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Business Model Innovation and Firm Performance: A Performance Feedback Perspective

Adeline Abou-Ali

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"*The two most powerful warriors are patience and time*." - Leo Tolstoy

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Chapter 1

Introduction

1.1. Research Background and Motivation

The constant introduction of new technologies in diverse industries constitutes an important challenge for managers (Greve, 2003a; Baden-Fuller & Haefliger, 2013). Besides, the requirements and competencies to effectively handle such changes do not appear likely to decrease anytime in the future (Akgün et al., 2007; Snihur, 2018). Being in part the result of market growth, globalization and R&D improvements, these changes create perturbance that can break down the established competencies of an organization (Tushman & Anderson, 1986; Tsang & Zahra, 2008). Strategies previously implemented by organizations, their core competencies (e.g., best practices, knowledge accumulated, technical capacities, etc.) (Prahalad & Hamel, 1990), "beliefs, values, and cultures are becoming less effective, or are no longer effective at all" (Akgün et al., 2007, p. 794). Core competencies require many years to be developed and can represent core rigidities with time (Leonard-Barton, 1995), thus, inhibiting an organization's competitive abilities, and forcing organizations to adopt a new business model (Snihur, 2018).

Therefore, an increasing attention of management researchers as well as organizations managers to the Business Model Innovation (BMI) concept has been observed in the recent years (Spieth et al., 2014; Wirtz et al., 2016; Foss & Saebi, 2017; Zhang et al., 2021; Filser et al., 2021; Schneckenberg et al., 2022; Spieth et al., 2023). BMI is defined as the introduction of a business model that is new to the industry of the focal firm, in other words, that no precedent of it is known in that space (Amit & Zott, 2012) and implying "designed, novel, and nontrivial changes to the key elements of a firm's BM and/or the architecture linking these elements." (Foss & Saebi, 2017, p. 201). BMI has gained importance as the success of its implementation has been associated with sustainable competitive advantage (Casadesus-Masanell & Zhu, 2013; Massa & Tucci, 2014; Filser et al., 2021; Schneckenberg et al., 2022;White et al., 2022) and increase firm performance (White et al., 2022; Menter et al., 2023).

However, BMI can represent a risk (e.g., uncertain financial outcomes, losing existing customers) for organizations as the decision to engage in such an organizational change is mainly depending on their performance and the aspirations they intent to reach (Baum et al., 2005; Kotiloglu et al., 2021). Indeed, managers compare expected firm performance to aspiration levels

that depend on prior aspirations, prior performance, and the performance of comparable firms. A large literature demonstrates that performance relative to aspirations influences risk taking (March & Shapira, 1987; Fiegenbaum,1990; Bromiley, 1991; Baum et al., 2005; Miller & Chen, 2004) and represents a major part of the Performance Feedback Theory (PFT) evolving out of Behavioral Theory of the Firm (BTOF) argumentation.

Although some connections can naturally be drawn between the different concepts and theories previously evoked, little is known on their theoretical interaction. Thus, the overarching aim and scope of this dissertation thesis resides in considering BMI in the context of PFT and further explore the interrelationship between the two streams of literature that have evolved separately.

The rest of the dissertation proceeds as follows. First, we expose the theoretical background on which the thesis is based. Second, we expose the research objectives and research questions. Next, the different chapters composed of single articles are presented. Finally, we discuss the implications and contributions of the dissertation.

1.2. Theoretical Background

1.2.1. Business Model Innovation and Firm Performance

Born from a constantly changing landscape, the BMI concept has received an increasing attention over the last 25 years (Spieth et al., 2014; Wirtz et al., 2016; Foss & Saebi, 2017; Nielsen et al., 2018; Zhang et al., 2021; Filser et al., 2021; Schneckenberg et al., 2022; Spieth et al., 2023). Two main factors are known to be at the origin of this phenomenon. In the first place, the introduction of new technologies and the advent of the digital era have considerably disrupted traditional channels of doing business and creating value (Nielsen et al, 2018). We can cite several examples such as transport industry with the apparition of Uber, retail industry with Amazon, music industry with Spotify, accommodation industry with Airbnb and Netflix with the video rental industry (Snihur, 2018; Nielsen et al., 2018). A second factor resides in the globalization of markets that have become hyper dynamic forcing companies to rethink and innovate their way of doing business. Therefore, the BMI concept has gradually appeared as a fundamental attribute to create, sustain and expand competitive advantage (Wirtz et al., 2016; Filser et al., 2021; Schneckenberg et al., 2022; Menter et al., 2023).

Furthermore, previous reviews of the literature on BMI have attempted to categorize it in different ways. Morris et al. (2005) determines three general categories (economic, operational and strategic) to cluster the various existing definitions and according to their main emphasis. Thereafter, Demil & Lecocq (2010) differentiate between static and transformational approaches of the business model concept. Zott et al. (2011) classify into three main focus area of explanation the existing literature: e-business and use of information technology, strategic issues, and innovation and technology management. Amit & Zott (2012), show that BMI can occur in 3 ways: adding novel activity (new activity system content), linking activity in novel way (new activity system structure), changing one or more parties that perform any of the activities (new activity system governance). Schneider & Spieth (2013) categorize existing literature on BMI in three streams of research: (1) prerequisites of conducting business model innovation, (2) elements and process of business model innovation, and (3) effects achieved through business model innovation. In addition, Spieth et al. (2014) present an overview of BMI research by clustering a set of 74 articles into three roles: explaining the business, running the business, and developing the business. Foss & Saebi (2017), identify four relevant streams of research in BMI: understanding business model innovation, analyzing the process of BMI, examining the outcome of the business model innovation, investigating the effects of business model innovation (e.g., performance implications), as well as create a research framework that clarifies where BMI is situated in terms of antecedent, moderating, mediating and outcome variables.

