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PhD Managerial and Actuarial Sciences  
Economics and Management of Innovation  
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**ON THE INTERRELATIONSHIP BETWEEN  
BUSINESS MODEL INNOVATION AND INTERNATIONALIZATION:  
A CRITICAL REVIEW AND EMPIRICAL RESEARCH**

PhD Thesis

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## Table of contents

Tables .....	V
Figures .....	V
Abbreviations .....	VI
Abstract .....	VII
1. Introduction .....	1
1.1. Motivation and relevance .....	1
1.2. Theoretical introduction and background.....	2
1.3. Research questions and hypotheses.....	5
1.4. Development of thesis and list of publications.....	8
2. Paper I.....	11
2.1. Introduction .....	12
2.2. Theoretical background.....	14
2.2.1. Business model innovation and internationalization .....	14
2.2.2. Taking on a process perspective on BMI and internationalization.....	15
2.3. Methodology .....	17
2.3.1. Eligibility criteria.....	17
2.3.2. Information sources and search strategy .....	17
2.3.3. Study selection and quality assessment.....	18
2.3.4. Data synthesis and analysis .....	19
2.3.5. Sample description .....	19
2.4. Understanding the articles on BMI and internationalization.....	21
2.4.1. Theoretical perspectives .....	21
2.4.2. The nexus of BMI and internationalization.....	22
2.4.3. Resources, capabilities, and tools.....	26
2.4.4. Contextual factors.....	28
2.4.5. Processes, paths, and patterns of BMI involved in internationalization.....	29
2.5. Examining the process-perspective in research articles on BMI and internationalization ...	30
2.5.1. Descriptive results .....	30
2.5.2. Quadrant 1 – “Consistent” .....	31
2.5.3. Quadrant 2 – “Unsupported” .....	31
2.5.4. Quadrant 3 – “Untapped” .....	31
2.5.5. Quadrant 4 – “Relation- and management-oriented” .....	32
2.6. Discussion .....	33
2.7. Managerial implications and limitations .....	35
2.8. References .....	37
3. Paper II .....	45
3.1. Introduction .....	46
3.2. Theoretical background.....	47
3.2.1. Extending the Uppsala model to include variable environmental conditions .....	48

3.2.2.	Extending the SEI perspective to the case of established firms .....	49
3.2.3.	The relationship between BMI and internationalization under the SEI perspective .....	50
3.3.	Crossing the SEI theory with the traditional U-model of internationalization .....	51
3.3.1.	International experience .....	52
3.3.2.	Resource commitment .....	52
3.3.3.	Psychic distance.....	53
3.4.	Method.....	54
3.4.1.	Sample .....	54
3.4.2.	Data collection method.....	55
3.4.3.	Dependent variable.....	55
3.4.4.	Independent, control, and moderating variables.....	56
3.4.5.	Data analysis method.....	57
3.5.	Results .....	58
3.6.	Discussion and conclusion .....	63
3.7.	Managerial implications and limitations .....	65
3.8.	References .....	67
4.	Paper III.....	73
4.1.	Introduction .....	74
4.2.	Theoretical framework .....	76
4.2.1.	Explaining BMI with the dynamic states approach.....	76
4.2.2.	The interrelationship between business model innovation and internationalization .....	78
4.3.	Methodology .....	81
4.3.1.	Sample selection.....	81
4.3.2.	Data collection method.....	82
4.3.3.	Data analysis procedure.....	85
4.4.	Results .....	87
4.4.1.	General findings and the role of internationalization in BMI.....	87
4.4.2.	The process of BMI in an international context .....	87
4.5.	Discussion and conclusion .....	94
4.5.1.	Theoretical implications .....	96
4.5.2.	Managerial implications .....	97
4.5.3.	Limitations and future research .....	98
4.6.	References .....	100
5.	Conclusion.....	104
5.1.	Summary of findings .....	104
5.2.	Contributions.....	107
5.3.	Critical assessment .....	108
5.4.	Outlook.....	109
	Literature .....	110

## Tables

Table 1: Overview on publications and manuscripts with regard to the PhD thesis .....	9
Table 2: Focus on firm type or industry in articles under review.....	20
Table 3: Results of hierarchical regression analysis.....	62
Table 4: Company cases and sample description .....	82
Table 5: Overview interview and data material collection.....	84
Table 6: Overview results on the role of internationalization .....	88
Table 7: Overview of results on different forms of BMI and the role of internationalization .....	95
Table 8: Summary of results .....	105
Table 9: Summary of contributions.....	106

## Figures

Figure 1: Integrated business model design template (adapted taken from Sternad et al., 2021) .....	3
Figure 2: Development of integrative parts of PhD thesis .....	8
Figure 3: Selection of articles for review .....	18
Figure 4: Publications on BMI and internationalization .....	20
Figure 5: Types of international BMI research .....	31
Figure 6: Conceptual framework and research hypotheses .....	54
Figure 7: Moderating effect of international experience on BMI and INTSUC .....	60
Figure 8: Moderating effect of resource commitment on BMI and INTSUC .....	61
Figure 9: Moderating effect of psychic distance on BMI and INTSUC .....	61
Figure 10: Internationalization through BMI stage logic .....	64
Figure 11: Data collection and analysis procedure.....	83
Figure 12: Example of network analysis method .....	86
Figure 13: Patterns of radical changes.....	89

## Abbreviations

BMI	Business Model Innovation
CEO	Chief Executive Officer
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IB	International Business
IE	International Entrepreneurship
IJV	International Joint Venture
INV	International New Venture
INTEX	International Experience
MNC	Multinational Corporation
NGO	Non-Governmental Organization
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
PSYDIS	Psychic Distance
R&D	Research and Development
RESCOM	Resource Commitment
SEI	Strategic Entrepreneurial Internationalization
SME	Small and Medium-sized Enterprise

## **Abstract**

This cumulative dissertation addresses the emerging field of research on the interrelationship between business model innovation and internationalization. Research on internationalization is well-represented in the literature, while research on business models and business model innovation only emerged in the 2000s, and has been growing steadily since. Despite a nexus between business model innovation and internationalization frequently existing in practice, the nature and workings of this relationship are not well-documented in the literature. Therefore, the main objective of this thesis is critically reflecting on existing research, identifying knowledge gaps and contributing to a better understanding of this particular relationship.

The first study systematically reviews articles on the nexus between business model innovation and internationalization. The aim of this review is twofold: first, to identify the body of relevant research; and, second, to discover to what extent research in this area follows a process-oriented approach. Of 800 articles gathered from different scientific databases, 71 were included in the final review. The main topics identified in the articles under review deal with theoretical approaches, the interrelationship of business model innovation and internationalization itself, contextual factors, resources and capabilities, as well as processes. Few articles were found to clearly promote a process perspective (based on process-theory and process data); a high number of articles used process data, but without enhancing process theory. Future research should clarify the relationship between BMI and internationalization, the effect of BMI on international performance, and to advance theory in this context.

The second paper addresses the research gap on how business model innovation is related to the success of an international venture of a firm. Based on Autio's (2017) Strategic Entrepreneurial Internationalization framework and the Uppsala model of internationalization (Johannson & Vahlne, 1977), it is tested whether business model innovation (BMI) affects the success of a firm's international venture and to which extent this relationship is influenced by internal and external dimensions of a gradual internationalization process (psychic distance, international experience, and resource commitment). Collecting data from 243 firms in Austria, Italy, and Slovenia, and using a multiple hierarchical regression model, results reveal a highly significant relationship between business model innovation and the success of an international venture. Additionally, it was found that psychic distance, international experience, and resource commitment positively moderate this relationship. The results of the study suggest that making the right changes in a business model during an important internationalization process can considerably raise the chances of the success of a firm's international venture. However, the effect depends on internal and external dimensions typical for a stepwise internationalization process. The paper also contributes to theory by offering a new stage logic to explain how firms internationalize with business model innovation.

The third paper investigates when and how firms change their business model in the context of internationalization, through application of a multiple case study design based on the dynamic states approach (Levie & Lichtenstein, 2010). In instances where business model innovation results in or leads to internationalization, incremental adaptations in an organization's business model occur more often than radical changes. These incremental adaptations can take place independently from radical changes. Furthermore, this paper presents four patterns of radical change and eight types of incremental adaptations, which are linked to process-, marketing-, organization- and product-related BMI.



## **1. Introduction**

The following chapter provides a brief insight into the motivation and relevance of the topic. A short introduction to both concepts, business model innovation (BMI) and internationalization, creates a basis for the further understanding of the thesis. Then, more detail about the research questions, and how they relate to each other is given. A total list of the author's publications (study reports, conference papers and monographies) made throughout the working process will be provided as they mark the intermediate steps of the research process.

### **1.1. Motivation and relevance**

In order to secure their profitability and competitiveness in the long term, companies pursue growth targets that can be realized with international market development. Operating in international markets opens up new business opportunities, such as gaining a new customer base or expanding a company's role as a market leader within an industry or increasing their market share (McDougall & Oviatt, 1996; Kyläheiko et al., 2011)

However, entering an unfamiliar environment also brings challenges for companies (Westhead et al., 2004). Certainly, when a firm enters a new market, it will encounter different market conditions. International market development requires negotiation of different legal frameworks, cultural differences, or customer requirements. Business practices in a specific target market may differ completely from those found in a company's home market. If a company aims to be successful in a foreign target market, its specific features must be analyzed and reacted to accordingly. Companies should question whether their way of doing business can also work in foreign markets. Very often, certain aspects may remain unchanged, while others must be adapted to local contexts (Calof & Beamish, 1995; Calantone et al., 2004)

This is illustrated by a real-world example (Sternad et al., 2021). In 2015, a Swedish start-up developed a telemedicine app that allowed medical treatment via video consultation. The app enabled patients to access healthcare provision from medical or psychological specialists at any time and from the comfort of their own homes. The company in question quickly found that their business idea, which was developed and successfully launched in Sweden, also had potential in other markets. To successfully internationalize, however, the firm had to understand the healthcare systems and the underlying legislative foundations of different European markets. Since the regulation and operation of healthcare services varies significantly, even between countries of the European Union, this means that different parties bear the treatment costs. Depending on the legal system, paying customers could either be the individual patient or the public health system (or both). Subsequently, the start-up had to amend the aspects of their business model relating to target customers and revenue streams in accordance with the legal framework of the local health system.

In contrast to this kind of adjustments, it can also be the case that a particularly innovative business idea gives the company a competitive edge in international markets. Another example shall serve as an illustration (Sternad et al., 2021). A Swiss company produced high-quality mattresses, selling these in their home market but also already exporting to several countries. The 2008/2009 economic crisis greatly impacted this company, not only because the prices of its premium products were already high, but also because the Swiss franc was very strong, which restricted the demand from other markets. The manager and owner of the company reflected on its strategy and identified hotels as a potential growing customer segment. However, the problem was that hotels usually have in excess of 50 beds; the high price of this company's product would mean an enormous investment for hotel owners. To address this, the company offered hotels the opportunity to lease their high-quality mattresses over a contractually stipulated term, paying depending on their actual usage. To enable this pay-per-use model, the mattresses were equipped with sensors that record the occupied nights per mattress. Usage statistics are displayed via a digital dashboard. By accurately recording usage data, the hotel owner is also able to rotate mattresses on a regular basis, to ensure that the mattresses are being equally used. The high quality of the mattresses enabled the hotel to offer their guests a premium experience, with the leasing agreement meaning that the hotel evaded high acquisition costs. The mattresses became the property of the hotel at the end of the leasing period, with the quality of the mattresses ensuring their longevity. Furthermore, guests were able to test the mattresses, and may later decide to buy a mattress for themselves for use at home. This pay-per-use model generated much interest for the Swiss company, both at home and abroad, and facilitated enormous growth in Italian, Greek, French, Cypriot, and Asian markets. Other markets that could not be served by the firm, for capacity reasons, were accommodated by selling of a license for the sensor and its associated software.

Both aforementioned examples refer to the principle of business model innovation (BMI) and demonstrate how closely it is intertwined with the internationalization process. With this in mind, the concepts of BMI and internationalization will now be explained in more detail as a basis for further understanding, before the research questions are outlined.

## **1.2. Theoretical introduction and background**

In simple terms, a business model describes what a company is doing and how it makes its business. It is the "design or architecture of the value creation, delivery and capture mechanisms" (Teece, 2010, p. 172), highlighting the interaction of its different dimensions. The term 'business model' itself refers to a "framework" (Schneider & Spieth, 2013, p. 1), but there is little agreement on the features of this framework, which makes it difficult to measure (Foss & Saebi, 2017). However, commonly proposed models (i.e. Osterwalder & Pigneur, 2010; Gassmann et al., 2014) draw on similar dimensions (Sternad et al., 2021). Figure 1 summarizes the main aspects of a business model in five dimensions: 1) value

proposition and target customers; 2) value creation; 3) value delivery; and 4) value capture. By describing or analyzing a business model, also answers to relevant questions are given, in order to understand how a firm makes business.

The value proposition dimension is primarily about offering a solution for a specific problem or a specific need of a target group. This can be physical or digital products as well as services or even the customer experience (Sternad et al., 2021). Value delivery includes questions on how the company reaches customers, chooses sales channels, and interacts with customers, thus marking the ‘demand side’ of the business model (Osterwalder & Pigneur, 2010). The value creation dimension would, on the contrary, comprise the ‘supply side’ of the business model is. It usually looks at the processes that are relevant to offer the value proposition as well as specific competencies of employees, or the role of cooperation partners. Lastly, another important question to understand a firm’s business model, refers to which costs occur and how revenues are created.

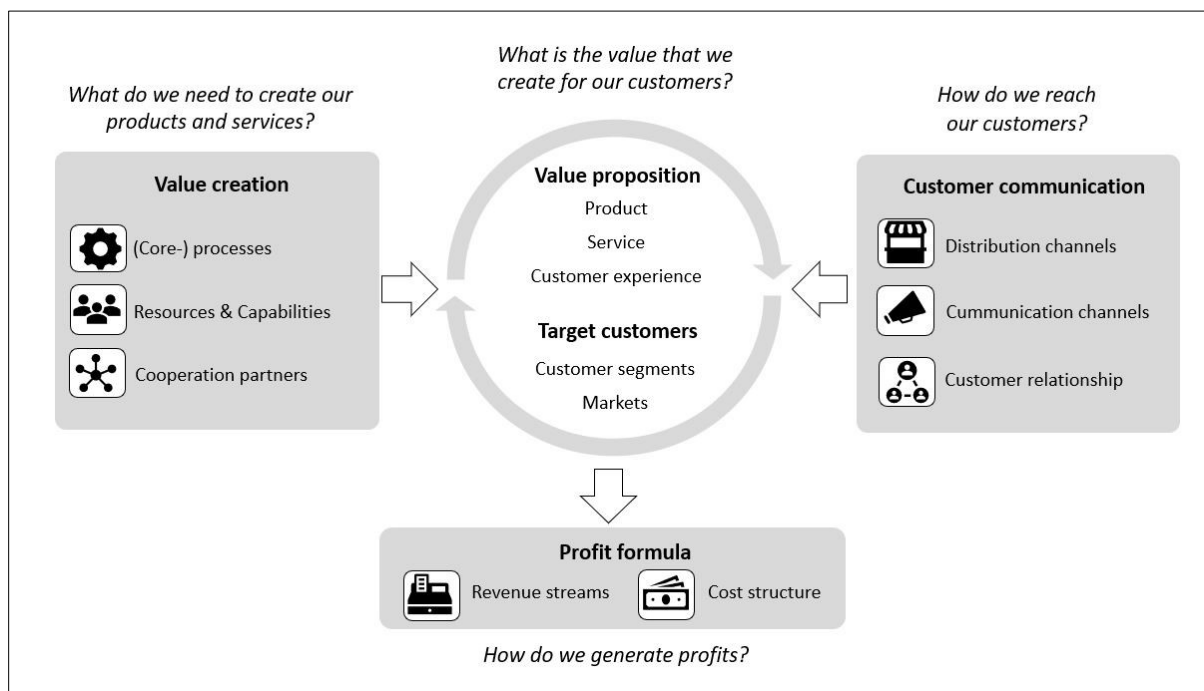


Figure 1: Integrated business model design template (adapted taken from Sternad et al., 2021)

Originally developed through e-business and entrepreneurship literature, the business model is presently a “potentially powerful generic concept in strategic and innovation management literature” (Kraus et al., 2017, p. 8). Business models are a ‘reflection’ of a strategy (Casadesus-Masanell & Ricart, 2010) and a description of an actual state (Dahan et al., 2010). However, business models are dynamic and do not emerge in their final state. Rather, they evolve continuously from their initial conception through testing, adjusting, and tuning (Teece, 2010).

Evolution or amendment of a business model can, itself, be regarded as a dimension of innovation (Foss & Saebi, 2017). Like innovation in general, adaptation of a business model can have a great influence

on a company's profitability and success, as it is performed to gain a competitive advantage and to increase productivity. This is one reason as to why we must learn more about how companies can use this concept for better performance.

In business research, business models and the ways in which they can be improved has gained increasing attention over the last two decades; however, no uniform definition of these developments exists (Foss & Saebi, 2017), but the term BMI has become established. The multiplicity of approaches becomes apparent in the different terminology used to refer to the evolution of business models, both within the context of internationalization or otherwise, which includes 'business model adaptation' (i.e. Balboni et al., 2016; Saebi et al., 2017), 'business model evolution' (i.e. Balboni et al., 2019; Parker & Lawrence, 2021), 'business model reconfiguration' (i.e. Casadesus-Masanell & Ricart, 2010), and 'business model transformation' (i.e. Cao, 2014), all of which highlight the dynamic aspect of business models.

This 'linguistic confusion' in terms of the wording and little agreement on what exactly BMI is, has limited the measurability of the phenomenon and could be one reason for the long-lasting lack of research on business models and BMI. In order to capture the complexity of business models and BMI, the two empirical studies in the present thesis will draw back on an appropriate measurement developed by Clauss (2017). In analogy to the dimensions of a business model, he suggests three dimensions of BMI: value creation innovation, value proposition innovation (including aspects of value delivery), and value capture innovation.

While some authors regard only a *radical* change as a real BMI (Markides, 2006; Saebi et al., 2016), there are also authors that regard any change in any dimension of a business model as BMI (Teece, 2010; Bashir & Verma, 2018). For the purpose of the following thesis and the context that BMI is referred to, it therefore seems appropriate to comprise radical BMI and concepts that rather refer to an incremental aspect of BMI. Hence, in analogy to Foss and Saebi (2017), BMI is comprised as changes to elements or dimensions of a firm's business model and/or the architecture that link these elements.

Albeit BMI is important for companies, it is often difficult to realize as different units of an organization have to effectively collaborate together (Azari et al., 2017). BMI does not occur in a linear process but through continuous feedback loops (Wirtz & Daiser, 2018). In this way, the company finds out what works, and what does not work (Gavetti et al., 2012). A learning mindset of the enterprise thus precedes BMI and the ability to leverage sustainable competitive advantage (Autio, 2017).

BMI must not simply be limited to a firm's business activities in foreign markets (Love & Roper, 2015). As previously mentioned, the development of sustainable competitive advantage is also crucial for success in international markets, thus representing the connective element between BMI and internationalization (Cavallo et al., 2019). Through internationalization, a company expands its business activities geographically to other markets (Ruzzier et al., 2006). The fact that internationalization and innovation are intertwined is also shown in the innovation model of internationalization, which regards the decision-

making processes leading to internationalization to be similar to those made in the instance of innovation (Cavusgil, 1982; Andersen, 1993). Other internationalization theory, such as the Uppsala model (Johanson & Vahlne, 1977), has an overlap with BMI in terms of learning and knowledge, which are crucial for both constructs.

The vast literature on international business includes research streams that try to explain the internationalization process of firms (i.e. Johanson & Vahlne, 1977), as well as research that comprehensively examines antecedents or outcomes of internationalization (i.e. Ruigrok & Wagner, 2004, Ruzzier et al., 2006). A basic assumption that is not only limited to international business research, is that decision-makers want to minimize their risks and are guided by a strategic consciousness (Andersen, 1993). However, when entering a new market, managers face uncertainty, as they lack specific information, which positions them as an outsider (Johanson & Vahlne, 2009) in comparison to companies that are perfectly familiar with the market in terms of customer needs or business practices. As a result, the company suffers from what has been called the ‘liability of foreignness’ (Hymer, 1976; Zaheer, 1995).

Casadeus-Masanell and Ricart (2010) point out that companies use business models to interact with their environment. While new business models can help firms to better reach their customers in both existing as well as in new markets (Gambardella & McGahan, 2010), adaptations of business models are necessary to better fit the “specific context of their international markets” (Child et al., 2017, p. 664). As a result, international business models often differ from those for domestic markets (Rask, 2014; Bouncken et al., 2015; Child et al., 2017). Innovation-based strategies may enable companies to prosper as they progress through their internationalization processes (Azari et al., 2017).

### **1.3. Research questions and hypotheses**

So far, research that addresses the nexus between BMI and internationalization has received little attention, although it is regarded a “common phenomenon in business” (Rask, 2014, S. 158; Azari et al., 2017; Cao et al., 2018). This relationship’s highly practical relevance, and its fragmentary status in academia, calls for an in-depth reappraisal. These includes, firstly, a systematic examination of the literature (paper I). The author is not aware of any such review, which necessitates summarization of previous findings and knowledge. The current research aim further includes the proposition of ideas and paths for future research. Aside from describing and providing an overview of existing research, the body of literature under examination will also be assessed in relation to its contribution to the further development of process theories based on process data. This is necessary as both BMI and internationalization, individually (Welch & Paavilainen-Mäntymäki, 2014; Spieth et al., 2016) and in interaction with each other, are to be regarded as a process (Rask, 2014). This leads to the following research questions:

*1a) What is the current body of research on the nexus between BMI and internationalization?*

***1b) To which extent is a process orientation in research on the nexus between BMI and internationalization realized?<sup>1</sup>***

When assessing the research on the nexus between BMI and internationalization, a main critique is the lack of clear evidence on how these two concepts relate to each other and what factors influence this relationship. This is especially the case in the question of whether BMI leads to a better international performance, as conflicting findings indicate that the relationship is not so straightforward as initially supposed. To date, there is no study that theoretically explains and empirically tests how BMI affects the international success of companies. A limited number of studies refer to a specific aspect of internationalization success, such as export performance, but with contrary results (Azari et al., 2017; Wojcik and Ciszewska-Mlinaric, 2021). If we keep in mind that internationalization takes place gradually (Johanson & Vahlne, 1977), it is not the overall success of internationalization that needs to be considered, but rather the question of how successful a certain ‘international venture’ of a company was. This leads to the following second research question:

***2a) Do firms benefit from innovating their business models while entering respectively developing a foreign market?***

Furthermore, it must be noted that the existing research also lacks concrete theoretical explanations for the presumption of a positive relationship between BMI and the success of an international venture. Therefore, one of the aims of this paper is to draw on theory to establish a relationship between BMI and internationalization success. Such a theoretical framework is provided by Autio (2017), who proposes that international new venture firms should build on and develop a competitive advantage in the course of the internationalization process. Experimenting with the business model design can help to achieve this. As will be shown in paper II, it can be assumed that the relationship between BMI and internationalization success will be positive, a proposition that is additionally supported by the findings of previous qualitative studies on BMI and internationalization.

*H1: BMI has a positive effect on the success of international ventures of firms.*

It can be further questioned whether firms will be able to invest resources for both their internationalization endeavors and innovation of their business models. Both business activities entail uncertainty and risk and are costly. For example, in the course of the internationalization, the company first must ascertain what works in the new target market, make new contacts, and understand the principles of how business is conducted in this new environment. These activities tie up resources and carry the risk of failure. Additionally, when a firm changes its business model, the success of these proposed changes is uncertain. For these reasons, it is likely that a firm will balance between both activities, but it is unclear in which way. For example, it can be supposed that a firm with international experience has available

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<sup>1</sup> The author would like to take this opportunity to express special thanks to Guido Bortoluzzi, who inspired this research question.

resources and will be more willing to take risks when changing the business model, while less experienced companies first have to become familiar with the internationalization process itself. Drawing on the traditional Uppsala model by Johanson and Vahlne (1977), we must question whether internal and external dimensions of a gradual internationalization process might lead to differences in the relationship between BMI and internationalization success:

***2b) Is this relationship influenced by internal and external dimensions of a stepwise internationalization process?***

For the purpose of paper II, focus will be applied to the dimensions that are typically associated with the Uppsala model, which include psychic distance, international experience, and resource commitment, suggesting that they positively moderate the relationship:

*H2: The positive relationship between BMI and the success of international ventures of firms will be stronger in firms with previous international experience.*

*H3: The positive relationship between BMI and the success of international ventures of firms will be stronger in firms with a higher degree of resource commitment.*

*H4: The positive relationship between BMI and the success of international ventures of firms will be stronger in firms which are doing business in foreign markets with a higher degree of perceived psychic distance.*

From the literature review, it is furthermore evident that a limited number of studies recognizes the complex and intertwined relationship between BMI and internationalization and contributes to the understanding of the process. Again, there is a lack of theoretical explanations to help us understand how BMI can trigger internationalization, and vice versa. Therefore, a theoretical explanation should be able to explain both directions. As explained in paper III, the dynamic states approach (Levie & Lichtenstein, 2010) will be used to understand how BMI can both be a trigger and an outcome of internationalization. Additionally, it is of interest to understand exactly which ‘forms’ BMI takes, depending on whether it is the trigger or the result of internationalization. This includes the question of how extensive BMI is (in terms of radical and incremental BMI) and which components of the business model are changed, leading to the following research question:

***3) Which forms of BMI are caused by or lead to internationalization?***

Giving answer to this question contributes to a better understanding what exactly changes in the business models and how the change occurs. This is particularly relevant because previous studies do not really take into account the interaction of BMI and internationalization. Also, the distinction between radical or incremental BMI will be considered.

What all three papers further have in common is their strong focus on a process perspective. This perspective is especially useful in order to understand dynamics, and how things evolve and change over

time. In paper I, processes are not only used as a separate category when presenting results of the body of literature; the paper also specifically examines to what extent a process perspective is applied in the literature on BMI and internationalization. Paper II examines if BMI leads to a measurable difference in the success of firms' international ventures. Even though this paper is variance-based, the assumption that firms follow a step-by-step internationalization process was an important foundation of the study design. Dimensions of the gradual Uppsala model of internationalization are also included in the conceptual model. In addition, one theoretical contribution and outcome of the paper is a new stage logic that explains how companies internationalize and which role BMI plays in this process. Finally, the third paper also takes a process perspective by systematically using the dynamic states approach to examine how BMI and internationalization are linked and what concrete changes occur in business models as a result.

#### 1.4. Development of thesis and list of publications

This PhD thesis presents three academic papers. They form the outcome of three independent studies (Figure 2), out of which different publications and documents were produced. Study reports and conference papers written by the author and colleagues mark the intermediate steps towards the final papers that are presented in this thesis. Table 1 provides an overview of these. All compositions were written within the framework of the doctorate.

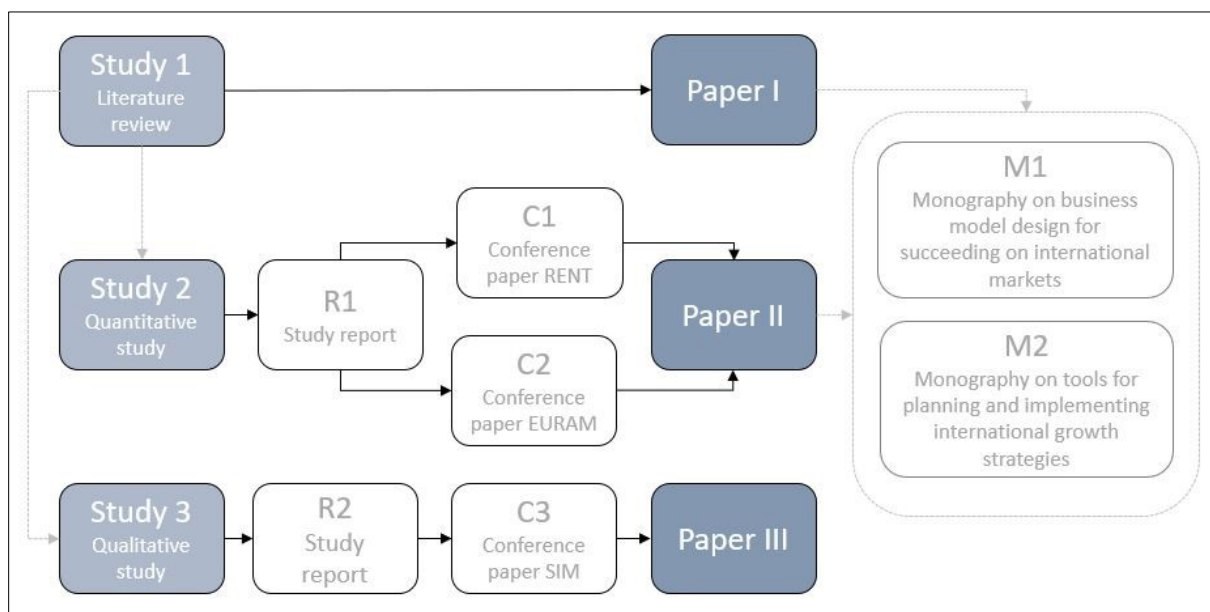


Figure 2: Development of integrative parts of PhD thesis

Since this research and the data collected originated from a project that was funded by the Carinthia Chamber of Commerce, the first results from the data were recorded in research reports (R1 and R2) written for the project client (in German). C1 and C2 comprise two conference papers, on the basis of which the present quantitative paper (Paper II) was further developed. The conference papers were presented at two international conferences: the EURAM (European Academy of Management) Conference



2021 and the RENT (Research on Entrepreneurship) conference 2020 (both in English). C3 was presented at a national conference of the Società Italiana Marketing (English), whose feedback was incorporated into further development of the present qualitative paper (paper III). Collaboration on two monographs with two co-authors is an additional work that has been completed based on the findings from the present studies. M1 is a monographic presentation on the process of business model design for international market development (the result of which is, among other things, Figure 1 above). M2 contains a workbook with practical tools for entrepreneurs and practitioners that contribute to the reflection and further development of international business development. The language of both monographies is German.

ID	Title	Type	Status
R1	Krenn, M., Sternad, D, Weiß, G. (2020): Alpen-Adria-Exportstudie zur internationalen Geschäftsentwicklung von Unternehmen in Kärnten, der Steiermark und Slowenien. Villach: FH Kärnten.	Study report	Published
R2	Krenn, M. (2022): Entwicklung und Anpassung von Geschäftsmodellen zur erfolgreichen Internationalisierung. Villach: FH Kärnten.	Study report	Published
C1	Krenn, M., & Sternad, D. (2020): Business model innovation as a driver of internationalization success. Full paper submitted and accepted for the RENT XXXIV conference, 19-20 November 2020, Naples, Italy.	Conference paper	Published
C2	Krenn, M., & Sternad, D. (2021): Business model innovation and internationalization success: A study of SMEs in three European Countries. Full paper submitted and accepted for the EURAM conference, 16-18 June 2021, Montreal, Canada.	Conference paper	Published
C3	Krenn, M., & Chiarvesio, M. (2021). Business model innovation: Exploring the dual role of internationalization. Full paper submitted and accepted for the SIM conference, October 2021, Ancona, Italy.	Conference paper	Published
M1	Sternad, D., Schwarz-Musch, A., & Krenn, M. (2021): Geschäftsmodell-Design für den internationalen Markterfolg. Wiesbaden: Springer.	Monograph	Published
M2	Sternad, D., Schwarz-Musch, A., & Krenn, M. (2023): Internationale Wachstumsstrategien planen und umsetzen. Workbook. <i>In press</i> . Stuttgart: Schäffer-Poeschl.	Monograph	Submitted
I	Krenn, M. (n.d.): Business model innovation and internationalization: A systematic literature review focusing on a process perspective. Villach/Udine: FH Kärnten/University of Udine.	Research article	Manuscript
II	Krenn, M., & Chiarvesio, M. (n.d.): Business model innovation and internationalization: Investigating the relationship through the dynamic states approach. Villach/Udine: FH Kärnten/University of Udine.	Research article	Manuscript
III	Krenn, M., Bortoluzzi, G., & Sternad, D. (n.d.). The moderating effects of psychic distance, international experience, and resource commitment on the relationship between business model innovation and the success of an international venture. Villach/Udine/Triest: FH Kärnten/University of Udine/University of Triest.	Research article	Manuscript

Table 1: Overview on publications and manuscripts with regard to the PhD thesis

The literature review was solely developed and elaborated by the author of the present thesis. For the empirical papers, the author's contribution refers to the research idea, literature review, preparation and conduction of the study, analysis of results, and development of a manuscript draft. The drafts of the conference papers leading to Paper II were prepared by the author with the help of the co-supervisor.

For the further development leading to the present version of paper II a third co-author strongly contributed to the theoretical part, which was based on an initial draft created by the author, and improved through several loops of all three authors. Paper III was written solely by the author and further developed by the author with the help of the author's supervisor.

## 2. Paper I

**Business model innovation and internationalization:  
A systematic literature review focusing on a process perspective**

Type of paper: Literature review

Melanie Krenn

## 2.1. Introduction

Over the past two decades, research on business models and business model innovation (BMI) has gained increasing attention in the management literature (Foss & Saebi, 2017). While a business model describes the mechanism of how a firm conducts its business (Casadeus-Masanell & Ricart, 2010a), BMI highlights the dynamic perspective, and the idea that the business model changes over time in its different dimensions and elements (Taran et al., 2015). Business models are not static, and evolve over time. Especially a changing environment forces a company to question their ways of doing business (Teece, 2010). Therefore, boundary conditions of such changing environments are of high interest in order to better understand the need for BMI.

Internationalization represents such environmental change. In order to remain successful, a firm will have to respond to the changing market conditions. A firm that enters a foreign market is exposed to a new environment, and will most likely adapt its business model. This is necessary, as the firm might be confronted by different customer needs and habits.

Some firms may develop a highly innovative business model, which helps them to grow and internationalize rapidly. Therefore, BMI can foster internationalization endeavors (Hennart, 2014). Both examples stress the importance and practical relevance of the interrelationship between BMI and internationalization.

In their review on BMI, Foss and Saebi (2017) elaborated that a better understanding of the antecedents and consequences of BMI is needed. Also, Bashir et al. (2020) have, in their review on BMI, identified the areas for future research, including questions about what triggers and what reinforces BMI, as well as what outcomes can be expected from BMI. Internationalization can therefore be an antecedent as well as a consequence of BMI. Moreover, internationalization represents a specific context where BMI is applied (Schneider & Spieth, 2013). As the interrelationship is of high practical relevance, this opportunity is taken to review systematically which research work has already been done in the field where BMI and internationalization overlap. This assessment is critical for making suggestions for future research. To date, literature lacks a systematic review on how research investigates the interrelationship of BMI and internationalization.

In addition, this review emphasizes that both concepts can be regarded as processes. This perspective is especially useful in order to understand dynamics, and how things evolve and change over time. The origins of internationalization being viewed from a process perspective can be traced back to the behavioral theories of internationalization in the 1970s, of which the Uppsala model (Johanson & Vahlne, 1977) is the best-known representative. The widespread theory of internationalization as process has remained until today (Welch & Paavilainen-Mäntymäki, 2014). Innovation has also been regarded as a manageable process (Van de Ven, 1999/2008). This process is nonlinear, iterative by nature,

and characterized by feedback loops (West & Bogers, 2014). As BMI is one specific aspect of innovation, these characteristics are also valid for BMI. Therefore, a process perspective offers high potential to understand the interaction of BMI and internationalization and to dive deeper into the sphere of understanding what actually happens when a business model changes in the context of internationalization. In order to set the course for future research, it seems appropriate to examine whether scholars take account of a process orientation.

