings; and by doing this, it ensures that the evidence addresses the initial research questions (Yin 1994). This study consists of four independent research papers. The papers have their own, unique research questions and consequently their own methods and theoretical bases. Carson and Coviello (1996) doubt if any single method in general is wholly appropriate in providing the depth, breath and, subtlety of information. Hence, the use of more than one method provides a more complete picture of the phenomenon, and thus also increases understanding and helps in achieving the research goals (Gilmore & Coviello 1999; Tashakkori & Teddlie 2003).

Considering this study in particular, the previous literature also suggests that there should be more research on firm resources, capabilities, and dynamic capabilities employing mixed method studies (Eriksson 2013). As the objective in this thesis is to explore how management in internationalizing small and medium-size firms allocate their limited resources between key functions, the unit of analysis in this study is a firm function. For this reason, empirical data are collected to illustrate resources, capabilities, and capabilities' microfoundations in key functions, particularly in management, marketing, and R&D. Moreover, data are selected to fit the context of this study, internationalizing SMEs (Poulis, Poulis & Plakoyiannaki 2013).

This chapter describes the methods and research process in each research paper. This chapter describes how theories were selected and methods were applied in these four research papers.

#### **3.1 Research process**

This thesis has its origins in a research project in which the participating researchers and practitioners developed a framework to evaluate firms' preparedness to internationalize. The framework builds partly on the SME exporting literature (e.g., Kuivalainen, Sundqvist & Servais 2007), internationalization stage models (cf. Bilkey & Tesar 1977), and the Uppsala internationalization model (Johanson & Vahlne 1977), but it is mainly a result of applying software design maturity models, such as the Capability Maturity Model (e.g., Paulk, Curtis, Chrissis & Weber 1993), in the SME context. In year 2009, this framework was applied for the first time to assist Finnish firms to initiate their internationalization and to expand into foreign markets. Many firms, mainly SMEs, have used this framework (later labeled the

Quum model) to facilitate their international expansion, and by doing this, these firms have also provided data for research purposes.

The gathered and accumulated data from internationalizing SMEs using the Quum model over these years have raised an interest on how firms manage and allocate their functional resources when they expand in international markets. A number of discussions with firms' executives have disclosed a variety of different strategies. Although these SMEs do not have notable resources and capabilities, a majority of them initiate and carry on their international expansion. For some reason, many of these firms succeed and some of them fail. Therefore this study also paid attention to prior scholars' concerns that the resource-based view and the dynamic capabilities perspective are focusing to a large extent on MNEs and more research should be done on small firms' entry-related dynamic capabilities (Markman & Waldron 2014; Zachary *et al.* 2015; Zahra *et al.* 2006), and in particular, looking at how they link to functional capabilities such as finance, information technology, R&D, and marketing (Easterby-Smith *et al.* 2009; Katsikeas *et al.* 2000).

Research paper I (Haapanen, Juntunen & Juntunen 2016) originated against this background. This study focuses on how limited financial resources influence resource allocation between a firm's key capabilities in internationalizing SMEs. Paper I builds on the resource-based view of the firm and especially acknowledges that those key capabilities that are developed over time in firm functions are sticky. Thus, these firm-specific capabilities may provide an SME with a competitive advantage (Kogut & Zander 1993; Zander & Kogut 1995), but transferring them between functions or activities is difficult (Amit & Schoemaker 1993; Fain & Wagner 2014; Lu & Beamish 2001; Kumar 2009; Lecerf 2012; Roper & Love 2002). Also, paper I takes into account scholars' requests for more studies on R&D and marketing functions that unbundle the competences and resources that characterize successful international expansion (Knight & Kim 2009; Regnér & Zander 2014).

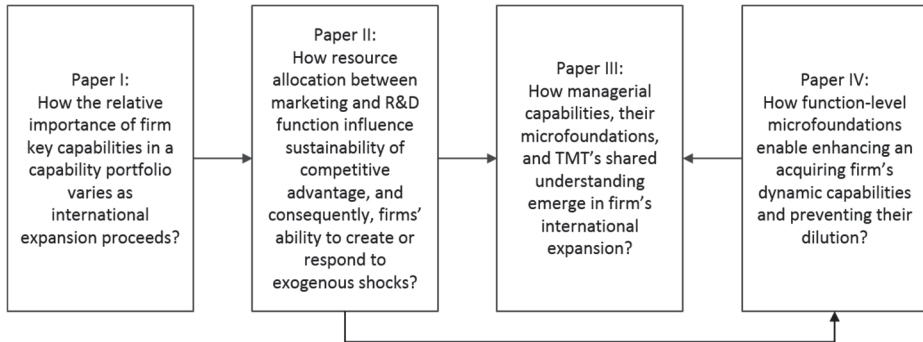
The results from paper I indicate that the relative importance of SMEs' key capabilities varies as their internationalization proceeds. It was also noticed that firms follow very different paths. Hence, this raised a question as to how these different paths influence firms' international expansion. Paper II assumes that it is very unlikely that all internationalizing SMEs allocate their scarce resources in a similar way. Hence, the interesting question is how different allocations result in a firm's competitive advantage, and furthermore, how this resulting advantage influences a firm's ability to either create market disruptions or to adapt to these

exogenous shocks. Still, the resulting nature of the competitive advantage and SMEs' international expansion are related. Paper II builds on dynamic capabilities and on the more recent literature on dynamic capabilities' microfoundations (Felin *et al.* 2015; Foss 2011; Teece 2007) framework and assumes that limited resources and capabilities (Cavusgil 1984; Jane Hewerdine *et al.* 2014; Katsikeas *et al.* 2000; Welch & Luostarinen 1988) push internationalizing SMEs to make trade-offs in their resource allocations. The findings in the research paper II underline managerial capabilities' importance in reconfiguring firms' asset bases, and yet they gave rise to two separate streams of interests. First, how executives in firms' management make resource-allocation decisions (paper III), and second, how dynamic capabilities' microfoundations emerge in merger deals, in particular how microfoundations influence the coalignment of two merging firms' resources and capabilities (paper IV).

Paper III focuses on dynamic managerial capabilities' underlying microfoundations, and thus builds especially on the literature on dynamic capabilities' microfoundations and the literature on managerial capabilities. The research acknowledges the prior remarks that the roles of routines and particular actions by the top management offer a rich and important area for research (Teece 2012), and more attention needs to be paid to the links between dynamic capabilities and more micro issues, such as managerial cognition and search processes (Easterby-Smith *et al.* 2009). Also, the research notes prior concern that scholars still do not know enough about how the interaction of TMT executives' cognitive capabilities and diversity between team members affect strategic change, like international expansion (Adner & Helfat 2003; Helfat & Peteraf 2015). The results indicate that despite the importance of all capabilities for an internationalizing SME, their mutual relative importance depends on the phase of internationalization.

Paper IV continues the discussion of dynamic capabilities' microfoundations in the context of SME cross-border mergers. This study acknowledges management scholars' prior demands especially for more qualitative research on the role of dynamic capabilities' microfoundations in merger deals (Angwin, Paroutis & Connell 2015; Nummela & Hassett 2015; Paruchuri & Eisenman 2012). Also, the prior literature asks for more studies on how mergers influence marketing and R&D processes (Sinkovics *et al.* 2014; Szücs 2013). Yet, a merger is an illustration of such an event that calls for dynamic capabilities (Junni, Sarala, Tarba & Weber 2015; Teece 2014; Zahra *et al.* 2006). Time-wise, even though paper III was started earlier than paper IV, the findings in paper IV pointed out top management's highly

important role in allocating scarce SME resources and yet were influencing the research in paper III.



**Fig. 2. Research process.**

Figure 2 illustrates the research process and the relationships between the individual research papers. As the arrows in Figure 2 indicate, the findings in paper I led to the research in paper II. The results from paper II, in turn, raised further research questions, which are answered in papers III and IV. Furthermore, the findings in paper IV raised management-related questions that are answered in paper III.

### **3.2 Case selection and data collection**

The data in this thesis were collected using quantitative surveys, interviews, and firm-internal documentation. Case selection requires careful consideration, and this thesis follows data collection principles suggested by Eisenhardt (1989b) and Yin (1994).

The quantitative survey data in this study were gathered from firms that have been using the Quum model to improve their skills in internationalization. The model was updated and commercialized in 2013. Due to changes in the structure of the framework and the phrasing of questions, the data between the two versions are not directly comparable. Full access to both the earlier and later datasets would allow a wide-ranging insight. However, for methodological rigor, the quantitative data in the research papers is comprised only of information retrieved from firms that have been using the newer version Quum model.

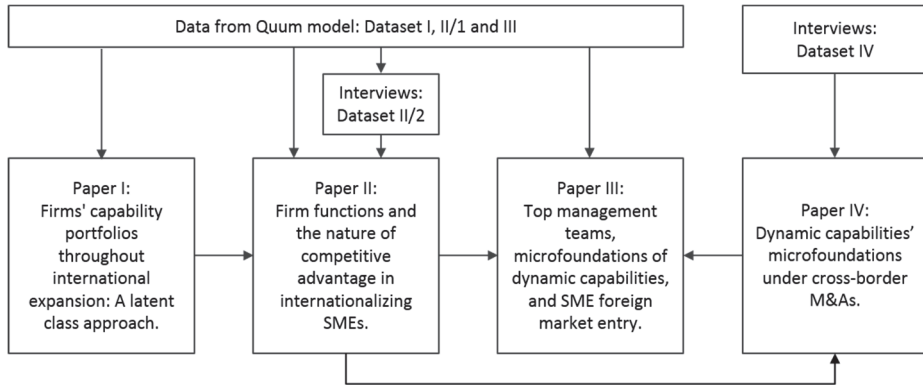
The Quum model builds on an assumption that international expansion can be illustrated as a maturity model, that is, further steps of expanding into foreign markets builds on decisions that a firm has made earlier and on those resources and capabilities that a firm currently possesses. The framework focuses on marketing and sales skills, firm strategy and operational activities, and a firm's tangible and intangible resources. All executives in a firm's top management team complete a questionnaire which consists of 480 unequivocal "yes" or "no" binary statements. As a result, the framework reveals the firm's current status and the firm's preparedness for further internationalization. The model covers a wide range of firm function-level activities and therefore provides an opportunity for this thesis to focus on firm function-level phenomena (Foss 2011).

The quantitative survey data in research paper I (Dataset I), paper II (Dataset II/1), and paper III (Dataset III) were gathered using the Quum model (questionnaire). Firms are selected for this thesis so that they are in different phases of international expansion, that is, they are either initiating their internationalization or are expanding their current foreign operations. Yet, such a setting provides this study with an opportunity to study the relationship between key capabilities and international expansion. Thus, this study collects and combines capability-related data from both young and established firms, as also suggested by Zahra *et al.* (2006). Secondly, the firms selected have been participating in projects that have employed external experts and the Quum model to assist them in internationalizing. Hence, the selected firms indicate a strong commitment in their international expansion.

The quantitative binary data in paper I (that is, Dataset I) were collected during the years 2013 and 2014 from 114 top management team executives in 34 Finnish firms. The youngest firm is a one-year old start-up and the oldest is a 97-year-old firm already in multiple countries. The size of these firms varies from 1 to 96 employees. The quantitative data in paper II (that is, Dataset II/1) was collected from eight Finnish high-technology SMEs between the years 2009 and 2016. Seven of the firms also belong to Dataset I, and all eight firms also belong to Dataset III. The youngest firm is six years old, and the oldest firm is 21 years old. One of the firms went bankrupt nine years after its establishment, and moreover, two firms merged in 2015. Items in Dataset II/1 were selected because they best support the answers to the research question.

The quantitative data in paper III (Dataset III) was collected between the years 2013 and 2016. The firms fulfill the above two criteria, and they were also selected because their top management teams have at least two members. This is important since this study focuses on the dynamics between the top management team

executives. As a result, this study consists of 65 firms with a total of 261 top management team executives. Twenty-seven of the firms in this study also belong to Dataset I. The size of the top management teams varies from 2 to 12 executives, averaging 4.1 members. Furthermore, the age of the firms varies from a one-year-old start-up to a 98-year-old firm, and the firms come from different industries.



**Fig. 3. Data collection.**

The primary data in paper II was also collected using qualitative methods, as illustrated in Figure 3. The primary qualitative data (Dataset II/2) consists of 59 face-to-face informal meetings with 13 key informants, including one chairman of the board, six CEOs, three CTOs, and three directors of marketing. All of these executives were members of the top management team, and four of the CEOs were also responsible for their firms' marketing functions. Table 2 illustrates the data-gathering process in more detail. Discussions with the case firms' executives provided the study with insight on how the firm management allocates their limited resources and how these trade-offs influence the firms' competitive advantage. Hence, such data provide an opportunity to answer the questions on how the relative importance of key capabilities changes and how key capabilities emerge in firm functions as international expansion proceeds.