Those studies (Amit & Zott, 2012; Schneider & Spieth, 2013; Spieth et al. 2014; Foss & Saebi, 2017) also reveal how crucial BMI is for companies, since having the right business model at the present does not guarantee them success for years, as technology or change in the business environment can influence the performance profitability (Casadesus-Masanell & Ricart, 2010; Spieth et al., 2023). In this sense, Chesbrough (2010) evokes BMI as one of the challenges organizations are facing when a novel technology requires a novel business model, and that the combination of this novel technology with a new business model leads to competitive advantage.

Therefore, interpreting the consequences of disruptive changes to the industry and notably at the organizational level, represents another challenge posed by BMI, involving long periods of adjustment, which are essential for

the incumbent survival (Snihur, 2018; Menter et al., 2023). In addition, crisis situations that might require important organizational changes to adapt to the new emerging ecosystems can be triggered by BMI, pushing organizations to reconsider their previous strategies and business model that might have become obsolete (Akgün et al., 2007). As expressed by Baden-Fuller & Haefliger (2013) the choice of business model influences the complementarity's nature between business models and technology and the paths to monetization as "A poor choice can lead to low profits, a good choice to superior profits." (p. 422). Hence, BMI represents a risky move for organizations, and more particularly for their decision-makers that are key players when it comes to decide on how to react to a disruptive organizational change and the potential implications on the firm performance[1] (Baum et al., 2005; White et al., 2022; Menter et al., 2023). Organizational change being a risky decision, the literature on organizational and managerial risk taking is important in understanding the motivation to operate such a change as BMI.

1.2.2. An Introduction to the Performance Feedback Theory

Emerging from the Carnegie School and developed by Cyert & March in 1963, the Behavioral Theory Of the Firm (BTOF) has been the seminal basis from which the PFT has evolved out over the years. Following the behavioral statement stating that the strategic behavior of firms is guided by the discrepancy between aspiration and performance (Ansoff, 1979; Cyert & March, 1963; Fiegenbaum, Hart, & Schendel, 1996; Shinkle, 2012; Posen et al., 2018; Kotiloglu et al. 2021), the PFT as further developed the models of organizational aspirations, a central concept of BTOF and to research on organizational and managerial risk taking (Bromiley, 1991; March & Shapira, 1992; Greve, 1998, 2003b). Organizational aspirations are defined as "desired performance levels in specific organizational outcomes and have also been called goals and reference points" (Shinkle, 2012, p. 416; Kotiloglu et al. 2021; Cyert & March, 1963), and representing a major part of the behavioral theory argumentation. Both the theory and existing empirical results suggest that organizational aspirations adapt to two factors: the firm's

[1] Here and in the successive chapters of the dissertation, we look at firm performance along the lines of the literature streams studied, namely BMI and PTF, which mainly considers the firm financial performance. Accordingly, following Kotiloglu et al. (2021) and Menter et al. (2023), we can define the firm performance as being a firm's ability to generate additional revenue and capture its economic value to increase the firm's financial performance.

own historical performance (historical aspiration) and the performance of other referent firms (social aspiration) (Cyert & March [1963] 1992; March & Simon [1958] 1993; Greve, 2003b; Kotiloglu et al., 2021).

On the one hand, historical aspiration levels which refer to the firm's past performance, shape strategic behavior and may be used as a forecasting tool of future performance (Cyert & March, 1963; Levinthal & March, 1981; Shinkle, 2012; Kotiloglu et al., 2021). An organization's recent performance history is a benchmark against which the organization evaluates its current performance. Aspiration levels based on historical performance have been related to early, and hence high-risk, firm entry into research and development consortia (Bolton, 1993), changes in organizational strategy in both stable and changing environments (Lant, Milliken, & Batra, 1992), and decisions in a simulated market (Lant, 1992).

On the other hand, social aspirations involve comparisons with industry peers (Massini et al., 2005; Shinkle et al., 2012; Kotiloglu et al., 2021) and represent a good indicator of the firm's capabilities in contrast to its competitors. In this case, the recent performance of an organization's reference or peer group is the benchmark against which the organization evaluates its current performance. Available research indicates that salience, ease of observation and comparability are important factors affecting how decision makers form a reference group of peer organizations used for social comparison (Reger & Huff, 1993; Lant & Baum, 1995; Porac et al., 1995; Greve, 1998; Baum et al., 2005; Kotiloglu et al., 2021).