The presumption is that only a minority of articles combine process data with process theorizing (Kutschker et al., 1997). The process lens thus provides an alternative perspective to the research on the relationship between BMI and internationalization. In this way the investigation of Welch and Paavilainen-Mäntymäki (2014) serves as a role model, and as a framework for understanding the role of processes in the existing research on the nexus between BMI and internationalization, as well as for fostering the process perspective in this field.

To study and understand research on the nexus between BMI and internationalization, the present review thus poses the following research questions:

- 1) *What is the current body of research on the nexus between BMI and internationalization?*
- 2) *To which extent is a process orientation in research on the nexus between BMI and internationalization realized?*

According to the differentiation between a *miner and prospector* view on literature reviews (Breslin & Catrell, 2020), this review follows a *miner* perspective and presents an in-depth analysis of the research streams (Webster & Watson, 2002). It organizes and categorizes the topics in the literature (Pickering et al., 2015) and takes stock of findings and common ideas. By targeting the first research question, this review gives an overview on what is known about international BMI, and demonstrates where the literature is incomplete. By addressing the second research question, it examines whether the literature on international BMI takes an adequate process perspective.

This study systematically reviews the literature dealing with the nexus of BMI and internationalization. To present the results, the first step is to understand the body of literature, and the individual articles, by identifying clusters of research and presenting a comprehensive review on the BMI and internationalization relationship. Then, a differentiation of the theoretical aims (applying/contributing to process theories) and their use of (or lack of) process-based data (Welch & Paavilainen-Mäntymäki, 2014; Pugliese et al., 2016) helps to categorize the articles. The basic assumption is that both internationalization and BMI are temporal and dynamic phenomena for why a process orientation is a suitable approach for investigation.

This study makes an important contribution to the literature of international entrepreneurship and business model innovation for the following reasons. Firstly, BMI significantly contributes to the competitiveness of firms, especially on a global level. Research on the internationalization of firms is extensive,

and the concept of BMI has gained increasing interest among scholars, as indicated above. But a body of articles dealing with the overlapping of both concepts is just at its beginning (Cavallo et al., 2019). Hence, this paper provides a basis for researchers by showing what we already know. Secondly, this article clarifies which questions remain to be answered as a prerequisite for a future research agenda. Thirdly, a declared focus of this study is to investigate whether the articles under investigation follow a process-perspective. In this way, a foundation for a future focus on a process perspective in research on international BMI is provided. In line with Welch and Paavilainen-Mäntymäki (2014) and Pugliese et al. (2016), this review helps to better formulate future research questions by using coherent methodologies and, in this way, to advance knowledge on the nexus of BMI and internationalization.

In the following section the concepts of BMI and internationalization are outlined. This is followed by an explanation of the process-perspective lens in management science, and why research on the nexus between BMI and internationalization can make use of this perspective. In a next step, the methodology of the systematic review is outlined, based on the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021) to ensure high quality within the review. By presenting the results, an overview of the body of literature is given, followed by a closer look at the process paradigm in research articles in the defined research area. The discussion part summarizes the findings, outlines implications and limitations, and provides some suggestions for future research.

## **2.2. Theoretical background**

### **2.2.1. *Business model innovation and internationalization***

A business model is a “cognitive structure” (Massa et al., 2017, p. 83) whose aim is to provide a tool for decision-makers to reduce complexity, and to enable efficient understanding of the main mechanisms in how a firm does business. The Business Model Canvas developed by Osterwalder and Pigneur (2010), for example, is widely used by practitioners to understand their businesses, but also to explain the mechanism of their businesses to others. Business models can serve as a starting point to analyze the status quo of business logic.

Business models are the realized strategy of a firm (Richardson, 2008; Casadesus-Masanell & Ricart, 2010, Spieth et al., 2016), originating from strategic management research (Ritter & Lettl, 2018). Strategic management examines how companies adapt to external conditions in order to be successful (Tece et al., 1997). Therefore, the question arises of how business models can be designed in the best possible way to achieve better firm performance (Tece et al., 1997; Frankenberger et al., 2013).

There is no uniform definition of the terms ‘business model’ and ‘business model innovation’ (Foss & Saebi, 2017). Regarding the latter, the multitude of approaches becomes visible in the different wording that refers to the evolution of business models, including ‘business model adaptation’ (Saebi et al., 2017), ‘business model evolution’ (Balboni et al., 2019), ‘business model reconfiguration’ (Calia et al., 2007), as well as ‘business model change’ or ‘new business models’. But all of them refer to the same

idea: namely that business models are dynamic, not static. The reason why firms rethink their business logic is because they want to create and sustain a competitive advantage, which helps them to achieve growth and to run their businesses for profit.

One way of achieving growth is to expand the business activities to new markets (Ansoff, 1957), which can be realized through internationalization. Internationalization comprises the “geographical expansion of economic activities over a national country’s border” (Ruzzier et al., 2006, p. 1462). However, the general conditions in other markets are different from those in the home market, which brings new opportunities as well as new challenges for the firm. Therefore, firms have to adjust their corporate strategy (Calof & Beamish, 1995; McDougall & Oviatt, 1996; Lam & White, 1999) in the course of successful market development.

Adjusting the corporate strategy also means adjusting existing business models (Ngoasong et al., 2021). A changing environment requires that business models are adapted and renewed (Chesbrough, 2010; Doz & Kosonen, 2010; Sosna et al., 2010). Established business models cannot simply be transferred into a new market context, but need considerable adaptation and change to increase productivity and competitiveness significantly (Wu et al., 2010).

### ***2.2.2. Taking on a process perspective on BMI and internationalization***

Management studies differ between two paradigms: the variance and the process paradigm. The variance approach prevails, with the target of explaining and predicting causal relationships between two or more factors (Pugliese et al., 2016). Research following the variance paradigm assesses the antecedents or consequences of a certain phenomenon in question. From a technical point of view, it is necessary to translate the constructs into measurable dependent and independent variables and to check for statistical variance. Quantitative methods like linear and non-linear regression models are often applied, but of course not limited to these (Welch & Paavilainen-Mäntymäki, 2014).

In the case of BMI this could involve studies that survey its success or the extent to which BMI has an impact on the overall performance of the company. Zhang et al. (2021), for example, have examined in their extensive meta-analysis antecedents of BMI (based on 86 studies) as well as its effect on firm performance (based on 42 studies). The authors reveal that BMI significantly correlates with firm performance, and that environment uncertainty has a significant positive effect on the relationship between BMI and firm performance.

Although the variance paradigm is dominant in research on internationalization (Welch & Paavilainen-Mäntymäki, 2014), a main critique is that interesting aspects of change processes may be overlooked (Poole et al., 2000). Moreover, variance-based approaches rather test but hardly contribute to advancing existing theory (Welch & Paavilainen-Mäntymäki, 2014).

Process research, on the contrary, helps to better understand the dynamics in management and entrepreneurship (Langley et al., 2013; McMullen & Dimov, 2013). Researchers following a process paradigm aim to understand how things evolve and change. This manifests in processes, sequences, and events (Mohr, 1982), explaining “patterns in events, activities, and choices over time” (Langley, 2009, p. 409). Mostly, qualitative methods are preferred (e.g. longitudinal case-studies), but quantitative methodologies (e.g. panel data models) are also used. While weak process theories explain the evolution of the firm, or identify patterns or stages, stronger process theories are able to explain how and why these patterns occur. The main challenge is to shift from describing events and patterns to identifying the key mechanisms of how and why the patterns occur (Langley, 2009).

The reasons why studies investigating on the nexus between BMI and internationalization should also be process-based are, first of all, because both concepts are processes when considered individually. Behavioral theories in internationalization, including the Uppsala model, are so-called process theories, assuming that internationalization takes place in certain stages. They have mainly contributed to the prevailing view of internationalization as a multi-layered process that evolves over time (Welch & Paavilainen-Mäntymäki, 2014). This becomes evident in definitions that highlight internationalization as “the process of increasing involvement in international operations” (Welch & Luostarinen 1988, p. 36).

Similarly, the process perspective is an integral part of definitions of the term BMI. Traditionally, research in innovation management aimed to analyze and structure innovation processes, but this is not necessarily the case for BMI (Frankenberger et al. 2013). Earlier research assumed that innovations follow a linear process (Daft, 1978) which was later revised (Schroeder et al. 1989). As the idea of a structured scheme (Frankenberger et al. 2013) was easier for practitioners, the compromise was to enhance the process with feedback loops. There is an iterative nature in the innovation process.

BMI can be seen as a form of innovation that is itself promoted as an organizational process (e.g., Damanpour, 1996). Furthermore, as business models are subject to change, they are not only a unit of innovation, but can also be viewed from a process perspective (Foss & Saebi, 2017). Amit and Zott (2010) defined BMI as the “[process of] designing a new, or modifying the firm’s extant activity system” (p. 2). Many authors highlight the dynamic nature, describing BMI as an ‘ongoing learning’ (McGrath, 2010; Sosna et al., 2010), and iterative process (Kajanus et al., 2014), where firms develop their business models through continuous improvement (Kraus et al., 2017). While research seeks to identify different stages within the BMI process (Foss & Saebi, 2017), it is important to recognize that feedback loops from the market, and a process of trial and error are necessary (Sosna, et al., 2010; Rissanen et al., 2020). The continuous evolution of business models implies that they are “permanently in a state of transitory disequilibrium” (Demil and Lecocq, 2010, p. 240).



In their review on research dealing with internationalization from a process perspective, Welch and Paavilainen-Mäntymäki (2014) found that many papers do not meet the requirement of examining process-based data in accordance with a process theory. Pugliese et al. (2019) included a similar approach in their review of work on growth, concluding that research does not always measure up. Again, the authors found a large number of publications that are generating process but not process theory.

### **2.3. Methodology**

#### **2.3.1. Eligibility criteria**

The methodology of our review follows the PRISMA statement (Page et al., 2021). Following these principles, this review includes all papers that a) refer to the concepts of BMI and internationalization in the title, abstract, or key words, b) have been published in peer-reviewed journals, c) had been published between 2000 and June 2022, d) have been published as an article or research article, and e) were published in English.

#### **2.3.2. Information sources and search strategy**

In accordance with the PRISMA statement, five databases served as sources for finding suitable articles, as can be seen in figure 3. In the databases ScienceDirect, Emerald, Business Source Premier, and Web of Science, it is possible to search the abstract, the title, and the keywords. In Google Scholar one can only limit the search to the title (but not to the abstract). Furthermore, in some databases it was not possible to select research articles directly, which is why the type of publication was checked. Theses, conference papers, (editorial) notes, case studies for educational purposes, and articles that were not accessible, did not make the final selection.

Although the term ‘business model innovation’ is now dominant, some authors still speak of ‘business model evolution’ (Rissanen et al., 2020), ‘reconfiguration’, ‘change’, etc. Due to the fact that there is no unique use of the concept of BMI, it seemed appropriate not only to search for the keyword ‘business model innovation’, but to expand the research by searching by ‘business model’ only. In this way articles were collected whose content refers to the concept of BMI, but describes it as ‘changes in the business model’ or ‘business model evolution’.

Search combinations comprise the term ‘business model’ with terms that refer to ‘internationalization’: ‘international\*’, ‘export’, and ‘multinational’. In the case of the term global it was necessary to do a more precise search, and combine this term with the term ‘business model innovation’. Making this choice helped to ensure that no irrelevant articles were considered, but only those considering BMI as a crucial part of their investigation. In total 800 articles were identified.

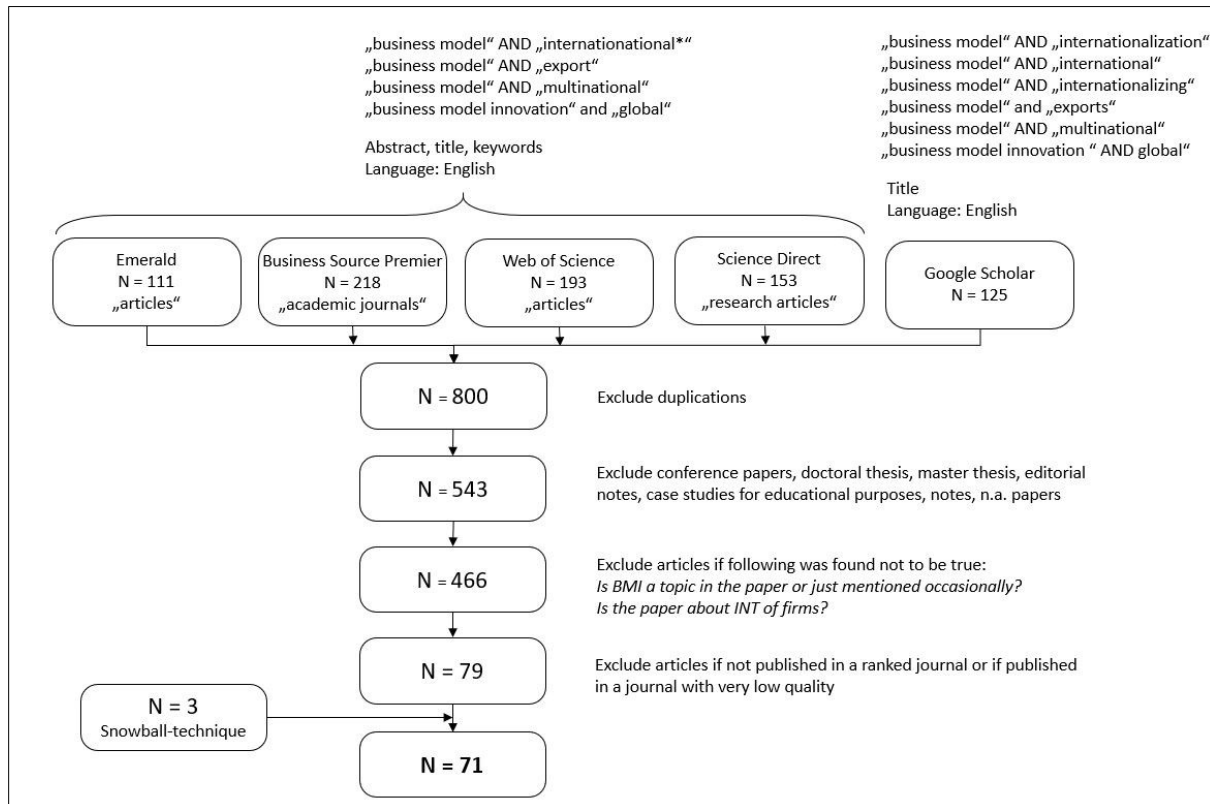


Figure 3: Selection of articles for review

### 2.3.3. Study selection and quality assessment

The total list has been checked for duplications. Eliminating all articles that appeared more than once reduced the overall database to 543 articles. Again, articles were excluded that were not proper research papers, such as book chapters or case studies for educational purposes. This step ensured that only articles published in a journal and having gone through a review process were included. Also, articles that were found to be conference papers were excluded, because they were most probably in an early development phase.

The remaining publications were screened in order to find out whether the articles were really dealing with BMI and internationalization. Checking titles as well as the abstracts helped to exclude articles that mentioned the terms casually. The step of assessing the relevance of BMI and internationalization to the paper was a critical step. This included the danger of potential bias, for which reason two researchers assessed the articles independently as a first step, and then each reviewer double-checked the other researcher’s evaluation. In the case of differences, the researchers discussed whether to include the article or not. In this way the list of articles was reduced to 79.

A last step considered whether the journals in which the respective articles were published had been listed in ranking lists. This should, again, ensure that the articles had been through a review process. The listing of the journals in the ABS (2021) and SCImago (n.d.) rankings served as a basis for the decision-making. The review excludes articles from journals that were a) listed in the worst categories of both

rankings, b) listed in the worst category of the SCImago ranking and not listed in the ABS ranking, and c) were not listed in either ranking. Eleven further articles were excluded. Through using a snowball-technique, four additional articles were found, of which one was not listed on the ranking lists, and thus failed to be included for our review. The final list of articles included in the review comprises 71 articles.

#### **2.3.4. Data synthesis and analysis**

In order to handle the data of our collected articles, MAXQDA data-analysis software helped to organize the examination. To answer the first research question, that deals with the overall body of literature on the nexus between BMI and internationalization, inductive category building was applied, which means that the categories emerged out of the data (and were not predefined). This step required a screening of the first articles and an attempt to elaborate common superordinate themes. Throughout the coding process these categories were expanded, cumulated, or changed. Whenever new categories were formed, articles that had been read up to that point were reassigned. Through this iterative process the following categories were formed: 1) theoretical perspectives, 2) the nexus of BMI and internationalization, 3) resources, capabilities, and tools 4) contextual factors, and 5) processes, paths, and patterns.

A next step was to analyze the coded phrases in each category, and again to cluster the articles under examination. For example, in the case of ‘the nexus on BMI and internationalization’, it appeared that some articles view internationalization as a trigger for BMI, other articles regard BMI as the initiator of internationalization, and others again recognize the complex interrelationship between the two concepts. The presentation of the results draws back on these categories to provide an overall understanding of the articles on BMI and internationalization.

In order to answer the second research question, it was assessed whether the articles used process data in their reviews, and whether they were contributing to process theory (i.e. generating a process model out of the empirical data). For the purpose of reducing the risk of arbitrary evaluation, the passages of text in the articles were coded to provide accurate evidence of the assignment to process data or process theories.

#### **2.3.5. Sample description**

As can be seen from Figure 4, the highest number of publications per year was in 2021. As the research included all articles published until the end of June 2022, for the year 2022 six articles have already been included in our sample. It can be assumed that the topic will develop further in the next few years, and that this review represents a starting point for providing a future research agenda.

Nearly two thirds of the articles selected for review used qualitative methods (65%), followed by quantitative methods (18%), and some conceptual and theoretical papers (14%). Mixed methods were hardly used at all (3%). There is a high number of articles whose findings were built on the insights of a single case study (n=20), being nearly half of all the articles that used qualitative methods. Most qualitative articles draw on multiple case studies (with an average of 8 companies).

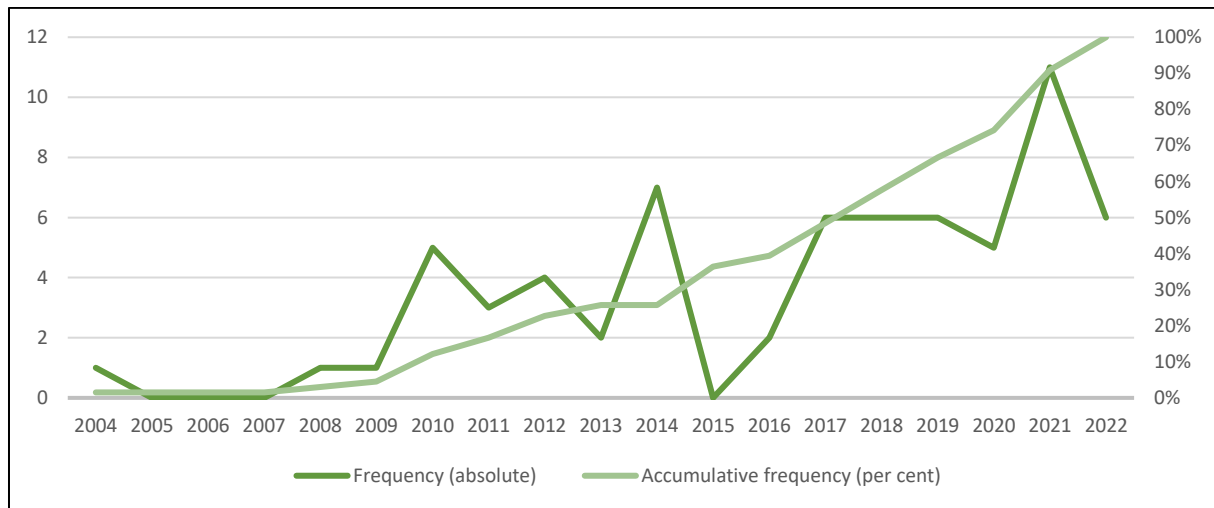


Figure 4: Publications on BMI and internationalization

72.7% of the articles were published in journals that were ranked as ‘Q1’ according to the SCImago ranking (n.d.), and 43.9% in journals with a ranking higher than ‘3’, according to the ABS (2021) ranking.

Focus on firm type	Articles	
INV	Abrahamsson et al. 2019; Autio 2017; Bialek-Jaworska & Gabryelczyk 2016; Johansson & Abrahamsson 2014; Hennart et al. 2021; Kraus et al. 2017; Lehrer & Almor 2022; Onetti et al. 2012; Sainio et al. 2011; Turcan & Juho 2014	10
SME	Asemokha et al. 2019; Azari et al. 2017; Child et al. 2017; Colovic 2022; Javalgi et al. 2012; Lee et al. 2012; Rissanen et al. 2020; Sundström et al., 2021; Sundström et al.2020; Reim et al. 2022; Westerlund 2020	11
MNC	Cao et al. 2018; Colli et al. 2013; Buckley & Horn 2009; Fleury & Fleury 2014; Dahan et al. 2010; Das & Dey 2021; Duan et al. 2021; Duan et al. 2020; Malik et al. 2022; Morrison et al. 2004; Ngoasong et al. 2021; Pitelis 2022; Tallman et al. 2018; Williamson 2010	14
<b>Focus on industry</b>		
IT or High-Tech	Cavallo et al. 2019, Cahen & Borini 2020, Calvo & Villarreal 2018; Ciravegna et al. 2019; Dalby et al. 2014; Jean & Tan 2019; Sun et al. 2018; Wang et al. 2018; Wood et al. 2020; Wu et al. 2010; Zarei et al. 2011	11
Service	Bohnsack et al. 2021; Chalaby 2012; Dunford et al. 2010; Mir-Bernal et al. 2018, Otto et al. 2021; Minahan et al. 2012; Sharma et al. 2016; Strandskov & Pedersen 2008; Parker & Lawrence 2021; Presenza & Messeni Petruzzelli 2019	10
Production	Casadesus-Masanell & Ricart 2010b; Chang et al. 2021; Guercini & Milanese 2017; Kajanus et al. 2014; Landau et al. 2016; Nandi et al. 2022; Runfola & Guercini 2013; Von Delft et al. 2019; Winterhalter et al. 2017; Wójcik & Ciszewska-Mlinarič 2021; Zähringer et al. 2011	11
<b>Unknown</b>	Jun et al. 2013; Nunes & Steinbruch 2019; Rask 2014; Tian & Martin 2014	4

Table 2: Focus on firm type or industry in articles under review

The firms as research objects in the articles in question are heterogenous in terms of size and age (SMEs vs MNCs, start-ups vs. established firms), but also regarding the wording for the concepts (‘design’ or ‘adaptation’ as alternatives of business model ‘innovation’, or ‘export performance’ as a proxy for internationalization). Most papers in our sample focus on a specific industry, or on the firm size. Table 2 provides an overview of which industry and firm type the papers have focused on. The industries can be

categorized as high-tech or IT firms, manufacturers, and service firms; in terms of firm age, some articles explicitly focus on international new ventures (thus young firms, including start-ups and born global firms) while in terms of firm size, authors either focus on small and medium-sized enterprises (SMEs) or multinational corporations (MNCs).

## **2.4. Understanding the articles on BMI and internationalization**

### **2.4.1. Theoretical perspectives**

The prevailing theoretical approach is the dynamic capabilities view (Fleury & Fleury, 2014; Johansson & Abrahamson, 2014; Turcan & Juho, 2014; Cao et al., 2018; Cavallo et al., 2019; Cahen & Borini, 2020; Chang et al., 2021; Ngoasong et al., 2021; Wójcik & Ciszewska-Mlinarič, 2021). Business model innovation is regarded as a necessary dynamic capability for achieving transformation. But Chang et al. (2021), for example, regarded business modelling and internationalization as seizing activities. Other authors refer to the resource-based view (Strandskov & Pedersen, 2008; Casadesus-Masanell & Ricart, 2010b; Bohnsack et al., 2021), or a mix of the resource-based and the dynamic capabilities view (Child et al., 2017; Jean & Tan, 2019; Malik et al., 2022).

Also, the behavioral theory of the firm and a learning-oriented perspective were used in some articles (Sun et al., 2018; Rissanen et al., 2020; Colovic, 2022). Only a few articles considered internationalization-related theories, as for example Parker and Lawrence (2021) included BMI as state variable in the Uppsala model. Das and Dey (2021), as well as Zähringer et al. (2011), built their investigations on the OLI-paradigm, assuming that ownership advantages, location, and internalization influence BMI. Nunes and Steinbruch (2019) developed propositions based on the literature, according to which the market entry strategy will determine the level of BMI. The authors claim that direct export will lead to medium BMI in terms of content, structure, and governance, while indirect export will lead to low BMI. Contractual agreements will lead to low BMI in terms of content and structure, and high BMI in terms of governance.

To the author's best knowledge, there is no article to date that measures the impact of BMI on international performance, and empirically tests a concrete theory. This can certainly be accounted for by the lack of theoretical approaches explaining the interrelationship between BMI and internationalization. Looking at the theoretical backgrounds of the articles, only a few papers really contribute to theory-building. There are two articles in our review that are an exception. The normative framework of Autio (2017) aims to predict how BMI enables international new venture firms (INVs) to develop a competitive advantage, which will lead to internationalization success. He argues that four strategic postures can serve as a source of competitive advantage: learning orientation, business model experimentation, niche orientation, and the exploitation of cross-border asymmetries to translate them into business models. Focusing on MNCs, Pitelis (2022) suggests the dynamic capabilities view as "meta-theory-plus". The author explains that dynamic capabilities (including BMI as restructuring capability) interact with

the context, but are also related to other theories, such as the resource-based view, or behavioral theories. Both papers are promising in explaining the relationship between BMI and internationalization.

#### ***2.4.2. The nexus of BMI and internationalization***

Despite the fact that hardly any articles empirically test the effect of BMI and international performance, BMI seems to be a necessity for firms in the course of the internationalization process, as this has been highlighted by several authors of qualitative papers (i.e. Landau et al., 2016; Bohnsack et al., 2021; Colovic, 2022). For born global firms, it has been shown that the ‘design’ of a business model fosters internationalization (Cavallo et al., 2019). Here, the competitive or firm-specific advantage is regarded as critical in explaining why firms will be successful on foreign markets by changing their business model (Casadesus-Masanell & Ricart, 2010b; Autio, 2017; Calvo & Villa Real, 2018; Cavallo et al., 2019; Bohnsack et al., 2021).

In one of the few quantitative articles, BMI has served as a mediating variable to explain the relationship between international orientation and international performance in the case of SMEs (Asemokha et al., 2019). The partly mediating effect was found to be significant; also, the effect of BMI on international performance was significantly positive. Wójcik and Ciszewska-Mlinarič (2021) concluded that business modeling is positively related to export performance (as one aspect of internationalization). There are, however, also some opposing results, leading to the conclusion that the relationship between BMI and internationalization might not always be clear. Testing the impact of different types of innovation on export performance, Azari et al. (2017) discovered that BMI has a negative effect on export performance. At the same time, the authors found a positive association between BMI and the growth ambition of a firm. The authors explain their results by the fact that a low level of BMI might not be sufficient to succeed; yet a radical BMI also bears a high risk, and ties up resources. Similarly, Duan et al. (2021) argue that MNCs face increased costs and risks when research and development (R&D) institutions in several countries face cultural differences. This leads to a lower level of innovation quality, and subsequently firms fail to realize BMI.

These findings can be an indicator that BMI might not lead to success on international markets under all circumstances. A positive relationship between BMI and international performance is likely to exist, but only under certain conditions that are not yet known. Furthermore, it should be considered that BMI might not bring immediate value in the short term, but will aid visibility and growth in the long term (Mir-Bernal et al., 2018).

#### *Internationalization as an initiator for BMI*

Some authors take the position that firms adjust their business model because they want to expand their businesses on international markets, regarding internationalization as a starting point (Buckley & Horn, 2009; Nunes & Steinbruch, 2019). Accordingly, internationalization provides opportunities for firms to expand their businesses, and also to learn, and to change their business model (Ciravegna et al. 2019).

In a study on the transformation of research and development in a single firm, Chang et al. (2021) built on the idea that dynamic capabilities are related cyclically and sequentially. Therefore, international market innovations, and technological and organizational innovations, lead to business modelling and internationalization as major strategic activities, from which R&D is reconfigured.

More than providing new opportunities, there might even be the necessity of “localization” (Sharma et al., 2016, p. 109), showing that firms have to adapt their business models when internationalizing because the firm is exposed to a new institutional environment. This is necessary, as markets differ in terms of the institutional setting (Landau et al., 2016). This is not only the case when firms from developed markets expand to emerging markets (Wu et al., 2010; Sharma et al., 2016), but also the other way around. Fleury and Fleury (2014) examined the case of what they call ‘reverse takeovers’ of Brazilian MNCs that enter the US-American market. These firms have developed a competitive business model designed for their home market, but when taking over firms in a developed country, their local environmental conditions are no longer valid. In order not to become ‘trapped’ in an incompatible business model, these firms have to move up to activities with a higher knowledge content. Also, Runfola and Guercini (2013) regard internationalization as an initiating event for developing the business model of a company in the fast-fashion industry, pointing out that the changes of the business model correspond with the market expansion of their case firm from Italy to Europe, and then to emergent markets.

While some authors suggest that firms develop “secondary business model innovations” (Wu et al., 2010) when translating disruptive technologies to emerging markets, others point out that business models evolve continuously through internationalization as a form of market feedback (Sun et al., 2018). As international business activities include risk and uncertainty, firms will counteract perceived threats by planning international activities more carefully, and tending to change their business model (Rissanen et al., 2020). Drawing on the business model of Piaggio Ape, Nandi et al. (2022) explain that the Italian business model of the company differentiates from the Indian in terms of several aspects. All these changes could not have been made in a single phase, but were completed by an iterative approach.

Looking more closely at which components or elements in the business model change, it is obvious that the picture is not uniform. Also, there is no consensus on the understanding of a business model, its dimensions and elements. While some authors emphasize that all components of a business model have to be adjusted (Cavallo et al., 2019; Reim, 2022), other articles stress that the adaptations affect certain components or elements in particular.

Landau et al. (2016) found that adjustments were necessary for all components of the business model. However, they further pointed out that especially value creation and delivery had to be changed in emerging markets. This is in line with the finding from Turcan and Juho (2014) that adaptations on an

operational level are necessary to guarantee the quality of processes. Also critical are external relationships and partnerships (Abrahamsson et al., 2019), as well as sales, distribution, and logistics in particular (Wu et al., 2010; Dalby et al., 2014).

Others again emphasize that the value proposition itself has to be tailored to the market (Wu et al., 2010; Turcan & Juho, 2014), or recommend looking at and including different levels of the customer chain (Sundström et al., 2021).

Finally, looking at the cost side of a business model can be relevant. Especially when firms target emerging markets, cost reduction may help develop a ‘frugal value proposition’ to attract customers with limited resources (Winterhalter et al., 2017). ‘Cost innovation’ (Williamson, 2010) refers to firms offering high technology or a high variety of products at low cost, as well as firms moving from a niche to a mass market.

Mirahan et al. (2012) recommend identifying critical elements in the business model for success. These should be kept without discussion, while remaining elements can be adapted. Similarly, Tallman et al. (2018) propose a “global business model” (p. 517) for MNCs, which offers an “overall architecture” (p. 532) in terms of a standardized core process, profit formula, and value proposition. But, again, a “one size fits all” (p. 531) solution for all markets is not possible, and the authors point out that certain aspects have to be adapted specifically for the target markets.

Bohnsack et al. (2021) have found in their qualitative study that firms differ in the specific advantage of their business model according to their degree of location-boundedness. Firms with a high degree of location-boundedness had to adapt two or three components of their business model for internationalization. For firms with a low location-boundedness (technology providers and consulting firms), minor adaptations in the business model were sufficient. Some firms were in-between high and low location-boundedness, so some degree of recombination and adaptation was necessary.

#### *BMI as an initiator of internationalization*

In contrast to those articles that regard BMI as a means for encountering opportunities and threats on the target markets, others examine how innovative business models themselves drive growth (Johansson & Abrahamson, 2014), and thus also international business. Jean and Tan (2019) state that innovative digital business models may help to overcome or reduce the liability of foreignness. Hennart et al. (2021) examine how the design of (innovative) business models affects internationalization speed. Firms internationalize faster when they do not need any adaptations, and when they standardize processes to save time. Kraus et al. (2017) assumed that the business model design of born global firms would influence their international performance. The authors’ findings reveal that efficiency-centered designs have a directly significant effect on international performance (measured by the transnationality index), while business model novelty has an indirect effect on internationalization, mediated through network intensity.



Research also investigates certain types of (innovative) business models. Earlier articles focus on business models linked to e-commerce (Mir-Bernal et al., 2018), or ‘netchising’, which is the idea of using the internet for procurement, sales, and for managing business relationships (Morrison et al., 2004). Wang et al. (2018) examine the case of a cross-border e-commerce company, highlighting that innovations in the supply chain build the core of BMI in that specific branch. Other authors emphasize the relevance of networks (Morrison et al., 2004; Zarei et al., 2011) or making use of platform models (Das & Dey, 2021). Similarly, Saino et al. (2011) propose a value-based business model that is designed with the help of partners and suppliers. Further specific business models focus on intangibles like servitization/service business models (Stranfskov & Pedersen, 2008; Zähringer et al., 2011; Wood et al., 2020), or intellectual property (Chalaby, 2012). Some articles discuss the aspects of sustainability (Calvo & Villa Real, 2018), CSR (Sundström et al., 2020) and “shared value” (Nandi et al., 2022) for innovative business models. Another important focus has been found on niche business models (Autio, 2017; Hennart et al., 2021; Lehrer & Almor, 2022).

Child et al. (2017) propose a sophisticated differentiation of three types of international innovative business models, based on empirical data of 180 SMEs. The ‘traditional market-adaptive’ model refers to exporters that modify existing products and services for international markets and strongly collaborate with local partners. The ‘technology-exploiter’ model consists of firms with high innovation capacity, mostly using the internet as a sales channel. Lastly, firms with a flexible combination of different market entry and market development strategies form the ‘ambidextrous explorers’. Which innovative business model a firm will apply is dependent on the industry, level of home economy development, and decision-maker international experience (Child et al. 2017).

#### *The complex interrelationship between BMI and internationalization*

Some authors recognize that the relationship between BMI and internationalization is not “unidirectional” (Cavallo et al., 2019, p. 20), but an “intertwined” (Onetti et al., 2012, p. 339) and complex connection (Strandskov & Pedersen, 2008; Cao et al., 2018). Runfola and Guercini (2013) came to the finding that it depends upon geographic extent whether it is possible to overcome tensions in the business model caused by internationalization. Subsequently, the business model of their examined industry (fast-fashion industry) and its major forces will guide the internationalization strategy. Otherwise, major changes in the fast-fashion business model will be necessary to sustain rapid growth, and therefore internationalization will cause changes.