**Table 2. Data collection process in Paper II.**

Case firm	Involvement with the case firm
Alpha	<p>25.02.2009 – 19.11.2015</p> <p>13 personal meetings with CTO (co-founder), 19.11.2015 interview, 39 min 44 sec</p> <p>1 personal meeting with CTO (co-founder) and CEO (co-founder)</p> <p>Case firm in Oulu Business School course in 2011, 2012</p> <p>Case firm in Oulu Business School course in 2013, including an analysis of preparedness on international markets. Several meetings with the firm's management and guidance of students' work.</p>
Beta	<p>31.10.2013 – 23.11.2015</p> <p>5 personal meetings with the chairman of the board, 23.11.2015 interview, 42 min 39 sec</p> <p>Case firm in Oulu Business School course in 2013, including an analysis of preparedness on international markets. Several meetings with the firm's management and guidance of students' work.</p>
Gamma	<p>17.03.2010 – 14.12.2015</p> <p>4 personal meetings with CEO (co-founder)</p> <p>3 personal meetings with Marketing Director, 14.12.2015 interview, 30 min 45 sec</p> <p>Case firm in Oulu Business School course in 2011</p> <p>Case firm in a consultancy project aiming at improving international strategy in 2014, including an analysis of preparedness on international markets.</p>
Delta	<p>28.06.2008 – 27.06.2015</p> <p>12 personal meetings with CEO, 19.11.2015 interview, 1 hour 5 min 37 sec</p> <p>Case firm in Oulu Business School course in 2011, 2012</p> <p>Case firm in Oulu Business School course in 2013, including an analysis of preparedness on international markets. Several meetings with the firm's management and guidance of students' work.</p>
Epsilon	<p>18.09.2008 – 23.11.2015</p> <p>7 personal meetings with Senior Specialist / CTO (co-founder), 23.11.2015 interview, 46 min 55 sec</p> <p>Case firm in a consultancy project aiming at improving international strategy in 2014, including an analysis of preparedness on international markets.</p>
Zeta	<p>18.09.2015 – 03.12.2015</p> <p>4 personal meetings with CEO (founder) and Marketing Director, 03.12.2015 interview, 40 min 15 sec</p> <p>Case firm in Oulu Business School course in 2010, 2011</p> <p>Case firm in Oulu Business School course in 2013, including an analysis of preparedness on international markets. Several meetings with the firm's management and guidance of students' work.</p> <p>Zeta acquired Kappa in 2015. Kappa was also discussed in the meetings above.</p>
Kappa	<p>31.10.2013 – 13.11.2013</p> <p>4 personal meetings with CEO</p>

Case firm	Involvement with the case firm
	Case firm in Oulu Business School course in 2013, including an analysis of preparedness on international markets. Several meetings with the firm's management and guidance of students' work.
Sigma	<p>18.08.2009 – 19.11.2015</p> <p>2 personal meetings with CEO (founder), 03.12.2015 interview, 47 min 11 sec</p> <p>1 personal meetings with CEO (founder), Marketing Director (co-founder)</p> <p>3 personal meeting with CEO (founder), Marketing Director (co-founder) and CTO (co-founder),</p> <p>Case firm in Oulu Business School course in 2013, including an analysis of preparedness on international markets. Several meetings with the firm's management and guidance of students' work.</p>

The qualitative data in paper IV (that is, Dataset IV) consist of two separate, horizontal cross-border merger deals that took place between Finnish and US high-technology SMEs in 2005 and 2007. Merger cases were selected so that they represent SMEs that aspire to grow in international markets and suffer from limited resources. Two of the authors belonged to the merging firms' top management and were involved in the decision-making processes, which provides this paper with exceptional access to the firm-internal documentation of both deals, and still ensures genuine understanding (Gilmore & Coviello 1999). The primary qualitative longitudinal data in case 1 were gathered between 1999 and 2007 from personal notes, e-mails, and firm-internal strategy documents. The primary qualitative longitudinal data in case 2 were collected between 2005 and 2008 from two due diligence reports, 11 integration group memos, 9 management board memos, 21 memos from function integration meetings, and personal notes. During the research process, the authors gathered several times for discussions with the two key informants to gain a better understanding, to fill in missing information, and to reflect on impressions and conclusions. The resulting rich and versatile data provide an opportunity to answer the question of how key capabilities emerge in firm functions as international expansion proceeds.

### 3.3 Data analysis

Each research paper has its own specific method in analyzing data. The quantitative binary data in research paper I (Dataset I) and III (Dataset III) were analyzed using the finite mixture structural equation modeling and qualitative comparative analysis methods, as described below.

The aim in paper I is to identify and compare how management allocates scarce financial resources to employ key capabilities in firms that are in different phases of internationalization. The unit of analysis in this paper is a function-specific key capability. To reveal distinct realities, paper I applies finite mixture structural equation modeling (FMSEM) to uncover unobservable heterogeneous segments and latent classes and to estimate segment-specific path coefficients of each segment in the data simultaneously (Bart, Shankar, Sultan & Urban 2005; McLachlan & Peel 2000; Muthén & Muthén 1998–2007). As a result, FMSEM provides fit indices for each solution. The findings in paper I suggest that the three latent class solution is the best, in which classes contain 27, 33, and 54 respondents.

In research paper III, the aim is to explore how firm management's managerial capabilities and their shared understanding emerge in a firm's international expansion. The unit of analysis is the top management team of a firm. Paper III employs qualitative comparative analysis (QCA) to handle the binary data. QCA is capable of revealing underlying cross-case patterns even in a small data sample, as is the case in this paper. QCA groups firms based on diversity and heterogeneity in sensing, seizing, reconfiguration, and disagreement measures within the groups. The results from QCA analysis show that in most cases (31.75% of all firms in the sample), the top management team unanimously agrees that the firm has high sensing, seizing, and reconfiguring capabilities.

Paper II employs a mixed method research strategy (Hurmerinta-Peltomäki & Nummela 2006; Yin 1994). The mixed method is a research strategy in which, in a single study, both quantitative and qualitative data are collected and combined at one or more stages in the research process to gain a synergistic view of the evidence (Eisenhardt 1989b; Hurmerinta-Peltomäki & Nummela 2006; Tashakkori & Teddlie 2003). Yet, a combination of methods provides a more in-depth understanding of complex and vague outcomes of managerial decisions (Gilmore & Coviello 1999). The primary qualitative data in paper II (that is, Dataset II/2) are analyzed using a multiple-case study method which enables the exploration of complex phenomenon in an organizational context (Creswell 1994; Eisenhardt 1989b; Yin 1994). As Easton (2010) points out, the multiple-case study research method provides a researcher with the possibility to investigate a small number of entities or situations about which data are collected from multiple sources to develop a holistic understanding. The data analysis in paper II starts with within-case analysis to become familiar with the data in each case (Eisenhardt 1989b). The focus in this phase is to identify how data in the case firms manifest the key

constructs of the study, that is, the resource allocation in firms' key functions and competitive advantages.

Next, the findings from the qualitative primary interview data are triangulated using quantitative data (Dataset II/1). In this paper, quantitative binary data are used to measure the firm managements' average subjective evaluations for competitive advantage, marketing, and R&D capabilities. For these internationalizing firms, the quantitative survey data indicate 10 items related to the subjective evaluation of a firm's competitive advantage, 28 items related to how individual managers assessed the firm's marketing capabilities, and 17 items related to how individual managers assess the firm's R&D capabilities. Value 0 is assigned to "no" answers, and 1 is assigned to "yes" answers. Subjective average measures are calculated as averages of these items. Yet, in this study, the average subjective evaluations are measurable using the quantitative data. Measurement enhances the qualitative interpretation (Tashakkori & Teddlie 2003), and the quantitative results confirm the findings in the qualitative data (Tashakkori & Teddlie 2003). The triangulation that was made possible by using both quantitative and qualitative data (Eisenhardt 1989b) provides paper II with rich data concerning the nature of competitive advantage, resource allocation, and the microfoundations of dynamic capabilities in the context of internationalizing Finnish high-technology SMEs. In the last phase, cross-case patterns are analyzed (Eisenhardt 1989b; Yin 1994).

Finally, paper IV is a qualitative study. The data analysis in paper IV employs a multiple-case study method (Eisenhardt 1989b; Yin 1994) in a similar manner as in paper II. First, researchers gathered with key informants to review the data in order to get an understanding of both merger deals' constructs that can explain how functional capabilities' microfoundations emerge in a merger. After this within-case analysis (Eisenhardt 1989b), similarities between the two merger cases were analyzed in order to reveal cross-case patterns (Eisenhardt 1989b; Yin 1994). The primary data (Dataset IV) were triangulated using secondary data from the firms' annual reports and web sites. The results from paper IV indicate the importance of focusing on functional capabilities' microfoundations, particularly in cross-border merger deals.

**Table 3. Research methods and design of the papers.**

Paper	Methods and design	Data	Data
I	Quantitative, finite mixture structural equation modeling (FMSEM)	Questionnaire, binary data	How small and medium-size firms exploit and allocate limited resources and capabilities between their key activities when expanding into international markets, especially under limited financial resources
II	Mixed method; Quantitative and qualitative	Questionnaire (binary data) and interviews of the case firms' key informants	How resource allocation between key functions influence the nature of competitive advantage, particularly the firms' ability to create or respond to exogenous shocks
III	Quantitative, Qualitative Comparative Analysis (QCA)	Questionnaire, binary data	How managerial capabilities' microfoundations emerge in a firm's international expansion
IV	Qualitative, multiple-Firm-internal documentation, memos case study	Firm-internal documentation, memos	How function-level dynamic capabilities' microfoundations emerge in mergers and acquisitions



## 4 Overview of the papers

The purpose of this study is to explore how management in internationalizing small and medium-size firms allocate their limited resources between key functions, in particular, between marketing and R&D. The interest is especially in internationalizing SMEs in which the resource allocation calls for specific managerial capabilities. This thesis consists of four research papers. The results from these papers provide an answer to the research question, “How do firms with a limited resource endowment simultaneously manage their functional resources and capabilities when executing an international expansion strategy?” The papers’ specific research questions, main results, and contributions are summarized in Table 2.

**Table 4. Summary of the papers.**

Paper	Research question	Results	Main contribution
I	How the relative importance of firm key capabilities in a capability portfolio varies as international expansion proceeds?	Under a limited financial resource endowment, firms are not able to simultaneously invest in multiple capabilities. In contrast to R&D capabilities, neither marketing nor sales capabilities benefit from financial resources until the initial foreign expansion takes place. When the level of financial resources increases, firms begin to develop international capabilities.	The study reveals the existence of multiple realities. When expanding into foreign markets, SMEs need a specific capability portfolio that originates from the firms’ activities and they depend on financial resources. The relative importance of capabilities in a capability portfolio varies as firms’ international expansion proceeds. The authors also answer the call for new forms of data gathering.

Paper	Research question	Results	Main contribution
II	How resource allocation between marketing and the R&D function influences sustainability of competitive advantage and consequently firms' ability to create or respond to exogenous shocks?	Investments in marketing and R&D per se are a necessary but not sufficient condition for the emergence of dynamic capabilities and competitive advantage. Firms might be able to execute their own, strategies if their marketing and R&D capabilities are, first, relevant to identify and filter latent needs, and second, are coupled with managerial capabilities to reconfigure firms' asset base.	R&D capabilities alone do not manifest dynamic capabilities; they require complementary marketing capabilities and simultaneous managerial reconfiguration capabilities in order for a firm to create Schumpeterian market destructions. No single firm function is an illustration of dynamic capabilities. Function-specific capabilities may yield a series of temporary competitive advantages, but only if managerial reconfiguration capabilities are present.
III	How managerial capabilities, their microfoundations, and TMT's shared understanding emerge in a firm's international expansion?	Along with internationalization, relative importance of the underlying capacities varies. A clear consensus among TMT executives is needed only at the time when a firm is making its initial substantial foreign market commitment.	Initiation of international expansion especially requires sensing capacities. When the foreign market commitment increases, stabilization on new markets begins to call for simultaneous, high-level TMT agreement. Substantial investments to foreign countries also require high seizing and high reconfiguration capacities.
IV	How function-level microfoundations enable enhancing an acquiring firm's dynamic capabilities and preventing their dilution?	Analysis reveals that synergies between the merging firms' products, services, and key functions may not be realized unless similar synergies exist between the merging firms' underlying structures, processes, routines, and skills.	An assessment of possible merger benefits calls not just for understanding whether there are synergies between the merging firms' capabilities but also strong dynamic managerial capabilities are needed in aligning possible synergies between the underlying cross-functional microfoundations.



#### **4.1 Firms' capability portfolios throughout international expansion: A latent class approach (Paper I)**

Research paper I focuses on the relative importance of firm's key capabilities and how this relative importance changes when a firm expands its operations into international markets. In particular, this paper provides a description of the relationship between key capabilities and limited financial resources.

Many streams in the international business and strategic management literature assume that firms expanding into international markets have sufficient resources and capabilities. However, for small and medium-size firms, this is rarely the situation. Scholars show that, first, domestic resources often do not fit into foreign operations (Kumar 2009); secondly, a firm's resources are function-specific and cannot be easily transferred from one function to another (Lecerf 2012), and thirdly, SMEs have to make trade-offs when they allocate scarce resources between domestic operations, growth, and international expansion (Baker & Nelson 2005). The prior literature discusses the above findings separately, and consideration of these findings simultaneously is rare, thereby leaving a gap in the existing knowledge. Thus, the aim of this paper is to integrate and bring these research streams closer together.

This study builds on the resource-based view of the firm and on the dynamic capabilities perspective. Paper I starts with an assumption that in order to expand into foreign markets, SMEs need a set specific capabilities—a capability portfolio—that originates from the firms' activities and depends on financial resources. This study makes an attempt to show that the relative importance of capabilities in a capability portfolio varies as the firms' international expansion proceeds. Moreover, this paper is making an attempt to answer the call for new forms of gathering data to challenge traditional methods such as Likert scales (Woodside 2014).

The paper uses binary data to analyze whether and how the relative importance of firm capabilities change as internationalization proceeds. The research model consists of the following constructs: financial resources, four key capabilities (international orientation, marketing capabilities, sales capabilities, R&D capabilities), and two additional factors, initial international expansion and extended international expansion, to measure the progress of internationalization. This study uses finite mixture structural equation modeling (FMSEM) and makes estimations using a covariance matrix with the robust maximum likelihood (MLR) method.

FMSEM fit indices suggest that the best solution comes with three latent classes. Firms in the first class have an aspiration to internationalize but do not have international operations yet; and for this reason, this class is called the *preparing international*. Firms in the second class have already initiated their internationalization but are still in their infancy in international expansion. Thus, this class is labeled the *novice international*. Finally, as the firms in the third latent class are already operating either in multiple countries or show more advanced modes of international operations, this class is labeled the *experienced international*.

This research paper contributes to the resource-based view and to the dynamic capability literature. The results of the study show that R&D capabilities are present in each latent class, but their relative importance diminishes as firms' international commitment increases. In contrast to R&D capabilities, neither marketing nor sales capabilities benefit from financial resources until the initial foreign expansion takes place. These findings are in line with Baker & Nelson (2005), Chen & Hsu (2010), Freeman *et al.* (2006), Jane Hewerdine *et al.* (2014), and Kozlenkova *et al.* (2014), and who suggest that with a limited financial resource endowment, firms are not able to simultaneously invest in multiple capabilities. SMEs need to make trade-offs between investments in functional capabilities, and these firms have to optimize their operations with the resources they have at hand. The results also indicate that the level of financial resources is an antecedent for international expansion. In line with Freeman *et al.* (2006), the findings indicate that as the level of financial resources increases, firms start developing international capabilities. The point of initial internationalization seems to be a watershed after which firms begin to reallocate their available resources and capabilities to international operations, marketing, and sales. Furthermore, since this study reveals the existence of multiple realities but does not show how a firm's key capabilities develop, this research points out that, in particular, the microfoundations of capability development calls for more research.

The findings of this study indicate that SMEs' managers should pay attention not only to resource allocation but also to (development of) functional capabilities. In particular, this study highlights that firms need to continuously modify their capability portfolios along with increasing their commitment to international markets. Understanding how the change of capabilities' relative importance is connected to international expansion and financial resources allows an analytical approach towards managing resources and capabilities.