As explained by Greve (1998), historical and social aspiration levels are the results of the decision makers intuitive and scientific behavior, which based on simple processing rules interpret available data, allowing them to forecast future performance, hence setting the aspiration level. This simplified information processing obtained by categorizing outcomes as successes or failures, shows that risk-taking is highly sensitive to performance outcomes relative to aspiration levels (March & Simon, 1958; Greve, 1998), and depending on whether the organization's performance is above or below aspirations (March & Shapira, 1992), thus highly impacting the propensity of an organization to engage in organizational change such as BMI (Shinkle, 2012; Snihur, 2018).

Studies have shown that performance appearing below the aspiration level, triggers a problemistic search (Cyert & March, 1963; Greve, 2003a, b; Posen et al., 2018). Problemistic search is a major concept in the BTOF, suggesting that companies search for a solution to solve their performance problem and meet their aspiration level (Cyert & March, 1963; Posen et al., 2018; Kotiloglu et al., 2021). The greater the gap between performance and the aspiration level, the more the firm is seeking to engage in risk-taking, which has been demonstrated through various empirical findings showing the resulting firm actions, including R&D and innovation (Chen, 2008; Chen & Miller, 2007; Greve, 2003a, b), acquisition (Iyer & Miller, 2008), business expansion (Audia & Greve, 2006), new product introduction (Greve, 2003a), new market entry and position (Joseph & Gaba, 2015). Reversely, when performance is above the aspiration level, two scenarios are possible. First, firms are risk-averse, fearing any potential loss, conserving a status quo and resulting in inertia (Cyert & March, 1963; Greve, 2003a, b). Second, slack resources (e.g., resources in excess of those required) are accumulated, hence firms appear more likely to engage in risk-taking and experiment with new practices and changes (a.k.a "slack search"; Iyer & Miller, 2008), which increases innovativeness (Baum et al., 2005; Kotiloglu et al., 2021).

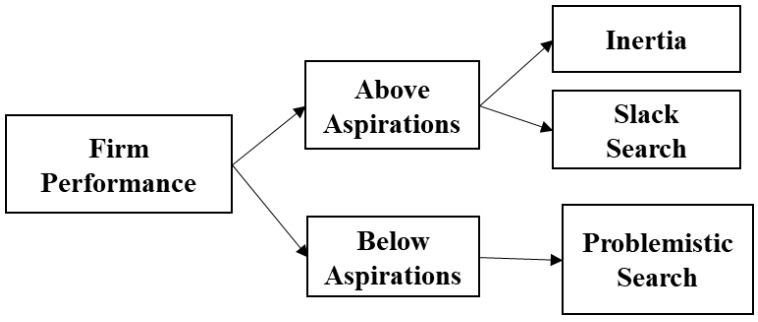

Figure 1. Performance Feedback Foundations

1.3. Research Objectives and Research Questions

Following the previous research motivation and based on the theoretical background previously exposed, this dissertation highlights the need to develop a comprehensive understanding of the potential implications of performance feedback for BMI. Therefore, the main objective of this

dissertation is to consider BMI in the framework of Performance Feedback, to better understand how companies decide to engage in BMI based on their performance. Consequently, the overarching research question probes the role of performance feedback in business model innovation enhancement, as firm performance relative to organizational aspirations determine the firm's willingness to engage in organizational change or not, hence influencing firms' decision to engage in BMI.

In this dissertation, the previous overarching objective is further broken down into specific sub-objectives, each leading to specific research questions. The following section briefly introduces the specific sub-objectives and the associated research questions that have been the basis for the development of the chapters 2-5 of the dissertation.

1.3.1. Research Specific Objective 1

It has been widely acknowledged that BMI is associated with sustainable competitive advantage (Casadesus-Masanell & Zhu, 2013; Massa & Tucci, 2014; Filser et al., 2021; Schneckenberg et al., 2022; Spieth et al., 2023). In recent discussions, the focus has shifted towards understanding how firms enhance their performance by integrating the different business model elements (Menter et al., 2023; White et al., 2022; Bigelow & Barney, 2020; Lanzolla & Markides, 2021; Massa, Tucci & Afuah, 2017; Zott, Amit & Massa, 2011). These latter discussions further lead to the development of studies showing the positive influence of BMI on firm performance (Foss & Saebi, 2017; White et al., 2022; Menter et al., 2023). However, recent evidence suggests that the novelty of a business model does not always guarantee high level of performance (White et al., 2022; Leppänen et al., 2023), leading scholars to emphasize the need to address the significant gaps and lack of clarity in BMI research related to conceptual, theoretical, and empirical aspects (Foss & Saebi, 2017).

Therefore, the first specific research objective intends to determine and understand the nature of the relationship between BMI and FP as the extant literature in the field seems largely fragmented. This research objective further answers the call for clarifying the real implications of the relationship between BMI and FP, with the ambition to provide valuable insights on the current state of the research in this field. The research question associated to the specific objective 1 is listed here:

Specific Objective 1: To determine and understand the nature of the relationship between BMI and FP by looking at the literature in the field.

- RQ.1: What is the nature of the relationship between BMI and firm performance?