Some authors suggest a perspective that synthesizes both concepts, regarding internationalization as a part of BMI. Onetti et al. (2012) propose to include internationalization as an aspect of the business-model framework for new technology-based firms. The authors suggest the location (or “locus”) as a key building block of their framework, beside focus (value proposition) and modus (organizational aspects). Similarly, for Guercini and Milanesi (2017) internationalization is a constitutive element of the

business model in the fast-fashion industry. The authors show that the liability of foreignness can also become the asset of foreignness, and a competitive advantage (at least in the luxury fashion industry, and in the case of Italy). Other authors rather regard BMI as a unit of analysis for the internationalization process (Cavallo et al., 2019).

To summarize, the relationship between BMI and internationalization is reciprocal. However, most of the research looks at it from either a BMI or an internationalization perspective. There are hardly any (theoretical) approaches, which help to explain how to look at the reciprocal relationship. In addition, there is no clear picture of what specifically is changing in the business models. In principle, based on theoretical considerations and qualitative work, it can be suggested that there is a positive relationship between BMI and INT. But the picture is not clear, such as that BMI has been found to negatively affect export performance.

#### **2.4.3. Resources, capabilities, and tools**

There are some resources and capabilities relevant for the BMI-internationalization relationship, that seem to have general applicability for firms, independent of their size or industry, while some authors explicitly refer to companies of a certain industry only.

Particularly relevant is the ability for orchestration, in order to coordinate activities and knowledge, as in the context for MNCs (Pitelis, 2022), or for platform ecosystems launched by MNCs (Das & Dey, 2021). Born global firms need a balance capability to manage different business model designs simultaneously and in a timely manner (Johansson and Abrahamsson, 2014). Some authors introduce the perspective of ambidexterity by developing incremental and disruptive innovation capabilities (Lee et al. (2012), or by making use of explorative and exploitative supply chain practices, in combination with the ability to acquire external knowledge (Van Delft et al., 2019). Ngoasong et al. (2021) highlight the role of subsidiary managers for orchestration.

Further capabilities refer to agility or flexibility (Buckley & Horn, 2009; Sainio et al. 2011; Minahan et al., 2012; Jun et al., 2013). For Tallman et al. (2018) flexibility helps firms to find out in a trial-and-error process what works, and to respond to external changes. The relevance of flexibility is also highlighted through making small experiments with business models in the course of internationalization (Jun et al., 2013). Wójcik and Ciszewska-Mlinarič (2021) foster strategy as a “stretch managerial mindset” that is positively related to business modelling. Also, Sharma et al. (2016) highlight that a successful adaptation requires elasticity to exploit demand spurts, as well as an innovative design to overcome institutional voids, and the efficiency to serve large volumes at lower cost (in the airline industry).

Some articles focus on capabilities related to leadership and management. Fleury and Fleury (2014) find that the environment affects organizational competences and management style, which in turn affect BMI. Colovic (2022) examines how chief executive officers (CEOs) in SMEs lead BMI during the process of internationalization, highlighting that a timely internationalization is rather achieved by small-

scale BMI and directive leadership, while large-scale BMI and an empowering leadership style helps to increase international business activities. In MNCs that innovate their business model for transforming economies, subsidiary managers especially can contribute to effectively sensing the market for opportunities, transferring knowledge, confronting structural tensions through effective relationship management, and reflecting on how to adapt the products to local needs (Ngoasong et al., 2021). The international work experience of the founders of born global firms may also contribute to successfully innovating a business model (Hennart et al., 2021).

Some authors highlight in their research the relevance of strategic partnering (Presenza & Messeni Petruzzelli, 2019), networking (Lee et al., 2012) and relationship capabilities (Johansson & Abrahamsson, 2014, Ngoasong et al., 2021; Malik et al., 2022). These characteristics can help to overcome certain challenges, and to solve structural, behavioral, and cultural tensions, for example, between the headquarters and the subsidiary branches, and ensure knowledge transfer. Knowledge from internal and external sources helps to innovate the business model in terms of the value creation and value capture mechanisms (Malik et al., 2022). Especially for startups and spin-offs, relational capabilities are necessary to bring their business models to scale internationally (Johansson & Abrahamsson 2014; Bialek-Jaworska & Gabryelczyk, 2016). For example, in order to tailor business models specifically to emerging markets, collaborations with non-governmental organizations (NGOs) might help, as they have market expertise and are familiar with market specificities (Dahan et al., 2010). Similarly, supply chain partners may possess global knowledge that firms can use for BMI (Von Delft et al., 2019). Also, using internet technology for networks may be crucial, as, for example, in the case of virtual networks in service-business models (Wood et al., 2020) or online-based SMEs, which will be successful if they, amongst others, make use of information systems and value networks (Westerlund, 2020). Furthermore, managing the relationships within the industry and understanding the business models of industry players is vital, as the firm's business model interacts with the environment of the industry (Casadesu-Masanell & Ricart, 2010b). While cultural capabilities help to build a learning and market orientation, relational capabilities improve abilities, motivation, and opportunities (Malik et al., 2022).

Specific resources that firms need for international BMI depends upon the industry. Parker and Lawrence (2021) have found that for the banking industry, strategic alliancing, brokerage know-how, and risk management were necessary to replicate business models in foreign markets. Westerlund (2020) observed that for digital firms the use of information systems, the extent of value networks, the emphasis on key internal resources, and dealing with cybersecurity issues were key to implementing international BMI successfully. The knowledge throughout the customer chain, the customer needs and wants, as well as information process capabilities, and applying this knowledge into practices, are further critical capabilities (Buckley & Horn, 2009; Sundström et al., 2021).

Concrete tools that help practitioners are rare. Kajunus et al. (2014) develop an evaluation tool that aims to speed up the implementation of BMI in international markets. Sundström et al. (2021) propose that a

market-oriented business model can serve as a tool to capture contextual differences, and to integrate internally any external knowledge of the market. Jun et al. (2013) develop a decision-making model through an analytical network process, in order to select successful business models for bottom-of-pyramid markets for multinationals.

#### ***2.4.4. Contextual factors***

Another topic in research focuses on certain contextual factors influencing the interrelationship of BMI and internationalization - specifically drivers, barriers, and firm and market characteristics. Drivers can be related to environmental volatility, including globalization, and changes in the global market structures, which force firms to expand their boundaries and rethink their business models (Williamson, 2010; Chalaby, 2012; Javalgi et al., 2012; Tian & Martin, 2014). Similarly, the cultural environment of firms affects the process of BMI in the internationalization process: in a comparative study of two MNCs from Russia and Finland, Rissanen et al. (2020) found that the degree, content, and speed of BMI differ, depending upon how risk is perceived in the home market, thus influencing firm behavior.

In contrast to that, barriers may hinder the implementation of BMI in the course of internationalization, making it difficult for firms to find the right fit (Bohnsack et al., 2021). A significant number of these barriers relates to cultural or institutional differences between countries – for example regulatory, infrastructural, and market barriers, including market inconsistencies and cultural differences (Bohnsack et al., 2021). Dalby et al. (2014) work on which cultural issues act as barriers, identifying communication, team building, and uncertainty avoidance as the most critical ones. Furthermore, the distance between R&D institutions in several countries increases costs and risks. This can lead to a lower quality of innovation, and result in a failure to achieve BMI (Duan et al., 2021). Ngoasong et al. (2021) point out that MNCs have to overcome tensions between headquarters and subsidiaries, which can help experimentation with variations of the business model. Institutional voids play a critical role, Sharma et al. (2016) and Jean and Tan (2019) arguing that BMI can serve as a source for learning how to deal with institutional voids.

Reim et al. (2022) differentiate challenges according to the three business model components. Challenges in value creation can result from a lack of international market knowledge, difficult international marketing conditions, and an inappropriate value proposition. Value delivery challenges are related to international collaboration, resource limitations, and a lack of competence and skills. Challenges of value capture relate to the increased costs and unstable revenues that go along with international business activities. Digitization as a key enabler for resource-efficiency, and the adaptation of the business model, could help to overcome these challenges.

The specific barriers a company faces may relate to the industry. Child et al. (2017) found that the level of home country development, as well as the industry, predicts which type of international BMI a firm will adopt.

Firm characteristics that have been found to influence international BMI include family ownership. Family firms are more flexible and agile when it comes to making adaptations in the business model (Colli et al., 2013). Colli et al. (2013) argue that family ownership favors international expansion because managers have more freedom to develop their business model: transferring to a foreign market, and exploiting their business model in foreign markets, is easier; and expertise and networks are adapted more easily.

Abrahamsson et al. (2019) observed that INVs are more often focused on innovating their business models. Ciravegna et al. (2019) regard firms which follow an entrepreneurial internationalization strategy as adapting their business models (in contrast to serendipitous internationalizing firms that withdraw from markets, and strategic internationalizing firms that follow an economic rationale).

It was further found that a lot of the articles in our review focus on BMI in the context of expanding to emerging markets (Buckley & Horn, 2009; Dahan et al., 2010; Williamson, 2010; Wu et al., 2010; Zarei et al., 2011; Javalgi et al., 2012; Fleury & Fleury, 2014; Landau et al., 2016; Winterhalter et al., 2017; Sharma et al., 2016; Ciravegna et al., 2019; Jean & Tean, 2019; Duan et al., 2020; Duan et al., 2021; Malik et al. 2022), highlighting that the scale-up takes place earlier and faster in emerging economies than in advanced mainstream markets.

#### ***2.4.5. Processes, paths, and patterns of BMI involved in internationalization***

Investigating the connection of BMI and internationalization, some scholars have examined processes, paths, and patterns of international BMI. As early as 2010, Dunford et al. have described the process leading to the evolution of business models in the context of internationalization. These four steps comprise: establishing the core business model elements (clarification); responding to contextual conditions (localization); trying something new (experimentation); and taking advantage of others' experience (co-option). Similarly, Sharma et al. (2016) examine the "design leaps" of their case firm, and propose three phases of business model adaptation in the internationalization process, especially regarding emerging markets. In these three stages, the firm tries to overcome problems of institutional voids through the novelty of the business model (the contextual novelty phase); to exploit an unexpected increase in demand with elasticity (the augmentation phase); and to serve large volumes through efficiency (the buffering phase). Both papers are oriented towards a BMI perspective.

Working from the angle of internationalization, Landau et al. (2016) propose a phase model of how to adapt business models to emerging markets, based on empirical data from a case study. These four phases comprise: international extension; local emergence; local expansion; and local consolidation. In each phase of this process, firms will gradually adapt different components of the business model (exploration), which results in a local business model for emerging markets. After that, the business model is then continuously adjusted (exploitation). The authors further find that changes in the components are interdependent.

Some articles investigate firm paths that refer to the idea of an enterprise life-cycle. Wang et al. (2016) relate to the ecosystem stages. Lehrer and Almor (2022) examine process niche start-ups that transform from a “pre-product and pre-service” stage to niche firms, of which some will later become hidden champions with a servitization model. Relevant questions about the internationalization path of these firms include defining the location of the headquarters from which to explore market opportunities, then looking for cross-border partnerships, choosing market segments, and finally approving their business model and continuing their internationalization path. In his conceptual work, Rask (2014) proposes to use geographical (domestic vs. globalized) as well as positional value chain dimensions (market vs. production), and subsequently distinguishes different business models to be used for exploiting opportunities on international markets. By moving from domestic-based to export-based, import-based, or semi-global business models, the firm has to make certain strategic decisions for resource allocation along this path.

Patterns of how firms adapt their business models when internationalizing have been described in two articles. With data from a multiple case study, Cao et al. (2018) look at the capabilities of retail firms and describe six distinct ways in which retailers adapt their business models as they internationalize: legitimizing the brand image in the local market; sharing resources; transferring knowledge from headquarters; forming an alliance with local stakeholders; imitating local competitors; and introducing new innovation for the local market. These six routes are then aligned to the differentiation between exploring/exploiting resources, either from the home country or the host country. The authors thus derive three patterns of BMI involved in the internationalization process: “extension of existing knowledge base”; “embedment with the local environment”; and “autonomic exploration of subsidiaries” (p. 558).

Based on a mixed-method approach, Lee et al. (2012) identify four business model types (global champion, focused R&D, global niche market, and global infant), and find that many firms have difficulties in becoming a global company, rather remaining a global infant. However, some are able to develop their business model and become a global leader. The authors further differentiate four ways to become a global leader, namely through disruptive transition; through incremental transition; by leapfrogging; and born-to-be global.

## **2.5. Examining the process-perspective in research articles on BMI and internationalization**

### **2.5.1. Descriptive results**

In order to understand whether the articles follow a process perspective (RQ2), the articles were categorized according to a four-field matrix by giving answers to the questions if process data is used or not, and if the study builds on or contributes to a process theory or not.

As can be seen in Figure 4, the articles can have the following four combinations: (1) the study advances process theory and builds on process data (Quadrant 1,  $n=10$ , 14% of the total); (2) the study proposes a process theory without support of process data (Quadrant 2,  $n=1$ , 1%); (3) process data are included

in the study, but no process theory is developed (Quadrant 3,  $n=34$ , 48% of the total); and (4) the study includes neither process data nor process theory (Quadrant 4,  $n=26$ , 37%).

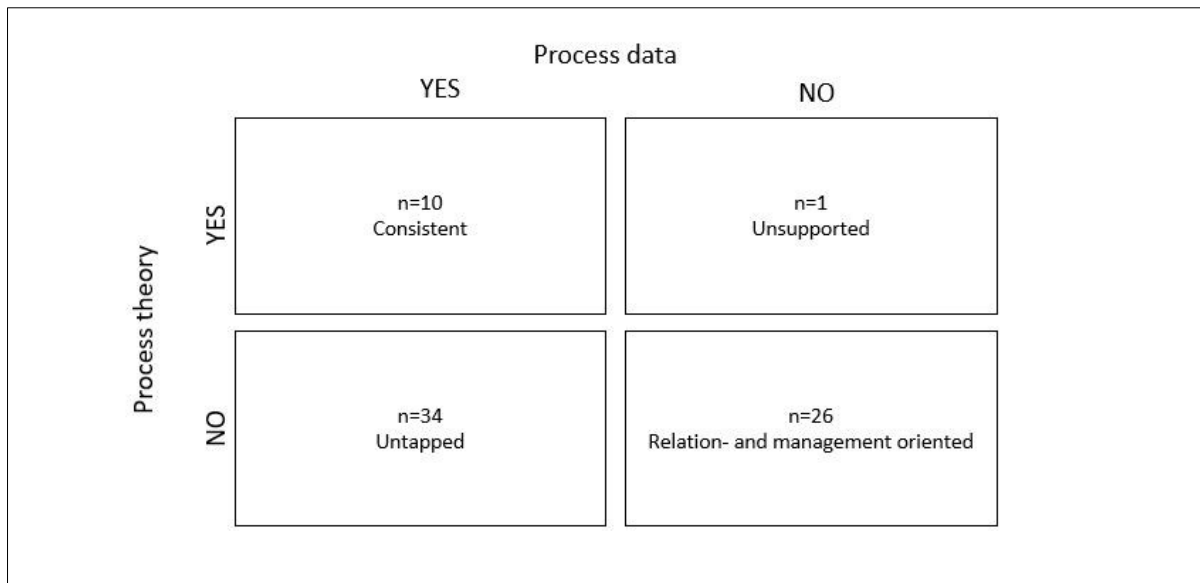


Figure 5: Types of international BMI research

### 2.5.2. Quadrant 1 – “Consistent”

Ten articles in our sample were both using process data and contributing to a process theory. Most articles used qualitative data either from single ( $n=5$ ) or multiple cases ( $n=4$ ). The article by Lee (2012) used a mixed-method approach. The relevant research questions dealt with the identification of phases (Landau et al., 2016, Sharma et al., 2016), processes (Dunford et al., 2010; Colovic, 2022) including decision making processes (Sun et al., 2018), patterns and paths (Lee et al., 2012; Cao et al., 2018; Lehrer & Almor, 2022), or evolvment (Strandskov & Pedersen, 2008, Parker & Lawrence, 2021). In most articles ( $n=9$ ) process models were a result (or part of the results) of the investigation, and thus only contributed to a weak process theory. Only the article by Parker and Lawrence (2021) integrated BMI as state variable in the strong process theory of the Uppsala model.

### 2.5.3. Quadrant 2 – “Unsupported”

The article by Rask (2014) was found to be *unsupported*. Building on the idea that both internationalization and BMI are processes, the author regarded internationalization as a part of BMI, and showed how business model design dimensions relate to international activities. The author described an ideal process for innovating a global business model, but without providing any empirical data.

### 2.5.4. Quadrant 3 – “Untapped”

The biggest part of our sample refers to the category “untapped”. Articles were using process data but not using them to build on or develop a process theory. Most of the articles in this quadrant were quali-

tative and descriptive. They addressed *how*-questions, for example how BMI fosters internationalization, how the environment of the firm affects changes, or how firms manage international BMI (Morrison et al., 2004; Dahan et al., 2010; Wu et al., 2010; Javalgi et al., 2012; Turcan & Juho, 2013; Johannson & Abrahamsson, 2014; Kajanus et al., 2014; Mir-Bernal et al., 2017; Winterhalter et al., 2017; Wang et al., 2018; Cavallo et al., 2019; Rissanen et al., 2020; Wood et al., 2020; Chang et al., 2021; Das & Dey, 2021; Sundström et al., 2021; Ngoasong et al., 2021; Nandi et al., 2022; Reim et al., 2022). Some articles addressed *what*-questions, mainly referring to contextual factors, like the role of managers, capabilities, and challenges (Buckley & Horn, 2009; Casadesus-Masanell & Ricart, 2010; Chalaby, 2012; Colli et al., 2013; Runfolà & Guercini, 2013; Child et al., 2017; Guercini & Milanesi, 2017; Calvo & Villareal, 2018; Ciravegna et al., 2019; Cahen & Borini, 2020; Sundström et al., 2020; Bohnsack et al., 2021; Malik et al., 2022), as well as *why*-questions (i.e. why and how international chef-entrepreneurs innovate their business models, Presenza & Messeni Petruzzelli, 2019).

#### **2.5.5. Quadrant 4 – “Relation- and management-oriented”**

In the last quadrant, articles neither contribute nor build on a process theory, nor do they use process data. These articles focused either on examining the relationship of BMI and internationalization, or on boundary conditions for managing BMI in the context of internationalization. Among these articles there are by nature variance-based articles. Research questions referred to the identification of success factors and drivers (Jean & Tean), effects (Azari et al. 2017; Kraus et al., 2017; Asemokha et al., 2019; Duan et al., 2021; Hennart et al., 2021; Wójcik & Ciszewska-Mlinarič, 2021), and differences between firms (Abrahamson, 2019; Westerlund, 2020;). Without providing any empirical confirmation, one article also presents the research question how different entry modes will lead to different levels of BMI (Nunes & Steinbruch. 2019).

Also, some articles that built on qualitative data or conceptual considerations targeted the relationship between BMI and internationalization (Fleury & Fleury, 2014; Duan et al., 2021; Pitelis, 2022), illustrated links (Tian & Martin 2014), highlighted the impact of internationalization on business models (Otto et al., 2021), used business models as a framework of analysis (Sainio et al., 2011), or included internationalization as a part of BMI (Zähringer et al., 2011).

The remaining studies focused on how to manage international BMI. This includes a normative framework on how INV should behave to internationalize (Autio, 2017), how to select (Jun et al., 2013) and manage innovative business models (Williamson, 2010), as in a best-practice network (Zarei et al., 2011) or in a biotech-spin-offs (Bialek-Jaworska & Gabryelczyk, 2016). Further articles examined the extent of adaptations (Onetti et al., 2012), how to adjust components owing to cultural contexts (Dalby et al., 2014), and how a global business model is achieved (Tallman et al., 2018). One publication sought to assess the acceptance, rejection, or adaptation of business models from the consumer perspective (Minahan et al., 2012).



## 2.6. Discussion

The relationship between BMI and internationalization is a phenomenon that has recently received increased attention in the literature. This extensive review encompassed 71 articles that address the concept of this relationship, BMI, and internationalization, respectively. Our findings give insight into which aspects authors have investigated, and to what extent a process perspective is realized.

Through building categories and coding the articles, the following reoccurring topics were identified: the theoretical background; the nexus between BMI and internationalization; contextual factors; resources, capabilities, and tools; and processes, paths, and patterns.

Papers covering the theoretical background draw on the dynamic capabilities approach to explain BMI. Theories of internationalization are not well represented or integrated. Instead, authors tend to review literature and derive a conceptual (eclectic) framework. It can be assumed that the interrelationship of BMI and internationalization is a positive one, but contradictory results weaken this finding. Furthermore, the interrelationship is complex and intertwined.

Some publications have demonstrated the relevance of capabilities in terms of flexibility, leadership, and partnering. Challenges refer to resource constraints and cultural or institutional differences between countries. Digitization has been revealed as a means to overcome these difficulties. However, it should be noted that these resources and capabilities do not exclusively apply to the relationship between BMI and internationalization. Flexibility is a skill that companies do not require solely in the context of innovating their business models for the purposes of internationalization, but also generally when facing environmental turbulence (Bock et al., 2012; Schneider & Spieth, 2014). In terms of challenges, the fact that cultural or institutional differences present an obstacle to companies in the course of their internationalization business endeavors is not a novel finding.

Regarding those articles covering processes and patterns, it appears that these are path-dependent and descriptive, but do not really *explain* processes. In those studies that described the processes of BMI in the context of internationalization, these were found to be heterogenous, albeit with different *levels* of analysis. Some articles adopt an BMI-oriented perspective; others an internationalization focus. Other research features a life-cycle perspective, elaborating on how a firm evolves over time through BMI.

When addressing our second research question, it appears that research does not fully exploit process data, and does not sufficiently contribute to developing and contributing to process theory. To reinforce this point, our results are consistent with studies already conducted on the process perspective on internationalization (Welch & Paavilainen-Mäntymäki, 2014), growth (Pugliese et al., 2016), and BMI (Andreini et al., 2021).

For future research, the following suggestions are made in accordance with the presented findings. Firstly, research should more deeply engage in providing and integrating a solid theory that can be used

in further examination of the topic. This includes adopting a holistic perspective on the complex inter-relationship between the two concepts of internationalization and BMI, and not viewing these as separate entities. Research on the nexus between BMI and internationalization reveals a reciprocal and complex interrelationship. This complexity should also be considered in research focusing on processes, as it demands approaches focusing on non-linearity. In this instance, it could be helpful to draw on theories that help to explain complex and non-linear processes.

Secondly, current research describes patterns and processes, but lacks strong process theories. It seems that authors still think in very linear ways; this should be disrupted. In line with the findings of Andreini et al. (2021), linear models oversimplify the multiplicity of interactions, failing to reveal the explanatory mechanisms and to explain the key mechanisms. Once again, theoretical approaches and empirical findings are needed that reflect the complexity of entrepreneurial growth. In addition, future research could address how the BMI process can be specifically designed and managed to help companies in their internationalization endeavors.

While one possibility could be to further develop a solid theoretical understanding of how BMI and internationalization are related, another promising approach would be to draw on existing theories that can, for example, recognize the complexity of business growth and transpose this to the context of BMI and internationalization. One instance of this could be the dynamic states approach to entrepreneurship (Levie & Lichtenstein, 2010). According to this approach, firms convert opportunity tension (a perceived unexploited market potential in combination with the entrepreneurial drive to exploit that potential) into value through creating an appropriate business model (Levie & Lichtenstein, 2010). Firms are perceived to be in a dynamic state when their business model matches the external market potential (Levie & Lichtenstein, 2010). Changes in the operating environment, like in the case of entering a foreign market, can lead to a situation in which the existing business model is no longer sustainable. In such a situation, firms need to change their business model in order to enter a new dynamic state. The shift between dynamic states has recently been termed “entrepreneurial leap” (Sternad & Mödritscher, 2020), defined as “a transition phase between dynamic states in which entrepreneurial action, focused on reconfiguring key elements of the business model, [which] allows a firm to tap into new pools of resources through accessing and exploiting new market potential” (p. 5). In their case study-based research, Sternad and Mödritscher (2020) have identified internationalization as one particular form of entrepreneurial leap in SMEs. BMI is a key factor that enables firms to enter a new dynamic state when they internationalize their business.

Thirdly, more research is also needed to test the effect of BMI on internationalization. Despite the fact that some publications support the positive relationship between BMI and internationalization, there also appears to be contradiction in the literature. As our findings suggest, BMI does not always necessarily lead to successful internationalization, as in the case of export (Azari et al., 2017; Wójcik & Ciszewska-Mlinarič, 2021). The specific conditions have to be identified, and tested empirically. More

research is required to identify under which circumstances BMI will lead to success in international markets. Furthermore, the question of which specific business models are particularly well-suited for international market development, and why, could be of interest.

Another promising avenue of enquiry would be to look at different stakeholders and entities. This could comprise, for example, specific characteristics found in managers and entrepreneurs, or the influence of forces and dynamics within a certain industry. Furthermore, especially in the context of internationalization, companies make use of the expertise of native speakers who are familiar with the language and culture of the target market. This raises the question of how their creativeness could be used to innovate business models and, conversely, how this diversity can be managed, especially by SMEs. Another question would be regarding what an organization can specifically do to create conditions that are conducive to BMI for internationalization.

Fourthly, managers need concrete guidance and more research is needed on tools for practitioners to manage the process of international BMI, as it is for BMI in general (Foss & Saebi, 2017). To develop tools that enhance the decision-making process, it is necessary to understand which adaptations are made and which are not, as well as how learning unfolds. The development and assessment of tools would provide managers with guidance on how to actually implement scientific findings to ensure sustainable business success.

### **2.7. Managerial implications and limitations**

The results of the current study lead to a number of insightful findings that will be of interest to managers. Managers should firstly use the logic of business models to reflect on where adaptations might be needed in the course of internationalization. Furthermore, managers and (future) entrepreneurs designing an innovative business model could open the doors for growth and international business activities. Since many firms will encounter resource constraints during internationalization, they should make use of external knowledge, including partnerships. By establishing partnerships, these businesses will find inspiration for understanding the needs of the foreign market (necessary for adaptation), and also find a source for inventing and elaborating on innovative business models. The use of networks may help organizations to understand their target industry and the business models of competitors in foreign markets, especially for new ventures.

Despite the care that has been taken in preparing and developing the present review, this study also has some limitations that can be found in the review process itself. Although the overall quality of our study was increased by applying the selected exclusion criteria, this also led to the negligence of some articles and their results. Therefore, the inclusion of studies that differ in terms of research focus may provide more comprehensive findings (for example, to look at articles that refer to business models in general).

Our aim was to comprehensively summarize and present the heterogeneity of the subject area. However, this heterogeneity also leads to challenges in relation to the interpretation and synthesis of the individual

studies. One problem is certainly that the understanding of BMI does not provide a uniform picture here either. It should be noted that the chosen study design may have led to the unintentional exclusion of other studies investigating BMI and internationalization. Aside from this, new insights could be revealed regarding the different dimensions of BMI through searching for articles that explicitly focus on value proposition innovation in the context of internationalization, to give an example.

To conclude, the present review provides an overview on existing research on the interrelationship between BMI and internationalization, identifying research gaps and suggesting promising avenues for future research. This can be a starting point for future researchers to begin to examine the topic more closely, so that we can better understand how BMI can be used for internationalization and how internationalization can be a stimulus for BMI, as a means for an organization to guarantee competitiveness and success in the long term.

## 2.8. References

- Abrahamsson, J., Boter, H., & Vanyushyn, V. (2019). Business model innovation of international new ventures: An empirical study in a Swedish context. *Journal of International Entrepreneurship*, 17(1), 75-102.
- Association of Business Schools (ABS, 2021). *Academic Journal Quality Guide*. London: Chartered Association of Business Schools.
- Andreini, D., Bettinelli, C., Foss, N.J., & Mismetti, M. (2021). Business model innovation: a review of the process-based literature. *Journal of Management and Governance*, 26, 1089-1121.
- Ansoff, H.I. (1957). Strategies for diversification. *Harvard Business Review*, 35(5), 113-124.
- Asemokha, A., Musona, J., Torkkeli, L., & Saarenketo, S. (2019). Business model innovation and entrepreneurial orientation relationships in SMEs: Implications for international performance. *Journal of International Entrepreneurship*, 17(3), 425-453.
- Autio, E. (2017). Strategic entrepreneurial internationalization: A normative framework. *Strategic Entrepreneurship Journal*, 11(3), 211-227.
- Azari, M.J., Madsen, T.K., & Moen, Ø. (2017). Antecedent and outcomes of innovation-based growth strategies for exporting SMEs. *Journal of Small Business and Enterprise Development*, 24(4), 733-752.
- Balboni, B., Bortoluzzi, G., Pugliese, R., & Tracogna, A. (2019). Business model evolution, contextual ambidexterity and the growth performance of high-tech start-ups. *Journal of Business Research*, 99, 115-124.
- Bashir, M., Naqshbandi, M.M., & Farooq, R. (2020). Business model innovation: a systematic review and future research directions. *International Journal of Innovation Science*, 12(4), pp. 457-476, DOI: 10.1108/IJIS-06-2020-0081.
- Bialek-Jaworska, A. & Gabryelczyk, R. (2016). Biotech spin-off business models for the internationalization strategy, *Baltic Journal of Management*, 11(4), 380-404.
- Bock, A.J., Opsahl, T., George, G., & Gann, D.M. (2012). The effects of culture and structure on strategic flexibility during business model innovation. *Journal of Management Studies*, 49(2), 279-305.
- Bohnsack, R., Ciulli, F., & Kolk, A. (2021). The role of business models in firm internationalization: An exploration of European electricity firms in the context of the energy transition. *Journal of International Business Studies*, 52(5), 824-852.
- Breslin, D., & Gatrell, C. (2020). Theorizing Through Literature Reviews: The Miner-Prospector Continuum. *Organizational Research Methods*, 1094428120943288.
- Buckley, P.J., & Horn, S.A. (2009). Japanese multinational enterprises in China: Successful adaptation of marketing strategies. *Long Range Planning*, 42(4), 495-517.
- Cahen, F., & Borini, F.M. (2020). International digital competence. *Journal of International Management*, 26(1), 100691.
- Calia, R.C., Guerrini, F.M., & Moura, G.L. (2007). Innovation networks: From technological development to business model reconfiguration. *Technovation*, 27(8), 426-432.

- Calof, J.L., & Beamish, P.W. (1995). Adapting to foreign markets: Explaining internationalization. *International Business Review*, 4(2), 115-131.
- Calvo, N., Villarreal, Ó. (2018). Analysis of the growth of the e-learning industry through sustainable business model archetypes: A case study. *Journal of Cleaner Production*, 191, 26-39.
- Cao, L., Navare, J., & Jin, Z. (2018). Business model innovation: How the international retailers rebuild their core business logic in a new host country. *International Business Review*, 27(3), 543-562.
- Casadesus-Masanell, R., & Ricart, J.E. (2010a). From strategy to business models and onto tactics. *Long Range Planning*, 43(2-3), 195-215.
- Casadesus-Masanell, R., & Ricart, J.E. (2010b). Competitiveness: business model reconfiguration for innovation and internationalization, *Management Research*, 8(2), 123-149.
- Cavallo, A., Ghezzi, A., & Ruales Guzmán, B.V. (2019). Driving internationalization through business model innovation: evidences from an AgTech company. *Multinational Business Review*, 28(2), 201-220.
- Chalaby, J.K. (2012). Producing TV Content in a Globalized Intellectual Property Market: The Emergence of The International Production Model. *Journal of Media Business Studies*, 9(3), 19-39.
- Chang, Y.C., Chen, P.H., & Huang, C.L. (2021). Transforming R&D in a world-leading bicycle company (1972–2016): the dynamic capabilities perspective. *Innovation*, 1-32, DOI: 10.1080/14479338.2021.1960536.
- Chesbrough, H. (2010). Business model innovation: opportunities and barriers. *Long Range Planning*, 43(2-3), 354-363.
- Child, J., Hsieh, L., Elbanna, S., Karmowska, J., Marinova, S., Puthusserry, P., Tsai, T., Narooz, R., Zhang, Y. (2017). SME international business models: The role of context and experience. *Journal of World Business*, 52(5), 664-679.
- Ciravegna, L., Kundu, S.K., Kuivalainen, O. & Lopez, L.E. (2019). The timing of internationalization – Drivers and outcomes. *Journal of Business Research*, 105, 322-332.
- Colli, A., García-Canal, E., & Guillén, M.F. (2013). Family character and international entrepreneurship: A historical comparison of Italian and Spanish ‘new multinationals’. *Business History*, 55(1), 119-138.
- Colovic, A. (2022). Leadership and business model innovation in late internationalizing SMEs. *Long Range Planning*, 55(1), 102083, DOI: 10.1016/j.lrp.2021.102083.
- Daft, R. (1978). A dual-core model of organizational innovation. *Academy of Management Journal*, 21, 193-210.
- Dahan, N.M., Doh, J.P., Oetzel, J., & Yaziji, M. (2010). Corporate-NGO collaboration: Co-creating new business models for developing markets. *Long Range Planning*, 43(2-3), 326-342.
- Dalby, J., Lueg, R., Nielsen, L.S., Pedersen, L., & Tomoni, A.C. (2014). National culture and business model change – A framework for successful expansions. *Journal of Enterprising Culture*, 22(04), 463-483.
- Damanpour, F. (1996). Organizational complexity and innovation: developing and testing multiple contingency models. *Management Science*, 42(5), 693-716.

- Das, A., & Dey, S. (2021). Global manufacturing value networks: assessing the critical roles of platform ecosystems and Industry 4.0. *Journal of Manufacturing Technology Management*, 32(6), 1290-1311.
- Demil, B., & Lecocq, X. (2010). Business model evolution: in search of dynamic consistency. *Long Range Planning*, 43(2-3), 227-246.
- Doz, Y. L., & Kosonen, M. (2010). Embedding strategic agility: A leadership agenda for accelerating business model renewal. *Long Range Planning*, 43(2-3), 370-382.
- Duan, Y., Huang, L., Cheng, H., Yang, L., & Ren, T. (2020). The moderating effect of cultural distance on the cross-border knowledge management and innovation quality of multinational corporations. *Journal of Knowledge Management*, 25(1), 85-116.
- Duan, Y., Liu, H., Deng, Z., & Tao, P. (2021). The impact of cross-border R&D sourcing on the innovation quality of MNCs, from the perspective of business model innovation. *Sustainability*, 13(8), 4579.
- Dunford, R., Palmer, I., & Benveniste, J. (2010). Business model replication for early and rapid internationalisation: The ING direct experience. *Long Range Planning*, 43(5-6), 655-674.
- Fleury, A. & Fleury, M.T.L. (2014). Local enablers of business models: The experience of Brazilian multinationals acquiring in North America. *Journal of Business Research*, 67(4), 516-526.
- Foss, N.J., & Saebi, T. (2017). Fifteen years of research on business model innovation: How far have we come, and where should we go? *Journal of Management*, 43(1), 200-227.
- Guercini, S. & Milanese, M. (2017). Extreme luxury fashion: business model and internationalization process. *International Marketing Review*, 34(3), 403-424.
- Hennart, J.F. (2014). The accidental internationalists: a theory of born globals. *Entrepreneurship Theory and Practice*, 38(1), 117-135.
- Hennart, J.F., Majocchi, A., & Hagen, B. (2021). What's so special about born globals, their entrepreneurs or their business model? *Journal of International Business Studies*, 52(9), 1665-1694.
- Javalgi, R.R.G., Todd, P.R., Johnston, W.J., & Granot, E. (2012). Entrepreneurship, muddling through, and Indian Internet-enabled SMEs. *Journal of Business Research*, 65(6), 740-744.
- Jean, R.J., & Tan, D. (2019). The effect of institutional capabilities on E-business firms' international performance. *Management International Review*, 59(4), 593-616.
- 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.
- Johansson, M., & Abrahamsson, J. (2014). Competing with the use of business model innovation - an exploratory case study of the journey of born global firms. *Journal of Business Models*, 2(1), 33-55.
- Jun, S., Lee, D. & Park, J. (2013). Determining business models in bottom-of-the-pyramid markets. *Industrial Management & Data Systems*, 113(7), 1064-1082.
- Kajanus, M., Ire, A., Eskelinen, T., Heinonen, M., & Hansen, E. (2014). Business model design: new tools for business systems innovation. *Scandinavian Journal of Forest Research*, 29(6), 603-614.