In sum, this research paper focuses on functional capabilities. The findings show how key capabilities in a capability portfolio vary as SMEs expand into international markets. In particular, the results indicate that investments in developing R&D capabilities do not significantly decrease at any time while international expansion proceeds. Hence, the findings provide a partial answer to sub-question 1 and therefore, to the main research question.

## **4.2 Firm functions and the nature of competitive advantage in internationalizing SMEs (Paper II)**

Paper II shifts the focus towards the microfoundations of dynamic capabilities, and therefore addresses the remark made in the previous paper that the microfoundations of capabilities particularly call for more research. Paper II explores how dynamic capabilities' microfoundations emerge in firm functions and provides a description between resource allocation and the nature of a firm's competitive advantage.

The management literature suggests that firms' dynamic capabilities help them to successfully respond to market turbulence and even enable firms to shape their business environments (Augier & Teece 2009; Teece *et al.* 1997). However, prior studies do not yet provide comprehensive explanations on how some firms are capable of initiating Schumpeterian types of creative market destruction, while others need to adapt to such changes. Especially in high velocity markets, two streams in the dynamic capability literature have opposite views on whether the competitive advantage is more sustainable or temporary in nature (Eisenhardt & Martin 2000; Teece *et al.* 1997).

The dynamic capabilities perspective suggests that a successful reconfiguration of a firm's resource and capability bases might provide a firm with a sustainable competitive advantage (Eisenhardt & Martin 2000; Teece *et al.* 1997). However, the dynamic capabilities perspective does not consider that resources and capabilities might differ considerably between firm functions. Other studies indicate that specific resources and capabilities are not interchangeable between the functions, and moreover they can hardly be transferred from domestic to foreign activities (Kumar 2009; Lecerf 2012). Moreover, contrary to large established firms, SMEs often have limited endowments of resources and capabilities (Cavusgil 1984; Jane Hewardine, *et al.* 2014; Katsikeas *et al.* 2000; Welch & Luostarinen 1988). For this reason, SMEs often face trade-offs in their resource allocations, particularly when they are expanding into international markets.

This study suggests that the nature of competitive advantage is strongly related to and emerges from dynamic capabilities' microfoundations. Microfoundations, in general, are about decomposing fundamental structures beneath an aggregate phenomenon (Felin *et al.* 2015; Foss 2011). In this context, Teece (2007, p. 1319) suggests that microfoundations of dynamic capabilities are in "the distinct skills, processes, procedures, organizational structures, decision rules, and disciplines [...] that are difficult to develop and deploy." In line with this, this paper assumes that microfoundations of dynamic capabilities are likely to be found in a firm's key functions, marketing, and R&D. Thus, this study aims to examine how resource allocation between R&D and marketing functions can explain whether the nature of the competitive advantage is more temporary or sustainable in its nature, and furthermore how this advantage constitutes a firm's capability to shape markets and why the rest of the firms need to adapt to these markets changes.

Exploring microfoundations often requires an explorative method (Felin *et al.* 2012). This study employs both quantitative and qualitative data, and therefore applies a mixed method research strategy (Hurmerinta-Peltomäki & Nummela 2006; Yin, 1994). The results show that SMEs need both marketing and R&D capabilities in order to make solid decisions about product development and commercialization. Without a rich market and technological data, strategic decisions become ad-hoc in nature. The findings also indicate that investments in marketing and R&D per se are a necessary but insufficient condition for dynamic capabilities and competitive advantage to emerge. Firms might be able to execute their own strategy-based product/service road-maps if their marketing and R&D capabilities are first of all relevant to identify and filter latent needs, and secondly are coupled with managerial capabilities to reconfigure the firms' asset base.

This paper contributes to the dynamic capability literature and shows the close linkage between the resource allocation between marketing and R&D, the varying nature of competitive advantages, and an SME's ability to lead the markets. Based on the findings, this paper also suggests that R&D capabilities alone do not manifest dynamic capabilities; they require complementary marketing capabilities and simultaneous managerial reconfiguration capabilities in order for a firm to create a Schumpeterian type of market destruction. Nevertheless, contrary to findings from prior studies (cf. Eisenhardt & Martin 2000; Teece *et al.* 1997), this paper argues that no single firm function is an illustration of dynamic capabilities. However, the presence of microfoundations that support market sensing may yield a series of temporary competitive advantages, but only if managerial reconfiguration capabilities are present. In the absence of relevant managerial

reconfiguration capabilities, a bias towards R&D capabilities pushes firms to follow the leaders. From this it follows, in line with Teece (2007), that the nature of competitive advantage results from how the firm management exploits and manages R&D and marketing resources and capabilities to sense opportunities and threats, not from resource allocation between functions per se.

Managers making resource allocation related decisions in their organizations should note that the value of any of the firm's key capabilities in isolation is very low. The findings indicate that firms in which managers make balanced investments between R&D and marketing are more likely to be able to sustain their competitive advantages. Unbalanced investments might result in a more temporary competitive advantage. In the worst case, investments in R&D at the expense of marketing and management capabilities might even jeopardize a firm's existence.

The results of paper II illustrate that SME management has to make difficult trade-off decisions when expanding the business into international markets. Yet these choices may have far-reaching consequences, as some resource allocations may provide a firm with the ability to execute its own product map based strategy while other allocations may push firms to adapt to the competition. Hence, these results provide a partial answer to the research question.

### **4.3 Top management team and SME foreign market expansion (Paper III)**

Paper I and II show that an internationalizing firm needs a bundle of specific capabilities, and the resource allocation between these capabilities dictates the nature of the resulting competitive advantage. Paper III turns attention to the top management teams and the actual management aspects.

SMEs, especially when initiating their foreign entry, are highly vulnerable to protracted rivalry (Markman & Waldron 2014). Such SMEs often lack those key resources and capabilities that are among the main antecedents for internationalization (Zachary *et al.* 2015). Prior studies show that the longer an entrant survives, the better are the odds in gaining and developing those skills and capabilities that are required for operating in foreign countries (Thornhill & Amit 2003). To hang tough in fierce international competition, an entrant needs some advantage to compete against local competitors. The recent literature on the dynamic capabilities perspective commonly agrees that competitive advantage results from firms' higher order managerial skills to develop, allocate, and orchestrate a firm's resources and capabilities (Helfat & Martin 2014; Teece 2007).

In a foreign entry, resource investments and subsequent allocations depend partly on available resources, but also partly on the top management team's (TMT) dynamic managerial capabilities (Sirmon & Hitt 2009).

Scholars commonly agree that the sensing and shaping of opportunities, when there is close cooperation between sales & marketing and R&D, support firms' competitive advantage (Menguc & Barker 2005; Kozlenkova *et al.* 2014). Furthermore, competition in the international arena calls for managerial reconfiguration capacities and specific collective managerial skills, as foreign expansion often entails irreversible resource commitments (Schreyögg & Kliesch-Eberl). The emerging management literature suggests that microfoundations of such reconfiguration capacities stem from firm processes, systems, decision rules, and structures (Teece 2007). Yet not surprisingly, scholars are asking for more empirical studies focusing on underlying managerial capabilities (Adner & Helfat 2003; Helfat & Martin 2014; Martin 2011).

Whereas the boards of firms often include outsiders (Rivas 2012) for monitoring and guidance (Fama & Jensen 1983; Forbes & Milliken 1999), TMTs are responsible for executing firm strategies and allocating firm resources (Hutzschenreuter & Horstkotte 2013). Executives in the TMT all have different backgrounds. Scholars suggest that the resulting heterogeneity between TMT members leads to heterogeneity between firms' performance (Eisenhardt 2013; Francioni *et al.* 2015; Segaro *et al.* 2014). At the same time, research on managerial capabilities assumes that executives in TMTs share their premises, beliefs, and assumptions, which in turn has a positive impact on firm performance (Kor & Mesko 2013; Lampel & Shamsie 2000; Prahalad & Bettis 1986; Teece 2007). However, Helfat and Peteraf (2015) argue that this literature is still lacking knowledge in cases in which the reality is opposite, that is, in cases in which TMT members do not share their views. To fill in this gap, the aim of this study is to explore how the dynamic managerial capabilities' microfoundations, particularly the TMTs' shared or diverse understanding, emerge in SME performance at the time of international expansion.

To analyze the binary survey data in this paper, this study adopts Qualitative Comparative Analysis (QCA) to explore whether a TMT's common understanding (or lack of common understanding) relates to a firm's international expansion. QCA indicates underlying cross-case patterns, and it groups case firms based on the diversity and the heterogeneity within the TMTs. The findings from the QCA analysis indicate that along with internationalization, the relative importance of the underlying capacities varies. The firms that score high in terms of sensing have

foreign customers, repeated sales to their current foreign customers, and several long-term international customer agreements. These results also indicate that the initiation of international expansion requires sensing capacities and especially sales & marketing resources. When the foreign market commitment increases, stabilization in new markets begins to call for simultaneous, high-level TMT agreement. The results also suggest that substantial investments in foreign countries require high seizing and high reconfiguration capacities. Yet, different capacities and their underlying microfoundations respectively, contribute to different phases of SMEs' international expansion.

The findings in this paper contribute to the dynamic capabilities literature, and yet, quite surprisingly, the results from the QCA indicate that clear consensus among TMT executives is needed only at the time when a firm is making its initial substantial foreign market commitment. The results also reveal a group of firms that are lacking a TMT agreement, have initiated their internationalization, have an internationalization strategy, but have not succeeded in repeating sales to their existing foreign customers and do not have long-term international contracts. Most probably, these are rapidly internationalizing firms.

In sum, results from the study show that dynamic capabilities' microfoundations originate from managerial and functional capabilities. In this respect, the findings point out that the sensing of opportunities and threats is an elementary managerial capacity in international expansion, while TMT agreement plays a minor role until firms face substantial financial decisions. Hence, the findings provide a partial answer to the research question.

#### **4.4 Microfoundations of Dynamic Capabilities in Cross-border M&As – Alignment within and between Merging Firms (Paper IV)**

The final paper continues research on function-level microfoundations, but in the context of cross-border mergers and acquisitions. A cross-border merger is an event in which dynamic managerial capabilities to reconfigure SMEs asset bases culminate. Yet dynamic capabilities' function-specific microfoundations show their true colors when merging SMEs are integrating their functional activities.

Mergers and acquisitions, especially cross-border M&As among SMEs, are good examples of such rapidly changing occasions that, in order to succeed, require dynamic capabilities (Teece 2014; Zahra *et al.* 2006). Prior studies suggest that post-merger integration is most prominent in the merging firms' R&D and sales &

marketing function (Sinkovics *et al.* 2014). In M&As, functional resource relatedness is supposed to lower costs, as merging firms are able to share at least some of their functional resources. In addition, at the same time, resource complementarity, that is, mutually supportive differences within and between merging firms, might open up new possibilities (Bauer & Matzler 2014; Kim & Finkelstein 2009). Despite scholars' agreement that merging firms' key functions are not independent and should not be studied in isolation (Tanriverdi & Venkatraman 2005), existing studies, particularly in the cross-border M&A context, do not explain how the merging firms' functions interact (Sinkovics *et al.* 2014; Szücs 2013). In addition, scholars are asking for more studies focusing on microfoundations' role in M&A deals (Paruchuri & Eisenman 2012).

Reconfiguration of the two merging firms' resources and capabilities is, by definition, an illustration of a dynamic capability (Junni *et al.* 2015). This study focuses on capabilities, dynamic capabilities, and their microfoundations at the time of a cross-border M&A deal. As suggested earlier by Felin and Foss (2009) and Teece (2007), microfoundations emerge in distinct skills, processes, and organizational structures. To gain synergy, merging firms most often adjust and reorganize their key processes. As a result, a merger changes not only the functional capacities to sense and seize opportunities but also managerial reconfiguration routines. Thus, a merger impacts not only the firms' key functions, but also the structures, processes, routines, and skills behind these functions. This study aims at explaining how function-level microfoundations enhance the acquiring firm's dynamic capabilities and prevent their dilution. The focus is on R&D and marketing, as mergers have imminent consequences for these functions (Angwin *et al.* 2015).

This study employs a qualitative, multiple-case study method to explore the integration of function-level microfoundations in R&D and marketing. Longitudinal data were gathered from two cross-border merger cases. In the first case, a Finnish SME acquired an US SME, and in the second case, an US SME acquired a Finnish SME. The primary data were collected from personal notes, emails, due diligence reports, integration group memos, and firm-internal strategy documents. One of the authors was a member of the acquiring firm's management board in the first case; another author was the head of the post-merger integration process in the second case. Multiple sources of secondary data, including firms' annual reports and Internet pages, were also used. The resulting triangulated primary data provide the research with rich insight into these two M&A deals.

This paper focuses on how the function-specific microfoundations affect the outcomes of cross-border mergers. In this study, specific attention is paid to



function-specific and cross-functional processes, routines, skills, and organizational structures (Felin *et al.* 2015; Foss 2011; Teece 2007) during the pre-merger and post-merger phases.

In both cases, a bit surprisingly and against some earlier findings (Di Minin & Bianchi 2011; Patel & Pavitt 1991; Pavitt 2002), both R&D and marketing function adapt to Finnish processes and routines. At first glance, it appears that in both of the cross-border merger cases, firms do not have overlapping products, and therefore should have been able to share their functional resources to lower the overall costs (cf. Davis & Thomas 1993). However, a closer study on the microfoundational level reveals that in both merger cases, the firms follow very different processes and employ different routines, which in turn dilutes the benefits that are gained from synergies.

The results of the study contribute to the dynamic capabilities literature and show that an assessment of benefits from cross-border mergers calls not just for understanding whether there are synergies between the merging firms' processes. In fact, the benefits are more likely related to synergies between the underlying microfoundations that emerge in the firms' key functions. Two M&A deals show that a poor understanding of both function-specific and cross-functional processes, routines, structures, and skills leads to difficulties in the post-merger integration phase.

Firm managers need to pay close attention to the merging firms' functional processes, routines, structures, and skills. Moreover, managers would benefit from focusing on cross-functional complementarities in order to evaluate if and how a merger supports cooperation between the firms' R&D and marketing functions.

The results of this research paper indicate that the management of functional capabilities requires not only explaining the underlying microfoundations, but also an insight on the capabilities' functional relatedness and complementarity. A merger and consequent shift of firm boundaries is a manifestation of dynamic managerial capabilities. By doing this, Paper IV provides a partial answer to the research question.