1.3.2. Research Specific Objective 2

The second specific research objective investigates whether performance is feeding back to BMI with the aim of proposing a new theoretical perspective on the topic. This research objective contributes both to the PFT and BMI literature by exploring the underlying mechanisms and determinants of the relationship between PF and BMI. The goal of this research step is to establish a comprehensive framework including propositions to help develop research on the topic and further assess the role that PF can play in enhancing BMI. The research question associated to the specific objective 2 is listed here:

Specific Objective 2: To explore and understand if performance feeds back into BMI by analyzing the extant literature on the topic and propose a novel theoretical perspectives.

- RQ.2.1: How performance feeds back to BMI?

1.3.3. Research Specific Objective 3

The Performance Feedback (PF) literature is initially taking its root in qualitative research present in the seminal work of Cyert & March (1963), A *Behavioral Theory of the Firm*. However, over time, such methods have been progressively marginalized as quantitative methods have become the norm in PF studies. Indeed, the majority of the PF literature focuses on the behavioral concept of aspirations and its effect on firm performance using statistical model as main research method (e.g., Audia & Greve, 2006; Greve, 2003a, b; Lant, 1992; March & Shapira, 1992; Miller & Chen, 2004). While quantitative methods have greatly helped the PFT develop empirically, qualitative methods can play an important role in overcoming the missing link between PF conceptualization and conceptions emerging from neighboring work branches, such as the BMI literature.

Thus, the third specific research objective extends beyond simply looking at the theoretical perspective of the relationship between PF and BMI to further look at it methodologically. This research objective contributes both to the PFT and BMI literature by exploring the new methodological ways to approach PFT and further help expand the study of the PF-BMI relationship. The research question associated to the specific objective 3 is listed here:

Specific Objective 3: To propose a new methodological approach to PFT to further help expand the study of the PF-BMI relationship.

- RQ.3: Can PFT research beneficiate from a more qualitative approach?

1.3.4. Research Specific Objective 4

Finally, relying on both PF and BMI literature assumptions, the fourth specific research objective 4 aims at empirically analyzing the way in which established companies innovate or change their BM based on their performance. This research objective contributes both to the PFT and BMI literature by exploring the underlying mechanisms of the relationship and opening new path for future research. The research question associated to the specific objective 4 is listed here:

Specific Objective 4: To analyze the way in which companies innovate or change their BM based on their performance.

- RQ.4: Do companies change or innovate their business models based on their performance?

1.4. Research Overview

In this section, the structure of the dissertation is presented. Secondly, a model summarizing the main research objectives is introduced. Finally, the intermediate contributions derived from the dissertation realization are described.

1.4.1. Dissertation Structure

This dissertation is presented as a collection of papers. Therefore, chapters 2 to 5 are written in the format of four stand-alone articles. Each chapter is intending to meet the specific objectives previously described in the dissertation and with the end goal of contributing to both the BMI and PFT literature. The dissertation chapters structure is summarized in Table 1.

As one of the conceptual foundations of this dissertation, the second chapter provides a systematic literature review of research on BMI and firm performance. It follows the idea of capturing the conceptual essence largely published in the leading strategic management outlets these past 32 years. Based on a systematic literature review methodology (Tranfield et al., 2003), it has a clear focus on academic peer-reviewed studies rather than practitioner-oriented research. Hence, this chapter aims at determining and understand the nature of the relationship between BMI and FP by looking at the literature in the field. This chapter further arrives at a unifying understanding of the BMI and FP relationship as well as providing a research agenda for future research.

The third chapter is a conceptual development paper on how performance can feedback to BMI. The ambition of this chapter is to examine the role played by performance feedback in enhancing BMI. In addition of the BMI literature demonstrating the importance of BMI for firm performance in research conducted in Chapter 2, this chapter reviews the PFT literature to provide insights on the effect of firm performance on BMI. Based on this review, several propositions are emerging, providing a research framework and suggesting the need for a new theoretical approach that could broaden both BMI and PF literature perspectives.

Based on the PFT literature reviewed in Chapter 3, the fourth chapter is an essay suggesting the use of qualitative methods in the PFT and its contributions to enlarge the theoretical perspective in the field. Qualitative research represents a useful mean to gain insights about phenomena and mechanisms within the organization and to improve our understanding of interaction and processes present in the Performance Feedback field. Hence, this chapter aims at proposing a new methodological approach to PFT to further help expand the study of the BMI-FP relationship.

The fifth chapter of the dissertation is an empirical piece aiming at analyzing the way in which established companies innovate or change their BM based

on their performance. Taking a PFT perspective, this chapter studies the relationship between performance relative to organizational aspirations and BMI, looking at the way companies change or innovate their business models based on their past and current competitive performance. The application of PFT leads to four propositions that are discussed by means of five case studies conducted in various industrial sectors. By leveraging the PFT as a theoretical lens, this research establishes an empirical relationship between Performance Feedback and BMI and contributes to better understand the role of firm performance in influencing BMI, constituting a basis for future research.

Finally, the sixth chapter concludes the dissertation with reflections on the overarching objective, the theoretical and managerial contributions as well as an outlook on future research development.