- Kraus, S., Brem, A., Schuessler, M., Schuessler, F., & Niemand, T. (2017). Innovative born globals: Investigating the influence of their business models on international performance. *International Journal of Innovation Management*, 21(01), 1750005, DOI: 10.1142/S1363919617500050.
- Kutschker, M., Baurle, I., & Schmid, S. (1997). International evolution, international episodes, and international epochs: Implications for managing internationalization. *Management International Review*, 37, 101-124.
- Lam, L.W., & White, L.P. (1999). An adaptive choice model of the internationalization process. *The International Journal of Organizational Analysis*, 7(2), 105-134, DOI: 10.1108/eb028896.
- Landau, C., Karna, A., & Sailer, M. (2016). Business model adaptation for emerging markets: a case study of a German automobile manufacturer in India. *R&D Management*, 46(3), 480-503.
- Langley, A. (2009). Studying processes in and around organizations. In Buchanan, D., & Bryman, A. (eds.), *The Sage handbook of organizational research methods*, London: SAGE Publications, pp. 409-429.
- Langley, A., Smallman, C., Tsoukas, H., & Van de Ven, A.H. (2013). Process studies of change in organization and management: Unveiling temporality, activity, and flow. *Academy of Management Journal*, 56(1), 1-13.
- Lee, Y., Shin, J. & Park, Y. (2012). The changing pattern of SME's innovativeness through business model globalization. *Technological Forecasting and Social Change*, 79(5), 832-842.
- Levie, J., & Lichtenstein, B.B. (2010). A terminal assessment of stages theory: Introducing a dynamic states approach to entrepreneurship. *Entrepreneurship Theory and Practice*, 34(2), 317-350.
- Lehrer, M., & Almor, T. (2022). Startups internationalizing in quest of a business model: The global prospecting of process niche firms. *Journal of International Management*, 28(1), 100906.
- Malik, A., Sharma, P., Kingshott, R., & Laker, B. (2022). Leveraging cultural and relational capabilities for business model innovation: The case of a digital media EMMNE. *Journal of Business Research*, 149, 270-282.
- Massa, L., Tucci, C.L., & Afuah, A. (2017). A critical assessment of business model research. *Academy of Management Annals*, 11(1), 73-104.
- McDougall, P.P., & Oviatt, B.M. (1996). New venture internationalization, strategic change, and performance: A follow-up study. *Journal of Business Venturing*, 11(1), 23-40.
- McGrath, R.G. (2010). Business models: A discovery driven approach. *Long Range Planning*, 43(2-3), 247-261.
- McMullen, J.S., & Dimov, D. (2013). Time and the entrepreneurial journey: The problems and promise of studying entrepreneurship as a process. *Journal of Management Studies*, 50(8), 1481-1512.
- Minahan, S. M., Huddleston, P. & Bianchi, C. (2012). Costco and the Aussie Shopper: a case study of the market entry of an international retailer. *The International Review of Retail, Distribution and Consumer Research*, 22(5), 507-527.
- Mir-Bernal, P., Guercini, S. & Sadaba, T. (2018). The role of e-commerce in the internationalization of Spanish luxury fashion multi-brand retailers. *Journal of Global Fashion Marketing*, 9, 1-14.
- Morrison, A., Bouquet, C. & Beck, J. (2004). Netchising: The Next Global Wave? *Long Range Planning*, 37(1), 11-27.



- Nandi, S., Nandi, M.L., & Sindhi, S. (2022). Does the concept of “creating shared value” make sense for multinational firms? *Society and Business Review* (ahead of print).
- Ngoasong, M.Z., Wang, J., Amdam, R.P., & Bjarnar, O. (2021). The role of MNE subsidiaries in the practice of global business models in transforming economies. *Management and Organization Review*, 17(2), 254-281.
- Nunes, M.P., & Steinbruch, F.K. (2019). Internationalization and the need of business model innovation - A theoretical approach. *Brazilian Business Review*, 16(3), 207-221.
- Onetti, A., Zucchella, A., Jones, M.V., & McDougall-Covin, P.P. (2012). Internationalization, innovation and entrepreneurship: business models for new technology-based firms. *Journal of Management & Governance*, 16(3), 337-368.
- Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: a handbook for visionaries, game changers, and challengers*. Hoboken, NJ: John Wiley & Sons.
- Otto, J.M., Zarrin, M., Wilhelm, D., & Brunner, J.O. (2021). Analyzing the relative efficiency of internationalization in the university business model: the case of Germany. *Studies in Higher Education*, 46(5), 938-950.
- Page, M.J., McKenzie, J. E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., ... & Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *Systematic Reviews*, 10(1), 1-11.
- Parker, D.W., & Lawrence, W.W. (2021). Improving productivity of a financial firm: business model evolution in the Caribbean. *International Journal of Productivity and Performance Management*, 70(2), 277-296.
- Pickering, C., Grignon, J., Steven, R., Guitart, D., & Byrne, J. (2015). Publishing not perishing: How research students transition from novice to knowledgeable using systematic quantitative literature reviews. *Studies in Higher Education*, 40(10), 1756-1769.
- Pitelis, C. N. (2022). Dynamic capabilities, the new multinational enterprise and business model innovation: A de/re-constructive commentary. *Journal of International Business Studies*, 53, 741-753.
- Poole, M.S., Van de Ven, A.H., Dooley, K., & Holmes, M.E. (2000). *Organizational change and innovation processes: Theory and methods for research*. New York: Oxford University Press.
- Presenza, A., & Messeni Petruzzelli, A. (2019). Investigating business model innovation in Haute Cuisine. Role and behavior of chef-entrepreneurs. *International Journal of Hospitality Management*, 82, 101-111.
- Pugliese, R., Bortoluzzi, G., & Zupic, I. (2016). Putting process on track: empirical research on startups' growth drivers. *Management Decision*, 54(7), 1633-1648.
- Rask, M. (2014). Internationalization through business model innovation: In search of relevant design dimensions and elements. *Journal of International Entrepreneurship*, 12(2), 146-161.
- Reim, W., Yli-Viitala, P., Arrasvuori, J. & Parida, V. (2022). Tackling business model challenges in SME internationalization through digitalization. *Journal of Innovation & Knowledge*, 7(3), 100199.
- Richardson, J.E. (2008). The business model: an integrative framework for strategy execution. *Strategic Change*, 17, 133-144.

- Rissanen, T., Ermolaeva, L., Torkkeli, L., Ahi, A., & Saarenketo, S. (2020). The role of home market context in business model change in internationalizing SMEs. *European Business Review*, 32(2), 257-275.
- Ritter, T., & Lettl, C. (2018). The wider implications of business-model research. *Long Range Planning*, 51(1), 1-8.
- Runfola, A., & Guercini, S. (2013). Fast fashion companies coping with internationalization: driving the change or changing the model? *Journal of Fashion Marketing and Management*, 17(2), 190-205.
- Ruzzier, M., Hisrich, R.D., & Antoncic, B. (2006). SME internationalization research: past, present, and future. *Journal of Small Business and Enterprise Development*, 13(4), 476-497.
- Saebi, T., Lien, L., & Foss, N.J. (2017). What drives business model adaptation? The impact of opportunities, threats and strategic orientation. *Long Range Planning*, 50(5), 567-581.
- Sainio, L.M., Saarenketo, S., Nummela, N., & Eriksson, T. (2011). Value creation of an internationalizing entrepreneurial firm: The business model perspective. *Journal of Small Business and Enterprise Development*, 18(3), 556-570.
- SCImago, (n.d.). SJR — SCImago Journal & Country Rank [Portal]. URL: <http://www.scimagojr.com> (retrieved: July, 30th, 2022).
- Schneider, S., & Spieth, P. (2013). Business model innovation: Towards an integrated future research agenda. *International Journal of Innovation Management*, 17(01), 1340001, DOI: 10.1142/S136391961340001X.
- Schneider, S., & Spieth, P. (2014). Business model innovation and strategic flexibility: insights from an experimental research design. *International Journal of Innovation Management*, 18(06), 1440009, DOI: 10.1142/S136391961440009X.
- Schroeder, R.G., Van de Ven, A.H., Scudder, G.D., & Polley, D. (1989). The development of innovation ideas. In Van de Ven, A.H., Angle, H.L., & Poole, M. (eds.), *Research on the Management of Innovation: The Minnesota Studies*. Cambridge, MA: Ballinger Publishing, pp. 107-133.
- Sharma, S., Dixit, M.R., & Karna, A. (2016). Design leaps: Business model adaptation in emerging economies. *Journal of Asia Business Studies*, 10(2), 105-124.
- Sosna, M., Trevinyo-Rodríguez, R.N., & Velamuri, S.R. (2010). Business model innovation through trial-and-error learning: The Naturhouse case. *Long Range Planning*, 43(2-3), 383-407.
- Spieth, P., Schneckenberg, D., & Matzler, K. (2016). Exploring the linkage between business model (& innovation and the strategy of the firm. *R&D Management*, 46(3), 403-413.
- Sternad, D., & Mödritscher, G. (2022). Entrepreneurial leaps: Growth processes in transition phases between dynamic states. *Entrepreneurship Theory and Practice*, 46(4), 952-984.
- Strandskov, J., & Pedersen, K. (2008). The foreign expansion of a service company: The case of ISS A/S. *Business History*, 50(1), 40-61.
- Sun, S. L., Xiao, J., Zhang, Y., & Zhao, X. (2018). Building business models through simple rules. *Multinational Business Review*, 26(4), 361-378.
- Sundström, A., Hyder, A.S., & Chowdhury, E.H. (2021). Market-oriented business model for SMEs' disruptive innovations internationalization. *Marketing Intelligence & Planning*, 39(5), 670-686.

- Sundström, A., Hyder, A.S. & Chowdhury, E.H. (2020). Market-oriented CSR implementation in SMEs with sustainable innovations: an action research approach. *Baltic Journal of Management*, 15(5), 775-795.
- Tallman, S., Luo, Y., & Buckley, P. J. (2017). Business models in global competition. *Global Strategy Journal*, 8(4), 517-535.
- Taran, Y., Boer, H., & Lindgren, P. (2015). A business model innovation typology. *Decision Sciences*, 46(2), 301-331.
- Teece, D.J. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43(2-3), 172-194.
- Tian, X. & Martin, B. (2014). Business models for higher education: an Australian perspective. *Journal of Management Development*, 33(10), 932-948.
- Turcan, R.V., & Juho, A. (2014). What happens to international new ventures beyond start-up: An exploratory study. *Journal of International Entrepreneurship*, 12(2), 129-145.
- Van de Ven, A. H., Polley, D. E., Garud, R., & Venkataraman, S. (1999/2008). *The innovation journey*. New York: Oxford University Press.
- Von Delft, S., Kortmann, S., Gelhard, C., & Pisani, N. (2019). Leveraging global sources of knowledge for business model innovation. *Long Range Planning*, 52(5), 101848.
- Wang, Y., Jia, F., Schoenherr, T., & Gong, Y. (2018). Supply chain-based business model innovation: the case of a cross-border E-commerce company. *Sustainability*, 10(12), n.p.
- Webster, J., & Watson, R.T. (2002). Analyzing the past to prepare for the future: Writing a literature review. *MIS quarterly*, xiii-xxiii.
- Welch, C., & Paavilainen-Mäntymäki, E. (2014). Putting process (back) in: Research on the internationalization process of the firm. *International Journal of Management Reviews*, 16(1), 2-23.
- Welch, L.S., & Luostarinen, R. (1988). Internationalization: evolution of a concept. *Journal of General Management*, 14(2), 34-55.
- West, J., & Bogers, M. (2014). Leveraging external sources of innovation: a review of research on open innovation. *Journal of Product Innovation Management*, 31(4), 814-831.
- Westerlund, M. (2020). Digitalization, internationalization and scaling of online SMEs. *Technology Innovation Management Review*, 10(4), 48-57.
- Williamson, P.J. (2010). Cost Innovation: Preparing for a 'Value-for-Money' Revolution. *Long Range Planning*, 43(2-3), 343-353.
- Winterhalter, S., Zeschky, M.B., Neumann, L., & Gassmann, O. (2017). Business models for frugal innovation in emerging markets: The case of the medical device and laboratory equipment industry. *Technovation*, 66, 3-13.
- Wójcik, P., & Ciszewska-Mlinarič, M. (2021). The impact of cognitive and behavioral factors on the export performance: a dynamic capabilities perspective, *European Business Review*, 33(3), 427-449.
- Wood, S., Faulconbridge, J., Watson, I., & Teller, C. (2020). 'Business Code/Spaces' in digital service firms: The case of online multinational fashion retailing. *Geoforum*, 112, 13-23.

- Wu, X., Ma, R., & Shi, Y. (2010). How do latecomer firms capture value from disruptive technologies? A secondary business-model innovation perspective. *IEEE Transactions on Engineering Management*, 57(1), 51-62.
- Zähringer, D., Niederberger, J., Blind, K. & Schletz, A. (2011). Revenue creation: business models for product-related services in international markets – the case of Zwick GmbH & Co. KG. *The Service Industries Journal*, 31(4), 629-641.
- Zarei, B., Nasser, H., & Tajeddin, M. (2011). Best practice network business model for internationalization of small and medium enterprises. *Journal of International Entrepreneurship*, 9(4), 299-315.

### **3. Paper II**

**Business model innovation and the success of international ventures:  
The moderating effects of psychic distance, international experience, and  
resource commitment**

Type of paper: Quantitative paper

Melanie Krenn

Guido Bortoluzzi

Dietmar Sternad

### 3.1. Introduction

To ensure their survival and growth in the long term, companies must continuously reflect on their strategies in relation to changing external circumstances (Chakravarthy, 1982). This is particularly also true in international markets, where companies must constantly monitor opportunities and threats and adjust their moves accordingly (Calof & Beamish, 1995; Barringer & Bluedorn, 1999; Dana & Wright, 2004).

Companies entering foreign markets face unfamiliar territories. Each market has its own specific characteristics, and local customers can differ substantially from domestic ones in terms of preferences, purchasing behavior, and price expectations. The local competitive dynamics, socio-economic situation, and legal requirements can differ significantly from the domestic or other existing market, and can also change dynamically. Such conditions can pose both opportunities and threats to firms and induce them to make significant adjustments to their business models also after the moment of entry.

Business model innovation (BMI) refers to the change of parts of the business model or the business model as a whole with the aim to adapt to external conditions and/or explore and exploit new business opportunities (Spieth et al., 2016; Saebi et al., 2017; Heikkilä et al., 2017). With increasing uncertainty in international markets at a political, economic, social, and technological level, firms are also increasingly challenged to rethink both their business models and their ways of doing business abroad (Morris et al., 2015; Sharma et al., 2016).

The process of internationalization is inherently risky since it requires the commitment of a certain amount of resources with an uncertain outcome (Figueira-de-Lemos et al., 2011; Björkdahl & Holmén, 2013). Before and while entering new markets, firms need to commit time and money in market research, finding local business partners, and adapting their marketing strategies. Without previous international experience, these activities can become even more costly due to the additional time and effort that is spent for experimenting and learning (Bouwman et al., 2019).

The impact of BMI on the internationalization process of firms and their international success has not been in the focus of much research yet, so that there is a paucity of both theoretical and empirical studies in this field. In this study, we aim to explore this relationship in more depth. For that purpose, we combine Autio's (2017) Strategic Entrepreneurship Theory (SEI) with Johanson and Vahlne's (1977) Uppsala model to delineate a set of research hypotheses about the effect of BMI on the success of a firm's foreign venture. In this context, we assume companies take individual steps towards their internationalization, such as entering a specific foreign market via direct export, intensifying the development of an existing market, or even establishing a foreign branch. An international venture, therefore, refers to any entrepreneurial activity or operation in order to enter a foreign market or to expand its current position in an existing market.

We assume that when considering the different internationalization steps of companies, three important factors characterize companies along their internationalization journey: internal factors such as existing

experience in the area of international market development and the willingness to invest resources, as well as the external factor of psychic distance, which is inherent by the choice of target market. Subsequently, we include three key dimensions of the Uppsala model – international experience, resource commitment, and psychic distance – as moderating factors.

We thereby address the following two research questions:

- 1) *Do firms benefit from innovating their business models while entering a foreign market?*
- 2) *Is this relationship influenced by internal and external dimensions of a stepwise internationalization process?*

By answering these questions, we advance our knowledge on the relationship between BMI and internationalization in several ways. Firstly, we provide empirical support to Autio's (2017) theoretical speculations related to the relevance of BMI as a factor that contributes to the international success of international new ventures (INVs). Secondly, we also extend the validity of SEI theory beyond new ventures to the domain of established companies. Thirdly, we provide a theoretically grounded overview of conditions under which BMI can be particularly effective for internationally active firms.

In the following, we will first provide an overview of traditional process theories of internationalization with a focus on the Uppsala model. We then combine basic ideas from the Uppsala model with SEI theory to provide a theoretical basis for studying the relationship between BMI and internationalization success. In the empirical part of our study, we expand the original focus of SEI theory on new venture firms to include established firms, where we will find evidence in favor of our hypotheses.

### **3.2. Theoretical background**

Research in international business (IB) provides several theoretical approaches to explain how and why firms internationalize. Traditional theories on internationalization were strongly inspired by economic thinking, assuming perfect rationality of economic actors and full availability of information (Mtigwe, 2006). The theory of monopolistic advantage (Hymer, 1976; Caves, 1985), for example, postulates that the internationalization of the firm is the rational consequence of the process of accumulation of monopolistic advantages on the domestic market. Hence, before internationalizing, firms need to acquire some form of advantage. Only then, they can begin to think about export their advantage into new market domains.

Traditional theories have received fierce criticism from behavioralist scholars who highlighted the fallacy of the assumptions on which they were built. Two new approaches became gradually predominant during the late 1970s and the 1980s in the IB literature: the Johanson & Vahlne's (1977) Uppsala model (or 'U-model') and Dunning's (1981) eclectic paradigm (also known as the 'OLI model'). The U-model has been strongly integrated into the literature of the internationalization of small and medium-sized firms (SMEs), while the OLI model has generally been more associated with the internationalization process of multinational firms (MNEs). In this paper, we put our focus on the U-model.

### ***3.2.1. Extending the Uppsala model to include variable environmental conditions***

The U-model is a dynamic process model rooted in the behavioral theory of the firm (Cyert & March, 1963) and Penrose's (1959) theory of the growth of the firm. The model postulates that the internationalization process of the firm proceeds in an incremental way both in terms of resource commitment (from export to foreign direct investment) and geographical expansion (from psychically close to psychically distant markets). Market knowledge and cumulated international experience play a central role in reducing the uncertainty perceived by firms and their decision makers, pushing them toward increasing their resource commitment over time in progressively more unfamiliar markets (Johanson & Vahlne, 1977). The U-model has received large acceptance in the international business (IB) community. Since its conception, it has been subject to several updates from the original authors, who later also read it under a network perspective (Johansson & Vahlne, 1990; 2009). Both the structure and the general content of the original model, however, have remained largely unchanged over time (Vahlne & Johansson, 2017).

Recent studies have noticed that doing business in emerging markets can bring specific consequences for the internationalization path of firms. In particular, the process of resource escalation was found to be less linear and predictable due to the peculiar institutional conditions that affect emerging markets (Dikova et al., 2010; Akbar et al., 2017).

What we can observe today is a general increase of the levels of environmental instability that characterize several international markets, not just emerging ones (Westhead et al., 2004; Wijen & van Tulder, 2011; Casson & Li, 2022). This is due to political reasons (international friction), economic reasons (high fluctuations in gross domestic product growth and inflation levels), technological reasons (accelerated digitalization and disruptive trends in many industries), and environmental/legal reasons (new regulations for reducing pollution and an accelerated transition to a sustainable economy). Entering foreign market environments with fast-changing and instable conditions might force firms to revise and adapt the ways in which they conduct business abroad (Andersen, 2004; Tallman et al., 2018; Surdu et al., 2021).

Dynamic changes in environmental conditions have theoretical implications too. The U-model is based on the assumption that psychic distance can be reduced through a process of knowledge accumulation in foreign market. But when environmental conditions become unstable, knowledge gaps move dynamically too, and new knowledge needs to be continuously developed by firms to adapt to the changing conditions.

In a similar vein, resource commitment is gradual in the U-model, and it goes along with the reduction of the perceived uncertainty. When firms struggle to reduce uncertainty, however, they could become more cautious in escalating from low resource commitment modes to higher ones. In general, more agile behaviors (e.g. more experimentation, a trial and error approach, and emerging strategizing) could prevail (Figueira-de-Lemos & Hadjikhani, 2014; Teece et al., 2016; Clarke & Liesch, 2017).



### 3.2.2. *Extending the SEI perspective to the case of established firms*

As other models, the U-model has also been subject to criticism. One of the most frequent points of criticism relates to the inability of the model to explain why some firms do not follow the foreseen gradual path (as in the case of born-global firms that tend to “leapfrog” the steps predicted by the U-model and to accelerate their process of international expansion) (Oviatt & McDougall, 1997; Alvarez & Busenitz, 2001; Chetty & Campbell-Hunt, 2004). McDougall’s (1989) seminal contribution led to the emergence of a new perspective on the internationalization process of smaller firms. She challenged the assumption that international knowledge is a resource available ‘to anyone’, arguing that in smaller and fast-internationalizing firms (INVs), knowledge is more often an exclusive asset of a single person (the entrepreneur) or of a small circle of people. Hence, internationalization decisions tend to be more ‘entrepreneurial’ in the sense that they are based on the attitudes, beliefs, expectations, and skills of a limited number of individuals.

The International Entrepreneurship (IE) perspective has subsequently acquired increasing legitimacy in the IB literature. The concept of opportunity recognition is central to the IE perspective (Brush, 1995; Venkataraman, 1997; Jones & Coviello, 2005; Oviatt & McDougall, 2005; Chandra, 2017). It is assumed that in order to grow internationally, entrepreneurs (and the companies led by them) need to be agile in grabbing the opportunities they recognize in foreign markets as well as in overcoming the challenges that get in their way (Calof & Beamish, 1995; Teece et al., 1997; Davidsson, 2015).

Questioning the fact that opportunities really objectively ‘exist’, effectuation theory later postulated that firms tend more often to create opportunities through their actions rather than just recognizing them (Andersson, 2011; Fisher, 2012). Arguing from an effectuation theory perspective, Autio (2017) recently proposed that firms do not just recognize opportunities before starting to internationalize, but also create them during the internationalization process. A novel theoretical framework, Strategic Entrepreneurial Internationalization (SEI), has emerged from this reasoning (Autio, 2017).

According to SEI, firms succeed on international markets if they develop a competitive advantage abroad. Four strategic postures can serve as a source of a competitive advantage: learning orientation, business model experimentation, niche orientation, and the exploitation of cross-border asymmetries which are then translated into a business model.

Autio defines SEI as “purposeful entrepreneurial action that seeks to derive and sustain a competitive advantage through the use of resources and the sale of outputs in multiple countries” (p. 216). It is important to notice in this definition that international expansion and success on international markets do not happen ‘by chance,’ or simply reactively, but is the outcome of active goal-oriented entrepreneurial behavior.

Zahra and George (2002) have criticized the strong focus of IE on young firms, arguing that entrepreneurial activities can be found in all types of firms independently of their age or size when they start

business activities on foreign markets. Although we can expect new ventures and smaller firms having a higher degree of freedom compared to established corporations when entering foreign markets, thus allegedly being able to act in a more ‘entrepreneurial’ way (Kalinic & Forza, 2012; Colli et al., 2013), there is also evidence that established corporations can have a high entrepreneurial orientation, and that this can also have a significant positive effect on their performance on international markets (Su et al., 2011; Zucchella, 2021).

### ***3.2.3. The relationship between BMI and internationalization under the SEI perspective***

According to the SEI framework, firms need to develop “internationally scalable business models” (Autio, 2017, p. 218) to create marketing opportunities and build competitive advantages in international markets. The idea that firms need to modify their business model – or create new ones from scratch – to succeed on international markets is not completely new. On the one hand, as Demil and Lecocq (2010) noticed, entrepreneurs find specific ways of creating and seizing value (essentially, innovating their business models) to generate competitive advantages in the markets where they compete. On the other hand, by accessing new markets, firms frequently also change their business model as a result of the learning processes they activate in each market (Ciravegna et al., 2019).

In general, scholars seem to converge around the idea that to succeed in foreign markets, firms need to innovate, in full or in part, their business models (Zott & Amit, 2008; Bohnsack et al., 2021). This is especially true in situations in which foreign markets present specificities that make such markets different from the usual markets they serve, like in the case of emerging markets (Bortoluzzi et al., 2015).

Although the amount of research on the relationship between BMI and international performance still remains quite limited, there have been a few first qualitative studies (Dunford et al. 2010; Landau et al., 2016; Cavallo et al., 2019; Cahen & Borini, 2020; Colovic et al., 2022). It was already found that innovative business models explain the internationalization speed of firms, especially if they operate in a market niche (Hennart et al., 2021), and that the design of a business model has some impact on the international performance of firms (Kraus et al., 2019). Azari et al. (2017) observed a correlation between BMI and a firm’s export degree and scope, albeit unlike for other types of innovation a negative one. The authors suggest that radical BMI often comes with higher costs and risks, which tie resources, while a low level of BMI might not be sufficient to succeed.

Prior empirical research has also revealed statistically significant associations among related concepts, such as BMI and organizational performance (Onetti et al., 2012; Cucculelli & Bettinelli, 2015; Wei et al., 2017; Zhang et al., 2021) or innovation and internationalization success (Cassiman & Golovko, 2011; Bagheri et al., 2019; Saridakis et al., 2019), and product innovation and export performance (Akbar et al., 2022). Empirically testing how firms make use of knowledge from foreign partners, Von Delft et al. (2019) observed that firms integrate external knowledge from various sources globally, which leads to a positive relationship between BMI and strategic learning capability (Von Delft et al., 2019).

Based on the prior findings about the link between BMI/innovation and international performance and on the argument that both a high strategic learning capability and a high entrepreneurial orientation can have a positive effect on performance in international markets, we extend the line of argumentation of SEI theory to the domain of established firms, which leads to the following hypothesis:

*RH1: Business model innovation has a positive effect on the success of international ventures of firms.*

### **3.3. Crossing the SEI theory with the traditional U-model of internationalization**

Recently Parker and Lawrence (2021) relied on the U-model to examine the relationship between BMI and the cross-border productivity and performance of firms. They did so by claiming that BMI can be assimilated to a ‘state variable’ of the U-model. This assumption is actually not that bizarre. While revising their model, Vahlne and Johansson (2017) themselves identified in a firm’s capabilities new ‘state elements’ of the U-model. Although capabilities are called ‘state variables,’ they are dynamic in nature, as they are constantly evolving during the iterations which stay at the base of the model (Vahlne & Johanson, 2017).

According to the revised U-model, firms have limited capabilities in the early stages of the internationalization process. Through accumulating experience, they get ready for further investments (also in internal capabilities) and dare to face increasing risks in foreign markets.

We propose that BMI can act in a similar way. Companies have a certain business model before entering a foreign market, which they often also try to replicate when entering a new foreign market. Following SEI theory logic, firms make business model reconfigurations when seizing business opportunities in foreign markets (Autio, 2017). We add that the specific environmental conditions characterizing each market activate learning processes that, in an iterative way, induce firms to slightly (or deeply) revise their business models. This revision is an act of innovation.

By finding the right fit with the environment through BMI, firms become able to strengthen their position in the foreign market. In each stage of the internationalization process, firms will increase their capabilities and their ability to innovate their business model. Hence, by viewing BMI as a ‘state variable’ in the U-model, we claim that the success of an international venture will depend on its ability to adapt the business model.

However, as prior research has shown, a high level of BMI does not always automatically mean a higher level of success of an international venture (Azari et al., 2017). Contextual factors could play a role in this equation too. In the following, we will therefore examine how three contextual variables (which are all strongly linked to the logic of the U-model) – international experience, resource commitment, and psychic distance – could have an effect on the relationship between BMI and international success. Argumentations are provided in each of the following sections.

### **3.3.1. International experience**

International experience has paramount importance in the U-model. As firms accumulate experience, they develop the relevant market knowledge needed to reduce the levels of uncertainty which they perceive in foreign markets. By reducing uncertainty, firms feel then more confident to both escalate their resource commitment in the markets they already entered and expand to further markets.

We can assume that international experience remains a highly relevant factor in the international expansion of firms in a dynamic and uncertain market environment. Through acquiring international experience, firms become more sensitive to opportunities, and are more likely to identify and exploit them, or even to create new ones (Cavusgil et al., 1993; Parker & Lawrence, 2021). Higher international experience can also lead to an enhanced ability to ‘finetune’ the firm’s business model based on a more fine-grained knowledge of the specific environmental circumstances that firms experience in the markets they enter (Child et al., 2017).

On the value creation side of the business model, a higher degree of international experience might lead to a more accurate definition of suitable target groups (or, at least, help to discover them faster) and facilitate the creation of offers that better meet the expectations of clients in foreign markets. Similarly, for value delivering, by acquiring experience in the management of international channels, companies become more skilled in choosing and adapting the best solutions according to the specificities of each market, hence increasing the share of value created that they can capture.

Finally, by leveraging on their accumulated international experience, firms will be able to better judge how and where to manage their international operations. This will enable them to take more informed decisions about whether and how to manage activities directly within a certain market (though an increase of the resources committed) or by relying on local key partners. Accumulated international experience also make firms more attentive in choosing the best business partners in local markets (Bortoluzzi et al., 2015).

Based on these arguments, we advance our second research hypothesis as follows:

*RH2: The positive relationship between business model innovation and the success of international ventures of a firm will be stronger in firms with previous international experience.*

### **3.3.2. Resource commitment**

Internationalization inherently involves risks. Firms can try to reduce such risks by carefully planning the business activities to be carried out abroad (Figueira-de-Lemos et al., 2011). Designing their business models will support firms in making use of their strengths and capturing the market opportunities.

Different market entry modes imply different levels of risk. For example, smaller companies tend to rely more than big firms on export and on local partners to manage distribution and communication activities in foreign markets. Same for those companies that by applying standardized marketing strategies do not

provide any adaptation to products and to distribution and communication activities. In this way, companies try to minimize additional costs associated with the risk of failure. Both examples illustrate that the degree of resource commitment will depend on the perceived risk.

We would claim that companies committing more resources (hence risking more) will tend to put additional effort into innovating and adapting their business model to the local market conditions. This is also contingent on the entry mode, as there are typically higher resource needs for internalizing and control activities in international joint ventures (IJV) or foreign direct investment (FDI) compared to exporting and licensing. In the case of IJV or FDI, we would therefore also expect additional care to be put in the process of BMI, thus enhancing the potential of a firm in effectively grabbing additional (or better) opportunities in the market and reducing the risk of making mistakes, which can again lead to higher performance.

We therefore hypothesize that resource commitment moderates the relationship between BMI and internationalization success.

*RH3: The positive relationship between business model innovation and the success of international ventures of a firm will be stronger in firms with a higher degree of resource commitment.*

### **3.3.3. Psychic distance**

The U-model predicts that companies typically start their internationalization efforts in countries with a low psychic distance (the distance between the home market and the target market based on cultural, political, economic, social, and legal aspects) to the home market. Doing business in countries with greater psychic distance is associated with more difficulties and a higher probability of failure. Therefore, companies will not enter distant markets until they feel – based on their accumulated internationalization experience – confident enough in doing so.

Duan et al. (2020) actually found an inverted U-shaped relationship between knowledge creation (and knowledge application, respectively) and innovation quality. The effect was moderated by cultural distance. The authors explain this observation with increased costs and risks that occur due to cultural distance between R&D institutions in several countries. This, in turn, leads to a lower level of innovation quality, which is the reason why firms fail to realize BMI.

In general, uncertainty reduction is a costly activity. Obtaining and developing market knowledge in distant markets implies additional costs (Nadolska & Barkema, 2007; Malik & Zhao, 2013). As distant markets will also most likely be different markets, we can expect that in more distant markets, firms will also have a need to innovate and adapt their business model to a greater extent. This is because in markets with a greater psychic distance, firms can expect different institutional and cultural conditions to have a greater impact regarding the demand for a value offering, for example.

Their additional efforts will, however, ideally be compensated by better performance levels obtained in the foreign market, as it would otherwise not be worth the endeavor. Based on this reasoning, we advance our fourth hypothesis as follows:

*RH4: The positive relationship between business model innovation and the success of international ventures of firms will be stronger in firms which are doing business in foreign markets with a higher degree of perceived psychic distance.*

Figure 6 summarizes the theoretical derived hypotheses and model to be tested.

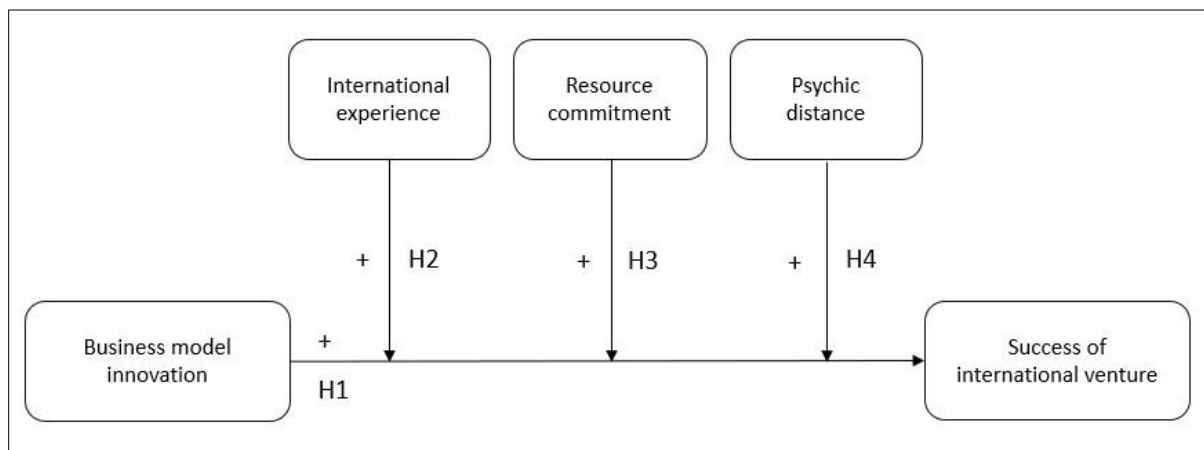


Figure 6: Conceptual framework and research hypotheses

### 3.4. Method

#### 3.4.1. Sample

Our population consists of 1,569 internationally active companies from three European countries (Austria, Italy, and Slovenia). We used different databases of exporting companies in the respective countries, provided by the Carinthia Chamber of Commerce (Austria), the Confindustria Udine and the Economic Chambers in the region of Friuli-Venezia-Giulia (Italy). We also scanned the Italiancom database (Italy) and the SloExport database of exporters (Slovenia) to identify additional internationally active firms.