## **5 Discussion and conclusions**

This chapter discusses the findings of the four research papers. This thesis focuses on small and medium-size firms that are expanding into international markets. Growth in international markets calls for a range of specific resources that these firms rarely possess. This study makes an attempt to explain how firm management facing such a challenge allocates the firm's scarce resources and how this resource allocation results in international expansion.

The following summary of the results answers the research questions. After discussing the theoretical contribution and managerial implications, this chapter evaluates the study and the limitations of this research. The chapter ends with suggestions for future research.

### **5.1 Summary of the results**

The main research question of this study is, "How do firms with a limited resource endowment simultaneously manage their functional resources and capabilities when executing an international expansion strategy?" The main research question is addressed through answering the three sub-questions.

#### ***5.1.1 Relative importance of key capabilities***

Research papers I and II focus on SMEs' functional capabilities and provide an answer to the first sub-question, "How does the relative importance of key capabilities change as international expansion proceed?" These two papers focus on exploring how resource allocation changes as international expansion progresses.

The findings suggest that an internationalizing SME needs a specific set of marketing, sales, and R&D capabilities that are coupled with a firm's international orientation. The relative importance of the capabilities in this capability portfolio depends on the level of available financial resources. Moreover, there is a relationship between resource allocation and the nature of a firm's competitive advantage. None of the key capabilities are able to provide a firm with sustainable competitive advantage in isolation, that is, without the presence of other key capabilities.

The results also indicate that firms with limited financial resources are not able to simultaneously invest in developing multiple capabilities. Hence, the firm

management has to make trade-offs and optimize operations with those resources they have at hand. The findings add to the existing knowledge and suggests that there is a pattern in how investments in the key capabilities vary as international expansion proceeds. Yet firms with only domestic operations invest mainly in R&D capabilities in order to develop and enhance their competitive advantage. Sales and marketing capabilities in these firms do not benefit from financial resources until the international expansion takes place. From then on, firms that have already initiated their internationalization but are still in their infancy in international expansion begin to develop their international capabilities, but only if the level of financial resources increases at the same time. In other words, the findings show that even if the relative importance of R&D decreases, in terms of the received share of SME funding, the absolute amount of investments in developing R&D capabilities stays approximately on the same level. Finally, firms that are already operating either in multiple countries or show more advanced modes of international operations begin reallocating their resources and capabilities to all key capabilities—international operations, R&D, marketing, and sales. Hence, a constant flow of financial resources are available for developing R&D capabilities throughout internationalization, but R&D's relative importance diminishes as international commitments increase.

In sum, the two research papers provide an answer to the first sub-question and yet proposes that no universal capability portfolio supports international expansion as such. An internationalizing SME needs a set of key capabilities in which the relative importance depends on the level financial resources and varies along with international expansion. Such capability reallocation during international expansion is a manifestation of higher-order capabilities. From this it follows that resource allocation between firm functions per se is not sufficient, as these investments must result in dynamic capabilities in order to yield competitive advantage. These findings add to the existing knowledge, as they bridge the gap between separate discussions and moreover indicate the R&D function's dominating role throughout the SMEs' internationalization process.

### ***5.1.2 Key capabilities' functional microfoundations***

Research papers II, III, and IV go beyond functional capabilities and focus on dynamic capabilities' microfoundations that emerge from a firms' key functions. By doing this, these research papers seek an answer to the second sub-question,

“How do key capabilities emerge in a firm’s functions?” These papers also examine the possible causality between resource allocation and competitive advantage.

The results from these studies suggest that microfoundations of dynamic capabilities to screen, interpret, and filter market and technological information are likely to be found both in the marketing and R&D functions. Yet selecting the most promising opportunities is dependent on the available resources and also on managerial skills to align strategies and business models. Managers in SMEs have different options to allocate firms’ available resources to develop different functional capabilities, and subsequently their microfoundations. The findings indicate that there is a relationship between resource allocation and the nature of the competitive advantage, hence different allocation decisions lead to different types of competitive advantages.

The results show that the nature of the resulting competitive advantage, whether it is sustainable or temporary, depends on the capabilities’ microfoundations rather than on the functional resources. In other words, the resulting competitive advantage depends on the firm’s function-specific processes to grasp market and technological information, and more importantly, whether a firm has adequate managerial capabilities to transform this information into a competitive advantage. The results add to the existing knowledge and suggest that those firms that (1) have necessary marketing capabilities to identify latent market needs, (2) have necessary R&D capabilities to anticipate emerging technological trends, and (3) have relevant managerial capabilities to reconfigure asset bases, are able to create Schumpeterian market disruptions and consequently execute their own, strategy based product/service road-maps. Other firms need to adapt to the competition. From this it follows that the extent to which firms are able to create or respond to exogenous shocks does not depend on the resource allocation per se, but rather on investments in the functional microfoundations of dynamic capabilities. Thus, investments in R&D and marketing are necessary but not a sufficient condition for building dynamic capabilities.

In terms of international expansion, the results suggest that the relative importance of the underlying microfoundations of dynamic capabilities, and thus the relative importance of functional capabilities, varies according to specific patterns. Strong market sensing capabilities that emerge especially in the marketing function are decisive and have a positive relationship with successful international expansion. Further growth and subsequent resource allocation decisions in a new foreign market also requires simultaneous, high levels of agreement among the executives in the top management teams. However, when international expansion

calls for substantial investments, the firm management needs to have strong seizing and reconfiguration capabilities as well as sufficient resource and capability endowments.

In sum, the results suggest that an understanding of how the microfoundations of dynamic capabilities emerge in firm functions is highly important when a firm expands into foreign markets. The assessment of these microfoundations becomes even more crucial if a firm's growth in international markets involves mergers and acquisitions. In such event, functional synergies may not be capitalized if the firm management is not able to assess and align the underlying microfoundations, that is, the underlying function-specific and cross-functional processes, structures, and routines.

### ***5.1.3 Managerial capabilities' impact on key capabilities and their microfoundations***

Research papers II, III, and IV have a specific focus on dynamic capabilities' microfoundations, and thus also on SMEs' managerial capabilities. In particular, research paper III pays specific attention to firms' top management teams, and moreover to dynamic managerial capabilities, and by doing this, provides an answer to the third sub-question, "How managerial capabilities impact on the relative importance of key capabilities and their microfoundations as international expansion proceeds?"

As discussed above, the firm management reallocates the firm's key capabilities as international expansion proceeds, and yet such managerial ability to reconfigure resources and capabilities is a manifestation of dynamic capabilities (Teece *et al.* 1997). Allocation decisions in SMEs are bounded by limited resources, particularly by limited financial resources. The findings from research papers II and III confirm the results in paper I and indicate that before an initial international expansion, R&D benefits the most from available financial resources. SMEs that are able develop at least sufficient market sensing capabilities may use strong R&D capabilities to enhance their competitive advantage, whereas for SMEs that are lacking such sensing skills, bias in financing R&D has a negative impact on performance. The results show that at the point of initial internationalization, firm management is shifting the resources both to international operations and to marketing. The findings also suggest that the nature of competitive advantage depends on the managerial reconfiguration capabilities, that is, on management's skills in exploiting available information and making wise resource allocations,

which in turn provide an SME with a competitive advantage. Yet, the development of competitive advantage requires investments in different functions but does not capitalize without dynamic managerial capabilities. The results further suggest that managerial capabilities are indispensable for SMEs to build competitive advantages and internationalize. However, the disagreement between executives in the top management team does not prevent SMEs from successfully initiating international operations. However, the findings indicate that unanimity among top management team (TMT) executives becomes important when international expansion is stabilizing and begins to call for market commitment.

The results also suggest that the extent to which companies are able to execute their own strategies depends on the SMEs' managerial capabilities. Firms that are able to follow their own, strategy-driven product/service road-maps have both marketing and R&D capabilities that provide management with necessary information. Nevertheless, managerial capabilities in these firms enable and support the reconfiguration of asset bases. Thus, the findings show that function-specific microfoundations are needed but they require simultaneous managerial skills, processes, and routines to yield the desired advantages. Hence, managerial reconfiguration capabilities are a necessary but not sufficient condition for a firm to execute its own strategy. The absence of managerial reconfiguration capabilities pushes a firm to follow the leaders. The findings from paper III show that for an internationalizing SME, a common understanding among top management team members can replace missing market sensing skills, thus managerial reconfiguration capabilities can on some occasions even replace marketing capabilities.

To conclude, the prior management literature shows that dynamic managerial capabilities' microfoundations stem from executive's individual abilities and capabilities. But since people are different, managerial decisions differ, and therefore heterogeneous managerial decisions lead to performance heterogeneity between firms (Helfat & Martin 2014). The results from papers II, III, and IV add to the existing knowledge and suggest that dynamic managerial capabilities are needed to collect, analyze, and refine information provided by marketing and R&D. In this process, agreement among the TMT members is less important. In fact, the Results revealed a group of rapidly internationalizing firms that are lacking this agreement. Dynamic managerial capabilities materialize not in the resource allocation of functional resources but in the investments in such functional capabilities that support the emergence of these functional capabilities' microfoundations. A merger, in particular, is an event that illustrates that absence

of managerial co-alignment, realignment, and redeployment skills jeopardizes the benefits from expected and potential synergies.

#### ***5.1.4 Simultaneous management of functional resources and capabilities***

Each of the four research papers provides answers to the sub-questions and thus a partial answer to the main research question: “How do firms with a limited resource endowment simultaneously manage their functional resources and capabilities when executing an international expansion strategy?”

The results in this study suggests that an international expansion strategy requires a specific set of resources and capabilities—a capability portfolio. The relative importance of capabilities in this portfolio varies as internationalization proceeds, and therefore no universal capability portfolio would support international expansion as such. International expansion for SMEs is challenging since these firms have a limited endowment of resources, and in particular, the level of financial resources is a boundary condition for internationalization. For this reason, these SMEs start with investing in R&D capabilities and reallocate their resources towards marketing and international operations, but not until the initial internationalization takes place. Financial resources, however, are available for developing R&D capabilities throughout internationalization. Yet, the shift in resource allocation is an illustration of managerial reconfiguration capabilities.

The findings also show that the above resource reallocation between firm key functions does not contribute to the nature of the firm’s competitive advantage per se. However, if both marketing and R&D possess such skills, processes, and routines that enable these functions to screen, identify, and filter opportunities in the business environment, such reallocation may result in dynamic capabilities. Yet, the resulting nature of the advantage, that is, the possibility to create market destructions or the need to adapt to changes in the environment, depends on whether a firm possesses simultaneous, adequate managerial capabilities to transform market information into a competitive advantage. Hence, an SME’s ability to create exogenous shocks and lead the markets does not depend on the resource allocation per se but on the underlying functional microfoundations of dynamic capabilities. It must be noted here that dynamic reconfiguration capabilities is not a synonymous with top management team consensus. Common agreement among the team might substitute some missing capabilities for an internationalizing SME, but otherwise it is not required until international



expansion reaches the point where a firm needs to commit to longer-term foreign contracts.

Microfoundations of functional capabilities emerge in key functions and in managerial capabilities. Findings indicate the importance of allocating sufficient resources in marketing function to support and develop underlying capacities to sense and identify latent and expressed market needs. Dynamic capabilities' microfoundations, particularly in the marketing function, coupled with adequate managerial capabilities, strongly support SMEs in their international expansion.

To conclude, SMEs' size and limited resource endowment make them very different from large, established firms. Large firms have sufficient resources but they are often such diverse organizations in which functions may improve the firm's performance through independent decisions, and yet local optimizations may yield the global optimum. The results of this thesis indicate that in an SME, no function, regardless of the level of function-specific capabilities, can individually make such decisions that would benefit the whole firm. Hence, in an SME, top management makes all strategic asset reconfiguration decisions. The challenge for an SME is that in order to succeed, a firm's top management needs to have strong dynamic managerial capabilities.

## **5.2 Theoretical contribution**

This thesis builds on the resource-based view of the firm and the dynamic capabilities perspective. The findings in this research contribute to these theories in the following ways.

First, the results gather closer together prior, scattered results on how internationalizing SMEs allocate their limited resources between key firm functions. Management scholars note, mainly in separate discussions, that SMEs with limited financial resources (Cavusgil 1984; Freeman *et al.* 2006; Jane Hewerdine *et al.* 2014; Katsikeas *et al.* 2000; Knight & Kim 2009; Welch & Luostarinen 1988) do not have the luxury to invest simultaneously in developing the highly specific capabilities (Amit & Schoemaker 1993; Barney & Hesterly 2012; Fain & Wagner 2014; Grant 1991; Griffin & Hauser 1996) needed in domestic (Lecerf 2012) and foreign operations (Baker & Nelson 2005; Kumar 2009). Paper I contributes to the resource-based view literature by bridging the various findings, particularly those related to limited financial resources, and reveals the existence of distinct multiple realities. SMEs that expand into international markets need a specific capability portfolio, in which the relative

importance of capabilities varies depending on the phase of the expansion and available financial resources. Yet, in SMEs' internationalization process, investments in R&D do not decrease; increasing sales or other sources of funding initiates the management to invest in international operations and marketing.

Secondly, the results in paper II contribute to the resource-based view and the dynamic capability literature by connecting the relationship between the nature of the competitive advantage with functional capabilities and their underlying microfoundations. Hence, the results also respond to prior calls (Knight & Kim 2009; Regnér & Zander 2014) to focus more on the functions' roles to unbundle the competences and resources that characterize successful international expansion. The prior literature shows that capabilities are highly function-specific (Amit & Schoemaker 1993; Autio *et al.* 2011; Barney & Hesterly 2012; Grant 1991; Helfat & Peteraf 2003; Katkalo *et al.* 2010), and yet capabilities are difficult transfer between functions (Fain & Wagner 2014; Kumar 2009; Lecerf 2012). Thus, a firm's management needs specific abilities to orchestrate these sticky, function-specific capabilities in order to preserve and improve the firm's competitive advantage (Eisenhardt & Martin 2000; Helfat *et al.* 2009; Sapienza *et al.* 2006; Teece & Pisano 1994; Teece *et al.* 1997; Winter 2003) or to introduce new innovations in the markets that other firms have to adapt to (Sapienza *et al.* 2006; Teece *et al.* 1997; Winter 2003). Particularly for an internationalizing SME, the allocation of limited resources between different functions is a managerial challenge which illustrates dynamic managerial capabilities (Brown & Eisenhardt 1995; Fain & Wagner 2014; Haverila 2013; Hughes *et al.* 2010; Katkalo *et al.* 2010; Menguc & Auh 2006; Teece 2007;). Contemporary literature suggests that microfoundations of capabilities emerge in functional skills, processes, procedures, organizational structures, decision rules, and disciplines (Felin, Foss & Ployhart 2015; Felin & Powell 2016; Foss 2011; Teece 2007). And in a similar vein, microfoundations of dynamic managerial capabilities originate from an executive's individual abilities and capabilities (Adner & Helfat 2003; Augier & Teece 2009; Helfat & Martin 2014; Teece 2007).