Table 1. Chapters objective and methodological characteristics

	Chapter 2	**Chapter 3**	**Chapter 4**	**Chapter 5**
Objective & Scope	Determine and understand the nature of the relationship between BMI and FP by looking at the extant literature in the field.	Explore and understand if performance feeds back into BMI and propose a novel theoretical perspective	Propose a new methodological approach to PFT to further help expand the study of the BMI-FP relationship	Analyze the way in which companies innovate or change their BM based on their performance
Methodology	Systematic Literature Review	Conceptual Development	Conceptual	Multiple case study
Sources for data	• EBSCO • Web of Science • Scopus	• EBSCO • Web of Science • Scopus	• EBSCO • Web of Science • Scopus	• Online interviews • Companies reports and websites • Press releases
Setting	Highly ranked academic journals published in English	Highly ranked academic journals published in English	Highly ranked academic journals published in English	Various industries: • Logistics • Electronic components • Printing • Medical devices • Food

1.4.2. Thesis Research Model

Figure 2 represents the dissertation research model. It summarizes all the general and specific research objectives previously exposed to ease the understanding of the relationships studied throughout this dissertation.

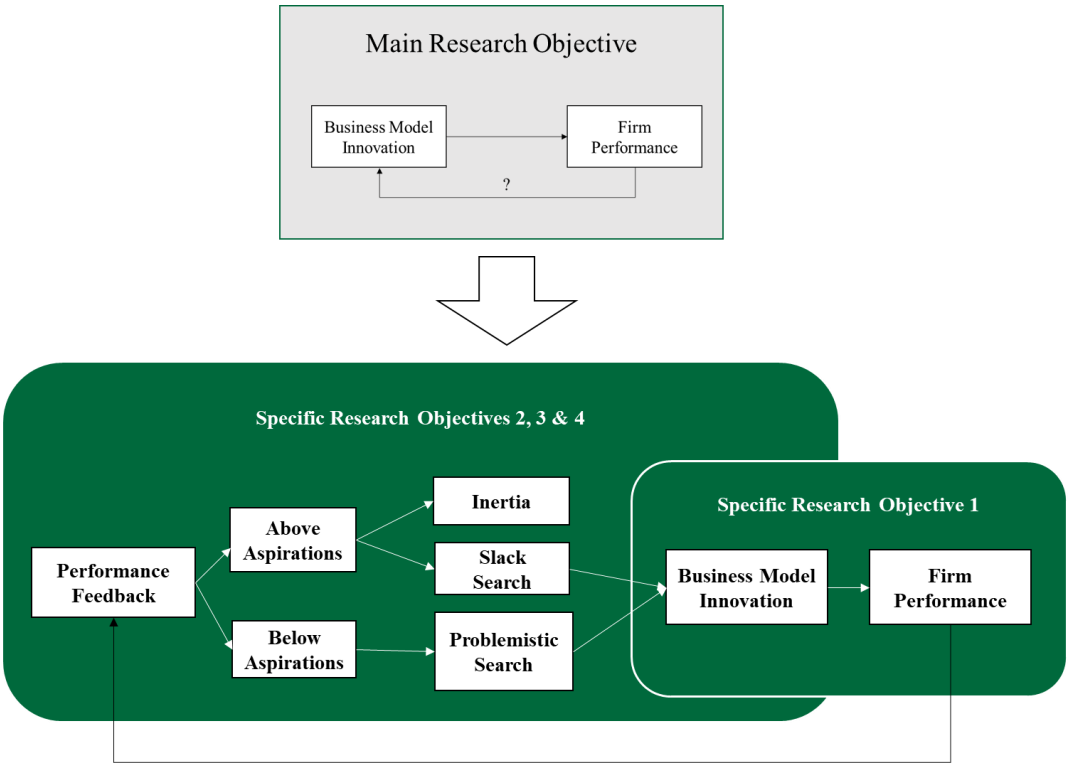

Figure 2. Dissertation research model scheme

1.4.3. Contributions derived from the dissertation

Table 2 shows the contributions developed throughout the realization of this dissertation and that have been presented and submitted to different editions. It also summarizes the relationship of these contributions with the different chapters of the dissertation.

Table 2. Contributions derived from the dissertation

Authors	Title	Type	Status	Submission details	Relationship with the dissertation

Abou-Ali, A., & Abdelkafi, N.	Business Model Innovation and Firm Performance: A Systematic Review and Research Agenda	Conference	Presented on May 5th, 2023	Innovation & Value Creation (IVC) Seminar 2023	Chapter 2
Abou-Ali, A.	Organizational Aspirations And Business Model Innovation: A Review And Future Research Agenda	Conference	Presented on June 15th, 2021	European Academy of Management (EURAM) Doctoral Colloquium 2021	Chapters 2 & 3 previous version
Abou-Ali, A.	Organizational Aspirations And Business Model Innovation: A Qualitative Approach	Workshop	Presented on October 29th, 2021	Strategic Management Society (SMS) "*Designing Strategic Decision-Making Studies: From Idea Generation to Execution a PhD Development Workshop*".	Chapters 2, 3 & 4 previous version
Abou-Ali, A.	Opening The Performance Feedback Horizon: A Qualitative Approach	Conference	Presented on September 1st, 2022 Published in the BAM 2022 proceedings ISBN 978-0-9956413-5-8	British Academy of Management (BAM) Conference 2022	Chapter 4
Abou-Ali, A.	How Can Qualitative Research Contribute To The Performance Feedback Literature	Workshop	Accepted for presentation on February 25th, 2022, but not presented due to health issues	Academy of Management Review (AMR) Idea Development Workshop	Chapter 4
Abou-Ali, A., Abdelkafi, N., & Pero, M..	Performance Feedback and Business Model Innovation: Insights from a case study-based analysis	Conference	Presented on June 8th, 2023	30th Innovation and Product Development Management Conference (IPDMC) 2023	Chapter 5