In Austria, we focused on the region of Carinthia, where we identified and contacted 608 firms. In Slovenia, we addressed 316 randomly selected companies in all regions except Central Slovenia and Gorenjska, as these constitute the capital region, which we wanted to exclude from our sample. In Italy, we identified 645 internationally active companies in the Friuli-Venezia Giulia region.

126 questionnaires were returned in Austria, 74 in Slovenia and 100 in Italy. In total, we had a gross response rate of 19,1 percent (300 out of 1,569). After cleaning up the database from incomplete records and inattentive respondents, we came up with an overall sample composed by 243 firms.

### **3.4.2. Data collection method**

We use a quantitative analysis of (retrospective) survey data to address our research questions. The survey included questions about strategic internationalization decisions as well as about internal and external conditions that were present in the firm while it was going through its most important internationalization step. We referred to such an important internationalization step as an international venture.

Retrospectively gathered information are commonly used in the fields of organizational science and business management, especially when decision making and organizational change processes or competitive strategies are investigated (Miller et al., 1997). We reduced the risk of informant fallibility and retrospective accuracy by involving top managers in our study (Schwens & Kabst, 2009). Following Miller et al. (1997), the reliability of retrospective reports of top manager is not dissimilar from the reliability of non-retrospective ones.

We originally developed our survey instrument in German. We used statistical pretests to test the validity and reliability of the instrument before conducting our main study. For the pretest, we addressed 284 out of 461 randomly collected companies in the Austrian province of Styria (a neighboring province of Carinthia), from where we received 67 completed questionnaires. As one result of this pretest, we found that Cronbach's Alpha of all measured constructs was above 0.7, indicating an adequate degree of reliability of our scales. In the pretest, we also sent our questionnaire to some firms with a general e-mail address and to others with a personalized e-mail-address of the executive director. In the first case, the response rate was only about 2 percent, in the second case 18 percent. For the main study, we therefore decided to send the link to the survey instrument to the personalized e-mail addresses of the firms' executive directors.

For the Slovene and Italian version of our questionnaire, we used standard back-translation procedures. For this purpose, the German questionnaire was first translated into Slovene and Italian by native speakers and then back-translated to German by another interpreter of an external institute. Two Slovenian and two Italian native speakers discussed and revised the translated questionnaires together with another person who contributed to the development of the original questionnaire. The use of such "committee assessments" (Harkness, 2003) should help to reduce the probability of a flawed translation which might lead to different findings.

The questionnaire was sent out via an e-mail that addressed the executive directors of the relevant firms, followed by an e-mail reminder and a telephone call as a second reminder.

### **3.4.3. Dependent variable**

Measuring the internationalization success of a firm is a complex endeavor (Sousa, 2004). Zou et al. (1998), for example, pointed out an inconsistency in conceptual and operational definitions of export performance based on an overview of different existing performance measurement scales of export ventures. Several studies use objective financial data (e.g. international sales-related measures) to assess

international performance (Sousa, 2004). While such an approach might work in a single-country context, financial performance measures are difficult to apply across different countries (Zou et al., 1998). Additionally, focusing on financial performance alone fails to consider other (non-financial) performance aspects of internationalization (Brouthers, 2013).

Challenges could also arise when researchers need to determine what counts as success or failure, as this can vary from firm to firm. There is also lack of comparability due to heterogeneous accounting practices across firms and countries (Lages et al., 2005). Moreover, the respondents might not be willing to share information about concrete financial data and absolute values (Madsen, 1989) or might not remember the exact numbers.

Subjective performance measures, on the other hand, refer to the perception of performance and the extent to which expectations of the managers have been met. Prior studies observed a strong correlation between subjective and objective measures of internationalization performance (Sousa, 2004). According to Lages and Montgomery (2004), the measurement of perceived performance provides an opportunity to “capture the degree to which performance has matched the aspiration levels of the firm” (p. 1191). Using subjective performance measures also reduces the danger that managers are either not willing or not able to provide information about objective financial data. Moreover, it helps to overcome problems that arise in cross-country studies due to differences in accounting practices (Sousa, 2004).

Based on these arguments, we decided for an approach in which we did not measure internationalization performance per se, but the extent to which the top management’s expectations of internationalization performance were met. For this purpose, we rely on Zou et al.’s (1998) export performance (EXPERF) scale. We regard the scale as particularly suitable for our purposes because it considers three different levels of success: financial success, strategic success, and the overall satisfaction. Although it is a scale that was originally developed to measure the performance of an export venture, we extend this scope of application and include any kind of international ventures in the course of our study. We slightly adapted the scale to the context of the most important internationalization step of the respective firm in order to measure the success of a specific international venture (INTSUC). The items in the scale were measured with a verbalized five-point Likert scale, ranging from 1=‘do not agree’ to 5=‘completely agree’.

#### ***3.4.4. Independent, control, and moderating variables***

We measured BMI using a scale developed by Clauss (2017). Previous authors used proxies to measure BMI, such as R&D intensity (Child et al., 2017) or other data based on secondary sources (Brea-Solís et al., 2015). Even though questions in other studies have referred to the different dimensions of BMI (e.g. Spieth & Schneider, 2015), a valid multi-item scale such as the one provided in Clauss (2017) has not been used so far to test the effect of BMI on (international) performance. The scale includes questions on the extent to which the firms used new capabilities, new technology/equipment, new partnerships, and new processes (value creation innovation), new offerings, new customers/markets, new channels,



and new customer relationships (value proposition innovation), as well as new revenue models and a new price and/or cost structure (value capture innovation). Each variable consists of three to four items (31 items in total for the whole BMI construct).

We integrated two control variables in our study that refer to the type of ownership (owner-managed and non-owner-managed firms) and the type of the company (headquarter, subsidiary in the respective country, or other).

To measure the moderator variable resource commitment (RESCOM), we asked the respondents to assess which type of market entry mode was used in the most important internationalization step of the firm. Answer possibilities included service export, export of goods, licensing, franchising, joint venture, subsidiary for commercial purposes, subsidiary for production purposes, and FDI in form of an acquisition. Since the investment of resources increases with the market entry modes mentioned in this order, following Akbar et al. (2017), we weighted them in ascending order (i.e., weight 1 for service export and weight 8 for FDI).

For measuring perceived psychic distance (PSYDIS), we asked the respondents to assess the degree of cultural challenges during the international venture. We did so for two reasons. First, psychic distance is perceived individually (Sousa & Lages, 2011). Therefore, we regard it as appropriate to use a subjective measurement here. Managers that have an international background or some experience with the target market might perceive a lower level of psychic distance. It is not necessarily related to an objective distance between home market and target market. We assume that a high level of psychic distance creates a higher degree of uncertainty, which will usually also lead to more challenges for the firm. Therefore, we specifically asked our respondents to assess the degree of the cultural challenges related to the target market.

Of course, it is possible to raise the question whether a single item is sufficient. We therefore follow the example of other researchers (i.e. Petersen & Pedersen, 1998) who have tried to measure psychic distance with a summary construct by giving some examples what cultural challenges could comprise (i.e. in terms of mentality or the understanding of time), rating from 'not at all' to 'very much' on a five-point Likert scale. In doing so, we were able to assess whether the firms perceived a low or a high level of cultural challenges.

International experience (INTEX) as the third moderator in our analysis was measured simply by asking the respondents whether their firms had already been engaged in international markets before making the internationalization step under scrutiny.

#### ***3.4.5. Data analysis method***

We tested our hypothesis using multiple hierarchical regression models. Before running the calculations in SPSS, we checked for linear relationships between dependent and independent variables with scatter plots. We removed outliers where standardized deleted residuals fell outside of the range [-3, 3]. We

checked our data for homoscedasticity (scatter plot of unstandardized residuals and studentized residuals). The Durbin-Watson test of ANOVA had a value of around 2 in all models, which we accepted as an indicator that there is no autocorrelation of residuals. We also checked the variance inflation factor, which was below 10. The tolerance value was above 0.1. Standardized residuals were checked for normal distribution applying the Kolmogorov-Smirnov test ( $p > 0.1$ ). Furthermore, we mean-centered all variables.

We first include only control variables in our model (model 1) and then add BMI as an independent variable (model 2). Then, we add the interaction effects. From a formal perspective, the moderation effect can be tested by calculating an interaction term of the independent and the moderator variable. The joint effect is reflected through a multiplication of the two variables (Venkatraman, 1989). Thus, we multiply the single moderator variables with BMI (BMI\*PSYDIS, BMI\*INTEX, BMI\*RESSCOM). In a hierarchical regression model, we add the interaction terms to show the additional variance that is explained (model 3, model 4, model 5). In a last step, we integrate all three interaction terms in a single model (model 6).

Asking only one person per firm and collecting all (subjective) measures (including all dependent and independent variables) in the same questionnaire could potentially lead to common method bias. Podsakoff et al. (2003) suggest several measures to decrease the risk of common method bias. We used procedural remedies like locational separation, protecting respondent anonymity, and a counterbalancing question order. As suggested by Podsakoff et al. (2003), we further applied Harman's single-factor test to check for the possibility of common method bias. For this test, all items of the questionnaire are loaded into a single exploratory factor analysis. The risk of common method bias is regarded as low if the single factor accounts for less than 50 percent of the variance. In our case, the single factor accounts for 27,6 percent of the variance, thus lying well below the threshold level. Therefore, even if common method bias cannot be excluded, we have an indication for a low risk of common method bias.

### 3.5. Results

Table 3 provides an overview of descriptive characteristics of the sample. The majority of our firms were SMEs (89%). The distribution of turnover shares abroad also appears to be normally distributed, as shown in table 1. Around 79 percent of our sample are manager-owned, which is comparable with the number of family-owned firms in the European Union (European Commission, 2022).

Table 4 provides an overview of the variables used in the model in terms of descriptive statistics (means and standard deviation) as well as correlation coefficients. We used the Pearson correlation coefficient for metrical variables INTSUC and BMI, and the Spearman correlation coefficient for the other variables. The table also shows that we did not receive complete information for all variables, which is why there are also differences in our sample numbers later in the regression calculation.

	Category	Percentage of firms in the sample
<b>Country</b>	Austria	41,2
	Italy	36,2
	Slovenia	22,6
<b>Size</b>	<10	9,5
	10-49	52,3
	50-249	27,2
	250-999	8,2
	>1000	2,9
<b>Foreign sales to total sales</b>	<=10%	15,1
	11%-25%	13,4
	26%-50%	20,2
	51%-75%	21,4
	76%-89%	12,2
	>=90%	17,6
<b>Origin of company</b>	Headquarter	92,9
	Subsidiary of foreign company	5,4
	Other	1,7
<b>Manger-owned</b>	No	21,3
	Yes	78,8

Table 3: Descriptive characteristics of sample

Variables	N	Mean	SD	1	2	3	4	5	6	7
1 INTSUC <sup>a</sup>	243	-0.0309	0.7145	1.000						
2 BMI <sup>a</sup>	243	-0.1379	0.5688	<b>.423**</b>	1.000					
3 RESSCOM <sup>b</sup>	236	-0.1263	1.8085	.0492	.0198	1.000				
4 PSYDIS <sup>b</sup>	238	0.0000	1.2291	.0125	.156*	.1050	1.000			
5 INTEXP <sup>b</sup>	243	0.3628	0.7901	-.0197	.160*	.0036	.0027	1.000		
6 origin of company <sup>b</sup>	240	1.0875	0.3371	.142*	.0010	.1170	-.0065	.0252	1.000	
7 manager owned <sup>b</sup>	240	1.7875	0.4099	-.0984	-.0017	-.129*	.0622	-.0621	<b>-.335**</b>	1.000

<sup>a</sup> Pearson Correlation Coefficient, 2-tailed<sup>b</sup> Spearman Correlation Coefficient, 2-tailed

Table 4: Correlation matrix

The hierarchical regression analyses (Table 5) show a highly significant relationship ( $p < 0.001$ ) between BMI and the success of an international venture (model 2). However, the table also reveals that the control variable manager-owned is significant on the dependent variable. The additional change of  $R^2$  between models 1 and 2 is 0.17. According to Cohen (1988), these  $R^2$  rates indicate a high goodness-of-fit. We thus found evidence for a link between BMI and the variance of the perceived success of the major internationalization steps of the firms in our sample. In our sample, we can observe that BMI and success on international markets are significantly connected with each other, which provides support for our hypotheses H1.

Additionally, we conducted a stepwise addition of the moderator variables into our hierarchical regression model. Resource commitment per se had no significant effect on internationalization success ( $p > 0.1$ ), but the interaction effect of BMI and resource commitment on internationalization success was highly significant ( $p < 0.001$ ), with an additional change of  $R^2$  of 0.037. International experience had a

slightly negative albeit not significant effect on internationalization success ( $p > 0.1$ ). Again, the interaction effect of BMI and INTEX was positively related to internationalization success ( $p < 0.1$ ;  $\Delta R^2$  0.011). Cultural challenges as a proxy for psychic distance had a negative, non-significant effect on internationalization success. As an interaction term, however, cultural challenges positively moderate the effect of BMI on internationalization success ( $p < 0.05$ ;  $\Delta R^2$  0.015). Added together in model 6, the interaction terms of the three moderator variables and BMI showed positive and significant effects ( $p < 0.1$ ) with an overall change of  $R^2$  of 0.051.

The results of our analysis therefore provide support in favor of our hypotheses on a moderating effect of resource commitment, psychic distance, and international experience on the relationship between BMI and internationalization success (hypothesis 2, 3, and 4).

To summarize, our models indicate that BMI is positively linked with internationalization success, and that such a relationship is affected by the degree of resource commitment, psychic distance, and previous international experience. Figure 7, 8, and 9 plot our findings, showing how the relationship between BMI and the success of an international venture changes depending on high or low levels of the moderating variables.

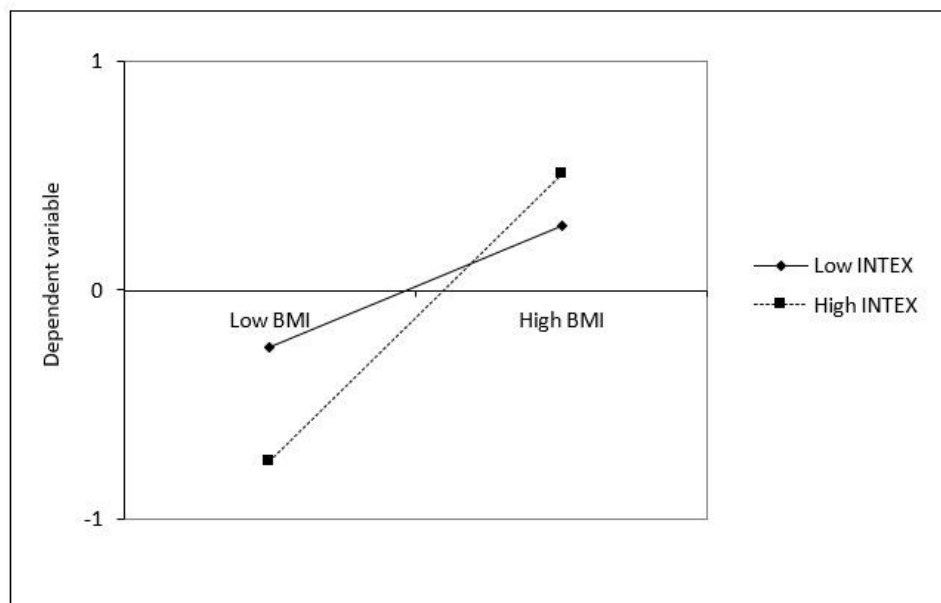


Figure 7: Moderating effect of international experience on BMI and INTSUC

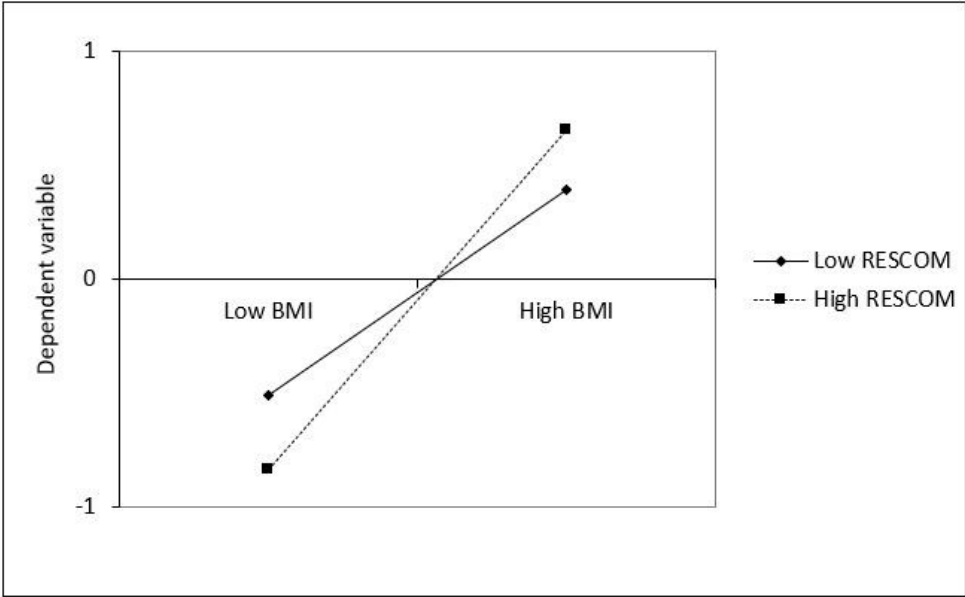


Figure 8: Moderating effect of resource commitment on BMI and INTSUC

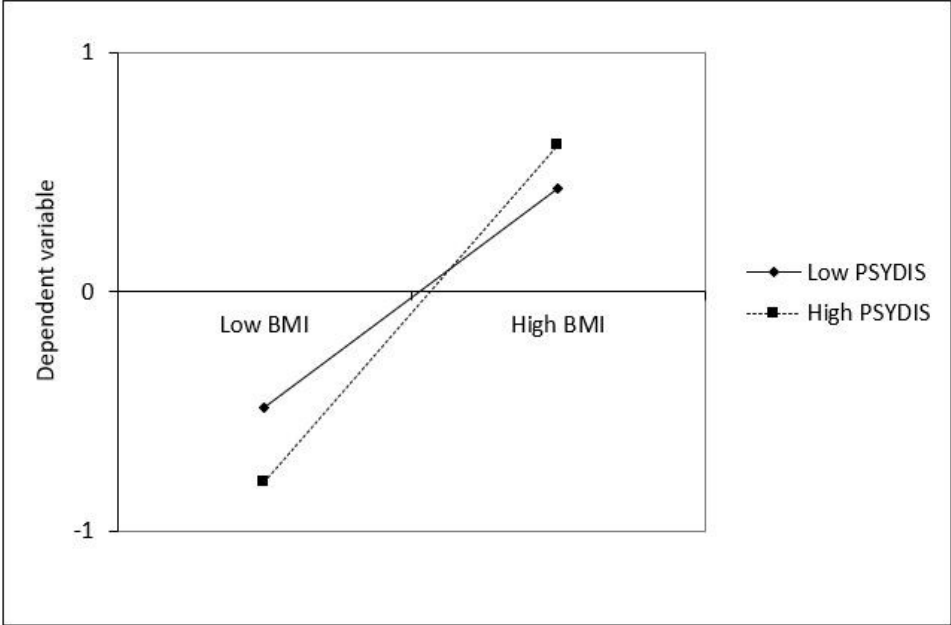


Figure 9: Moderating effect of psychic distance on BMI and INTSUC

Independent variables	Internationalization success																	
	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	Beta	t	p	Beta	t	p	Beta	t	p	Beta	t	p	Beta	t	p	Beta	t	p
(constant)	-0.238	0.812		-0.148	0.883		-0.280	0.779		-0.282	0.778		-0.218	0.828		-0.575	0.566	
Manager-owned	<b>0.115</b>	<b>1.698</b>	<b>0.091</b>	<b>0.120</b>	<b>1.944</b>	<b>0.053</b>	<b>0.142</b>	<b>2.312</b>	<b>0.022</b>	<b>0.123</b>	<b>2.023</b>	<b>0.044</b>	<b>0.127</b>	<b>2.084</b>	<b>0.038</b>	<b>0.178</b>	<b>3.045</b>	<b>0.003</b>
Type of company	-0.070	-1.039	0.300	-0.062	-1.002	0.317	-0.070	-1.149	0.252	-0.057	-0.930	0.353	-0.062	-1.008	0.314	-0.066	-1.134	0.258
BMI				<b>0.412</b>	<b>6.994</b>	<b>&lt;.001</b>	<b>0.477</b>	<b>7.916</b>	<b>&lt;.001</b>	<b>0.413</b>	<b>6.955</b>	<b>&lt;.001</b>	<b>0.456</b>	<b>7.668</b>	<b>&lt;.001</b>	<b>0.522</b>	<b>8.867</b>	<b>&lt;.001</b>
RESSCOM							-0.044	-0.731	0.466							-0.002	-0.038	0.970
BMI*RESSCOM							<b>0.201</b>	<b>3.314</b>	<b>0.001</b>							<b>0.114</b>	<b>1.769</b>	<b>0.078</b>
IE										-0.074	-1.183	0.238				-0.075	-1.265	0.207
BMI*IE										<b>0.113</b>	<b>1.830</b>	<b>0.069</b>				<b>0.131</b>	<b>2.188</b>	<b>0.030</b>
PSYDIS													-0.056	-0.930	0,353	-0.061	-1.053	0.293
BMI*PSYDIS													<b>0.123</b>	<b>2,083</b>	<b>0,038</b>	<b>0.110</b>	<b>1.749</b>	<b>0.082</b>
$\Delta R^2$	0.023			0.170			0.037			0.011			0,015			0.051		
$\Delta F$	2.732			48.916			10.980			3.349			4.339			5.509		
n	237			237			230			237 <sup>a</sup>			232			223 <sup>a</sup>		

All variables mean centered.

<sup>a</sup>Eliminating outliers [Studentized deleted residuals  $-3 \leq$ ]

Table 3: Results of hierarchical regression analysis

### 3.6. Discussion and conclusion

In our study of 243 internationalizing firms from three different European countries, we could observe a significantly positive correlation between BMI and the success of international ventures. In contrast to previous studies that analyzed the role that specific marketing moves like product adaptation or promotion strategy adaptation had on export performance (Hultman et al., 2011; Westjohn, 2017), we took a more comprehensive view and examined the effect of BMI ‘as a whole’ (Bouncken et al., 2015; Lew et al., 2022) on the success of international ventures (in the sense of internationalization step). We also analyzed the variation of the strength of this relationship under some specific internal and external (to the firm) conditions. In particular, we could observe a positive and significant moderating effect of three contextual variables on the relationship between BMI and the success of international ventures: psychic distance, international experience, and resource commitment.

Our study makes several contributions to the literature. First, we provide empirical support for SEI theory and Autio’s (2017) normative framework as we find evidence for the existence of a relationship between BMI and the success of international ventures. Autio claims that new ventures tend to experiment with the business model design while internationalizing, and that by doing so they develop specific competitive advantage in foreign markets. Our results extend these considerations to the domain of established firms, confirming that firms that adapt and innovate their business models in foreign markets also tend to report higher performance levels.

With these findings, we also contribute to a long-running debate in the international marketing literature about the relative effectiveness of standardization versus adaptation strategies when entering foreign markets (see, for example, Theodosiou and Leonidou, 2003) by showing that firms that adapt their business model on average report higher international performance levels compared to firms that make no or only a few adaptations.

Our study also provides further empirical confirmation for the Uppsala model. Although scores of prior researchers have provided evidence for the U-model before, it is still impressive to ascertain that the underlying mechanisms of the model still prove to be valid 45 years after its conception. Our results show that specific internal and external factors favor the international success of firms and can influence the effectiveness of their BMI strategies. We have derived these factors – international experience, the perception of psychic distance, and the level of resource commitment – from the U-model, thus again confirming its usefulness as a framework for studying internationalization processes.

Key theoretical contributions of our work are the addition of BMI to the U-model and establishing a link between SEI theory and the U-model. In Figure 10, we propose an interpretive framework which allows us to look at the internationalization process through a BMI stage logic. The framework shows a process

model of internationalization that combines some elements of SEI theory with the U-model. The framework is consistent with our data, although we have not explicitly based our hypotheses on it (this might be an interesting starting point for further research).

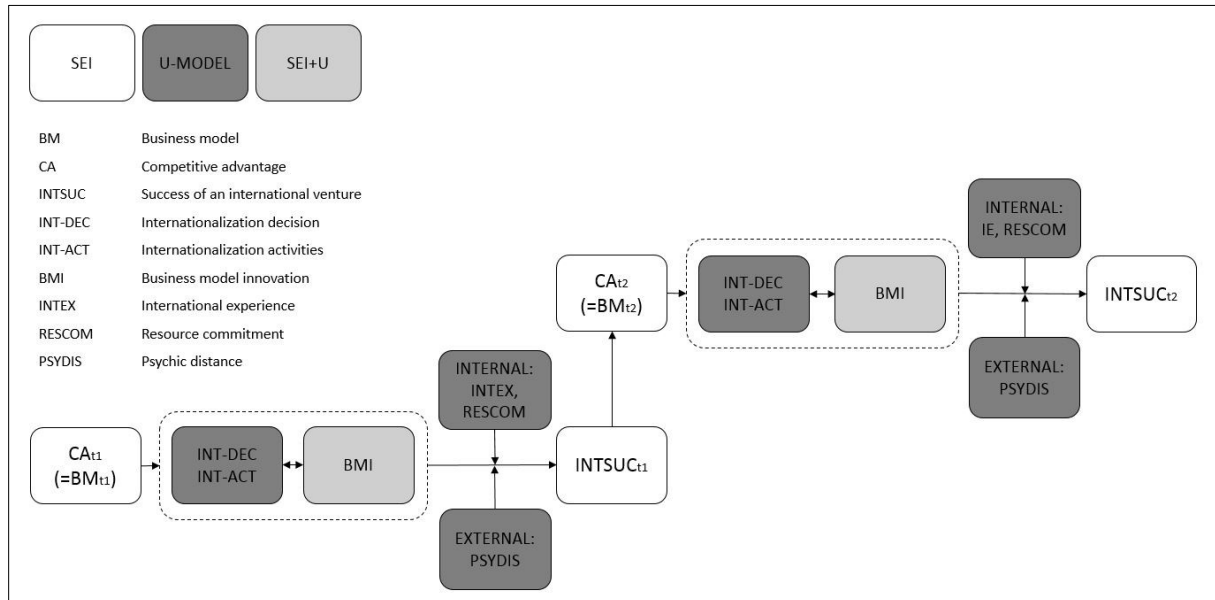


Figure 10: Internationalization through BMI stage logic

As Autio's (2017) framework, our model also assumes that before starting an internationalization process, a firm holds a specific competitive advantage, which is reflected in its business model at a certain point in time  $t_1$ . The management of the firm then decides to enter a certain market (or simply exploit an opportunity that arises on a foreign market). This is where BMI comes into play. The firm may start conducting its business activities just 'as usual' when entering the new market. The entrepreneurial perception of the peculiarities of the market will, however, often trigger some internal reflections on the opportunity (or the need) to adjust the business model in order to reach a better fit with that particular market. For example, product adaptations might be needed to better meet the preferences of local consumers, or distribution strategies could be changed to better match the peculiarities of the distribution channels of the new market. This fine-tuning process, which represents an act of innovation of the business model, will continue until the firm's management perceives to have reached some competitive advantage over its direct competitors (in a certain market space or niche). This is represented by the new business model at the point of time  $t_2$ .

According to our model, the likelihood to succeed in a new market will depend on the effectiveness of the process of BMI, which is iterative in nature. The effect tends to be stronger in firms with previous international experience. The model further proposes that firms that are willing to accept more risky challenges (thus committing more resources in the process of internationalization) and firms that are entering psychically more distant markets will need to put even more attention in innovating the business models.



Once a firm has successfully internationalized into a new market and has adapted its business model to become successful in that market, it will be ready to proceed to the next levels of internationalization (either through entering new markets or expanding its presence in existing foreign markets) by going through the same process again and again.

### **3.7. Managerial implications and limitations**

Our study could also have some implications for entrepreneurs and managers of firms which are taking internationalization steps. First, our results show that it would make sense for them to consider whether the business model of their firm fits their target markets, not only before entering new markets but also while doing business abroad. A continuous process of innovation, adaptation and fine-tuning the business model seems to be beneficial for the international success of a firm.

Second, managers should never underestimate cultural (or 'psychic') distance, since, according to our results, the likelihood to obtain adequate returns from international ventures depends on the ability to adjust the business model to the specifics of the target markets. Similarly, the management of firms entering new markets through high resource-committing modes should consider adapting their business model even more (and ideally also continuously) in line with the changing characteristics of markets.

Finally, managers should be particularly cautious about innovating their business model when their level of international experience is low. Experience in managing international business activities allows firms to develop more effective entry routines, act more confidently on the market, and to avoid (at least some) mistakes.

Our study does not come without limitations. Although we took widely accepted measures to prevent common method bias, we cannot completely rule it out, especially in relation to the role of moderating variables. We also relied on a subjective method for estimating the success of an international venture. Although this has several well-justified reasons (e.g. the limits of comparability of profitability figures in cross-national studies based on different tax regulations; the limits in the capacity or willingness of respondent to disclose profitability figures), it still bears some risks of being biased by differing personal perceptions.

Another critical element of our study is the use of a single item scale to measure psychic distance. Multi-item scales include several dimensions of distance, for example geographical and administrative distance. Future research could consider the influence of different dimensions of distance (geographical, cultural, administrative, economic, etc.). We also acknowledge that in our cultural challenges and resource commitment variables, we are treating a nominal and ordinal level of measurement as interval data. Although we believe, following Haas et al. (2003), that this is an acceptable choice, we still need to point this out as a limitation.

For measuring BMI, we relied on the comprehensive BMI scale suggested by Clauss (2017). Future research could take a closer look at whether there are different effect sizes for certain dimensions of BMI.

The combined effect of the three moderating variables in our study show a change in  $R^2$  of 0.05. Even if our results are significant, the effect is rather small, which means that other variables also have an influence here. There might, for example, be a variation by industry, which could also be included as a variable in further studies. The ability of firms to acquire and process information could also play a role, as could risk perceptions or the experience of managers. Further examinations will be required to fill this knowledge gap.

Despite these methodological limitations, we believe that our study has taken us one step further in recognizing the existence and exploring the nature of the link between the ability of a firm to adapt its business models during their internationalization process and the likelihood of being successful in their international endeavors. We have to acknowledge that BMI plays an important role during the internationalization processes, and that it should be integrated in our considerations and models of how firms internationalize.

### 3.8. References

- Akbar, Y.H., Balboni, B., Bortoluzzi, G., & Tracogna, A. (2017). SME export performance, capabilities and emerging markets: the impact of institutional voids. *European Journal of International Management*, 11(2), 201-226.
- Akbar, Y., Balzano, M., & Bortoluzzi, G. (2022). The relationship between innovation and internationalization of SMEs: a review of theoretical perspectives. In Dikova, D. (ed.): *Research Handbook on Innovation in International Business*, Cheltenham/Northampton: Edward Elgar, pp. 6-33. <https://doi.org/10.4337/9781800882942.00008>.
- Alvarez, S. A., & Busenitz, L. W. (2001). The entrepreneurship of resource-based theory. *Journal of Management*, 27(6), 755-775.
- Andersen, T.J. (2004). Integrating the strategy formation process: An international perspective. *European Management Journal*, 22(3), 263-272.
- Andersson, S. (2011). International entrepreneurship, born globals and the theory of effectuation. *Journal of Small Business and Enterprise Development*, 18(3), 627-643.
- Autio, E. 2017. Strategic entrepreneurial internationalization: A normative framework. *Strategic Entrepreneurship Journal*, 11(3), 211-227.
- Azari, M.J., Madsen, T.K., & Moen, Ø. (2017). Antecedent and outcomes of innovation-based growth strategies for exporting SMEs. *Journal of Small Business and Enterprise Development*, 24(4), 733-752.
- Bagheri, M., Mitchelmore, S., Bamiatzi, V., & Nikolopoulos, K. (2019). Internationalization orientation in SMEs: The mediating role of technological innovation. *Journal of International Management*, 25(1), 121-139.
- Barringer, B.R., & Bluedorn, A.C. (1999). The relationship between corporate entrepreneurship and strategic management. *Strategic Management Journal*, 20(5), 421-444.
- Björkdahl, J., & Holmén, M. (2013). Business model innovation—the challenges ahead. *International Journal of Product Development*, 18(3/4), 213-225.
- Bohnsack, R., Ciulli, F., & Kolk, A. (2021). The role of business models in firm internationalization: An exploration of European electricity firms in the context of the energy transition. *Journal of International Business Studies*, 52(5), 824-852.
- Bortoluzzi, G., Chiarvesio, M., & Tabacco, R. (2015). Managing distribution networks in emerging markets. Evidence from the furniture sector. *European Business Review*, 27(6), 617-637.
- Bouncken, R.B., Muench, M., & Kraus, S. (2015). Born globals: Investigating the influence of their business models on rapid internationalization. *International Business & Economics Research Journal*, 14(2), 247-256.
- Bouwman, H., Nikou, S., & de Reuver, M. (2019). Digitalization, business models, and SMEs: How do business model innovation practices improve performance of digitalizing SMEs? *Telecommunications Policy*, 43(9), 101828.
- Brothers, K.A. (2013). A retrospective on: Institutional, cultural and transaction cost influences on entry mode choice and performance. *Journal of International Business Studies*, 44, 14-22.

- Brush, C.G. (1995). *International Entrepreneurship: The Effect of Firm Age on Motives for Internationalization*, New York: Garland Publishers.
- Cahen, F., & Borini, F. M. (2020). International digital competence. *Journal of International Management*, 26(1), 100691.
- Calof, J.L., & Beamish, P.W. (1995). Adapting to foreign markets: Explaining internationalization. *International Business Review*, 4(2), 115-131.
- Cassiman, B., & Golovko, E. (2011). Innovation and internationalization through exports. *Journal of International Business Studies*, 42, 56-75.
- Casson, M., & Li, Y. (2022). Complexity in international business: The implications for theory. *Journal of International Business Studies*, 1-13.
- Cavallo, A., Ghezzi, A., & Ruales Guzmán, B.V. (2019). Driving internationalization through business model innovation: evidences from an AgTech company. *Multinational Business Review*, 28(2), 201-220.
- Caves, R.E. (1985). International trade and industrial organization: Problems, solved and unsolved. *European Economic Review*, 28(3), 377-395.
- Cavusgil, S.T., Zou, S., & Naidu, G.M. (1993). Product and promotion adaptation in export ventures: an empirical investigation. *Journal of International Business Studies*, 24(3), 479-506.
- Chakravarthy, B.S. (1982). Adaptation: A promising metaphor for strategic management. *Academy Of Management Review*, 7(1), 35-44.
- Chandra, Y. (2017). A time-based process model of international entrepreneurial opportunity evaluation. *Journal of International Business Studies*, 48(4), 423-451.
- Chetty, S., & Campbell-Hunt, C. (2004). A strategic approach to internationalization: a traditional versus a “born-global” approach. *Journal of International Marketing*, 12(1), 57-81.
- Child, J., Hsieh, L., Elbanna, S., Karmowska, J., Marinovaf, S., Puthusserry, P., Tsai, T., Narooz, R., Zhang, Y. (2017). SME international business models: The role of context and experience. *Journal of World Business*, 52, 664-679.
- Ciravegna, L., Kundu, S.K., Kuivalainen, O., & Lopez, L.E. (2019). The timing of internationalization – Drivers and outcomes. *Journal of Business Research*, 105, 322-332.
- Clarke, J.E., & Liesch, P.W. (2017). Wait-and-see strategy: Risk management in the internationalization process model. *Journal of International Business Studies*, 48(8), 923-940.
- Clauss, T. (2017). Measuring business model innovation: Conceptualization, scale development, and proof of performance. *R&D Management*, 47(3), 385-404.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*, 2<sup>nd</sup> ed., Hillsdale, NJ: L. Erlbaum Associates.
- Colli, A., García-Canal, E., & Guillén, M.F. (2013). Family character and international entrepreneurship: A historical comparison of Italian and Spanish ‘new multinationals’. *Business History*, 55(1), 119-138.
- Colovic, A. (2022). Leadership and business model innovation in late internationalizing SMEs. *Long Range Planning*, 55(1), 102083.