The findings from paper II contribute to the prior literature and show that for internationalizing SMEs, the nature of competitive advantage depends on the concurrent dynamics within managerial, marketing, and R&D capabilities. These findings are contrary to the early dynamic capabilities literature (cf. Eisenhardt & Martin 2000; Teece *et al.* 1997). The results indicate that no single function in an SME can be used as an illustration of dynamic capabilities. Hence, the results of this thesis suggests that in the context of SMEs, operationalization by using simple

functional outcomes, such as the number of patents, do not approximate a firm's dynamic capabilities.

Furthermore, the findings from papers II and III suggest that for internationalizing SMEs, the relative value of the function-specific microfoundations is not equal. Those microfoundations that support market sensing seems to be more important than those that support tapping into emerging technologies. In particular, the results contribute to the literature on the dynamic capabilities perspective by indicating that firms that possess relevant managerial reconfiguration capabilities, coupled with adequate microfoundations of sensing in both the marketing and R&D functions, are the ones that might be able to create Schumpeterian-kind-of market destructions and thus execute their own strategy-based road-maps. Hence, in the context of internationalizing SMEs, none of the functional microfoundations in isolation is able to yield such firm-level dynamic capabilities that provide a firm with sustainable competitive advantage.

Third, and also a bit surprisingly, high levels of agreement among top management team executives is needed only at the time the internationalizing SME is making its initial substantial foreign market commitment. The results contribute to the top management team and dynamic managerial capability literature, as prior studies generally do not consider how the dynamics between individual executives change as firms mature. The results in this thesis indicate that the SME internationalization process is an illustration of such process during which the requirements for decision-making change. In addition, as international expansion proceeds, the results from paper III indicate that the relative importance of managerial capabilities shifts from sensing towards seizing and reconfiguration.

Fourth, the current literature indicates that mergers and acquisitions might provide an SME with an opportunity to deviate from path-dependency and gain, in particular, such R&D resources and capabilities that would not be otherwise available (Anand & Delios 2002; Bertrand & Zuniga 2006; Helfat *et al.* 2009; Makadok 2001; Paruchuri & Eisenman 2012; Szücs 2013). The findings from paper IV add to existing knowledge on the role of dynamic capabilities' microfoundations in the event of a SME's cross-border merger. The results suggests that when estimating the possible benefits of a merger, managerial focus should be on the interaction of merging SMEs' functional microfoundations rather than on resources and capabilities per se. These results contribute to the dynamic capability literature by showing that in a cross-border merger between two SMEs, benefits from external relatedness disappear, unless the underlying functional and particularly the cross-functional microfoundations cannot be effectively aligned.

Fifth, two papers in this research employ methods to handle small samples of binary data, and by doing this they make an attempt to respond to Hurmerinta-Peltomäki and Nummela's (2006) and Woodside's (2014) call for more innovative data gathering and methodological methods. The primary binary data in research papers I, II, and III are collected using a questionnaire in which only a "yes" or "no" answer is possible; hence, these papers challenge traditional data collecting methods such as the Likert scale. The results show that even a small data sample can be used to reveal latent classes relating to multiple realities, and thus heterogeneous data.

In sum, the results from this study suggest that research in the resource-based view and the dynamic capability literature which particularly focuses on the internationalizing SME with limited financial resources, benefits from both holistic analyses that simultaneously cover several firm functions and from the decomposition of aggregate phenomena into their microfoundations. The findings contribute to the existing RBV literature by linking separate streams of discussions. And the findings show that as SMEs' international expansion proceeds, the relative composition of needed capabilities varies. In this process, SMEs tend to be strongly biased in favor of investing in their R&D capabilities. Such emphasis may enhance or hinder further expansion, depending on the firm's dynamic capabilities and their microfoundations. The results also contribute to the dynamic capability literature and suggest that the relative value of the dynamic capabilities' microfoundations is not equal, and yet their different combinations result in the different natures of competitive advantage. Furthermore, the findings show that without dynamic managerial capabilities, internationalizing SMEs become market followers, and strong dynamic managerial capabilities may even replace the lack of some other capabilities.

To conclude, the results from cross-border mergers highlight that seemingly trivial functional capabilities' microfoundations have a pivotal role, and therefore success of post-merger integration seems to be closely related to them. When two SMEs merge, the managerial task is not only to align two firms' functions but to align the underlying, complex cross-functional relationships in processes, routines, and organizational structure.

### **5.3 Managerial implications**

Managers in internationalizing small and medium-size enterprises often face situations in which they need to choose which firm functions and activities to invest

in. These firms have limited resources, and for this reason managers have to make trade-offs, allocating resources to one function at the expense of the others. The results show that until the point on initial international expansion, firms focus on product-related competitive advantages, and for this reason they allocate their scarce resources mainly to R&D. As the level of available financial resources increases and international expansion proceeds, international operations and sales & marketing also begin to receive resources.

The findings in the research indicate that activities in any of the firm functions, in isolation, can hardly provide a sustainable competitive advantage. This means that first, even small investments in the sales & marketing function before entering the foreign markets support both R&D and the firm management in building competitive advantages. Moreover, the neglect of marketing may even risk the existence of a firm. The late appearance of marketing and sales capabilities also indicate that sales and marketing skills and knowledge evolve gradually; hiring of new professionals does not capitalize immediately.

Second, the conventional conception of the roles of firm functions enforces only operational capabilities. Investment in functional resources per se does not enhance a firm's competitive advantage; any resource allocation decision must result in improving dynamic, not just operational, capabilities. This said, resource reallocation and reconfiguration not only means employing persons in functions, but also providing functions with prerequisites to screen, identify, and filter opportunities and threats, and moreover to transfer acquired knowledge to competitive products and services. This means that marketing as a function has two equally important mandates – providing products to the customers and providing management with customer information. In a similar manner, R&D is also a two-way street. The R&D function is responsible for product creation and also for providing management with information about emergent technologies. This often also calls for a reconfiguration of existing systems, processes, and routines. Hence, resource reallocation requires managerial skills to renew organizational structures.

Third, the results show that the relative importance of needed capabilities varies as internationalization proceeds, and no universal capability portfolio is suitable throughout the international expansion. Managers should be alert to these dynamics and be sensitive about reallocating available resources for developing and employing relevant capabilities. Asset reconfiguration is probably more frequent and more radical when expanding in international markets compared to management's experiences on the domestic markets. Thus, internationalization calls for additional and specific skills in the top management team.

Finally, all of the above notions culminate in managerial skills. The nature of the competitive advantage and the firm's subsequent ability to lead the markets depend to a large degree on dynamic managerial capabilities. On the one hand, top management needs to understand the underlying functional skills, systems, processes, and routines to make prudent asset reconfigurations decisions, and on the other hand, it needs managerial skills to transform available information into new business models, structures, perhaps new firm boundaries. Those firms that want to execute their own, strategy-based road maps need not only dynamic managerial capabilities but also strong simultaneous marketing and R&D capabilities. A merger, as the results show, is a good illustration of such an event where the managerial dynamic capabilities make the deal a success; or in the opposite case, the lack of these capabilities dilutes the possible benefits.

In sum, SME owners and boards should also be alert. The results in this thesis show that for an internationalizing SME, the need for different capabilities, including managerial capabilities, changes as international expansion proceeds. Boards need to be able to also align firms' top management teams, that is, to replace and hire executives with relevant and suitable skills as firms expand into international markets.

#### **5.4 Evaluation of the study**

The purpose of this study is to explore how management in internationalizing small and medium-size firms allocate their limited resources between key functions, in particular, between marketing and R&D. The results of this study are collected from four research papers, and the thesis should be evaluated against how research meets the objectives. Papers I and III use a quantitative method and papers II and IV use a qualitative method. Each paper provides a partial explanation, but an answer to the research question requires that the results from these papers are considered. Thus, the findings of this thesis are the result of a mixed method research strategy (Eisenhardt 1989b; Hurmerinta-Peltomäki & Nummela 2006; Yin 1994).

Qualitative studies lack a consensus for evaluating their quality (Creswell 1994). Eisenhardt (1989b) notes that even if there are no universal guidelines on how to evaluate theory-building case studies, the researcher should provide such evidence so that readers can assess whether the constructs support the theory. Similarly as in the qualitative studies, the quality of the research in the mixed method strategy is often assessed using the criteria of validity, reliability, and generalizability (Sullivan 2012; Venkatesh, Brown & Bala 2013), that is, focusing

on the accuracy in how conclusions are derived and the extent to which the results are generalizable.

Construct validity in multiple-case study research refers to case selection, appropriate operational measures, and how evidence is drawn from the data (Gibbert, Ruigrok & Wicki 2008; Tashakkori & Teddlie 2003; Yin 1994). Firms in paper II represent Finnish high technology SMEs that are in different phases of their international expansion and possess limited amount of resources. All of these case firms have been participating in separate projects in which external consultants were assisting these firms in their internationalization. Such investments reflect a high level of commitment. Quantitative data from these projects, personal e-mails, and additional publicly available data from firms' Internet pages were used to triangulate the primary interview data. In paper IV, the two selected merger deals were selected so that both cases involved an internationalizing Finnish high technology SME. As a result, evidence in papers II and IV explain from different perspectives how these firms allocate their functional resources and capabilities as internationalization proceeds. The resulting triangulated primary qualitative data provide a more holistic insight and explanation of the phenomenon (Creswell & Miller 2000; Eisenhardt 1989b).

Internal validity in a multiple-case study research method refers to the causal relationship between measures and results, that is, how a researcher argues the logical reasoning to reach conclusions (Creswell 1994; Gibbert *et al.* 2008; Yin 1994). Both qualitative research papers aim at explaining how microfoundations of functional capabilities result in international expansion. Studies start familiarizing with cases (within-case analysis), and proceed to identifying cross-case patterns and consequent explanations (Creswell 1994; Eisenhardt 1989b; Yin 1994). In this thesis, in order to enhance the internal validity during the research process, primary data are triangulated, findings are presented so that they imply coherence and systematic relatedness, areas of uncertainty are identified, negative evidence is sought, and rival explanations are considered (Miles, Huberman & Saldana 2013).

Evaluation of external validity of the results refers to what extent the results from multiple-case studies can be generalized (Yin 1994). Particularly in multiple-case studies, the number of cases is likely never to be large enough to qualify for the use of statistical inference (Easton 2010). When assessing the external validity of the results, that is, whether the results are transferable in a wider context, it must be acknowledged that all case firms in the two qualitative multiple-case studies are Finnish internationalizing high-technology SMEs. Thus, as Eisenhardt (1989b) points out, the generalizability of the results is mainly limited to similar contexts.

To enhance external validity, relevant characteristics of the research is described, limitations of the sample selection are reported, findings are illustrated from various perspectives, the findings are connected to the prior theory, and reporting acknowledges the settings in which conclusions are applicable (Miles *et al.* 2013). However, the mixed method research strategy in this thesis extends the generalizability of some of the key findings to some extent. The case studies' key findings about function-specific capabilities and their emergence in functional microfoundations were triangulated using quantitative data, and the overall contributions demonstrate the convergence in the results (Creswell 1994).

Reliability in qualitative studies refers to errors and biases, and thus to the extent to which results are replicable if another researcher were to repeat the study (Creswell 1994; Sullivan 2012; Yin 1994). This thesis consistently focuses on the relationship between managerial skills and functional capabilities; and in doing this, it has drawn the theoretical grounds from the resource-based view and the dynamic capabilities perspective. To increase reliability, in line with Yin (1994), all operational steps throughout the data collection and analyses are documented and described.

## **5.5 Limitations and suggestions for future research**

As with all research, this study also has its limitations. The main limitation of this thesis is related to data, and hence to the generalizability of the results. The data in this study were gathered from internationalizing Finnish SMEs. Furthermore, the results from paper II and IV are derived from SMEs in high technology sectors. Thus, the results might be context-sensitive.

Also, the data collection method using binary statements is unconventional, data are not gathered using well-known or validated measures or scales, and still deserve further theoretical discussion. Furthermore, the firms represent to a large extent high-technology industries. The data are consistent and provide an explanation of how management allocates scarce resources between marketing and R&D in such firms. At the same time, the downside is that Finland is a small open economy which is starting to recover from a prolonged economic crisis, and thus making the business environment for internationalizing SMEs quite specific. In the future, this study should be extended to cover a wider range of countries in order to compare the findings with data from other countries.

The results in this thesis do not show how capabilities develop, but rather how firms in different situations allocate their scarce resources. Hence, cross-sectional



data cannot provide strong conclusions about causal relationships between the constructs. More longitudinal studies, particularly on microfoundations, would be helpful to explain how capabilities and their underlying microfoundations develop.

The results in this thesis indicate that resource allocation varies between SMEs' key functions as internationalization proceeds. In these processes, R&D tends to overshadow marketing and sales. Investments in R&D seem not to decrease at the time SMEs initiate their international expansion and start to increase investments in international operations and marketing. These findings indicate that the level of overall available financial resources is increased. Further research is needed to explain where internationalizing SMEs receive such funding, whether it is the result of increased sales revenues or comes from external sources. Furthermore, research is also needed to explore if and how the different sources of funding influence the subsequent success in international markets.

Furthermore, the findings from the multiple-case studies indicate underlying conditions for firms to execute their own, strategy-based road maps. Also in this setting, extrapolation of these findings would benefit from triangulation with quantitative methods, and thus such a setting would provide an interesting avenue for further research.

Paper III also focuses on the unanimity at the top management team level. The current literature indicates that firm boards also begin to be more actively involved in strategy-making and in firms' operational decisions (Oehmichen, Heyden, Georgakakis & Volberda 2017). For this reason, future research would benefit from the extending analysis of unanimity to the firm board level. Additionally, this research paper does not consider opportunistic behavior of individual executives. In a similar vein, as Argyres (2011) and Argyres, Felin, Foss and Zenger (2012) note, further research on top management teams could benefit from combining agency theory perspectives from organizational economics.

The two merger deals revealed the importance of function-specific capabilities and their underlying microfoundations. Even a retrospective analysis is able to demonstrate the magnitude and versatile nature of the data that can be revealed in using qualitative methods in cross-border mergers. As in the above cases, more comparative studies would be required to generalize findings. In particular, longitudinal multiple-case studies would add to existing knowledge, both in the dynamic capability literature and the M&A literature.