Chapter 2

Business Model Innovation and Firm Performance: A Systematic Review and Future Research Agenda

ABSTRACT

Business model innovation (BMI) has become a much-discussed concept in the strategic management field in recent years. The emerging BMI literature has demonstrated the importance of BMI for firm performance (FP). However, insights into the nature of this relationship have been fragmented. Accordingly, this paper presents a systematic literature review, in which we identified and analyzed 40 peer-reviewed articles published between 1990 and 2022. Spanning 32 years of research, we categorize the literature into four research categories: (1) the direct relationship between BMI-FP, (2) Moderators and mediators of the BMI-FP relationship, (3) BMI acting as a moderator and mediator, (4) FP and BMI. The analysis of the literature highlights the gap existing regarding the firm performance concept and how it constitutes a major and scarcely studied antecedent to BMI. We also provide a research agenda that reflects the need for a different theoretical approach to the BMI-FP relationship that could broaden BMI literature, fill the existing identified gap, and encourage future research in this area.

Keywords: Business Model Innovation, Firm Performance, Systematic Literature Review, Research Agenda.

2.1. Introduction

BMI has been receiving increasing attention from management researchers as well as organizations managers in recent years (Spieth et al., 2014; Wirtz et al., 2016; Foss & Saebi, 2017). BMI is defined as new to the firm, in other words, that no precedent of it is known in that space (Amit & Zott, 2012), and implying "designed, novel, and nontrivial changes to the key elements of a firm's BM and/or the architecture linking these elements." (Foss & Saebi, 2017, p. 201).

It has been widely acknowledged that firms generate value through various means including innovation (Schumpeter, 1942) or distinctive resources (Barney, 1991) and that BMI is associated with sustainable competitive advantage (Casadesus-Masanell & Zhu, 2013; Massa & Tucci, 2014). Based on these previous observations, a fundamental inquiry in the realm of strategic management and entrepreneurship research has been emerging, revolving around the driving factors for value creation, appropriation and capture, and ultimately leading to the firm's performance (Amit & Zott, 2001). Therefore, in recent discussions, the focus has shifted towards understanding how firms enhance their performance by integrating these different business model elements (Bigelow & Barney, 2020; Lanzolla & Markides, 2021;Massa, Tucci & Afuah, 2017; Zott, Amit & Massa, 2011).

While BMI has the potential to enhance a firm's ability to create and capture value, it is important to recognize that certain critical conditions may influence the relationship between BMI and firm performance (FP) (Spieth et al., 2014). Although, BMI has been theorized to positively influence firm performance (Foss & Saebi, 2017; White et al., 2022), recent evidence suggests that the novelty of a business model does not always guarantee high level of performance (White et al., 2022; Leppänen et al., 2023), leading scholars to emphasize the need to address the significant gaps in BMI research related to conceptual, theoretical, and empirical aspects (Foss and Saebi, 2017).

In this sense, as the existing literature on BMI does not entirely address the latter issue, the purpose of the present systematic review is to understand the relationships between BMI and PF. Therefore, this review aims at answering the following question: *What is the nature of the relationship between BMI and Firm Performance*?

Accordingly, this paper provides a systematic literature review of 40 studies on BMI and FP found in the academic literature in the past 32 years (1990-2022). To identify mutual themes and potential research gaps in a fragmented field of study, we build on previous reviews (e.g., Schneider & Spieth, 2013; Spieth et al., 2014; Foss & Saebi, 2017) and categorize the literature into four different categories, (1) the direct relationship between BMI-FP, (2) Moderators and mediators of the BMI-FP relationship, (3) BMI acting as a moderator and mediator, (4) FP and BMI.

Overall, our review makes several contributions to the BMI literature. First, it provides an up-to-date systematization of the literature published on the BMI-FP relationship. Second, this review provides an overview of the conceptual methodologies by researchers to investigate the interdependencies between BMI and FP. Third, the findings unveil the way through which BMI improves or not to FP. Fourth, we articulate research avenues still to be explored and set out an agenda for future research. Finally, we conclude our research by providing the academic and managerial implications of this paper.

2.2. Theoretical Background

Literature on business models has started to appear in the 1990s together with the development of the Internet and online businesses. The emergence of disruptive and new internet-based businesses has put in question the way managers and entrepreneurs used to make strategic choices in existing firms. Being related to corporate strategy, the business model concept is defined as "a value-centered activity system that is designed and enabled by a focal firm in order to meet perceived market needs." (Amit & Zott, 2021, p.15). A business model (BM) is composed of four design elements: the content (e.g., what are the activities contained in the business model), the structure (e.g., how the activities comprised in the business model are linked together), the governance (e.g., who is in charge of performing the activities), and the value logic (e.g., the approach to creating and appropriating value) (Amit & Zott, 2021).