- Cucculelli, M., & Bettinelli, C. (2015). Business models, intangibles and firm performance: evidence on corporate entrepreneurship from Italian manufacturing SMEs. *Small Business Economics*, 45(2), 329-350.
- Cyert, R.M., & March, J.G. (1963). *A behavioral theory of the firm*. Englewood Cliffs, NJ: Prentice Hall.
- Dana, L.P., & Wright, R.W. (2004). Emerging paradigms of international entrepreneurship. In Dana, L. P. (eds.), *Handbook of research on international entrepreneurship*, Cheltenham/Northampton: Edward Elgar, pp. 3-15.
- Davidsson, P. (2015). Entrepreneurial opportunities and the entrepreneurship nexus: A re-conceptualization. *Journal of Business Venturing*, 30(5), 674-695.
- Demil, B., & Lecocq, X. (2010). Business model evolution: in search of dynamic consistency. *Long Range Planning*, 43(2-3), 227-246.
- Dikova, D., Sahib, P.R., & Van Witteloostuijn, A. (2010). Cross-border acquisition abandonment and completion: The effect of institutional differences and organizational learning in the international business service industry, 1981–2001. *Journal of International Business Studies*, 41(2), 223-245.
- Duan, Y., Huang, L., Cheng, H., Yang, L., & Ren, T. (2020). The moderating effect of cultural distance on the cross-border knowledge management and innovation quality of multinational corporations. *Journal of Knowledge Management*, 25(1), 85-116.
- Dunford, R., Palmer, I., & Benveniste, J. (2010). Business model replication for early and rapid internationalisation: The ING direct experience. *Long Range Planning*, 43(5-6), 655-674.
- Dunning, J.H. (1981). Explaining the International Direct Investment Position of Countries: Towards a Dynamic or Developmental Approach. *Weltwirtschaftliches Archiv*, 117, 30-64.
- European Commission (2022): Family Business. URL: [https://single-market-economy.ec.europa.eu/smes/supporting-entrepreneurship/family-business\\_en](https://single-market-economy.ec.europa.eu/smes/supporting-entrepreneurship/family-business_en) (retrieved: October, 12th, 2022).
- Figueira-de-Lemos, F., & Hadjikhani, A. (2014). Internationalization processes in stable and unstable market conditions: Towards a model of commitment decisions in dynamic environments. *Journal of World Business*, 49(3), 332-349.
- Figueira-de-Lemos, F., Johanson, J., & Vahlne, J.E. (2011). Risk management in the internationalization process of the firm: A note on the Uppsala model. *Journal of World Business*, 46(2), 143-153.
- Fisher, G. (2012). Effectuation, causation, and bricolage: A behavioral comparison of emerging theories in entrepreneurship research. *Entrepreneurship Theory and Practice*, 36(5), 1019-1051.
- Harkness, J., van de Vijver, F.J.R. and Johnson, T.P. (2003). Questionnaire Design in Comparative Research. In Harkness, J., Van de Vijver, F.J.R. and Mohler, P.P. (eds.), *Cross-Cross-Cultural Survey Methods*. Hoboken, NJ: Wiley, pp. 19.34.
- Heikkilä, M., Bouwman, H., & Heikkilä, J. (2017). From strategic goals to business model innovation paths: an exploratory study. *Journal of Small Business and Enterprise Development*, 25(1), 107-128.
- Hennart, J.F., Majocchi, A., & Hagen, B. (2021). What's so special about born globals, their entrepreneurs or their business model? *Journal of International Business Studies*, 52(9), 1665-1694.
- Hultman, M., Katsikeas, C.S., & Robson, M.J. (2011). Export promotion strategy and performance: The role of international experience. *Journal of International Marketing*, 19(4), 17-39.

- Hymer, S.H. (1976). *The International Operations of National Firms: A Study of Direct Foreign Investment*. Cambridge. MIT Press.
- 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. (1990). The mechanism of internationalisation. *International marketing review*, 7(4), 11-24.
- 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, 1411-1431.
- Jones, M.V., & Coviello, N.E. (2005). Internationalisation: conceptualising an entrepreneurial process of behaviour in time. *Journal of International Business Studies*, 36(3), 284-303.
- Kalinic, I., & Forza, C. (2012). Rapid internationalization of traditional SMEs: Between gradualist models and born globals. *International Business Review*, 21(4), 694-707.
- Kraus, S., Brem, A., Schuessler, M., Schuessler, F., & Niemand, T. (2019). Innovative born globals: Investigating the influence of their business models on international performance. *International Journal of Innovation Management*, 21(1), 275-328.
- Lages, L.F., & Montgomery, D.B. (2004). Export performance as an antecedent of export commitment and marketing strategy adaptation. *European Journal of Marketing*, 38(9/10), 1186-1214.
- Lages, L.F., Lages, C., & Lages, C.R. (2005). Bringing export performance metrics into annual reports: The APEV scale and the PERFEX Scorecard. *Journal of International Marketing*, 13(3), 79-104.
- Landau, C., Karna, A., & Sailer, M. (2016). Business model adaptation for emerging markets: a case study of a German automobile manufacturer in India. *R&D Management*, 46(3), 480-503.
- Lew, Y. K., Zahoor, N., Donbesuur, F., & Khan, H. (2022). Entrepreneurial alertness and business model innovation in dynamic markets: international performance implications for SMEs. *R&D Management*, DOI: 10.1111/radm.12558.
- Madsen, T.K. (1989). Successful export marketing management: Some empirical evidence. *International Marketing Review*, 6(4), 41-57.
- Malik, T.H., & Zhao, Y. (2013). Cultural distance and its implication for the duration of the international alliance in a high technology sector. *International Business Review*, 22(4), 699-712.
- McDougall, P.P. (1989). International versus domestic entrepreneurship: New venture strategic behavior and industry structure. *Journal of Business Venturing*, 4(6), 387-400.
- Miller, C.C., Cardinal, L.B., & Glick, W.H. (1997). Retrospective reports in organizational research: A reexamination of recent evidence. *Academy of Management Journal*, 40(1), 189-204.
- Morris, M., Schindehutte, M., & Allen, J. (2005). The entrepreneur's business model: toward a unified perspective. *Journal of Business Research*, 58(6), 726-735.
- Mtigwe, B. (2006). Theoretical milestones in international business: The journey to international entrepreneurship theory. *Journal of International Entrepreneurship*, 4(1), 5-25.
- Nadolska, A., & Barkema, H.G. (2007). Learning to internationalise: The pace and success of foreign acquisitions. *Journal of International Business Studies*, 38(7), 1170-1186.

- Onetti, A., Zucchella, A., Jones, M.V., & McDougall-Covin, P.P. (2012). Internationalization, innovation and entrepreneurship: business models for new technology-based firms. *Journal of Management & Governance*, 16(3), 337-368.
- Oviatt, B. M., & McDougall, P. P. (1997). Challenges for internationalization process theory: The case of international new ventures. *MIR: Management International Review*, 85-99.
- Oviatt, B.M., & McDougall, P.P. (2005). Defining international entrepreneurship and modeling the speed of internationalization. *Entrepreneurship Theory & Practice*, 29(5), 537-553.
- Parker, D.W., & Lawrence, W.W. (2021). Improving productivity of a financial firm: business model evolution in the Caribbean. *International Journal of Productivity and Performance Management*.
- Pedersen, T., & Petersen, B. (1998). Explaining gradually increasing resource commitment to a foreign market. *International Business Review*, 7(5), 483-501.
- Penrose, E. (1959). *The Theory of the Growth of the Firm*. New York: Oxford University Press.
- Podsakoff, P.M., McKenzie, P.M., Lee, J.Y., & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Saebi, T., Lien, L., & Foss, N.J. (2017). What drives business model adaptation? The impact of opportunities, threats and strategic orientation. *Long Range Planning*, 50(5), 567-581.
- Saridakis, G., Idris, B., Hansen, J. M., & Dana, L. P. (2019). SMEs' internationalization: When does innovation matter? *Journal of Business Research*, 96, 250-263.
- Schwens, C., & Kabst, R. (2009). How early opposed to late internationalizers learn: Experience of others and paradigms of interpretation. *International Business Review*, 18(5), 509-522.
- Sharma, S., Dixit, M.R., & Karna, A. (2016). Design leaps: Business model adaptation in emerging economies. *Journal of Asia Business Studies*, 10(2), 105-124.
- Sousa, C.M., (2004), Export performance measurement: An evaluation of the empirical research in the literature. *Academy of Marketing Science Review*, 9, 1-22; URL: <http://www.amsreview.org/articles/sousa09-2004.pdf> (retrieved 20<sup>th</sup> August, 2020).
- Sousa, C.M., & Lages, L.F. (2011). The PD scale: a measure of psychic distance and its impact on international marketing strategy. *International Marketing Review*, 28(2), 201-222.
- Spieth, P., Schneckenberg, D., & Matzler, K. (2016). Exploring the linkage between business model (&) innovation and the strategy of the firm. *R&D Management*, 46(3), 403-413.
- Su, Z., Xie, E., & Li, Y. (2011). Entrepreneurial orientation and firm performance in new ventures and established firms. *Journal of Small Business Management*, 49(4), 558-577.
- Surdu, I., Greve, H.R., & Benito, G.R. (2021). Back to basics: Behavioral theory and internationalization. *Journal of International Business Studies*, 52(6), 1047-1068.
- Tallman, S., Luo, Y., & Buckley, P.J. (2018). Business models in global competition. *Global Strategy Journal*, 8(4), 517-535.
- Teece, D.J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *California Management Review*, 58(4), 13-35.

- Theodosiou, M., & Leonidou, L.C. (2003). Standardization versus adaptation of international marketing strategy: An integrative assessment of the empirical research. *International Business Review*, 12(2), 141-171.
- Vahlne, J.E., & Johanson, J. (2017). From internationalization to evolution: The Uppsala model at 40 years. *Journal of International Business Studies*, 48(9), 1087-1102.
- Venkataraman, S. (1997). The Distinctive Domain of Entrepreneurship Research. Advances in Entrepreneurship. *Firm Emergence and Growth*, 3, 119-138.
- Von Delft, S., Kortmann, S., Gelhard, C., & Pisani, N. (2019). Leveraging global sources of knowledge for business model innovation. *Long Range Planning*, 52(5), 101848, DOI: 10.1016/j.lrp.2018.08.003
- Wei, Z., Song, X., & Wang, D. (2017). Manufacturing flexibility, business model design, and firm performance. *International Journal of Production Economics*, 193, 87-97.
- Westhead, P., Wright, M., & Ucbasaran, D. (2004). Internationalization of private firms: environmental turbulence and organizational strategies and resources. *Entrepreneurship & Regional Development*, 16(6), 501-522.
- Westjohn, S.A., & Magnusson, P. (2017). Export performance: A focus on discretionary adaptation. *Journal of International Marketing*, 25(4), 70-88.
- Wijen, F., & van Tulder, R. (2011). Integrating environmental and international strategies in a world of regulatory turbulence. *California Management Review*, 53(4), 23-46.
- Zahra S.A., George G. (2002) International entrepreneurship: the current status of the field and future research. In: Hitt M.A., Ireland R.D., Sexton D.L. (eds.), *Strategic entrepreneurship: creating a new mindset*. Blackwell: Malden, pp 255-288.
- Zhang, H., Xiao, H., Wang, Y., Shareef, M.A., Akram, M.S., & Goraya, M.A.S. (2021). An integration of antecedents and outcomes of business model innovation: A meta-analytic review. *Journal of Business Research*, 131, 803-814.
- Zott, C., & Amit, R. (2008). The fit between product market strategy and business model: Implications for firm performance. *Strategic Management Journal*, 29(1), 1-26.
- Zou, S., Tylor, C.R., & Osland, G.E. (1998). The EXPERF scale: A cross-national generalized export performance measure. *Journal of International Marketing*, 6(3), 37-58.
- Zucchella, A. (2021). International entrepreneurship and the internationalization phenomenon: taking stock, looking ahead. *International Business Review*, 30(2), 101800.



## 4. Paper III

### **Business model innovation and internationalization: Investigating the relationship through the dynamic states approach**

Type of paper: Qualitative Paper

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#### 4.1. Introduction

While the concept of the business model was not yet well-established in economics and business research several years ago (Teece, 2010), it has more recently gained attention, both in theory and practice (Spieth et al., 2014; Cao et al., 2018). However, despite its increased presence, there is no common definition of the term ‘business model’ in the literature (Foss & Saebi, 2017; Bashir et al., 2020).

The concept of the business model can be considered from two points of view. From a static perspective, a business model is a tool of analysis to identify how firms create value; from a dynamic perspective, business models are transformational (Demil & Lecocq, 2010; Spieth et al., 2016). This latter perspective relates to the concept of business model innovation (BMI), which refers to the ways in which organizations adapt, change and reconfigure their business model. The recent COVID-19 pandemic and global political turbulence have highlighted the need for flexibility and innovation in business models (Miller et al., 2021). Firms must reconsider and adapt their business models in response to environmental changes (Spieth et al., 2016; Bashir et al., 2020).

As with business models, there is no global consensus on the definition and concept of BMI. This paper will adhere to Foss and Saebi’s (2017) definition, in which BMI is characterized as “designed, novel, nontrivial changes to the key elements of a firm’s business model and/or the architecture linking these elements” (p. 201). The perception of BMI as an organizational change process incorporates the assumption that it is a dynamic and iterative mechanism that develops continuously (Zott & Amit, 2015). This conception of BMI as a process features several stages and delineates the many ways in which firms execute BMI (i.e., Frankenberger et al., 2013).

Academic interest in BMI concept is growing (Cao et al., 2018), but research does not consider the antecedents and outcomes of BMI (Andreini & Bettinelli, 2017; Foss & Saebi, 2017; Bashir et al., 2020). Furthermore, BMI literature lacks a theoretical foundation. Schneider and Spieth (2013) identify prerequisites, process, and effects as three prevalent themes within BMI research. The authors call for further research on “the process and elements of business model innovation, as well as its enablers and effects in anticipation and response to increasing environmental volatility” (p. 9).

One specific example of an environmental change within an organization is the instance of a firm entering a foreign market (Teece, 2010). Internationalization requires BMI, in which firms might have to adapt their business models “to suit local requirements” (Teece, 2018, p. 4). During internationalization, a range of business activities, which are involved in “the process of increasing involvement in international markets” (Welch & Luostarinen, p. 36), are performed. The interrelationship between internationalization and BMI is a “common phenomenon” in business practice (Rask, 2014, p. 158). However, research on the nexus between BMI and internationalization is scarce (Nunes & Steinbruch, 2019). A thorough investigation into the association between BMI and internationalization (Onetti et al., 2012; Rask, 2014; Azari et al., 2017) and a detailed explanation of how BMI connects with the internationalization process (Child et al., 2017; Cavallo et al., 2019) is absent from the literature. The development

of approaches to further explore the relationship between BMI and internationalization is required (Abrahamsson et al., 2016; Cavallo et al., 2016).

One area of research relating to the relationship between BMI and internationalization is the assessment of whether volatile environments drive BMI, or vice versa (Spieth et al., 2014). Internationalization is a form of volatility for companies, as political, economic, legal, social, technical and environmental circumstances that differ from the organization's home market must be managed. When taking this into consideration, it is clear that firms must change their business model when internationalizing, and that innovative business models help businesses to be competitive on an international level. However, what is not apparent is in which cases internationalization triggers BMI and, conversely, in which cases BMI leads to internationalization. In order to understand when internationalization triggers BMI, as opposed to instances in which internationalization is an outcome, it is imperative to examine the BMI process in an international context more closely.

Additionally, research is limited regarding how BMI happens within organizations. The exact steps taken when firms change their business model in response to internationalization are not clear. The question of how organizational capabilities influence BMI has been recently addressed (Miller et al., 2021). However, research does not consider the various dimensions involved in BMI and, from a process perspective, what happens when firms conduct BMI. Knowing how companies employ BMI in the context of internationalization contributes to an understanding of how companies can establish a successful business model in international markets. Our paper aims to shed light on the black box of what exactly happens during the BMI process that is either caused by or leads to internationalization. The research question to be answered is:

***Which forms of business model innovation are caused by or lead to internationalization?***

This research question is explorative in nature, which is why an analysis of nine case studies, involving firms that developed an innovative business model for international markets, was employed. In addition to the multiple interviews conducted as part of this research, we also gathered informational material for later analysis, which were performed with the help of network analyses and qualitative content analysis procedures.

This qualitative study advances research in several aspects. First, this paper enriches the novel field of BMI research by delving into the relationship between BMI and internationalization; few studies address BMI in an international context (Cao et al., 2018). Second, this study is based on the theoretical framework of the dynamic states approach. Through the lens of this approach, internationalization is viewed as a means of organizational growth, with BMI existing as an integral part of the growth process. In this way, explanation and analysis of when internationalization is either an antecedent or outcome of the BMI process is more easily achieved. Our paper contributes to BMI literature through use of a progressive theoretical approach of firm growth in order to explain BMI in an international context. Third, we

develop and elaborate upon a more comprehensive understanding of the role of internationalization in BMI and how firms realize international BMI.

In the following sections, we first explain the theoretical basis for the current study and provide an overview on the literature on the interrelationship between BMI and internationalization. We also report on the research methodology and findings of this qualitative study. Finally, we discuss our results and share the theoretical and managerial implications of these, as well as the limitations of our study and proposed directions for future research.

## **4.2. Theoretical framework**

We will first provide some theoretical background, using the dynamic states approach, which is employed as the starting point of our analysis. The interrelationship between BMI and internationalization will then be reviewed.

### **4.2.1. Explaining BMI with the dynamic states approach**

Reconfiguring a business model and entering international markets are both innovative decision processes (Rask, 2014). Similarly, a firm implementing new production processes performs an innovative act in a way that parallels internationalization (Simmonds & Smith, 1968; Lee & Brasch, 1978; Cavusgil, 1980; Reid, 1981; Andersen, 1993; Azari et al., 2017). Since Schumpeter's seminal work (1934), the act of entrepreneurial innovation is deemed to be a basic determinant for growth.

In order to better understand organizational growth, Penrose (1959) developed a theory that proposes that businesses are dynamic and undergo a "process of development" (p. 1). This Penrosian conception of a company also addresses change and innovation in the organization, or even in the business model itself (Demil & Lecocq, 2010). Penrose's work is rooted in neoclassical economics, but her work has also inspired researchers in other disciplines (Pitelis, 2009, p. x). Specifically, this theory motivated the creators of the Uppsala internationalization process model, which proposes that firms are dynamic (Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne 1977; Rask, 2014). Although growth is not an explicit part of the Uppsala model, the model implies an "incremental nature" of internationalization (Johanson & Vahlne, 1977; Johanson & Vahlne, 1990, p. 17). For these reasons, internationalization can be a form of organizational growth (e.g., Vahlne & Nordstrom, 1993; Brock & Jaffe, 2008). However, alternatively, Ansoff (1965) considered market development to be one of four main growth strategies, according to his product-market matrix, and internationalization constitutes a typical case of a firm entering new markets with existing products. Therefore, the strategic decision to internationalize offers firms a significant opportunity for growth (Buckley & Casson, 1976; Lu & Beamish, 2001; Kylaheiko et al., 2011; Onetti et al., 2012).

In order to better understand firm growth, various authors have developed process models. Authors of early growth process models assumed that organizations undergo several pre-defined stages. In contrast, newer approaches acknowledge that firm development is not a linear process, and it is unlikely that

firms will cycle through predictable phases (Sternad & Mödritscher, 2022). This means that individual companies have differing development patterns. In order to integrate this claim into a theoretical framework, we can fall back on principles derived from complexity science. We regard firms as complex systems that interact with and adapt to their environment (Levie & Lichtenstein, 2010). Therefore, an “interplay of various internal and external forces” (Sternad & Mödritscher, 2022, p. 952) determines a firm’s options for its development. In this tradition, our paper adheres to the dynamic states approach of entrepreneurship in order to describe and understand the nonlinear process of firm growth (Levie & Lichtenstein, 2010). The dynamic states approach proposes that firms are in a dynamic state for as long as their business model fits the market potential (Levie & Lichtenstein, 2010). Growth occurs when firms shift from one dynamic state to another as a means of resonating better with the environmental conditions (Sternad & Mödritscher, 2022).

The dynamic states approach seems suitable for the study of BMI, as it fits with previous theories regarding the flexibility and dynamism of BMI and uses assumptions from the Penrosian growth theory as a foundation (Demil & Lecocq, 2010). Sternad and Mödritscher (2020) contribute to the dynamic states approach by addressing the question of what happens in the period between two dynamic states. The authors speak of “entrepreneurial leaps” and detect various growth patterns by positioning BMI as core activity in the growth process. These leaps emerge due to an internal and/or external trigger. A trigger helps the enterprise to recognize a certain market potential, which subsequently motivates the firm to exploit the market potential. Therefore, the firm performs “entrepreneurial actions” to better fit the market potential in an efficient and effective way. The actions of reconfiguring the business model mark the shift between two dynamic states.

Aside from these theories, Gassmann et al. (2016) also explain that a contingency-based approach could help to explain why firms adapt their business model to the external environment. The environment is an external factor that affects one of the core components of the business model, which can improve the performance of companies (Tidd, 2001; Gassmann et al., 2016). The authors further explain that the external environment and an organization’s business model are subjects of a “co-evolution” and in a “permanent state of disequilibrium” (p. 12). This co-evolution of product-market fit and BMI is under-researched (Gassmann et al., 2016, p. 12), and the dynamic states approach provides an appropriate theoretical lens through which this phenomenon can be examined and explained.

Firms can grow and enter a new dynamic state through either incremental adaptations or radical changes. Similarly to Foss and Saebi (2017), we regard incremental adaptations as “modular” (p. 216). This means that incremental forms of BMI are related to continuous improvement (Taran et al., 2015) and to a specific change in *one* component only. Radical changes, on the contrary, are large-scale architectural changes, and imply a redefinition of the ways in which components are combined. Similarly to Demil and Lecocq (2010), we define radical changes in a business model to be when the change in one component entails further changes within others. Radical changes comprise disruptive innovations of the

business model (Taran et al., 2015). For the purpose of our study, the multi-dimensionality of this aspect will be considered, through adherence to the work of Clauss (2017), who identified ten components (i.e. new capabilities) that form three dimensions involved in BMI – namely, value creation innovation, value proposition innovation, and value capture innovation.

When located within the context of internationalization, the principles of incremental adaptations and radical changes could manifest in several ways. Firms may identify potential in a new international market and innovate their business model to better suit the requirements of the foreign market environment, which serves as an example of incremental adaptation. An instance of radical change could be a particular trigger leading to the development of an innovative business model that offers a new growth opportunity. Innovation of a business model can lead to internationalization or offer the possibility to exploit new market potential. As the concept of BMI helps us to better understand and describe entrepreneurial leaps (Sternad & Mödritscher, 2022), this framework can be used to explain how firms grow and internationalize through BMI.

Based on the aforementioned, we can conclude that: 1) internationalization is a form of firm growth, and 2) BMI is a core contributory process to firm growth. Therefore, BMI also serves as a critical business activity during internationalization. However, the BMI process, in the context of internationalization, remains obscure, especially in regards to what exact changes are experienced and whether internationalization is either an outcome or a trigger of BMI. This paper uses the dynamic states approach as a theoretical basis and as an analytical tool for the empirical data incorporated, to better understand the relationship between internationalization and BMI. In doing so, we will be able to ascertain whether internationalization acts either as an antecedent or consequence of BMI in the growth process. Moreover, close analysis of the dynamics within BMI activity can also be achieved.

#### ***4.2.2. The interrelationship between business model innovation and internationalization***

Only a limited amount of studies illustrates the ways in which BMI is connected to the internationalization process (Child et al., 2017; Cavallo et al., 2019). Research states that the relationship between internationalization and innovation is “positive and reciprocal” (Cao et al., 2018, p. 553). This means that internationalization can lead to innovation, as well as innovation can lead to internationalization. As BMI is one type of innovation, it is safe to conclude that the relationship between internationalization and BMI is double-sided and reciprocal. Furthermore, in the literature, internationalization is revealed to be both an antecedent and a consequence of BMI. As an antecedent, firms respond to “changes in the business environment” (Bashir et al., 2020, p. 458) by innovating their business model. As a consequence or an outcome of BMI, innovative business models follow and develop alongside growth and can subsequently lead to international expansion. In the following sections, we will review the literature that positions internationalization as either an outcome or antecedent of BMI.

*Internationalization as an antecedent for business model innovation*

One of the research directions of BMI literature is to identify its different antecedents (Spieth et al., 2014). From this research perspective, internationalization may act as a trigger for BMI. BMI may exist as a consequence of a firm's international exposure, as the "circumstances of the environment" may force a company to reconsider its business model (Nunes & Steinbruch, 2019, p. 208). Kafouros et al. (2008) found that a firm's degree of internationalization moderates the effect of innovation on firm performance. If innovation affects the overall success of a firm, this also applies to its international success. As most industries are characterized by "intense global competition" (Taran et al., 2015), success on an international level can be regarded as a type and measure of firm performance. "Forces of globalization and global economics" (Guercini & Milanesi, 2017, p. 403) simultaneously drive companies to change their business model (Lee et al., 2012), being a possible source of BMI (Schneider & Spieth, 2013).

When internationalizing, firms are exposed to a form of turbulent and dynamic environmental change, which includes "changes in the business environment" (Bashir et al., 2020, p. 458). With this in mind, BMI is a response to changing sources of value creation in volatile environments (Chesbrough, 2007; Pohle & Chapman, 2006). This is especially the case in circumstances in which the environment forces the firm to rethink their way of doing business in order to fit the specific context of international markets. This includes particular adaptations to fit the economic, political, legal and cultural environment (Albaum et al., 2005; Rask, 2014; Landau et al., 2016; Child et al., 2017).

When firms internationalize, they also gain better access to new resources and capabilities, which aids BMI. According to Hitt et al. (1997), companies undergoing internationalization enhance their knowledge base because they are "exposed to new and diverse ideas from multiple markets and cultural perspectives" (p. 770). Firms with a higher degree of internationalization can benefit from network mechanisms that offer them a continuous flow of information about changing customer needs, which consequently increases the quality of new products (Kafouros et al., 2006). Internationalization can improve the ability to innovate by allowing firms to hire better technologists and access skills and expertise (Cheng & Bolon, 1993). In their study, Geldres-Weiss et al. (2016) found that firms gain new knowledge about market needs and consumer preference through exporting, which, again, influences firm performance. The authors argue that the "introduction of new products is an illustration of such performance" (p. 5080). Subsequently, this means that knowledge gained through exporting forms the basis for market innovation.

Similarly, internationalization places firms into a "competitive environment" that requires certain advantages to appeal to customers (Foss & Saebi, 2017, p. 217). One possible source of competitive advantage is the ability to implement BMI (Hamel & Valikangas, 2004). Small firms generate a competitive advantage through a reciprocal link between innovation, internationalization, and organizational learning, as Freixanet et al. (2020) have demonstrated through their complex model.

*Internationalization as an outcome of business model innovation*

Some research investigates the effect BMI has on certain outcomes (Foss & Saebi, 2017). BMI leads to improved organizational performance, which is why it seems to be an important predictor of a firm's competitiveness (Siggelkow, 2002; Zott & Amit, 2007; Kranich & Wald, 2018). Cucculelli and Bettinelli (2015) observed that firms who changed their business models innovatively over time demonstrate a positive effect on venture performance. If internationalization is positively correlated to the performance of a company (i.e. Schwens et al., 2018), we can apply this association to internationalization, positioning it as a proxy of firm performance. Similarly to the above, this subsequently means that BMI also fosters internationalization. However, Azari et al. (2017), in their empirical study, found that an increased focus on BMI affects export performance in a negative way.

Several authors also investigate internationalization that results from BMI. For example, in his study about born-global firms (companies that enter foreign markets soon after or near the time of their founding, Knight & Cavusgil, 2004), Hennart (2014) found that innovative business models foster international expansion. Cavallo et al. (2019) argue that BMI fosters "internationalization to scale" (p. 20). Furthermore, organizational innovation drives export performance through obtaining technological innovation, and digitalization provides opportunities for firms to enter new markets (Azar & Ciabuschi, 2017). Schmitt and Baldegger (2020) outline that digital infrastructure is more often required if firms want to succeed in foreign markets. Indeed, digitalization increases the rate of internationalization in born-global firms (i.e., Neubert, 2018) and fosters internationalization (Bergamaschi et al., 2020). In conclusion, as digitalization plays an important role in BMI (Rachinger et al., 2018; Zhang et al., 2021), innovative digital business models might stimulate international business endeavors.

One reasonable explanation behind why BMI results in internationalization is that, once a firm has innovated its business model, this could indicate that the firm is able to operate in volatile environments (Schneider & Spieth, 2013). Remaining flexible in terms of strategy is important for firms (Schneider & Spieth, 2013). Once a firm has innovated its business model, it is also likely to undergo other innovative decision processes, including internationalization. Another explanation as to why BMI might lead to internationalization is the necessity to reduce the costs associated with innovation and research and development (R&D), which often occur before any sales are made. It has been suggested that firms must grow through internationalization in order to remain in the market and to "cover their initial sunk expenses" (Kyläheiko et al., 2011, p. 511).

To conclude, the purpose of BMI may be to generate an outcome effect of driving company performance and firm growth. As internationalization is also a type of firm growth, this means that BMI can lead to international success. Internationalization marks a form of turbulent and competitive environment for a firm. As an organization must fit their new environment, changing their business models becomes a necessity. Internationalization also positions the firm to gain improved access to resources, which offers



better learning opportunities that can also influence BMI. The literature presents arguments encompassing the dual aspects of the relationship between BMI and internationalization, but it is still unclear as to whether firms are changing in response to BMI as either an outcome or antecedent of internationalization.

### **4.3. Methodology**

As our paper is exploratory in nature, we implemented a qualitative study design involving the analysis of multiple case studies, to gain insights into the processes involved in BMI and to better understand the cause-and-effect relationship between internationalization and BMI. In order to understand how firms are successfully innovating their business model during internationalization, it is necessary to investigate BMI best practice in an international context (Cao et al., 2018). By doing this, we are better able to capture the dynamics and consider the temporal development of internationalized BMI (Bergamaschi et al., 2020).

The case study selection process, along with the analysis procedure, will now be described.

#### **4.3.1. Sample selection**

Three criteria were developed for sample selection. First, focus was placed on organizations with innovative business models that contrast to those typically seen in various industries. As our research goal was to address best practice examples, it was assumed, for the purpose of the study, that firms with an innovative business model in a mature industry are able to generate value from exploiting new market potential (Sternad & Mödritscher, 2022) and are, therefore, more likely to be successful than other, more traditional organizations. By investigating established firms in mature industries that have developed an innovative business model, our study fills the gap in the literature created by research efforts that disregard these organizations (Saebi et al., 2017; Bashir et al., 2020).

Second, to be selected, businesses should be active in international markets. Third, they should have successfully innovated their business model. As an example, industry awards and/or economic success were taken as an indicator of fulfilment for this criterion. In addition, we relied on external expertise during the selection process, as the relevant data to evaluate a business' success was not always available.

In order to represent a variety of industries during case study selection, we contacted 123 experts on business model development in 18 European markets. Some 31 experts suggested companies which, in their view, met the study's three pre-defined criteria. Some 185 different companies were recommended. We eliminated certain companies in instances where it was found that the existing literature sufficiently illustrates their business models. Two researchers then independently assessed the remaining companies that met the inclusion criteria. As a result, 33 companies were selected for the next step in the selection process.

Contact was then made with either the managing directors or management board of these companies. We requested interviews with three persons who had been engaged in the development or international marketing of the firm's business model. Some 11 businesses did not respond, and six companies refused to participate in the study. Seven companies were excluded following the first round of interviews, due to either these firms refusing to provide further interview partners or offering limited information. A final total of nine companies participated in the study; all of these were B2B operations, with one company offering both B2B and B2C services. Table 4 displays the final participating businesses and the data provided. Generic business names help to ensure the anonymity of the participating interview partners. It was revealed that one organization (E1) possessed two types of innovative business models, which were marked as "I" and "II" where needed.

Firm	Industry	Location	Manager-owned	Spin-off	Internationalization strategy	Internationalization scope
C1	Construction	Austria	yes	yes	Licensing	Europe, Asia
C2	Plant construction	Austria	no	yes	Direct export (PaaS)	Europe, Asia
C3	Hardware & software	Italy	yes	no	Acquisitions	Europe, North-America, Asia
C4	Plant construction	Italy	no	no	Acquisitions	Europe, America, Asia
E1	Engineering	Germany	yes	yes	Direct export (SaaS)	Europe
E2	Engineering	Austria	yes	no	Direct and indirect export	Europe, Afrika, America, Asia
H1	Digital health care	Sweden	yes	no	Subsidiaries (commercial)	Europe
F1	Furniture	Switzerland	yes	no	Direct export (SaaS)	Europe, Latin-America, Asia
F2	Electronica	Austria	no	no	Subsidiaries (commercial)	Europe

Table 4: Company cases and sample description

### 3.1.1. Data collection method

Figure 11 displays the data collection method. In each firm, three people were interviewed using a guideline. Interviews with multiple stakeholders were conducted to ensure the validity of the data (Hannah & Eisenhardt, 2018; Yin, 2009). Table 4 also provides an overview of the selected sample. The interview guideline included questions concerning adaptations made by the business during the course of internationalization and questions referring to the specific steps taken to develop the business model. Additional questions aided better understanding of the business model and the context of the case study. Interviews were conducted between May and November 2020. Due to the COVID-19 pandemic, interviews were conducted remotely with the help of digital software. The total duration of all interviews was 25 hours and 59 minutes. Additionally, 3.597 pages of supplementary material (website data and PDFs) were collected via a search of the internet using pre-defined keywords. We also collected and revised additional video material of a total duration of 3 hours and 26 minutes. This secondary data contributed to a better understanding of the development of the business model for international markets.