To summarize, this thesis provides an insight on how managers in internationalizing SMEs allocate very limited resources to such activities that enable these firms to expand into international markets. In spite of resource

limitations, many SMEs succeed in their international endeavors, but too many fail. This study hopefully provides some tools to better understand how failures could be avoided and competitive advantages improved for more efficient internationalization.

## References

- Adner, R., & Helfat, C. E. (2003). Corporate effects and dynamic managerial capabilities. *Strategic Management Journal*, 24(10), 1011-1025.
- Agarwal, S., & Ramaswami, S. N. (1992). Choice of foreign market entry mode: Impact of ownership, location and internalization factors. *Journal of International Business Studies*, 23(1), 1-27.
- Aldrich, H., & Auster, E. R. (1986). Even dwarfs started small: Liabilities of age and size and their strategic implications. *Research in Organizational Behavior*, 8, 165-186.
- Amini, A. (2004). The distributional role of small business in development. *International Journal of Social Economics*, 31(4), 370-383.
- Amit, R. & Schoemaker, P.J.H. (1993). Strategic assets and organizational rent. *Strategic Management Journal*, 14(1), 33-46.
- Anand, J., & Delios, A. (2002). Absolute and relative resources as determinants of international acquisitions. *Strategic Management Journal*, 23(2), 119-134.
- Andersson, S. (2000). The internationalization of the firm from an entrepreneurial perspective. *International Studies of Management & Organization*, 30(1), 63-92.
- Angwin, D. N., Paroutis, S., & Connell, R. (2015). Why good things don't happen: The micro-foundations of routines in the M&A process. *Journal of Business Research*, 68(6), 1367-1381.
- Argyres, N. (2011). Using organizational economics to study organizational capability development and strategy. *Organization Science*, 22(5), 1138-1143.
- Argyres, N. S., Felin, T., Foss, N., & Zenger, T. (2012). Organizational economics of capability and heterogeneity. *Organization Science*, 23(5), 1213-1226.
- Aspelund, A., Koed Madsen, T., & Moen, Ø. (2007). A review of the foundation, international marketing strategies, and performance of international new ventures. *European Journal of Marketing*, 41(11/12), 1423-1448.
- Augier, M., & Teece, D. J. (2009). Dynamic capabilities and the role of managers in business strategy and economic performance. *Organization Science*, 20(2), 410-421.
- Autio, E., George, G., & Alexy, O. (2011). International entrepreneurship and capability development—qualitative evidence and future research directions. *Entrepreneurship Theory and Practice*, 35(1), 11-37.
- Bain, J. S. (1959). *Barriers to new competition*. Cambridge: Harvard University Press.
- Baker, T., & Nelson, R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly*, 50(3), 329-366.
- Baregheh, A., Rowley, J., & Sambrook, S. (2009). Towards a multidisciplinary definition of innovation. *Management Decision*, 47(8), 1323-1339.
- Barkema, H. G., Bell, J. H., & Pennings, J. M. (1996). Foreign entry, cultural barriers, and learning. *Strategic Management Journal*, 17(2), 151-166.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Barney, J. (1997). *Gaining and sustaining competitive advantage*. Reading, MA: Addison Wesley Publishing Company.

- Barney, J.B., & Hesterly, W.S. (2012). *Strategic management and competitive advantage: Concepts and cases*. New Jersey: Pearson Prentice-Hall.
- Barney, J.B., Ketchen Jr., D.J. & Wright, M. (2011). The future of resource-based theory: Revitalization or decline? *Journal of Management*, 37(5), 1299-1315.
- Barrales-Molina, V., Martínez-López, F. J., & Gázquez-Abad, J. C. (2014). Dynamic marketing capabilities: Toward an integrative framework. *International Journal of Management Reviews*, 16(4), 397-416.
- Barreto, I. (2010). Dynamic capabilities: A review of past research and an agenda for the future. *Journal of management*, 36(1), 256-280.
- Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. (2005). Are the drivers and role of online trust the same for all web sites and consumers? A large-scale exploratory empirical study. *Journal of Marketing*, 69(4), 133-152.
- Bauer, F., & Matzler, K. (2014). Antecedents of M&A success: The role of strategic complementarity, cultural fit, and degree and speed of integration. *Strategic Management Journal*, 35(2), 269-291.
- Beamish, P. W., Craig, R., & McLellan, K. (1993). The performance characteristics of Canadian versus UK exporters in small and medium sized firms. *Management International Review*, 33(2), 121-137.
- Beleska-Spasova, E., Glaister, K. W., & Stride, C. (2012). Resource determinants of strategy and performance: The case of British exporters. *Journal of World Business*, 47(4), 635-647.
- Bertrand, O., & Zuniga, P. (2006). R&D and M&A: Are cross-border M&A different? An investigation on OECD countries. *International Journal of Industrial Organization*, 24(2), 401-423.
- Biemans, W., Brencic, M. M., & Malshe, A. (2012). Sales-marketing interfaces within business firms: Transitions and evolution. *Transformation in Business & Economics*, 11(2), 478-487.
- Bilkey, W. J., & Tesar, G. (1977). The export behavior of smaller-sized Wisconsin manufacturing firms. *Journal of International Business Studies*, 8(1), 93-98.
- Bonaccorsi, A. (1992). On the relationship between firm size and export intensity. *Journal of International Business Studies*, 23(4), 605-635.
- Bourgeois III, L. J., and Eisenhardt, K. M. (1988). Strategic decision processes in high velocity environments: Four cases in the microcomputer industry. *Management Science*, 34(7), 816-835.
- Boter, H. (2003). Management perspectives as catalysts for exporting: A study of Nordic SMEs. *Journal of Global Marketing*, 16(3), 31-52.
- Boter, H., & Holmquist, C. (1996). Industry characteristics and internationalization processes in small firms. *Journal of Business Venturing*, 11(6), 471-487.
- Boter, H., & Lundström, A. (2005). SME perspectives on business support services: The role of company size, industry and location. *Journal of Small Business and Enterprise Development*, 12(2), 244-258.
- Brown, S.L. & Eisenhardt, K.M. (1995). Product development: Past research, present findings, and future directions. *Academy of Management Review*, 20(2), 343-378.

- Buckley, P. J. (1989). Foreign direct investment by small-and medium-sized enterprises: The theoretical background. *Small Business Economics*, 1(1), 89-100.
- Buckley, P. J. (2009). Internalisation thinking: From the multinational enterprise to the global factory. *International Business Review*, 18(3), 224-235.
- Buckley, P.J. and Casson, M.C. (1976). *The future of the multinational enterprise*. London: Macmillan.
- Cahen, F. R., Lahiri, S., & Borini, F. M. (2016). Managerial perceptions of barriers to internationalization: An examination of Brazil's new technology-based firms. *Journal of Business Research*, 69(6), 1973-1979.
- Carson, D., & Coviello, N. (1996). Qualitative research issues at the marketing/entrepreneurship interface. *Marketing Intelligence & Planning*, 14(6), 51-58.
- Cartwright, S., & Schoenberg, R. (2006). Thirty years of mergers and acquisitions research: Recent advances and future opportunities. *British Journal of Management*, 17(1), 1-5.
- Cassiman, B. & Golovko, E. (2011). Innovation and internationalization through exports. *Journal of International Business Studies*, 42(1), 56-75.
- Castanias, R. P., & Helfat, C. E. (1991). Managerial resources and rents. *Journal of Management*, 17(1), 155-171.
- Cavusgil, E., Seggie, S. H., & Talay, M. B. (2007). Dynamic capabilities view: Foundations and research agenda. *Journal of Marketing Theory and Practice*, 15(2), 159-166.
- Cavusgil, S. T. (1984). Differences among exporting firms based on their degree of internationalization. *Journal of Business Research*, 12(2), 195-208.
- Cavusgil, S.T. & Zou, S. (1994). Marketing strategy-performance relationship: An investigation of the empirical link in export market ventures. *Journal of Marketing*, 58(1), 1-21.
- Centeno, E., Hart, S., & Dinnie, K. (2013). The five phases of SME brand-building. *Journal of Brand Management*, 20(6), 445-457.
- Chen, C. J. (2007). Information technology, organizational structure, and new product development—the mediating effect of cross-functional team interaction. *IEEE Transactions on Engineering Management*, 54(4), 687-698.
- Chen, H. & Hsu, C.-W. (2010). Internationalization, resource allocation and firm performance. *Industrial Marketing Management*, 39(7), 1103-1110.
- Chen, C. H., & Lin, M. J. J. (2011). An assessment of post-M&A integration influences on new product development performance: An empirical analysis from China, Taiwan, and HK. *Asia Pacific Journal of Management*, 28(4), 807-831.
- Coad, A., & Tamvada, J. P. (2012). Firm growth and barriers to growth among small firms in India. *Small Business Economics*, 39(2), 383-400.
- Contractor, F. J. (2007). Is international business good for companies? The evolutionary or multistage theory of internationalization vs. the transaction cost perspective. *Management International Review*, 47(3), 453-475.
- Cooper, R. G., & Kleinschmidt, E. J. (1995). Benchmarking the firm's critical success factors in new product development. *Journal of Product Innovation Management*, 12(5), 374-391.

- Creswell, J.W. (1994). *Research design. Qualitative & quantitative approaches*. London: Sage Publications.
- Crick, D., & Spence, M. (2005). The internationalisation of 'high performing' UK high-tech SMEs: A study of planned and unplanned strategies. *International Business Review*, 14(2), 167-185.
- Danneels, E. (2002). The dynamics of product innovation and firm competences. *Strategic Management Journal*, 23(12), 1095-1121.
- Danneels, E. (2007). The process of technological competence leveraging. *Strategic Management Journal*, 28(5), 511-533.
- Datta, A., Reed, R., & Jessup, L. (2013). Commercialization of innovations: An overarching framework and research agenda. *American Journal of Business*, 28(2), 147-191.
- Davis, R., & Thomas, L. G. (1993). Direct estimation of synergy: A new approach to the diversity-performance debate. *Management Science*, 39(11), 1334-1346.
- Day, G.S. (1994). The capabilities of market-driven organizations. *Journal of Marketing*, 58(4), 37-52.
- Day, G. S. (2014). An outside-in approach to resource-based theories. *Journal of the Academy of Marketing Science*, 42(1), 27-28.
- Denison, D. R., Adkins, B., & Guidroz, A. M. (2011). Managing cultural integration in cross-border mergers and acquisitions. *Advances in Global Leadership*, 6, 95-115.
- Denrell, J., Fang, C., & Winter, S. G. (2003). The economics of strategic opportunity. *Strategic Management Journal*, 24(10), 977-990.
- Dierickx, I. & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35(12), 1504-1513.
- Di Minin, A., & Bianchi, M. (2011). Safe nests in global nets: Internationalization and appropriability of R&D in wireless telecom. *Journal of International Business Studies*, 42(7), 910-934.
- Dimitratos, P., Johnson, J., Slow, J., & Young, S. (2003). Micromultinationals: New types of firms for the global competitive landscape. *European Management Journal*, 21(2), 164-174.
- Dutta, S., Narasimhan, O., & Rajiv, S. (1999). Success in high-technology markets: Is marketing capability critical? *Marketing Science*, 18(4), 547-568.
- Easterby-Smith, M., Lyles, M. A., & Peteraf, M. A. (2009). Dynamic capabilities: Current debates and future directions. *British Journal of Management*, 20(1), 1-8.
- Easton, G. (2010). Critical realism in case study research. *Industrial Marketing Management*, 39(1), 118-128.
- Eisenhardt, K. M. (1989a). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 57-74.
- Eisenhardt, K. M. (1989b). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550.
- Eisenhardt, K. M. (2013). Top management teams and the performance of entrepreneurial firms. *Small Business Economics*, 40(4), 805-816.
- Eisenhardt, K. M., Kahwajy, J. L., & Bourgeois, L. J. (1997). How management teams can have a good fight. *Harvard Business Review*, 75(July-August), 77-86.

- Eisenhardt, K.M. & Martin, J.A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10/11), 1105-1121.
- Eriksson, T. (2013). Methodological issues in dynamic capabilities research—a critical review. *Baltic Journal of Management*, 8(3), 306-327.
- Eriksson, T. (2014). Processes, antecedents and outcomes of dynamic capabilities. Research note. *Scandinavian Journal of Management*, 30(1), 65-82.
- Eriksson, T., Nummela, N., & Saarenketo, S. (2014). Dynamic capability in a small global factory. *International Business Review*, 23(1), 169-180.
- Ernst, H., Hoyer, W. D., & RübSaamen, C. (2010). Sales, marketing, and research-and-development cooperation across new product development stages: Implications for success. *Journal of Marketing*, 74(5), 80-92.
- Etemad, H. (2004). Internationalization of small and medium-sized enterprises: A grounded theoretical framework and an overview. *Canadian Journal of Administrative Sciences*, 21(1), 1-21.
- Fain, N. & Wagner, B. (2014). R&D-marketing integration in innovation—does culture matter? *European Business Review*, 26(2), 169-187.
- Fainshmidt, S., Pezeshkan, A., Lance Frazier, M., Nair, A., & Markowski, E. (2016). Dynamic capabilities and organizational performance: A meta-analytic evaluation and extension. *Journal of Management Studies*, 53(8), 1348-1380.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301-325.
- Feldman, M. S., & Pentland, B. T. (2003). Reconceptualizing organizational routines as a source of flexibility and change. *Administrative Science Quarterly*, 48(1), 94-118.
- Felin, T., & Foss, N. J. (2009). Organizational routines and capabilities: Historical drift and a course-correction toward microfoundations. *Scandinavian Journal of Management*, 25(2), 157-167.
- Felin, T., Foss, N. J., Heimeriks, K. H., & Madsen, T. L. (2012). Microfoundations of routines and capabilities: Individuals, processes, and structure. *Journal of Management Studies*, 49(8), 1351-1374.
- Felin, T., Foss, N. J., & Ployhart, R. E. (2015). The microfoundations movement in strategy and organization theory. *The Academy of Management Annals*, 9(1), 575-632.
- Felin, T., & Powell, T. C. (2016). Designing organizations for dynamic capabilities. *California Management Review*, 58(4), 78-96.
- Fichman, M., & Levinthal, D. A. (1991). Honeymoons and the liability of adolescence: A new perspective on duration dependence in social and organizational relationships. *Academy of Management Review*, 16(2), 442-468.
- Filatotchev, I. & Piesse, J. (2009). R&D, internationalization and growth of newly listed firms: European evidence. *Journal of International Business Studies*, 40(8), 1260-1276.
- Forbes, D. P., & Milliken, F. J. (1999). Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups. *Academy of Management Review*, 24(3), 489-505.
- Foss, N.J. (2011). Why micro-foundations for resource-based theory are needed and what they may look like. Invited editorial. *Journal of Management*, 37(5), 1413-1428.