Business models are frequently subject to innovation and adaptation over time (Doz & Kosonen, 2010; Sosna et al., 2010; Casadesus-Masanell & Zhu, 2013). According to Foss & Saebi (2017, p. 201), BMI involves the "designed, novel, nontrivial changes to the key elements of a firm's business

model and/or the architecture linking these elements." Amit & Zott (2021) further conceptualized BMI as adding new resources or activities, finding new ways to link resources or business activities, shifting one or more parties involved in performing business model activities, or innovating the value logic of the business model itself such as adopting a new revenue model.

Appearing as complementary to other forms of innovation such as product, technology or service-based, managers are often envisaging BMI as a further dimension of innovation that can help them generate new competitive advantage, improve their performance and ensure survival (Amit & Zott, 2012; George & Bock, 2011). Indeed, BMI involves the discovery and adaptation of fundamentally different as well as new value proposition, value capture and value creation to an existing business model (Velu, 2015). Such innovation of the different BM elements, allows firms to optimize key processes, reducing costs by uncovering new profit model, ensure value creation and delivery high efficiency, and ultimately improve their performance (Casadesus-Masanell & Zhu, 2013). Therefore, BMI changes the way in which a firm is doing business and is executed by managers with the improvement of competitive positioning as a primary goal (Casadesus-Masanell & Zhu, 2013; Karimi & Walter, 2016).

Moreover, engaging in BMI allows firms to improve resources management efficiency (e.g., combining resources into valuable potential capabilities) to achieve future performance success (Sirmon & Hitt, 2009; Sirmon et al., 2011). In this sense, BMI enhances a firm's existing capabilities and resources through the development of capacity-driven BMI (Kim & Min, 2015), permitting it to fully realize the potential of new technologies which can lead to technology-driven BMI (Chesbrough & Rosenbloom, 2002); gain and maintain competitive advantage by opening up an entire niche market or by exploiting new markets not served competitors (Amit & Zott, 2021; Hartmann et al., 2016), and bolster long-term performance (Bock et al., 2012).

Therefore, a large part of the research has focused on how BMI plays a significant role in achieving superior financial performance (Casadesus-Masanell & Ricart, 2010; Kim & Min, 2015). Although, recent studies directly address the impact of BMI on firm performance (e.g., Cucculelli & Bettinelli, 2015; Guo et al., 2017; Kim & Min, 2015), or explore the effects of different BM designs such as novelty-centered and efficiency-centered

BMs on firm performance (e.g., Wei et al., 2014; Zott & Amit, 2008), a lack of clarity regarding the real nature and implications of the BMI-FP relationship still persists.

Hence, in the attempt to better understand the nature of the relationship between BMI and FP, as well as the role that firm performance is playing in explaining why firms embark on BMI, our literature review investigate how business model research has addressed, so far, the BMI-FP relationship and its main findings.

2.3. Methodology

To analyze the relationship between BMI and FP, we conducted a systematic literature review. Because of their replicable nature, systematic literature reviews allow for a scientific and transparent process while reducing bias due to exhaustive searches for existing studies (Tranfield et al., 2003). In this sense, the systematic literature review methodology appears well suited to provide a better understanding of the drivers of the relationship between BMI and FP and to derive future research questions. Therefore, in accordance with the recommendations of Tranfield et al. (2003), we proceeded with an initial scoping that allows the development of specific parameters for the search and selection of relevant papers. The review strategy consists in a multistage process composed of four steps.

(1) *Search and exclusion of irrelevant articles*

The search process began with a search of articles published since 1990. In the early 1990s, the BMI literature began to emerge (Foss & Saebi, 2017). Thus, a period of 32 years of research on BMI and FP is covered (1990-2022). To be consistent with previous studies (e.g., Pittaway, 2004; Gilal et al., 2021), we conducted our search using the Web of Science Core Collection database and double-checked the reliability of the results using the EBSCO Source Ultimate and Scopus databases. The Web of Science Core Collection search engine was chosen as the primary database because of its comprehensive coverage of peer-reviewed research publications, particularly in the social sciences area (Pittaway, 2004; Shinkle, 2012; Schneider & Spieth, 2013; Gilal et al., 2021). The search was conducted in October 2022. Our search is supported by predefined search strings.

Previous reviews on BMI (e.g., Badenfuller & Haelfiger, 2013; Schneider & Spieth, 2013; Spieth et al. 2014; Foss & Saebi, 2017) not only used "business model" and "innovation" as main keywords, but also other keywords such as "renewal" (Doz & Kosonen, 2010), "transformation" (e.g., Aspara et al., 2013), "reinvention" (Voelpel, Leibold, & Tekie, 2004), "evolution" (Demil & Lecocq, 2010), or "dynamics" (Achtenhagen, Melin, & Naldi, 2013; Foss & Saebi, 2017). We also use these terms to identify relevant literature.

We introduced the search operators "AND" and "OR" together with the search terms previously defined to ensure that relevant literature will be searched (Pittaway, 2004, Soto-Simone et al., 2020). We also restricted our search to "articles", which constitute the standard format for scholarly published papers (Podsakoff et al., 2005; Klang et al., 2014) and to "English", the language in which scholarly discourse is published (Schneider and Spieth, 2013). To guarantee a high level of quality regarding the information contained in the articles, we selected peer-reviewed journals ranked in the top 25% or Q1 category in the Web of Science journal of citation report (Podsakoff et al., 2005; Schneider & Spieth, 2013). Once the list of journals was defined, the search was conducted.