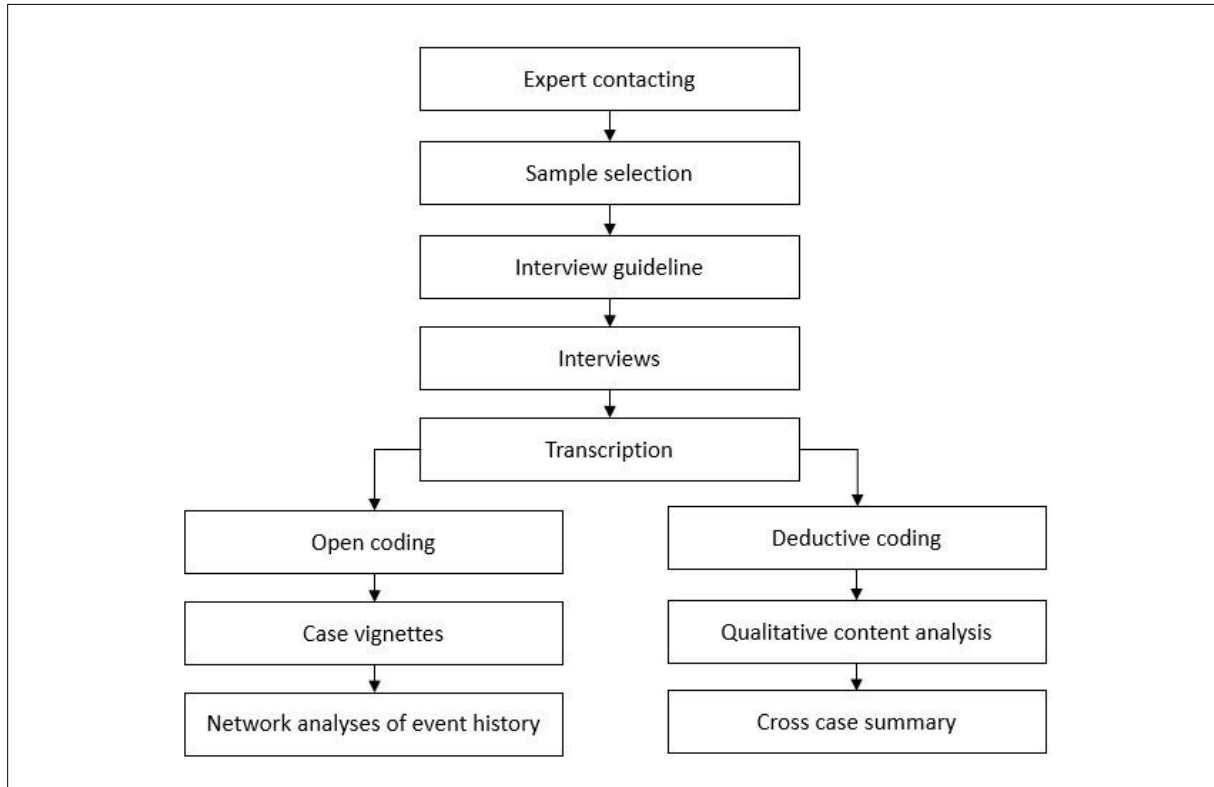


Figure 11: Data collection and analysis procedure

Firm	Date	Job position	Since	Duration	Transcription	Language	Additional material	Additional videos
C1	08/09/2020	Director of Global Licensing	2016	01:32:01	16	German		
	10/09/2020	CEO/CTO	2010	01:11:09	12	German	253	01:07:58
	01/10/2020	Market Coordinator	2016	00:47:21	10	German		
C2	13/11/2020	CEO	2020	01:02:01	11	German		
	26/11/2020	Customer relations	2018	01:05:08	9	German	16	-
	24/11/2020	CEO of partnering firm	N.A.	01:25:05	10	German		
C3	19/05/2020	Chairman of Directors' Board	1992	01:34:47	15	English		
	26/05/2020	Chief Strategy Officer	2010	01:23:52	16	German	500	01:17:51
	28/05/2020	Chief Financial Officer	2008	00:47:59	8	English		
C4	22/09/2020	Chief Operating Officer	2016	01:18:00	10	Italian		
	08/10/2020	Technical Coordinator	2016	01:05:00	9	Italian	368	-
	08/10/2020	Executive Vice President Sales	2014					
E1	04/11/2020	Head of Sales	2018	01:04:51	12	German	175	
	05/11/2020	CEO/Founder	2018	01:02:44	9	German		00:04:19
	10/11/2020	Technical Support	2020	00:54:07	8	German		
E2	15/07/2020	Chief Technology Officer	2019	01:06:29	12	German		
	29/07/2020	Chief Sales Officer	2019	00:44:36	8	German	188	00:02:11
	27/08/2020	Event & PR	2015	00:27:52	8	German		
H1	26/08/2020	CEO/Founder	2014	01:01:31	8	English		
	02/10/2020	Vice President of Business Development	2018	00:30:52	5	English	142	00:01:23
	23/10/2020	Vice President Operations	2020	00:24:38	4	English		
F1	12/05/2020	CEO	2006	01:04:37	12	English		
	25/05/2020	Sales Assistant	2018	01:09:30	14	German	308	00:15:09
	10/06/2020	Sales Deputy	2016	00:21:39	5	German		
F2	09/07/2020	Vice President Sales & Business Development	2017	01:01:42	11	German		
	28/07/2020	Senior Manager Business Development	2020	00:48:29	9	German	1.647	00:37:58
	16/07/2020	Vice President Services & Solutions	2018	01:03:01	13	German		
<b>total</b>				<b>25:59:01</b>	<b>264</b>		<b>3.597</b>	<b>03:26:49</b>

Table 5: Overview interview and data material collection

### **3.1.2. Data analysis procedure**

Interviews were coded using MAXQDA, applying two different approaches. First, interviews were conducted to identify which adaptations the companies made within the business model to fit the foreign market. After the coding of all interviews, all relevant text passages that referred to any kind of internationalization-related adaptation were listed. Systematic content analyses (Mayring, 2000) of these coded text passages were conducted, and the content was summarized in the form of a cross-case analysis.

Second, an open coding approach was used in order to understand the individual growth pathways of the companies and their business models. We thereby traced the key activities made by the company to develop the innovative business model. Systematic summaries and descriptions of all case studies (case vignettes) were then made. In order to ensure objectivity, the coding of text passages and composition of case vignettes was performed by one researcher, which was then reviewed by the second researcher. Adjustments were made in instances of disagreement.

We identified incremental and radical business model changes as our units of further analysis. Incremental adaptations refer to a specific change in only one component of the business model. Firms undertook incremental adjustments of the business model components continuously. Instances of incremental adaptations were mainly collected from the content analysis and cross-case analysis; the data were then transferred into a table, which summarized exactly what changed. Incremental adaptations were much easier to identify and describe than radical changes. For the abstraction and classification of incremental adaptations, our study references the wording established by Clauss (2017), which could be, for example, “adapting technologies” or “communication with customers”. We also described the triggers and outcomes of the BMI process and were then able to abstract them. This helped to categorize internationalization as either a trigger or outcome of BMI.

In contrast to incremental adaptations, radical changes have consequences for several components or dimensions of the business model. A radical change triggers a chain of transformation in all dimensions of the business model through initiating adaptation of either its value proposition or value creation aspects. Radical changes mark architectural transformations that had a major impact on the business model itself. Radical change creates change in all business model components (value creation, value proposition and value capture), which is referred to as a ‘chain of adjustments’. These changes bring about “further changes within that component or in others” (Demil & Lecocq, 2010, p. 235).

As information on each case study was collected in a case vignette, understanding of the interrelationships and evolution of each company’s individual business model was more easily achieved. Following the description of each development phase of business model internationalization, we created visual representations of the BMI process using network displays. This visualization contributed to a better understanding of the history of single events identified in the process (Miles et al., 2014), using the process model of entrepreneurial leaps (Sternad & Mödritscher, 2022). In this way, we were able to

systematically identify radical changes. Again, the three dimensions of BMI suggested by Clauss (2017) (value creation innovation, value proposition innovation, and value capture innovation) were used, so that abstraction of the patterns involved in radical change could be executed. With the aid of the visualization, the summarization of the growth pathways, the triggers of change and achieved outcomes was facilitated. From this, it became possible to conclude if the internationalization-related activity was an antecedent or the consequence. Figure 12 gives an example of this particular stage of analysis.

Descriptions of the radical change were then abstracted - “growing through developing market know-how” or “growing through new value proposition”, for example. In doing so, the descriptions were made more accessible and understandable. Again, the triggers and outcomes of the process were described, providing an insight into whether the process was either triggered by internationalization or lead to internationalization. In order to better determine when internationalization acts as either an antecedent or a consequence, various processes were classified as either “internationalization as trigger” or “internationalization as outcome” and were categorized into one of the three dimensions of BMI. Categorization of these processes into one of the three dimensions of BMI was determined according to which seemed to be the primary dimension addressed during the process. Finally, two matrices, with six fields each, were created. It was then possible to assign each abstracted incremental and radical change to their relevant fields, as can be seen in Table 6. For the radical changes, four patterns into which these commonly fell, and we had identified, were also laid out. For the presentation of the final results (Table 7), the fields to which these radical change patterns belonged (process, organization, marketing, and product) are described. The incremental adaptations are also organized according to these categorizations.

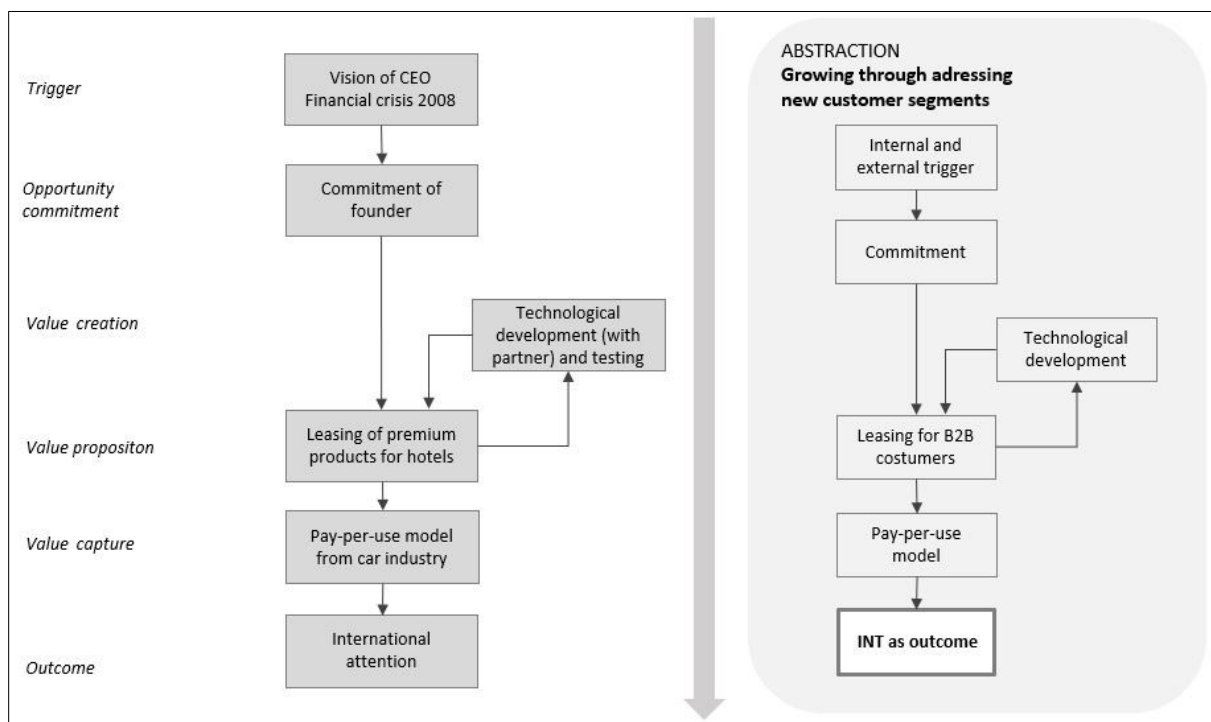


Figure 12: Example of network analysis method

## **3.2. Results**

In the following sections, we report on findings relating to the role of internationalization and on the BMI processes.

### ***3.2.1. General findings and the role of internationalization in BMI***

The firms in the sample generally underwent two types of international BMI (incremental adaptations and radical changes). This typology is used to structure the data analysis and also serves as one criterion for presenting the results. Some 31 incremental adaptations were examined. In contrast to radical changes, incremental adaptations stimulate only one element of the business model. Each company was revealed to demonstrate between two to eight incremental changes.

Radical changes in the business model, on the contrary, have a lasting effect, progressively changing its architecture. Each company underwent between one to three radical changes. Some 18 radical changes in total were observed. Table 6 summarizes the radical changes and incremental adaptations that occurred in the participating businesses.

In terms of the role of internationalization, internationalization triggered the BMI in all instances of incremental adaptation. Incremental changes do not contribute to internationalization. In contrast, five radical changes were triggered by internationalization, and there were 13 examples of radical changes in which the BMI stimulated international business activities.

For the following description of how firms change their business model, the identified radical changes and incremental adaptations are outlined separately.

#### ***3.1.1. The process of BMI in an international context***

The question of how firms change their business model in an international context is addressed with the help of Table 6. We used the criterion “internationalization as a trigger” and “internationalization as an outcome” as a key differentiator for analyzing and categorizing the radical changes and incremental adaptations identified. In this paper, radical changes will first be examined, followed by incremental changes.

Table 6 is organized into whether internationalization triggers or is a result of BMI and the dimensions of BMI (value creation innovation, value proposition innovation, and value capture innovation). It also shows the concrete differences between incremental and radical changes, and subsequently also shows the patterns of radical changes and what changes in the business model.

Role	BMI Dimension	Radical changes	Incremental adaptations
Outcome	Value creation	PATTERN A: IMPROVEMENT OF INTERNAL PROCESSES - exploiting new technologies E1(1), E2 (1b)	
	Value proposition	PATTERN B: MARKET POSITION - servitization - offering added value for existing customers - gaining market know-how C3 (1), C4 (2), E1(3), F2 (1), F1 (1), H1 (1), C4 (1), E1 (2), H1 (2), C2 (1), E2 (1a)	
	Value capture		
Trigger	Value creation	PATTERN C: RESTRUCTURATION - reorganizing C1 (3), F2 (2)	Adapting technologies Adapting structures (i.e. contracts) Establishing partnerships C2, E2(II), E2(II), F1 C1, C1, E1, F1, F2, F2 E3, H1, F2
	Value proposition	PATTERN D: NEW GOODS AND SERVICES - new value proposition C1 (1), C1 (2), F1 (2)	Additional offering Adapted offering Adapting communication with customers Change in market coverage to scale business model C1, E2(I), F2 C1, C1, C4, E2(I), H1, F2 C2, C2, C4, E2(II) C1
	Value capture		Adapting price conditions C1, C1, C2, E2(I)

Table 6: Overview results on the role of internationalization



*Patterns of radical changes*

We assessed the narrative histories to analyze and describe the patterns of radical change. For the following description, each radical change was categorized based on an assigned generic firm name (i.e. “E1”) and a number allocated to the radical change in parenthesis (i.e. “#2”). Figure 13 gives an overview of the patterns that were identified: two patterns which related to whether BMI was triggered by or resulted in internationalization, and two patterns in which the transformation process was initiated in the business model dimension of either value creation or value proposition.

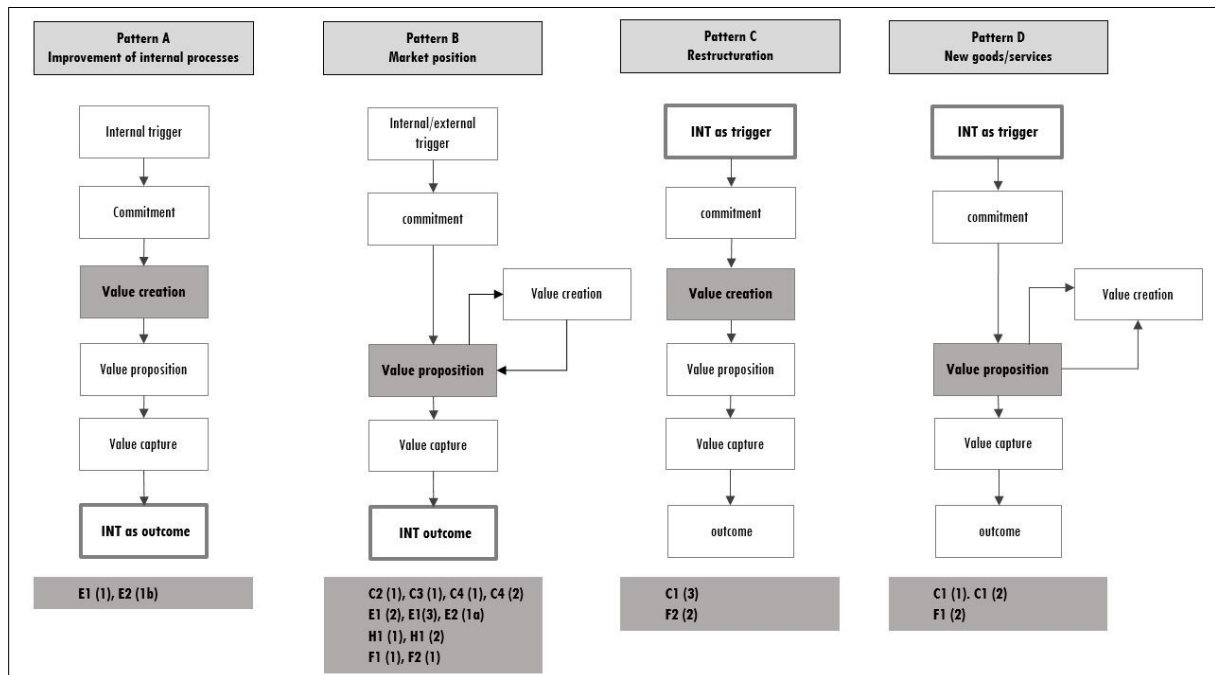


Figure 13: Patterns of radical changes

Interestingly, no instances in which change started in the value capture mechanism were observed. Indeed, a change in the value capture mechanism seemed to mark the conclusion of the BMI process. Some firms implemented the concept of recurring revenues in their business model; however, these businesses had to first consider the value proposition of the recurring revenue model to the customer. We conclude that creating a means of generating recurring revenues is not sufficient; it is primarily necessary to clarify what the exact advantage or solution for the customer is before implementation.

In Patterns A and B, internationalization is an outcome of BMI. Pattern A deals with what we termed the “improvement of internal processes”, which was found in two cases out of 18. In the case of E1 (#1), the founders demonstrated a deep fascination in digitalization, contemplating ways in which new technologies could be used to benefit their company. Consequently, the founders identified suitable processes for the project in question. After identifying an analog process that seemed appropriate, they commissioned a software developer to create an app that could help them digitalize the process. During a test phase, the employees tried the app, and the solution provided appealed to customers. These cus-

tomers subsequently requested an app they could use independently. As these B2B customers were internationally active, it was soon revealed that the app had to fulfill certain requirements to function in international markets. We observed another example of this pattern in E2-II (#1), in which the firm wanted to employ digitalization to gain more a comprehensive insight into the machines they were producing. Incidentally, this initial internal usage also resulted in possibilities for customers.

In Pattern B, the focus was on what we termed the “market position”, which relates to the proposition of new value. Some firms were growing through a) offering additional value for existing customers, b) servitization, or c) gaining market know-how. Some 11 observations that fell into this category were made, which makes this the most predominant pattern among the radical changes identified. C2 developed a platform for existing B2B customers to enable them to rent out certain capacities of the machinery used for product production, which allowed the company to generate revenue even during periods of lessened product demand. With the help of a research network and strategic partnerships, the technological infrastructure of this platform was developed. The main benefit for the company was to offer additional value for existing customers, which simultaneously provided the possibility to strengthen their market position globally. The firm could additionally address new customer segments. Further examples of additional value for existing customers are found in E1 (#2) and C4 (#1). Growing through servitization was also a way for some firms to foster a presence in international markets. For example, F2 (#1) developed a servitization-based model to respond to customer demand and to increase their presence on the market. C3 (#1), E2 (#1), F1 (#1), C4 (#1), C4 (#2), and E1 (#3) are further examples of firms that could grow through servitization and strengthen their market position. H1 (#1) is an example of growing through appealing to and accessing new customer segments. The management team of this company was aware of the fact that, if they entered international markets with their current business model, it would be necessary to address different customers and to identify who was paying for their services. In order to identify their customers in current and international environments, this organization had to develop profound know-how in both target markets. Based on their research, they were able to identify and address the right customers and, additionally, adapt the value capture mechanism for different markets. This was also the case for H1 (#2).

We also identified two patterns in which internationalization existed as a trigger, rather than an outcome, of BMI. This was categorized as Pattern C, which refers to a type of change where the concept of “re-organization” is central. Two firms grew internationally due to a restructuring process that had a major effect on the business model. One example is the case of C1 (#3). Their increasing growth within international markets led to internal restrictions within the firm, as they did not have sufficient resources to cope with all the requests received from both new and existing customers. In response, they built a platform to manage communication with global customers, which was then transformed into a crowdsourcing resource, in which all participants could share their knowledge. In summary, this offered new possibilities for generating revenue and, thus, a new BM. F2 (#2) initiated a change process of

decentralization. The head company had first handled the sales function, which was then transferred to the respective subsidiaries in different countries following internationalization. Clear processes were necessary for this change. Until this point, the company had worked closely with and sold to electricians. Due to expansion, the central sales office could not manage the demand from international markets on their own. The electricians who had been selling their products thus far were no longer their customers; in the response, the company began to address new customer segments in the retail sector.

Finally, Pattern D also featured internationalization acting as a trigger for BMI. This pattern is about offering “new goods and services”, which involves the possibility of growing through a new value proposition (i.e. through offering an intangible good, such as know-how). We found three examples of such growth patterns in the data. The case of F1 (#2) demonstrates how internationalization can trigger such a development. This Swiss firm gained international traction with their leasing and pay-per-use business model. Even overseas markets, such as Mexico, displayed interest in their concept. Although the firm faced limited resources, they committed to enter the market with the help of a partner. Specifically, they decide to sell the know-how captured in their business model by offering a license agreement to the interested partner in Mexico. This marks a shift in their business model, offering new possibilities for the firm. Further examples can be found in the cases of C1 (#1) and C1 (#2).

#### *Types of incremental changes*

We found several kinds of incremental adaptations. Notably, internationalization seemed only to trigger incremental adaptations; no cases of an incremental adaptation leading to internationalization were found. Additionally, incremental adaptations do not demonstrate any impact on any radical changes that may occur; this is mainly because incremental adaptations do not have an effect on other components of the business model.

All companies adapted aspects of value creation. Adaptations that were allocated to the notion of value creation involved adapting structures (six observations), technological adaptations (four observations), and establishing partnerships (three observations).

Adaptation of structures specifically relates to firms needing to edit contracts, both in terms of content (C1, F2, E1, C2) and length (E1):

*“Another law firm which we work with closely has completely revised this contract. It is now much leaner than before. It used to have 60 pages; now it has 20 pages, with the cover sheet. We’ve taken certain elements out of the contract and put them into appendices. That means you have this main contract—it’s called ‘exhibits’—you have an ‘exhibit A’, which is a brand guide, for example. That’s a ‘manual’ template about marketing-related documents about what our logo looks like [...].” [Vice President, Sales and Business Development, F2]*

C2, E2 and E1 experienced technical challenges, particularly highlighting that they made technical adaptations due to their internationalization endeavors. Similarly, F1 adapted individual components of the

sensors that were integrated in their core products in some countries, in order to demonstrate compliance with different technical standards.

It also became necessary to replicate multilingualism within some organizations' digital services or enable intercommunication between systems, regardless of the disparity between incorporated languages:

*“The big challenges in internationalization is to find the international language. How do you create systems that communicate with each other on a single track, even though we have a variety of languages? We solve this simply through technology and ‘pull down’ menus.” [Research partner, C2]*

For some companies, internationalization lead to changes in how they worked with partners. For example, F2 and C3 had to establish partnerships abroad so that they could continue to focus on their own core business. For these companies, partnerships introduce the challenge of finding a financing partner that can both manage leasing and are active in international markets. In-sourcing and out-sourcing in an international context also affected H1. Depending on the market conditions, contractors or employees provide the services. E2 also attempted to apply the business model to distributors, as on-site availability was often necessary, which was frequently easier to achieve via partners:

*“For us, the service area was, of course, a new topic [...] We didn't have that in the past. Did we have to change anything? What we tried to do at the beginning was to approach these projects only through our customers. Sometimes that just didn't work out, because the customer wanted a different electrician. That was when we started partnerships with supra-regional electricians, for example, in the Benelux countries or in Germany. Then we said: ‘Okay, we are doing this in your country often. Would you like to join a partnership with us?’. That made it easier for us and for the customers in terms of availability. So, we had to change that: working with partners.” [Vice President, Sales and Business Development, F2]*

Another point entails adaptations of the value proposition. This involved communication with customers (six observations), adjusted (six observations) or additional offerings (three observations), and a change in the market coverage to scale the business model (one firm). Businesses adapted their customer approach, not only in terms of content, but also in terms of intensity and mode. For C2, E2, E1 and H1, the differences in the respective countries have consequences for communication and explanatory work (i.e., information and explanation provided to convey the benefit to the customer). As these are digital business models and different customers require varying information, depending on the level of digital maturity in the markets, in order to be convinced of the solution. Because of cultural differences, the degree of the customer relationship for C1 differs in the various markets. As some customers demanded more communication, the business needed to adapt to the intensity of the cooperation. C3 also observed major differences in the customer relationship, alongside the processing of orders and purchasing, depending on the culture. Likewise, some companies stated that they had to adapt the communication to

the customer and/or provide different information regarding the explanatory work (E2, C2). This means that adjustments are necessary due to cultural differences and the openness of the respective markets. For example, C2 commented that people in the USA tended to be less open to technology than those in India, for example, which affected communication. This also relates to the communication of the value proposition (C3).

*“There are markets that need more support. Markets that prefer to run as independently as possible. Some need to be taken proactively by the hand. And some ask you a lot of questions.”*  
[Country Coordinator, Architecture and Services, C1]

The most frequently observed incremental changes in our data were additional or adjusted offerings. Most of the changes in the value proposition relate to supplementary offerings or minor changes between services, and not necessarily to the core value proposition. For example, at C1, customers have asked for certain additional services that give the partner more security, such as marketing. Country-specific requirements due to legal differences also trigger changes. For H1, a ‘customization’ of the business model was necessary because of the different infrastructure in the target markets, which is why they offer varying services in different countries, depending on requirements. Similarly to H1, legal conditions in some countries do not allow the same offering as in the home country. F2 also offers additional services, such as applying for subsidies that the customer can make use of. C4 adapts its consulting services to customer requirements, just as E2 sells different machines in some countries because of geographical characteristics or rents an additional operator for the machine to ensure a correct usage of the machines. Customer demand for additional services varies according to the legal situation, so services differ between markets. To mitigate these differences, F2 had to set up a 24/7 call center to ensure a globally functional service:

*“We also learned that we have to position ourselves in the marketing field in such a way that we can support business development in the respective country with our marketing services. Initially, we said: ‘Working on your market, doing acquisition, doing marketing—that is your job.’ We realized that we could not leave the partners alone in these topics.”* [CEO/CTO, C1]

Regarding the value capture mechanism, some companies mentioned having made adaptations in terms of their revenue, especially pricing (4).. Based on the gross domestic product (GDP) or other criteria, market potential is evaluated based and firms may adapt their license fees accordingly. In the course of internationalization, C1 recognized that the market coverage of an exclusive license for a country had to be changed in order to make the business model scalable. Regarding value capture, the license model of C1 had to be adjusted in terms of royalties. E1 had to consider different labor costs in the markets. E2 adjusted their prices for different markets. H1 also had different models for their profit formula because of the different payer structure in each country’s markets. The company has noted that countries in close geographical proximity do not necessarily display similar requirements:

*"If you take Iceland, for example, with 250,000 inhabitants, and now you take the Netherlands. Then it would be unfair if you charged the same royalty in Iceland as in the Netherlands." [Director of Global Licensing, C1]*

Interestingly, we did not observe that firms adapted any element of their capabilities, their market channels or their cost structure due to internationalization.

### 3.2. Discussion and conclusion

Although we can find reasonable explanations in existing research for the interrelationship between BMI and internationalization, we note that it is still not clear what exactly changes in the business model in an international context and in which cases internationalization is an antecedent or an outcome of BMI. Our research aims to shed light on the question of which forms of BMI are caused by or lead to internationalization. In order to describe what exactly changes in the business model related to internationalization, it was necessary to first examine instances when internationalization is a trigger and when it is a result of BMI. We assembled multiple case studies, comprising nine firms, and applied the dynamic states approach. We distinguish between incremental adaptations and radical changes in BMI, which also helped us to structure our analysis and results. Incremental adaptations refer to the adaptation of only one component in the business model, while radical changes comprise changes in multiple dimensions. In total, we identified four patterns of radical changes and eight types of incremental adaptations. The four different patterns of radical changes are: ‘improvement of internal processes’ (A), ‘market position’ (B), ‘restructuring’ (C), and ‘new goods and services’ (D). The eight types of incremental adaptations comprise: adapting technologies, adapting structures, establishing partnerships, adapting communication with customers, changing market coverage, adapting price conditions, additional offerings, and adapted offerings. In order to compare radical changes and incremental adaptations, we match the four patterns of radical changes and eight types of incremental adaptations to the four types of innovation processes (Tidd et al., 2005).

Pattern A comprises radical changes that refer to the “improvement of internal processes”. Tidd et al. (2005) regard process innovation as changes in the creation and delivery of better products or services. In the context of this paper, process-related BMI focuses on growth by using new technologies to improve value creation.

Pattern B deals with the ‘market position’, which is why we regard it as marketing-related BMI. This included measures to broaden the market position by offering a servitization-oriented business model, supplying additional value for existing customers, or gaining market know-how. Tidd et al. (2005) do not speak of marketing innovation but, instead, of “position innovation” (p. 10), which refers to a switch of the context in which goods or services are introduced to the market and the re-positioning of an existing product to a new context.

BMI related to	Radical changes	Incremental adaptations
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<b>Process</b>	INT as outcome PATTERN A: Improvement of internal processes - Growing through exploiting new technologies (2)	INT as trigger - Adapting technologies (4) - Adapting structures (i.e. contracts) (6)
<b>Organization</b>	INT as trigger PATTERN C: Restructuration - Growing through reorganizing (2)	INT as trigger - Establishing partnerships (3)
<b>Marketing</b>	INT as outcome PATTERN B: Market position - Growing through servitization (6) - Growing through addressing new customer segments (3) - Growing through gaining market know-how (2)	INT as trigger - Adapting communication with customers (4) - Changing market coverage to scale (1) - Adapting price conditions (4)
<b>Product</b>	INT as trigger PATTERN D: New goods and services - Growing through new value proposition (3)	INT as trigger - Additional offering (3) - Adapted offering (6)

Table 7: Overview of results on different forms of BMI and the role of internationalization

Pattern C focuses on ‘reorganizing’, thereby implying a type of organization-related BMI, with some cases of radical changes occurring because of the necessity of reorganization. These organizational-related radical changes are structural changes and contrast the understanding of paradigm innovation as conceived by Tidd et al. (2005). Paradigm innovation focuses on management of mental processes and refers to changes in the underlying mental models that shape what the organization does.

Pattern D comprises a shift to offering ‘new goods and services’, thereby relating to product-related BMI. For Tidd et al. (2005), product innovation implies changes in a product or service by using new or existing technologies, including the development and marketing of new products and services. The authors point out that, especially with reference to service innovation, it might not always be clear whether to speak of process or product innovation. In the present study, we observed six examples of servitization-related BMI processes. Interestingly, our classification of ‘growing through servitization’ does not match with a process or product innovation type, but with a marketing-related pattern, as the main outcome for the firm was to foster their (international) market position.

In our opinion, the eight types of incremental adaptations also match the above-mentioned typology, namely process-, marketing-, organization-, and product-related BMI (see Table 7). Process-related BMI involves the adaptation of technologies and structures (i.e. contracts) in certain markets that are necessary for creating value. Marketing-related BMI involves adjustments in the communication with customers, a change in the market coverage to scale the BMI, and adaptation of price conditions. Marketing-related BMI was also the most frequently observed pattern within the identified incremental adaptations. Organization-related BMI involves the establishment of partnerships; these are more likely to occur during incremental changes, as they mainly refer to the adaptation of contracts. Product-related BMI involves additional and adapted offerings.

In the following sections, we will outline the theoretical contribution, the managerial implications and the limitations of our study.

### ***3.2.1. Theoretical implications***

Existing research about the nexus between BMI and internationalization is scarce. One existing research paper from Cao et al. (2018) explains how firms adapt their business model in an international context. The authors focus on international learning capability and resources, but do not consider the various dimensions and components of business model elements. With our paper, we enrich the literature by shedding light on the question of how to describe BMI in an international context. We provide an answer regarding what exactly changes in the business model, taking into account the various BMI dimensions.

In order to understand the BMI process before or after internationalization, we considered the dimensions of BMI as defined by Clauss (2017) and analyzed the sequence of what happens during radical changes. Interestingly, with radical changes, we did not observe any instances that were initiated in the value capture mechanism. We observed that the value capture mechanism often marks the end of the BMI process. We observed some firms that were using recurring revenues in their business model. These businesses first had to think about the value proposition these offer to the firm, which means that having the idea to generate recurring revenues is not sufficient; it is also necessary to clarify the exact advantage for the customer first. This finding is in line with Demil and Lecocq (2010), who argue that “drastic changes in a BM's [business model's] revenue and/or cost structures occur because of radical BM [business model] changes”. Therefore, changes in the value capture mechanism should mark the end of the journey, and not the beginning. Most radical changes were initiated in the dimension of value proposition innovation. Nevertheless, there were also some cases where new technologies or structures had to be found, which then affected the value proposition and the value capture mechanism. These findings are important, as we see that firms must work on their value proposition first, before moving onto other aspects of business model dimensions.

Furthermore, this paper augments the research relating to BMI and internationalization by providing insights into the question of whether BMI results from or leads to internationalization. We enrich the existing research by building our study upon the theoretical foundation of the dynamic states approach, in order to capture the requirements of the complex process of firm growth. From our observations in terms of numbers and occurrences, we can derive three propositions, thereby identifying when internationalization is either an antecedent or outcome of BMI. Our propositions are outlined below.

First, we observed much more cases of incremental adaptations than identified instances of radical changes. This is logical when contextualized by the fact that radical changes are much more complex and require orchestration on an individual, as well an organizational, level (i.e. Ritala et al., 2009). If changes in the three dimensions of BMI are interdependent on previous changes, this might require more commitment in terms of time and resources. According to our results, internationalization triggered all 31 incremental adaptations. We did not observe any incremental adaptations that contributed to internationalization. This means that incremental adaptations do not result in internationalization. We conclude that



the incremental adaptations observed in this study are most often caused by an international business activity. Incremental changes seem to be a type of reaction to external requirements.

**Proposition 1a:** When internationalization triggers BMI, incremental adaptations are more frequent than radical changes.

Radical changes, on the contrary, more often lead to internationalization. One explanation for this observation could be that radical changes offer an opportunity to grow and, subsequently, to internationalize. Regardless, internationalization triggered radical changes in some cases.

**Proposition 1b:** When internationalization results from BMI, radical changes are more frequent than incremental changes.

Incremental adaptations are much more frequent than radical changes, and all incremental adaptations were triggered by internationalization. We can thereby conclude that the role of internationalization as a trigger for incremental adaptations is more frequent. However, the fact that there were more examples of incremental adaptations generally does not allow us to draw conclusions about the contribution of the adaptation to the overall success. Some changes were relatively easy to implement, while others required more effort and the help of external experts. Nevertheless, in general, it seems that internationalization leads to BMI rather than vice versa, which is why conclusions may be drawn regarding causality in the nexus between BMI and internationalization.