- Foss, N. J., & Lindenberg, S. (2013). Microfoundations for strategy: A goal-framing perspective on the drivers of value creation. *The Academy of Management Perspectives*, 27(2), 85-102.
- Francioni, B., Musso, F., & Cioppi, M. (2015). Decision-maker characteristics and international decisions for SMEs. *Management Decision*, 53(10), 2226-2249.
- Freeman, S., Edwards, R., & Schroder, B. (2006). How smaller born-global firms use networks and alliances to overcome constraints to rapid internationalization. *Journal of International Marketing*, 14(3), 33-63.
- Friedman, Y., Carmeli, A., Tishler, A., & Shimizu, K. (2016). Untangling micro-behavioral sources of failure in mergers and acquisitions: A theoretical integration and extension. *International Journal of Human Resource Management*, 27(20), 2339-2369.
- Gabrielsson, P., & Gabrielsson, M. (2013). A dynamic model of growth phases and survival in international business-to-business new ventures: The moderating effect of decision-making logic. *Industrial Marketing Management*, 42(8), 1357-1373.
- Garcia, R., & Calantone, R. (2002). A critical look at technological innovation typology and innovativeness terminology: A literature review. *Journal of Product Innovation Management*, 19(2), 110-132.
- Gibbert, M., Ruigrok, W., & Wicki, B. (2008). What passes as a rigorous case study? *Strategic Management Journal*, 29(13), 1465-1474.
- Gilmore, A., & Coviello, N. (1999). Methodologies for research at the marketing/entrepreneurship interface. *Journal of Research in Marketing and Entrepreneurship*, 1(1), 41-53.
- Gnizy, I., & Shoham, A. (2014). Uncovering the influence of the international marketing function in international firms. *International Marketing Review*, 31(1), 51-78.
- Golovko, E., & Valentini, G. (2011). Exploring the complementarity between innovation and export for SMEs' growth. *Journal of International Business Studies*, 42(3), 362-380.
- Grant, R.M. (1991). The resource-based theory of competitive advantage: Implications for strategy formulation. *California Management Review*, 33(3), 114-135.
- Griffin, A., & Hauser, J. R. (1996). Integrating R&D and marketing: A review and analysis of the literature. *Journal of Product Innovation Management*, 13(3), 191-215.
- Harreld, J. B., O'Reilly, C. A., & Tushman, M. L. (2007). Dynamic capabilities at IBM: Driving strategy into action. *California Management Review*, 49(4), 21-43.
- Harmancioglu, N., Droge, C., & Calantone, R. J. (2009). Strategic fit to resources versus NPD execution proficiencies: What are their roles in determining success? *Journal of the Academy of Marketing Science*, 37(3), 266-282.
- Harvey, C., Kelly, A., Morris, H. & Rowlinson, M. (2010). *Academic journal quality guide. Version 4.* The Association of Business Schools. London.
- Hauser, J., Tellis, G.J. & Griffin, A. (2006). Research on innovation: A review and agenda for marketing science. *Marketing Science*, 25(6), 687-717.
- Haverila, M.J. (2013). Marketing variables when launching high-technology products into international markets: An empirical study on Finnish technology firms. *Journal of High Technology Management Research*, 24(1), 1-9.



- Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D., & Winter, S. G. (2009). *Dynamic capabilities: Understanding strategic change in organizations*. New York: John Wiley & Sons.
- Helfat, C. E., & Martin, J. A. (2014). Dynamic managerial capabilities review and assessment of managerial impact on strategic change. *Journal of Management*, 41(5), 1281-1312.
- Helfat, C. E., & Peteraf, M. A. (2003). The dynamic resource-based view: Capability lifecycles. *Strategic Management Journal*, 24(10), 997-1010.
- Helfat, C. E., & Peteraf, M. A. (2015). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. *Strategic Management Journal*, 36(6), 831-850.
- Helfat, C. E., & Winter, S. G. (2011). Untangling dynamic and operational capabilities: Strategy for the (N) ever-changing world. *Strategic Management Journal*, 32(11), 1243-1250.
- Hitt, M.A., Hoskisson, R.E. & Kim, H. (1997). International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal*, 40(4), 767-798.
- Hughes, M., Martin, S. L., Morgan, R. E., & Robson, M. J. (2010). Realizing product-market advantage in high-technology international new ventures: The mediating role of ambidextrous innovation. *Journal of International Marketing*, 18(4), 1-21.
- Hurmerinta-Peltomäki, L., & Nummela, N. (2006). Mixed methods in international business research: A value-added perspective. *Management International Review*, 46(4), 439-459.
- Hutzschenreuter, T., & Horstkotte, J. (2013). Performance effects of top management team demographic faultlines in the process of product diversification. *Strategic Management Journal*, 34(6), 704-726.
- Hymer, S.H. (1976). *The international operations of national firms: A study of direct investment*. Cambridge, MA: MIT Press.
- Jane Hewerdine, L., Rumyantseva, M., & Welch, C. (2014). Resource scavenging: Another dimension of the internationalisation pattern of high-tech SMEs. *International Marketing Review*, 31(3), 237-258.
- Johanson, J. & Mattsson, L.-G. (1988). Internationalization in industrial systems: A network approach. In N. Hood & J.-E. Vahlne (eds), *Strategies in global competition*. London: Croom Helm.
- 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*, 8(1), 23-32.
- Johanson, J., & Vahlne, J. E. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies*, 40(9), 1411-1431.
- Junni, P., Sarala, R. M., Tarba, S. Y., & Weber, Y. (2015). The role of strategic agility in acquisitions. *British Journal of Management*, 26(4), 596-616.

- Kafouros, M. I., Buckley, P. J., Sharp, J. A., & Wang, C. (2008). The role of internationalization in explaining innovation performance. *Technovation*, 28(1), 63-74.
- Kahiya, E. T., & Dean, D. L. (2016). Export stages and export barriers: Revisiting traditional export development. *Thunderbird International Business Review*, 58(1), 75-89.
- Kaleka, A. (2012). Studying resource and capability effects on export venture performance. *Journal of World Business*, 47(1), 93-105.
- Katkalov, V. S., Pitelis, C. N., & Teece, D. J. (2010). Introduction: On the nature and scope of dynamic capabilities. *Industrial and Corporate Change*, 19(4), 1175-1186.
- Katsikeas, C., Leonidou, L. & Morgan, N. (2000) Firm-level export performance assessment: Review, evaluation, and development. *Journal of the Academy of Marketing Science*, 28(4), 493-511.
- Kay, N. M. (2010). Dynamic capabilities as context: The role of decision, system and structure. *Industrial and Corporate Change*, 19(4), 1205-1223.
- Kim, J.-Y. & Finkelstein, S. (2009). The effects of strategic and market complementarity on acquisition performance: Evidence from the US commercial banking industry, 1989–2001. *Strategic Management Journal*, 30(6), 617-646.
- Knight, G. A., & Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of International Business Studies*, 35(2), 124-141.
- Knight, G.A. & Kim, D. (2009). International business competence and the contemporary firm. *Journal of International Business Studies*, 40(2), 255-273.
- Knight, G., Koed Madsen, T., & Servais, P. (2004). An inquiry into born-global firms in Europe and the USA. *International Marketing Review*, 21(6), 645-665.
- Knudsen, T., & Madsen, T. K. (2002). Export strategy: A dynamic capabilities perspective. *Scandinavian Journal of Management*, 18(4), 475-502.
- Kogut, B., & Zander, U. (1993). Knowledge of the firm and the evolutionary theory of the multinational corporation. *Journal of International Business Studies*, 24(4), 625-645.
- Kor, Y. Y., & Mesko, A. (2013). Dynamic managerial capabilities: Configuration and orchestration of top executives' capabilities and the firm's dominant logic. *Strategic Management Journal*, 34(2), 233-244.
- Kotabe, M., Srinivasan, S.S. & Aulakh, P.S. (2002). Multinationality and firm performance: The moderating role of R&D and marketing capabilities. *Journal of International Business Studies*, 33(1), 79-97.
- Kozlenkova, I. V., Samaha, S. A., & Palmatier, R. W. (2014). Resource-based theory in marketing. *Journal of the Academy of Marketing Science*, 42(1), 1-21.
- Kuivalainen, O., Sundqvist, S., & Servais, P. (2007). Firms' degree of born-globalness, international entrepreneurial orientation and export performance. *Journal of World Business*, 42(3), 253-267.
- Kumar, M.V.S. (2009). The relationship between product and international diversification: The effects of short-run constraints and endogeneity. *Strategic Management Journal*, 30(1), 99-116.
- Kyläheiko, K., Jantunen, A., Puumalainen, K., Saarenketo, S., & Tuppurä, A. (2011). Innovation and internationalization as growth strategies: The role of technological capabilities and appropriability. *International Business Review*, 20(5), 508-520.

- Lado, N., Martínez-Ros, E., & Valenzuela, A. (2004). Identifying successful marketing strategies by export regional destination. *International Marketing Review*, 21(6), 573-597.
- Lampel, J., & Shamsie, J. (2000). Probing the unobtrusive link: Dominant logic and the design of joint ventures at General Electric. *Strategic Management Journal*, 21(5), 593-602.
- Lecerf, M.-A. (2012). Internationalization and innovation: The effects of a strategy mix on the economic performance of French SMEs. *International Business Research*, 5(6), 2-13.
- Lehto, I. (2015). International entrepreneurial selling as construction of international opportunities. *Journal of International Entrepreneurship*, 13(3), 277-302.
- Leonidou, L. C., Katsikeas, C. S., Fotiadis, T. A., & Christodoulides, P. (2013). Antecedents and consequences of an eco-friendly export marketing strategy: The moderating role of foreign public concern and competitive intensity. *Journal of International Marketing*, 21(3), 22-46.
- Love, J. H., Roper, S., & Zhou, Y. (2016). Experience, age and exporting performance in UK SMEs. *International Business Review*, 25(4), 806-819.
- Lu, J.W. & Beamish, P.W. (2001). The internationalization and performance of SMEs. *Strategic Management Journal*, 22(6/7), 565-586.
- Madsen, T. K., & Servais, P. (1997). The internationalization of born globals: An evolutionary process? *International Business Review*, 6(6), 561-583.
- Mainela, T., Puhakka, V., & Servais, P. (2014). The concept of international opportunity in international entrepreneurship: A review and a research agenda. *International Journal of Management Reviews*, 16(1), 105-129.
- Makadok, R. (2001). Toward a synthesis of the resource-based and dynamic-capability views of rent creation. *Strategic Management Journal*, 22(5), 387-401.
- Markman, G. D., & Waldron, T. L. (2014). Small entrants and large incumbents: A framework of micro entry. *Academy of Management Perspectives*, 28(2), 179-197.
- Martin, J. A. (2011). Dynamic managerial capabilities and the multibusiness team: The role of episodic teams in executive leadership groups. *Organization Science*, 22(1), 118-140.
- McLachlan, G., & Peel, D. (2004). *Finite mixture models*. New York: John Wiley & Sons.
- McGrath, R. G. (2013). *The end of competitive advantage: How to keep your strategy moving as fast as your business*. Boston, MA: Harvard Business Review Press.
- Menguc, B., & Auh, S. (2006). Creating a firm-level dynamic capability through capitalizing on market orientation and innovativeness. *Journal of the Academy of Marketing Science*, 34(1), 63-73.
- Menguc, B., & Barker, T. (2005). Re-examining field sales unit performance: Insights from the resource-based view and dynamic capabilities perspective. *European Journal of Marketing*, 39(7/8), 885-909.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2013). *Qualitative data analysis*. London: Sage Publications.
- Ministry of Employment and the Economy (2014). *Yrityskatsaus 2014. Työ- ja elinkeinoministeriön julkaisuja. Kilpailukyky. 39/2014*. Edita Publishing. Helsinki.

- Moen, Ø., & Servais, P. (2002). Born global or gradual global? Examining the export behavior of small and medium-sized enterprises. *Journal of International Marketing*, 10(3), 49-72.
- Morgan, N. A., Kaleka, A., & Katsikeas, C. S. (2004). Antecedents of export venture performance: A theoretical model and empirical assessment. *Journal of Marketing*, 68(1), 90-108.
- Mudambi, R., & Zahra, S. A. (2007). The survival of international new ventures. *Journal of International Business Studies*, 38(2), 333-352.
- Muthén, L. K., & Muthén, B. O. (1998–2007). *Mplus user's guide* (Fifth Edition). Los Angeles, CA: Muthén and Muthén.
- Napier, G., Johansson, D., Finnbjörnsson, T., Solberg, E., & Pedersen, K. (2013). *Nordic growth entrepreneurship review 2012*. Copenhagen: Nordic Council of Ministers.
- Nummela, N., & Hasset, M. (2015). Opening the black box of acquisition capabilities. *The Routledge companion to mergers and acquisitions*, 74. New York: Routledge.
- Nummela, N., Saarenketo, S., Jokela, P., & Loane, S. (2014). Strategic decision-making of a born global: A comparative study from three small open economies. *Management International Review*, 54(4), 527-550.
- Nummela, N., Saarenketo, S., & Puumalainen, K. (2004). A global mindset—a prerequisite for successful internationalization? *Canadian Journal of Administrative Sciences*, 21(1), 51-64.
- Oehmichen, J., Heyden, M. L., Georgakakis, D., & Volberda, H. W. (2017). Boards of directors and organizational ambidexterity in knowledge-intensive firms. *International Journal of Human Resource Management*, 28(2), 283-306.
- Olson, E. M., Walker, O. C., Ruekert, R. W., & Bonner, J. M. (2001). Patterns of cooperation during new product development among marketing, operations and R&D: Implications for project performance. *Journal of Product Innovation Management*, 18(4), 258-271.
- Oura, M. M., Zilber, S. N., & Lopes, E. L. (2016). Innovation capacity, international experience and export performance of SMEs in Brazil. *International Business Review*, 25(4), 921-932.
- Oviatt, B. M., & McDougall, P. P. (1994). Toward a theory of international new ventures. *Journal of International Business Studies*, 25(1), 45-64.
- Paruchuri, S., & Eisenman, M. (2012). Microfoundations of firm R&D capabilities: A study of inventor networks in a merger. *Journal of Management Studies*, 49(8), 1509-1535.
- Patel, P., & Pavitt, K. (1991). Large firms in the production of the world's technology: An important case of "non-globalisation". *Journal of International Business Studies*, 22(1), 1-21.
- Paulk, M. C., Curtis, B., Chrissis, M. B., & Weber, C. V. (1993). Capability maturity model, version 1.1. *IEEE software*, 10(4), 18-27.
- Pavitt, K. (2002). Innovating routines in the business firm: What corporate tasks should they be accomplishing? *Industrial and Corporate Change*, 11(1), 117-133.
- Paul, J., Parthasarathy, S., & Gupta, P. (2017). Exporting challenges of SMEs: A review and future research agenda. *Journal of World Business*, 52(3), 327-342.
- Penrose, E. (1959). *The theory of the growth of the firm*. Oxford: Oxford University Press.

- Pisano, G. P. (2015). A normative theory of dynamic capabilities: Connecting strategy, know-how, and competition." Harvard Business School Working Paper, No. 16-036. Harvard.
- Pitkänen, I., Parvinen, P., & Töytäri, P. (2014). The significance of the new venture's first sale: The impact of founders' capabilities and proactive sales orientation. *Journal of Product Innovation Management*, 31(4), 680-694.
- Porter, M.E. (1980). *Competitive strategy. Techniques for analyzing industries and competitors*. New York: Free Press.
- Porter, M. E. (1985). *Competitive advantage: Creating and sustaining superior performance*. 1985. New York: Free Press.
- 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.
- Prahalad, C. K., & Bettis, R. A. (1986). The dominant logic: A new linkage between diversity and performance. *Strategic Management Journal*, 7(6), 485-501.
- Ramaswami, S. N., Srivastava, R. K., & Bhargava, M. (2009). Market-based capabilities and financial performance of firms: Insights into marketing's contribution to firm value. *Journal of the Academy of Marketing Science*, 37(2), 97.
- Rasmussen, E., Møller Jensen, J., & Servais, P. (2011). The impact of internationalisation on small firms' choice of location and propensity for relocation. *Journal of Small Business and Enterprise Development*, 18(3), 457-474.
- Raymond, L., & St-Pierre, J. (2013). Strategic capability configurations for the internationalization of SMEs: A study in equifinality. *International Small Business Journal*, 31(1), 82-102.
- Regnér, P., & Zander, U. (2014). International strategy and knowledge creation: The advantage of foreignness and liability of concentration. *British Journal of Management*, 25(3), 551-569.
- Reus, T. H., & Lamont, B. T. (2009). The double-edged sword of cultural distance in international acquisitions. *Journal of International Business Studies*, 40(8), 1298-1316.
- Ripollés, M., Blesa, A., & Monferrer, D. (2012). Factors enhancing the choice of higher resource commitment entry modes in international new ventures. *International Business Review*, 21(4), 648-666.
- Ripolles Melia, M., Blesa Perez, A., & Roig Dobon, S. (2010). The influence of innovation orientation on the internationalisation of SMEs in the service sector. *Service Industries Journal*, 30(5), 777-791.
- Ritala, P., Heiman, B., & Hurmelinna-Laukkanen, P. (2016). The need for speed—unfamiliar problems, capability rigidity, and ad hoc processes in organizations. *Industrial and Corporate Change*, 25(5), 757-777.
- Rivas, J. L. (2012). Diversity & internationalization: The case of boards and TMT's. *International Business Review*, 21(1), 1-12.
- Rodenbach, M., & Brettel, M. (2012). CEO experience as micro-level origin of dynamic capabilities. *Management Decision*, 50(4), 611-634.
- Rodriguez, J.L. & Rodriguez, R.M.G. (2005). Technology and export behaviour: A resource-based view approach. *International Business Review*, 14(5), 539-557.

- Roper, S. & Love, J.H. (2002). Innovation and export performance: Evidence from the UK and German manufacturing plants. *Research Policy*, 31(7), 1087-1102.
- Ruokonen, M., Nummela, N., Puumalainen, K., & Saarenketo, S. (2008). Market orientation and internationalisation in small software firms. *European Journal of Marketing*, 42(11/12), 1294-1315.
- Saarenketo, S., Puumalainen, K., Kuivalainen, O., & Kyläheiko, K. (2004). Dynamic knowledge-related learning processes in internationalizing high-tech SMEs. *International Journal of Production Economics*, 89(3), 363-378.
- Sapienza, H. J., Autio, E., George, G., & Zahra, S. A. (2006). A capabilities perspective on the effects of early internationalization on firm survival and growth. *Academy of Management Review*, 31(4), 914-933.
- Schilke, O. (2014). On the contingent value of dynamic capabilities for competitive advantage: The nonlinear moderating effect of environmental dynamism. *Strategic Management Journal*, 35(2), 179-203.
- Schmalensee, R. (1985). Do markets differ much? *American Economic Review*, 75(3), 341-351.
- Schreyögg, G., & Kliesch-Eberl, M. (2007). How dynamic can organizational capabilities be? Towards a dual-process model of capability dynamization. *Strategic Management Journal*, 28(9), 913-933.
- Segaro, E. L., Larimo, J., & Jones, M. V. (2014). Internationalisation of family small and medium sized enterprises: The role of stewardship orientation, family commitment culture and top management team. *International Business Review*, 23(2), 381-395.
- Shimizu, K., Hitt, M. A., Vaidyanath, D., & Pisano, V. (2004). Theoretical foundations of cross-border mergers and acquisitions: A review of current research and recommendations for the future. *Journal of International Management*, 10(3), 307-353.
- Sinkovics, R. R., Zagelmeyer, S., & Kusstatscher, V. (2011). Between merger and syndrome: The intermediary role of emotions in four cross-border M&As. *International Business Review*, 20(1), 27-47.
- Sirmon, D. G., & Hitt, M. A. (2009). Contingencies within dynamic managerial capabilities: Interdependent effects of resource investment and deployment on firm performance. *Strategic Management Journal*, 30(13), 1375-1394.
- Song, X. M., & Parry, M. E. (1997). A cross-national comparative study of new product development processes: Japan and the United States. *Journal of Marketing*, 61(1), 1-18.
- Sullivan, P. (2012). *Qualitative data analysis using a dialogical approach*. London: Sage Publications.
- Szücs, F. (2014). M&A and R&D: Asymmetric effects on acquirers and targets? *Research Policy*, 43(7), 1264-1273.
- Tanriverdi, H., & Venkatraman, N. (2005). Knowledge relatedness and the performance of multibusiness firms. *Strategic Management Journal*, 26(2), 97-119.
- Tashakkori, A., & Teddlie, C. (2003). *Handbook on mixed methods in the behavioral and social sciences*. London: Sage Publications.
- Teece, D. J. (1998). Capturing value from knowledge assets: The new economy, markets for know-how, and intangible assets. *California Management Review*, 40(3), 55-79.

- Teece, D.J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319-1350.
- Teece, D. J. (2012). Dynamic capabilities: Routines versus entrepreneurial action. *Journal of Management Studies*, 49(8), 1395-1401.
- Teece, D. J. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies*, 45(1), 8-37.
- Teece, D. & Pisano, G. (1994). The dynamic capabilities of firms: An Introduction. *Industrial and Corporate Change*, 3(3), 537-556.
- Teece, D.J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Thorgren, S., Wincent, J., & Boter, H. (2012). Small firms in multipartner R&D alliances: Gaining benefits by acquiescing. *Journal of Engineering and Technology Management*, 29(4), 453-467.
- Thornhill, S., & Amit, R. (2003). Learning about failure: Bankruptcy, firm age, and the resource-based view. *Organization Science*, 14(5), 497-509.
- Trahms, C. A., Ndofor, H. A., & Sirmon, D. G. (2013). Organizational decline and turnaround a review and agenda for future research. *Journal of Management*, 39(5), 1277-1307.
- Vaara, E., Junni, P., Sarala, R. M., Ehrnrooth, M., & Koveshnikov, A. (2014). Attributional tendencies in cultural explanations of M&A performance. *Strategic Management Journal*, 35(9), 1302-1317.
- Vahlne, J. E., & Johanson, J. (2013). The Uppsala model on evolution of the multinational business enterprise—from internalization to coordination of networks. *International Marketing Review*, 30(3), 189-210.
- Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the qualitative-quantitative divide: Guidelines for conducting mixed methods research in information systems. *MIS Quarterly*, 37(1), 21-54.
- Wales, W. J., Parida, V., & Patel, P. C. (2013). Too much of a good thing? Absorptive capacity, firm performance, and the moderating role of entrepreneurial orientation. *Strategic Management Journal*, 34(5), 622-633.
- Welch, L. S., & Luostarinen, R. (1988). Internationalization: Evolution of a concept. *The Internationalization of the firm. Journal of General Management*, 14(2), 83-98.
- Welter, C., Bosse, D. A., & Alvarez, S. A. (2013). The interaction between managerial and technological capabilities as a determinant of company performance: An empirical study of biotech firms. *International Journal of Management*, 30(1), 272.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180.
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24(10), 991-995.
- Wolff, J. A., & Pett, T. L. (2006). Small-firm performance: Modeling the role of product and process improvements. *Journal of Small Business Management*, 44(2), 268-284.

- Woodside, A. G. (2014). Embrace•perform•model: Complexity theory, contrarian case analysis, and multiple realities. *Journal of Business Research*, 67(12), 2495-2503.
- Yalcinkaya, G., Calantone, R.J. & Griffith, D.A. (2007). An examination of exploration and exploitation capabilities: Implications for product innovation and market performance. *Journal of International Marketing*, 15(4), 63-93.
- Yin R. (1994). *Case study research. Design and methods*. Thousand Oaks. London: Sage Publications.
- Zachary, M. A., Gianiodis, P. T., Payne, G. T., & Markman, G. D. (2015). Entry timing: Enduring lessons and future directions. *Journal of Management*, 41(5), 1388-1415.
- Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management Journal*, 38(2), 341-363.
- Zahra, S.A. & Hayton, J.C. (2008). The effect of international venturing on firm performance: The moderating influence of absorptive capacity. *Journal of Business Venturing*, 23(2), 195-220.
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, 43(4), 917-955.
- Zander, U., & Kogut, B. (1995). Knowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test. *Organization Science*, 6(1), 76-92.
- Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13(3), 339-351.
- Zott, C. (2003). Dynamic capabilities and the emergence of intraindustry differential firm performance: Insights from a simulation study. *Strategic Management Journal*, 24(2), 97-125.



## Original publications

- I Haapanen, L., Juntunen, M., & Juntunen, J. (2016). Firms' capability portfolios throughout international expansion: A latent class approach. *Journal of Business Research*, 69(12), 5578-5586.
- II Haapanen, L., Hurmelinna-Laukkanen, P. & Hermes, J. (2018). Firm functions and the nature of competitive advantage in internationalizing SMEs. *International Journal of Innovation Management*. 22(2). April 2018. DOI: 10.1142/S1363919618500226. In press.
- III Haapanen, L., Hurmelinna-Laukkanen, P. & Puumalainen, K. (2017). Top management team and SME foreign market expansion. Manuscript. Paper was presented at the British Academy of Management Conference, Warwick, UK, in September 2017, and has been submitted to the *Management Decision* and is currently under review.
- IV Haapanen, L., Hurmelinna-Laukkanen, P., Nikkilä, S. & Paakkolanvaara, P. (2017). Microfoundations of Dynamic Capabilities in Cross-border M&As–Alignment within and between Merging Firms. Manuscript. Paper was presented at the 14th Vaasa Conference on International Business, Vaasa, Finland, August 2017, and has been submitted to the *International Business Review* and is currently under review.

Reprinted with permission from Elsevier (I). Reprinted with permission from World Scientific Publishing (II).

Original publications are not included in the electronic version of the dissertation.



76. Musial, Monika (2015) Exploring the organizing of work for creative individuals : the paradox of art and business in creative industries
77. Pietilä, Heli (2015) Strategiatyöhön osallistuminen : strategitit ja strategiaselviytyjät
78. Ramachandran, Sunder (2015) Understanding brand loyalty and disloyalty formation among consumers' of short life-cycle products
79. Keränen, Anne (2015) Business leaders' narratives about responsibility in leadership work
80. Ruopsa, Leena (2016) Kerrottu identiteetti organisaatiomuutoksen kontekstissa
81. Hermes, Jan (2016) Rendezvous in turbulent times : about the becoming of institution-changing networks in Myanmar/Burma
82. Lehto, Irene (2016) Narratives of international opportunities in entrepreneurial selling
83. Nuutilainen, Riikka (2016) Essays on monetary policy in China
84. Iivari, Marika (2016) Exploring business models in ecosystemic contexts
85. Nadeem, Waqar (2016) Examining consumers' acceptance of social commerce in clothing e-retail
86. Nykänen, Risto (2016) Emergence of an energy saving market : the rise of energy service companies
87. Wang, Fan (2016) From relational capital to venture capital : financing entrepreneurial international new ventures
88. Rantakari, Anniina (2016) Strategy as 'dispositive' : essays on productive power and resistance in strategy-making
89. Henttu-Aho, Tiina (2016) The emerging practices of modern budgeting and the role of controller
90. Koivuranta, Matti (2017) Studies on macroeconomics and uncertainty
91. Myllykoski, Jenni (2017) Strategic change emerging in time
92. Conlin, Andrew (2017) Essays on personality traits and investor behavior
93. Anees-ur-Rehman, Muhammad (2017) How multiple strategic orientations affect the brand performance of B2B SMEs
94. Juntunen, Marko (2017) Business model change as a dynamic capability

S E R I E S E D I T O R S

**A**  
**SCIENTIAE RERUM NATURALIUM**  
*University Lecturer Tuomo Glumoff*

**B**  
**HUMANIORA**  
*University Lecturer Santeri Palviainen*

**C**  
**TECHNICA**  
*Postdoctoral research fellow Sanna Taskila*

**D**  
**MEDICA**  
*Professor Olli Vuolteenaho*

**E**  
**SCIENTIAE RERUM SOCIALIUM**  
*University Lecturer Veli-Matti Ulvinen*

**E**  
**SCRIPTA ACADEMICA**  
*Planning Director Pertti Tikkanen*

**G**  
**OECONOMICA**  
*Professor Jari Juga*

**H**  
**ARCHITECTONICA**  
*University Lecturer Anu Soikkeli*

**EDITOR IN CHIEF**  
*Professor Olli Vuolteenaho*

**PUBLICATIONS EDITOR**  
*Publications Editor Kirsti Nurkkala*