**Proposition 2:** Internationalization is more often a trigger of BMI than an outcome.

Demil and Lecocq (2010) argue that, although BMI literature focuses on “radical, discontinuous or episodic change”, incremental and continuous adaptations seem to be much more common. According to these authors, radical changes follow incremental changes and “multiple internal changes” and “ongoing adjustments” take place (p. 241). However, it is our opinion that this may not be accurate, at least in the context of internationalization. According to our observations, incremental changes can take place independently of radical changes.

**Proposition 3:** In the context of internationalization, incremental changes are independent from radical changes.

We find support for this proposition in the fact that the incremental adaptations observed in our study were all triggered by internationalization; internationalization, however, was not found to be an outcome of BMI. Nevertheless, it can be assumed that incremental changes contribute significantly to successful internationalization. However, their contribution is mainly drawn from the fact that they were triggered by necessity created by the internationalization process.

### **3.2.2. Managerial implications**

Our findings supply the following managerial implications. First, we conclude that developing a new business models offers novel growth opportunities. This is especially true for established companies in

international markets. The instances of radical changes encapsulated in samples showed internationalization to be a facilitator for firms that develop an innovative business model. Certainly, companies desiring to develop a new business model should consider the aspects involved in internationalization from the very beginning. For example, a firm that wants to use a new digital technology for an internal application should consider that this idea could inadvertently have positive side effects that benefit other stakeholders. Therefore, firms should explore also internationalization opportunities and related needs in terms of internal resources and capabilities when developing a new business model.

Second, our observations of incremental adaptations demonstrated that companies inevitably must manage the ways in which internationalization affects the business model. Therefore, a comprehensive look at one's own business model can aid in the preparation of an internationalization strategy in such a way to avoid later, expensive changes. Firms that internationalize should also build up their knowledge on business models and how to utilize the business model concept as a tool for analysis as it could help to prevent unpleasant surprises. Firms that are internationalizing should consider how they can transfer the business model to their respective target markets. Incremental changes are a tool that aids continuous learning and adaptation to the internationalization process. Specifically, managers can analytically assess the core functions of their business and consider which adaptations may need to be made. It also seems necessary to make managers more aware of the issue of BMI in the context of internationalization, as many interviewees remarked that they were forced 'to learn the hard way'.

### ***3.2.3. Limitations and future research***

Of course, our study is not without limitations. Apart from the limitations commonly attributed to qualitative studies, our sample mainly featured firms in Western European countries, with a prevalence of B2B organizations. It may be worth considering if circumstances and challenges are different for either firms in developing countries or B2C organizations.

Questions remain unanswered as to what kind of organizational requirements firms need to undertake in order to radically or incrementally change their business model. It could be helpful to further analyze the interrelationship between incremental and radical changes. Future research could seek to identify any interdependencies between incremental and radical BMI in the context of internationalization.

We did not explicitly ask the participating organizations which adaptations were made for each individual dimension and element of their business models. It could be the case that these companies implemented some changes in the business model that remain hidden from us. We tried to counteract this limitation by speaking to three people in each company, but future research could highlight further aspects of BMI through a different study design.

This study also only distinguished between incremental and radical changes, as outlined by Foss and Saebi (2017). However, we did not consider further types of BMI. Future research could address this limitation.

It also remains unclear as to why there were no examples of incremental changes that resulted in internationalization in our data, which marks another element that is open to further discussion and research.

To conclude, our study is novel by using the dynamic states approach as theoretical basis, and thus considering the complex interrelationship between BMI and internationalization. This study presents a detailed qualitative analysis of different patterns of radical and incremental BMI that are either triggered or leading to internationalization.

### 3.3. References

- Albaum, G., Duerr, E., Strandskov, J. (2005). *International marketing and export management*. 5 edn. Essex: Prentice Hall.
- Andersen, O. (1993). On the internationalization process of firms: A critical analysis. *Journal of International Business Studies*, 24(2), 209-231.
- Andreini, D., & Bettinelli, C. (2017). *Business model innovation*. Cham: Springer International Publishing AG.
- Azar, G., & Ciabuschi, F. (2017). Organizational innovation, technological innovation, and export performance: The effects of innovation radicalness and extensiveness. *International business review*, 26(2), 324-336.
- Azari, M.J., Madsen, T.K., & Moen, Ø. (2017). Antecedent and outcomes of innovation-based growth strategies for exporting SMEs. *Journal of Small Business and Enterprise Development*, 24(4), 733-752. DOI: 10.1108/JSBED-08-2016-0125
- Bashir, M., Naqshbandi, M.M., & Farooq, R. (2020). Business model innovation: a systematic review and future research directions. *International Journal of Innovation Science*. 12(4), 457-476, DOI: 10.1108/IJIS-06-2020-0081.
- Bergamaschi, M., Bettinelli, C., Lissana, E., & Picone, P.M. (2020). Past, ongoing, and future debate on the interplay between internationalization and digitalization. *Journal of Management and Governance*, 1-50.
- Brock, D.M., & Jaffe, T. (2008). International diversification and performance: The mediating role of implementation. *International Business Review*, 17, 600-615.
- Buckley, P.J., & Casson, M. (1976). A long-run theory of the multinational enterprise. In: *The future of the multinational enterprise*, London: Palgrave Macmillan, pp. 32-65.
- Calof, J.L., & Beamish, P.W. (1995). Adapting to foreign markets: Explaining internationalization. *International Business Review*, 4(2), 115-131.
- Cao, L., Navare, J., & Jin, Z. (2018). Business model innovation: How the international retailers rebuild their core business logic in a new host country. *International Business Review*, 27(3), 543-562.
- Cavallo, A., Ghezzi, A., & Guzmán, B.V.R. (2019). Driving internationalization through business model innovation: evidences from an AgTech company. *Multinational Business Review*, 28(2), 201-20, DOI: 10.1108/MBR-11-2018-0087.
- Cheng, J. L., & Bolon, D.S. (1993). The management of multinational R&D: a neglected topic in international business research. *Journal of International Business Studies*, 24(1), 1-18.
- Chesbrough, H. (2007). Business model innovation: it's not just about technology anymore. *Strategy & Leadership*, 35(6), 12-17.
- Child, J., Hsieh, L., Elbanna, S., Karmowska, J., Marinova, S., Puthusserry, P., ... & Zhang, Y. (2017). SME international business models: The role of context and experience. *Journal of World Business*, 52(5), 664-679.
- Clauss, T. (2017). Measuring business model innovation: Conceptualization, scale development, and proof of performance. *R&D Management*, 47(3), 385-404.

- Demil, B., & Lecocq, X. (2010). Business model evolution: in search of dynamic consistency. *Long Range Planning*, 43(2-3), 227-246.
- Foss, N.J., & Saebi, T. (2017). Fifteen years of research on business model innovation: How far have we come, and where should we go? *Journal of Management*, 43(1), 200-227.
- Foss, N.J., & Saebi, T. (2018). Business models and business model innovation: Between wicked and paradigmatic problems. *Long Range Planning*, 51(1), 9-21.
- Frankenberger, K., Weiblen, T., Csik, M., & Gassmann, O. (2013). The 4I-framework of business model innovation: A structured view on process phases and challenges. *International Journal of Product Development*, 18(3-4), 249-273.
- Freixanet, J., Rialp, A., & Churakova, I. (2020). How do innovation, internationalization, and organizational learning interact and co-evolve in small firms? A complex systems approach. *Journal of Small Business Management*, 58(5), 1030-1063.
- Gassmann, O., Frankenberger, K., & Sauer, R. (2016). *Exploring the field of business model innovation: New theoretical perspectives*. Springer.
- Geldres-Weiss, V.V., Uribe-Bórquez, C.T., Coudoumaris, D.N., & Monreal-Pérez, J. (2016). Innovation and experiential knowledge in firm exports: Applying the initial U-model. *Journal of Business Research*, 69 (11), 5076-5081.
- Guercini, S., & Milanese, M. (2017). Extreme luxury fashion: business model and internationalization process. *International Marketing Review*, 34(3), 403-424.
- Hamel, G., & Valikangas, L. (2004). The quest for resilience. *icade. Revista de la Facultad de Derecho*, (62), 355-358.
- Hannah, D.P., & Eisenhardt, K.M. (2018). How firms navigate cooperation and competition in nascent ecosystems. *Strategic Management Journal*, 39(12), 3163-3192. DOI: 10. 1002/smj. 2750
- Hennart, J. F. (2014). The accidental internationalists: A theory of born-globals. *Entrepreneurship Theory and Practice*, 38(1), 117-135.
- 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.
- 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. (1990). The mechanism of internationalisation. *International marketing review*, 7(4), DOI: 10.1108/02651339010137414
- Johanson, J., & Wiedersheim-Paul, F. (1975). The internationalization of the firm: Four Swedish cases. *Journal of Management Studies*, 12(3), 305-322.
- Kafouros, M.I., Buckley, P.J., Sharp, J.A., & Wang, C. (2008). The role of internationalization in explaining innovation performance. *Technovation*, 28(1-2), 63-74.
- Knight, G., Cavusgil, S.T., & Innovation, O.C. (2004). The born-global firm. *Journal of International Business Studies*, 35(2), 124-141.
- Kranich, P., & Wald, A. (2018). Does model consistency in business model innovation matter? A contingency-based approach. *Creativity and Innovation Management*, 27(2), 209-220.

- 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.
- Landau, C., Karna, A., & Sailer, M. (2016). Business model adaptation for emerging markets: a case study of a German automobile manufacturer in India. *R&D Management*, 46(3), 480-503.
- Lee, W.Y., & Brasch, J.J. (1978). The adoption of export as an innovative strategy. *Journal of International Business Studies*, 9(1), 85-94.
- Lee, Y., Shin, J., & Park, Y. (2012). The changing pattern of SME's innovativeness through business model globalization. *Technological Forecasting and Social Change*, 79(5), 832-842.
- Levie, J., & Lichtenstein, B.B. (2010). A terminal assessment of stages theory: Introducing a dynamic states approach to entrepreneurship. *Entrepreneurship Theory and Practice*, 34(2), 317-350.
- Lu, J.W., & Beamish, P.W. (2001). The internationalization and performance of SMEs. *Strategic Management Journal*, 22(6-7), 565-586.
- Mayring, P. (2000). Qualitative Content Analysis. *Forum: Qualitative Social Research*, 1(2), Art. 20, <http://nbn-resolving.de/urn:nbn:de:0114-fqs0002204>.
- Miles, M.B., Huberman, A.M., & Saldana, J. (2014). *Qualitative Data Analysis* (3rd ed). SAGE Publications.
- Miller, K., McAdam, M., Spieth, P., Brady, M. (2021). Business models big and small: Review of conceptualisations and constructs and future directions for SME business model research?. *Journal of Business Research*, 131, 619-626, DOI: 10.1016/j.jbusres.2020.12.036
- Neubert, M. (2018). The impact of digitalization on the speed of internationalization of lean global startups. *Technology Innovation Management Review*, 8(5), 44-54.
- Nunes, M.P., & Steinbruch, F.K. (2019). Internationalization and the need of business model innovation - A theoretical approach. *Brazilian Business Review*, 16, 207-221.
- Onetti, A., Zucchella, A., Jones, M.V., & McDougall-Covin, P.P. (2012). Internationalization, innovation and entrepreneurship: Business models for new technology-based firms. *Journal of Management & Governance*, 16(3), 337-368.
- Penrose, E. (1959). *The Theory of the Growth of the Firm*. New York: Oxford University Press.
- Pitelis, C.N. (2009): Introduction. In: Penrose, E., & Pitelis, C. (eds.): *The theory of the growth of the firm*. Fourth edition. With a new introduction by Christos Pitelis. New York: Oxford University Press., pp. ix – xlvii.
- Pohle, G., & Chapman, M. (2006). IBM's global CEO report 2006: business model innovation matters. *Strategy & Leadership*, 43(5), 34-40.
- Rask, M. (2014). Internationalization through business model innovation: In search of relevant design dimensions and elements. *Journal of International Entrepreneurship*, 12(2), 146-161.
- Ritala, P., Armila, L., & Blomqvist, K. (2009). Innovation orchestration capability - Defining the organizational and individual level determinants. *International Journal of Innovation Management*, 13(04), 569-591.
- Saebi, T., Lien, L., & Foss, N.J. (2017). What drives business model adaptation? The impact of opportunities, threats and strategic orientation. *Long Range Planning*, 50(5), 567-581.

- Schmitt, C., & Baldegger, R. (2020). Digitalization and Internationalization. *Technology Innovation Management Review*, 10(4), 3-4.
- Schneider, S., & Spieth, P. (2013). Business model innovation: Towards an integrated future research agenda. *International Journal of Innovation Management*, 17(01), 1340001.
- Schumpeter, Joseph A. (1934). *The Theory of Economic Development*. Translation based on Schumpeter (1926). Harvard University Press.
- Schwens, C., Zapkau, F.B., Bierwerth, M., Isidor, R., Knight, G., & Kabst, R. (2018). International entrepreneurship: A meta-analysis on the internationalization and performance relationship. *Entrepreneurship Theory and Practice*, 42(5), 734-768.
- Siggelkow, N. (2002). Evolution toward fit. *Administrative Science Quarterly*, 47(1), 125-159.
- Spieth, P., Schneckenberg, D., & Matzler, K. (2016). Exploring the linkage between business model (&) innovation and the strategy of the firm. *R&D Management*, 46(3), 403-413.
- Spieth, P., Schneckenberg, D., & Ricart, J.E. (2014). Business model innovation—state of the art and future challenges for the field. *R&D Management*, 44(3), 237-247.
- Sternad, D., & Mödritscher, G. (2022). Entrepreneurial leaps: Growth processes in transition phases between dynamic states. *Entrepreneurship Theory and Practice*, 46(4), 952-984.
- Teece, D.J. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43(2-3), 172-194.
- Teece, D.J. (2018). Business models and dynamic capabilities. *Long Range Planning*, 51, 40-49.
- Vahlne, J.E., & Nordström, K.A. (1993). The internationalization process: impact of competition and experience. *The International Trade Journal*, 7(5), 529-548.
- Welch, L.S., & Luostarinen, R. (1988). Internationalization: evolution of a concept. *Journal of General Management*, 14(2), 34-55.
- Yin, R.K. (2009). *Case Study Research: Design and Methods* (4th ed). SAGE Publications.
- Zhang, H., Xiao, H., Wang, Y., Shareef, M.A., Akram, M.S., & Goraya, M.A.S. (2021). An integration of antecedents and outcomes of business model innovation: A meta-analytic review. *Journal of Business Research*, 131, 803-814.
- Zott, C., & Amit, R. (2007). Business model design and the performance of entrepreneurial firms. *Organization Science*, 18(2), 181-199.
- Zott, C., & Amit, R. (2015). Business model innovation: Toward a process perspective. In Shalley, C.E., Hitt, M.A., & Zhou, J. (eds.), *The Oxford Handbook of Creativity, Innovation, and Entrepreneurship*, New York: Oxford University Press., pp. 395-406.
- Zott, C., Amit, R., & Massa, L. (2011). The business model: recent developments and future research. *Journal of Management*, 37(4), 1019-1042.

## **5. Conclusion**

To conclude this thesis, the most important findings of the three research projects are recapitulated, to answer the research questions formulated at the beginning. It is then necessary to explicitly address the contributions that this dissertation makes in theoretical and practical terms. In addition, a critical appraisal of the research will be given, and the outlook for future research given.

### **5.1. Summary of findings**

Table 8 summarizes the overall and most important results of the papers presented in the present thesis. The results from the literature review presented in this thesis have shown that existing work bases its considerations primarily on the dynamic capabilities view. However, there is a lack of theory underlying the relationship between BMI and internationalization, and, therefore, an absence of theoretically sound research on the relationship between the two concepts. While qualitative work supports the assumption that the relationship is positive, there are also contradictions to this which require an in-depth investigation. It has also been found that some articles consider BMI to be the starting point of internationalization, while others propose that internationalization triggers BMI. A few articles expound the reciprocal relationship, but, again, empirically-based research remains lacking. Similarly, it is not clear what exactly changes in the business model as a result of internationalization. Some authors assume that all components of a business model are subject to change; others propose greater focus on the areas of value creation and value delivery. It has also been shown that some papers do focus on a specific form of BMI. Regarding the extent to which a process orientation is followed in the studies reviewed, it is clear that, while some papers certainly deal with processes in the interplay of BMI and internationalization, there are no real contributions to or applications of a (strong) process theory. Our figures are also relatively in line with comparable investigations of previous studies in similar fields.

The second study is in concordance with the findings of the literature review, which demonstrated, among other things, that there is no accurate research on the relationship between BMI and internationalization. Based on the considerations of Autio (2017), who assumed that BMI leads to success in international markets because international new venture firms (INVs) need a competitive advantage, and on the results of the qualitative studies on the topic, which also assumed a positive relationship, a study of 243 companies in three different countries (Italy, Slovenia, and Austria) was conducted. In order to make the concept of internationalization and its success measurable, survey respondents were specifically asked about a concrete internationalization step of the company. The result shows that there is a statistically significant, positive correlation.



	Paper I	Paper II	Paper II
<b>Motivation</b>	<ul style="list-style-type: none"> <li>Firms with innovative business models are often very successful internationally.</li> <li>Firms have to rethink their way of doing business when internationalizing.</li> <li>No systematic review to date</li> </ul>	<ul style="list-style-type: none"> <li>Unclear relationship between BMI and internationalization and opposing findings</li> <li>Mainly qualitative papers assuming positive relationship</li> <li>Relationship might be moderated by factors</li> </ul>	<ul style="list-style-type: none"> <li>Unclear when BMI causes internationalization and vice versa</li> <li>Unclear how BMI unfolds</li> <li>Follow process perspective to better understand complex interrelationship</li> </ul>
<b>RQ 1</b>	What is the current body of research on the nexus BMI and internationalization?	Do firms benefit from BMI when entering or developing a foreign market?	Which forms of BMI are caused by or lead to internationalization?
<b>RQ 2</b>	To which extent is a process orientation in research on the nexus between BMI and internationalization realized?	How is this relationship influenced by internal and external dimensions that are typical of a step-wise internationalization process?	
<b>Data collection method</b>	Systematic literature review following PRISMA statement	Development of questionnaire in three languages based on existing scales	Multiple case study through multiple interviews and secondary data on the cases
<b>Analysis</b>	Qualitative review, assessment using or contributing process theory vs. using process data	Multiple hierarchical regression and interaction terms	Network analysis of event history; content analysis
<b>Data sample</b>	71 scientific articles	243 firms in Austria, Italy, Slovenia	9 companies 26h interview duration 3.597 pages of additional material 4 h additional video material
<b>Results RQ 1</b>	Five clusters: 1) theoretical approaches 2) nexus of BMI and internationalization 3) resources & capabilities 4) contextual factors 5) processes, patterns, paths	Evidence for hypothesis H1: BMI has a positive effect on the success of international ventures of firms.	Four patterns of radical changes <ul style="list-style-type: none"> <li>Improvement of internal processes</li> <li>Restructuration</li> <li>Market position</li> <li>New goods and services</li> </ul> Eight types of incremental adaptations
<b>Results RQ 2</b>	Very few articles that contribute to process theory, although quite a few use process data	Evidence for hypotheses H2: The positive relationship will be stronger in firms with greater international experience H3: The positive relationship will be stronger in firms with a higher degree of resource commitment H4: The positive relationship between BM will be stronger in firms doing business in countries with a higher level of perceived psychic distance.	<ul style="list-style-type: none"> <li>Adapting technologies</li> <li>Adapting structures</li> <li>Establishing partnerships</li> <li>Adapting communication with customers</li> <li>Changing market coverage to scale</li> <li>Adapting price conditions</li> <li>Additional offering</li> <li>Adapted offering</li> </ul> 31 incremental adaptations triggered by internationalization; 5 radical changes triggered by internationalization; 13 radical changes leading to internationalization

Table 8: Summary of results

	Paper I	Paper II	Paper II
<b>Contribution</b>	First systematic literature review on the nexus between BMI and internationalization	Extending the Uppsala model and showing that mechanism still valid Empirically testing the SEI theory and extending the theory to established firms Offering a new stage logic of internationalization and explaining the role of BMI	Using dynamic states approach to explain how BMI can lead to internationalization, and how internationalization can trigger BMI. Four propositions: <ul style="list-style-type: none"> <li>• When internationalization triggers BMI, incremental adaptations are more frequent than radical changes.</li> <li>• When internationalization results from BMI, radical changes are more frequent than incremental changes.</li> <li>• Internationalization is more often a trigger of BMI than an outcome.</li> <li>• In the context of internationalization, incremental changes are independent from radical changes.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Heterogenous understanding of BMI and its dimensions</li> <li>• Unconsciously selecting promising articles through strict selection criteria</li> <li>• Number of articles constantly increasing</li> </ul>	<ul style="list-style-type: none"> <li>• Significance level low</li> <li>• Single item problematic, treating nominal data as interval data</li> <li>• Common method bias cannot be excluded</li> <li>• R<sup>2</sup> change is low</li> </ul>	<ul style="list-style-type: none"> <li>• Qualitative study design</li> <li>• Only radical and incremental changes</li> <li>• European countries with B2B focus</li> </ul>
<b>Future research</b>	<p>Which theory considers the complexity of relationship?</p> <p>Which theory can explain the link between BMI and internationalization?</p> <p>How can processes be explained (not just described)?</p> <p>What is the relationship between BMI and internationalization?</p> <p>What is the role of individuals in the BMI-internationalization relationship?</p> <p>Which tools for managers can be developed, provided, and evaluated?</p>	<p>Are there any differences in effect sizes of different dimensions of elements on BMI?</p> <p>Which further variables explain variance, i.e. ability to process information or risk perception?</p>	<p>What are the organizational requirements to undertake incremental and radical BMI in the context of internationalization?</p> <p>Are there interdependencies between incremental and radical changes?</p> <p>Do incremental changes never lead to internationalization and why?</p>

Table 9: Summary of contributions

However, it was found a 'higher' level of BMI does not necessarily mean a higher level of internationalization success. Based on the arguments of the Uppsala model, we included three additional internal and external dimensions typical for the gradual internationalization process (psychic distance, international experience and resource commitment) in our model, in the assumption that they have an impact on the relationship between BMI and internationalization. The Uppsala model proposes that the internationalization of companies is a gradual process and that the scope of the dimensions mentioned increases over the course of the internationalization process. This means that companies that already have experience in this area, are ready for market entry strategies that require more resources, or that expand into countries with a higher psychic distance, are more likely to demonstrate a positive relationship between BMI and the success of the international venture.

Finally, the question arose as to whether BMI leads to internationalization or is triggered by it, and what exactly changes in the business model. In this area, existing research on BMI and internationalization pays scant attention to process theories. Therefore, the dynamic states approach was particularly useful in showing how BMI can be triggered by internationalization, or vice versa. Additionally, a closer look was taken at what exactly is changing in the business models. Both incremental and radical BMI were identified, with process-, marketing-, product- and organization-related BMI being the most prevalent kinds of change. The patterns of radical changes comprising an 'improvement of internal processes' and the provision of 'new goods and services' were triggered by internationalization, while the changes related to 'restructuring' and 'market position' resulted in internationalization. Incremental adaptations of business models were only the results, rather than the precedent, of internationalization.

## **5.2. Contributions**

On one hand, the contributions made by this dissertation relate to the research area of international entrepreneurship, as it shows how BMI contributes to the successful internationalization of companies. However, it also enriches the literature on BMI, by singling out internationalization as a special context and taking its corresponding features into consideration. Table 9 summarizes the contributions as well as limitations and future research of the three papers.

While the systematic literature review takes stock of what we know on the interrelationship between BMI and internationalization and presents several proposals and directions for future research, there are important theoretical contributions of both empirical papers.

In particular, the quantitative study contributes to a greater understanding of internationalization and the role of BMI, due to its extension of the SEI theory to established firms and the inclusion of BMI as a state variable in the Uppsala model. BMI is also used to establish a link between the SEI theory (Autio, 2017) and the Uppsala model (Johanson & Vahlne, 1977). The results prove, that the main mechanism of the Uppsala model still hold to be true. Since the Uppsala model assumes a gradual pattern of internationalization, a main criticism is that the levels are very deterministic. This criticism is addressed by

proposing a new stage logic that explains how companies internationalize and what role BMI plays within this process.

Furthermore, it is not sufficient to simply assume a positive relationship between BMI and internationalization in any instance; however, there might be circumstances in which firms find themselves that influence this relationship. According to our arguments, these ‘circumstances’ can be taken from internal and external dimensions of the Uppsala-model. In contrast to previous research, our focus was not on one specific aspect of internationalization success, such as export performance. Rather, different entry modes were considered to be a variable that represents resource commitment, which influences the relationship between BMI and internationalization success. This result contributes significantly to the understanding of BMI as a central measure that can help to align the company strategically in the course of the internationalization process.

Also, the qualitative paper included established companies. The examples show how even established firms can develop an innovative business model that can then lead them to international success, and the majority of our respondents in our quantitative study were also SMEs. Another novelty of paper III is that the dynamic states approach serves as a theoretical lens to explain the interrelationship between BMI and internationalization and to understand how BMI takes place in the context of internationalization.

An important focus of this thesis is the process perspective, which is relevant in all three papers presented. In the literature review, not only processes and patterns were identified as an area of focus, but it was specifically looked at whether research on BMI and internationalization adopts a process perspective. The quantitative study follows a variance-based approach; nevertheless, the internationalization process, or the most important internationalization step taken by the surveyed companies, forms the unit of study, and as a result a new stage logic of internationalization explaining the role of BMI was presented. The qualitative study also contributes to a better understanding of BMI processes in relation to internationalization, by looking at the specific steps taken for each company, as a means of identifying corresponding patterns.

### **5.3. Critical assessment**

In summary, the following limitations of the present work should also be noted. On the one hand, we have seen in the context of the literature review that research work also takes into account the internationalization in emerging markets in particular, and how business models need to be adapted here. However, the empirical studies of the presented thesis are limited to Western markets in Central Europe, which is why the results of the data are only transferable to a limited extent.

Another point of criticism of the present work could be seen by readers in the understanding of BMI on which it is based. This is because in some works researchers tend to assume that proper BMI only takes place when it is a radical innovation, whereas in our work we did not explicitly commit to this, but also

explicitly include the incremental form of BMI. However, this is important for the interpretation of the present results.

Furthermore, one or the other reader may have recognized supposed contradictions. For example, it was critically noted in the qualitative paper that companies do not follow predefined stages in their development (p. 17), whereas the quantitative paper refers to the Uppsala model, which also assumes a gradual internationalization process. It should be pointed out again here that the linear process models naturally have their disadvantages and have come in for criticism, but that they still explain why these processes occur and therefore also have their justification.

#### **5.4. Outlook**

In the individual studies, it was pointed out, in detail, which questions future researchers could address, which is also summarized in table 11. The idea of identifying and examining current trends that influence the design of business models and, subsequently, internationalization seems particularly promising. Trends in the area of digitalization and technological development appear fruitful for future enquiry. The increasing relevance of blockchain technology and artificial intelligence will revolutionize future BMI and fuel the development of platform-based or data-based business models. It could also change the way in which international business is conducted, similarly to how the advent of the internet spurred the development of e-commerce. Other relevant topics include ecological and social sustainability. The latter will not only change business models (i.e., sharing-based business models), but also force the question of how to make supply chains more sustainable. Highly relevant also seems the question how current turbulences (COVID-19 pandemic, political crisis, and climate crisis) will unfold on the interrelationship between BMI and internationalization.

Past research has clearly shown that systematically selecting a target market has a distinct advantage and leads to greater success (Brothers & Nakos, 2005). In the future, it would also be interesting to discover whether significant value can be added by companies systematically understanding, questioning and adapting their business model when planning and implementing their international business activities, compared to those companies that pursue a strategy that is more randomly driven. It could also be interesting to definitively ascertain how companies can be supported and further developed in this regard.

More detailed suggestions for future research questions have been presented in the individual papers, and this work is intended to provide a starting point from which further research can contribute.

## Literature

- Andersen, O. (1993). On the internationalization process of firms: A critical analysis. *Journal of International Business Studies*, 24(2), 209-231.
- Autio, E. (2017). Strategic entrepreneurial internationalization: A normative framework. *Strategic Entrepreneurship Journal*, 11(3), 211-227.
- Azari, M.J., Madsen, T.K., & Moen, Ø. (2017). Antecedent and outcomes of innovation-based growth strategies for exporting SMEs. *Journal of Small Business and Enterprise Development*, 24(4), 733-752.
- Balboni, B., & Bortoluzzi, G. (2016). Business model adaptation and the success of new ventures. *Journal of Entrepreneurship, Management and Innovation*, 11(1), 119-140.
- Balboni, B., Bortoluzzi, G., Pugliese, R., & Tracogna, A. (2019). Business model evolution, contextual ambidexterity and the growth performance of high-tech start-ups. *Journal of Business Research*, 99, 115-124.
- Bashir, M., & Verma, R. (2018). Internal factors & consequences of business model innovation. *Management Decision*, 57(1), 262-290.
- Bouncken, R.B., Muench, M., & Kraus, S. (2015). Born globals: Investigating the influence of their business models on rapid internationalization. *International Business & Economics Research Journal*, 14(2), 247-256.
- Brouthers, L. E., & Nakos, G. (2005). The role of systematic international market selection on small firms' export performance. *Journal of Small Business Management*, 43(4), 363-381.
- Calantone, R.J., Tamer Cavusgil, S., Schmidt, J.B., & Shin, G.C. (2004). Internationalization and the dynamics of product adaptation – An empirical investigation. *Journal of Product Innovation Management*, 21(3), 185-198.
- Calof, J.L., & Beamish, P.W. (1995). Adapting to foreign markets: Explaining internationalization. *International Business Review*, 4(2), 115-131.
- Cao, L. (2014). Business model transformation in moving to a cross-channel retail strategy: A case study. *International Journal of Electronic Commerce*, 18(4), 69-96.
- Cao, L., Navare, J., & Jin, Z. (2018). Business model innovation: How the international retailers rebuild their core business logic in a new host country. *International Business Review*, 27(3), 543-562.
- Casadesus-Masanell, R., & Ricart, J. E. (2010). From strategy to business models and onto tactics. *Long Range Planning*, 43(2-3), 195-215.
- Cavallo, A., Ghezzi, A., & Guzmán, B.V.R. (2019). Driving internationalization through business model innovation: evidences from an AgTech company. *Multinational Business Review*, 28(2), 201-220.
- Cavusgil, S.T. (1982). On the nature of decision making for export marketing. *Marketing Theory: Philosophy of Science Perspectives*, 234, 221-235.
- Child, J., Hsieh, L., Elbanna, S., Karmowska, J., Marinova, S., Puthusserry, P., Tsai, T., Narooz, R., Zhang, Y. (2017). SME international business models: The role of context and experience. *Journal of World Business*, 52(5), 664-679.
- Dahan, N.M., Doh, J.P., Oetzel, J., & Yaziji, M. (2010). Corporate-NGO collaboration: Co-creating new business models for developing markets. *Long Range Planning*, 43(2-3), 326-342.

- Foss, N.J., & Saebi, T. (2017). Fifteen years of research on business model innovation: How far have we come, and where should we go? *Journal of Management*, 43(1), 200-227.
- Gambardella, A., & McGahan, A.M. (2010). Business-model innovation: General purpose technologies and their implications for industry structure. *Long Range Planning*, 43(2-3), 262-271.
- Gassmann, O., Frankenberger, K., & Csik, M. (2014). *The business model navigator: 55 models that will revolutionise your business*. Upper Saddle River, NJ: FT Press.
- Gavetti, G., Greve, H.R., Levinthal, D.A., & Ocasio, W. (2012). The behavioral theory of the firm: Assessment and prospects. *Academy of Management Annals*, 6(1), 1-40.
- Hymer, S.H. (1976). *The International Operations of National Firms: A Study of Direct Foreign Investment*. Cambridge: MIT Press.
- 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, 1411-1431.
- 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.
- Kraus, S., Brem, A., Schuessler, M., Schuessler, F., & Niemand, T. (2017). Innovative born globals: Investigating the influence of their business models on international performance. *International Journal of Innovation Management*, 21(01), 1750005, DOI: 10.1142/S1363919617500050.
- Kyläheiko, K., Jantunen, A., Puumalainen, K., Saarenketo, S., & Tuppura, A. (2011). Innovation and internationalization as growth strategies: The role of technological capabilities and appropriability. *International Business Review*, 20(5), 508-520.
- Levie, J., & Lichtenstein, B.B. (2010). A terminal assessment of stages theory: Introducing a dynamic states approach to entrepreneurship. *Entrepreneurship Theory and Practice*, 34(2), 317-350.
- Love, J. H., & Roper, S. (2015). SME innovation, exporting and growth: A review of existing evidence. *International Small Business Journal*, 33(1), 28-48.
- Markides, C. (2006). Disruptive innovation: In need of better theory. *Journal of Product Innovation Management*, 23(1), 19-25.
- McDougall, P.P., & Oviatt, B.M. (1996). New venture internationalization, strategic change, and performance: A follow-up study. *Journal of Business Venturing*, 11(1), 23-40.
- Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: a handbook for visionaries, game changers, and challengers*. Hoboken, NJ: John Wiley & Sons.
- Parker, D.W., & Lawrence, W.W. (2021). Improving productivity of a financial firm: business model evolution in the Caribbean. *International Journal of Productivity and Performance Management*, 70(2), 277-296.
- Rask, M. (2014). Internationalization through business model innovation: In search of relevant design dimensions and elements. *Journal of International Entrepreneurship*, 12(2), 146-161.
- Ruigrok, W., & Wagner, H. (2004). Internationalization and firm performance: Meta-analytic review and future research directions. *Annual meeting of the Academy of International Business*, July 2004, Stockholm, Sweden.

- Ruzzier, M., Hisrich, R.D., & Antoncic, B. (2006). SME internationalization research: past, present, and future. *Journal of Small Business and Enterprise Development*, 13(4), 476-497.
- Saebi, T., Lien, L., & Foss, N.J. (2017). What drives business model adaptation? The impact of opportunities, threats and strategic orientation. *Long Range Planning*, 50(5), 567-581.
- Saebi, T., Lien, L., & Foss, N.J. (2017). What drives business model adaptation? The impact of opportunities, threats and strategic orientation. *Long Range Planning*, 50(5), 567-581.
- Schneider, S., & Spieth, P. (2013). Business model innovation: Towards an integrated future research agenda. *International Journal of Innovation Management*, 17(01), 1340001.
- Spieth, P., Schneckenberg, D., & Matzler, K. (2016). Exploring the linkage between business model (&) innovation and the strategy of the firm. *R&D Management*, 46(3), 403-413.
- Sternad, D., Schwarz-Musch, A., Krenn, M. (2021): *Geschäftsmodell-Design für den internationalen Markterfolg*. Wiesbaden: Springer.
- Teece, D.J. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43(2-3), 172-194.
- Welch, C., & Paavilainen-Mäntymäki, E. (2014). Putting process (back) in: Research on the internationalization process of the firm. *International Journal of Management Reviews*, 16(1), 2-23.
- Westhead, P., Wright, M., & Ucbasaran, D. (2004). Internationalization of private firms: environmental turbulence and organizational strategies and resources. *Entrepreneurship & Regional Development*, 16(6), 501-522.
- Wirtz, B., & Daiser, P. (2018). Business model innovation processes: A systematic literature review. *Journal of Business Models*, 6(1), 40-58.
- Wójcik, P. & Ciszewska-Mlinarič, M. (2021). The impact of cognitive and behavioral factors on the export performance: a dynamic capabilities perspective, *European Business Review*, 33(3), 427-449.
- Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management Journal*, 38(2), 341-363.