The search resulted in a sample of 282 articles found for the BMI and FP query.

(2) *Selection of relevant articles*

We examined the articles' titles, abstract and keywords to assess their relevance for this research based on predefined inclusion and exclusion criteria. Out of scope articles are eliminated. The inclusion and exclusion criteria (cf. Annexes 1&2) are set according to previous reviews on BMI (Amit & Zott, 2012; Badenfuller & Haelfiger, 2013; Schneider & Spieth, 2013; Spieth et al. 2014; Foss & Saebi, 2017). The inclusion/exclusion criteria led to the exclusion of 212 articles, resulting in a sample of 70 articles.

(3) *Full-text assessment*

All 70 articles have been scanned. 31 articles are excluded because they considered BMI solely as a theorical hook, not as a central concept (Foss & Saebi, 2017). This step resulted in 39 articles.

(4) *Hand search*

Finally, a hand search was conducted to look for relevant references that are cited in all 39 articles (Adams et al., 2017; Soto-Simeone et al., 2020). This allowed the inclusion of an additional article, resulting in a final sample with 40 articles. Figure 3 summarizes the process of selecting the relevant literature for this review.

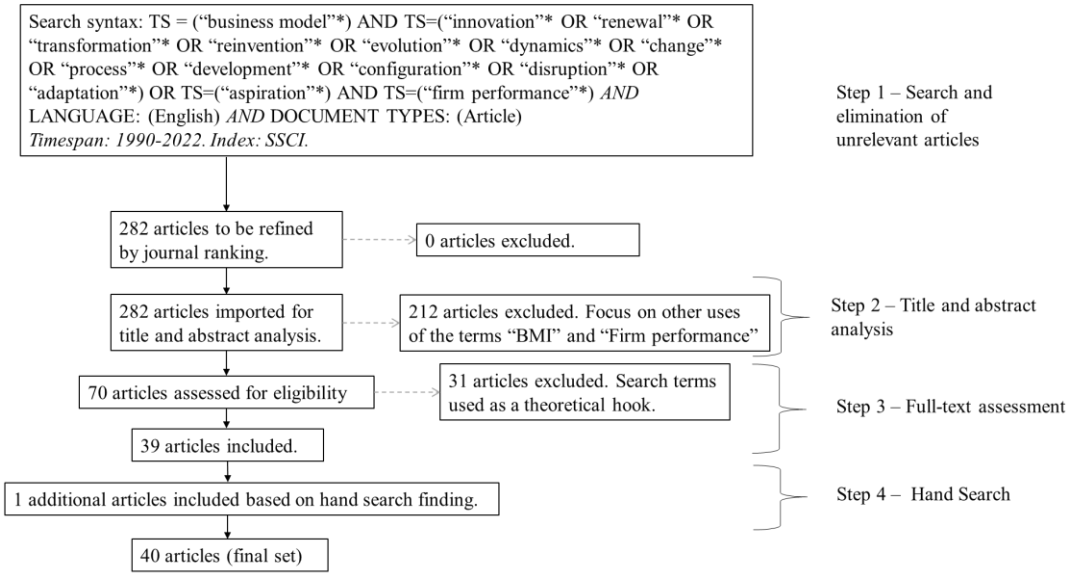

Figure 3. Search strategy, sampling and selection process

We first analyzed the final set using an Excel datasheet, in which we gathered the descriptive elements and the main results of each article. A table including all the studies included in this review is present in Annex 3.

2.4. Descriptive Findings

We further evaluate the distribution of articles by journal. Table 3 lists the journals in which the articles have been published and provides the number of articles published in each journal. The articles in the sample have been published in 26 renowned journals, with *Long Range Planning* (n=4), *Journal of Business Research* (n=3) and *R&D Management* (n=3) being the outlets where most of the selected papers have been published.

Journal Name	**Total**
Academy of Management Journal	1
Australian Journal of Management	1
California Management Review	1
European Journal of Innovation	1
IEEE Transactions on Engineering Management	1
Industrial Marketing Management	1
International Journal of Innovation Management	2
Journal of Business Research	3
Journal of Innovation & Knowledge	1
Journal of Knowledge Management	1
Journal of Manufacturing Technology Management	1
Journal of Operations Management	1
Journal of Organizational Change Management	1
Journal of Product Innovation Management	2
Journal of Production Economics	1
Journal of Small Business Management	1
Long Range Planning	4
Management Decision	2
R&D Management	3
Renewable Energy	1
Service Industries Journal	1
Small Business Economics	1
Strategic Entrepreneurship Journal	2
Strategic Management Journal	1
Strategic Organization	1
Technovation	2
Telecommunications Policy	1
Total	**39**

Table 3. List of journals used in the systematic review

Moreover, we looked at the distribution of the sample over the years. We can observe that most of the articles present in the sample have been published during the 2021 (n=10), 2013 (n=6) followed by 2020 (n=4). Figure 4 summarizes the sample distribution over the years.

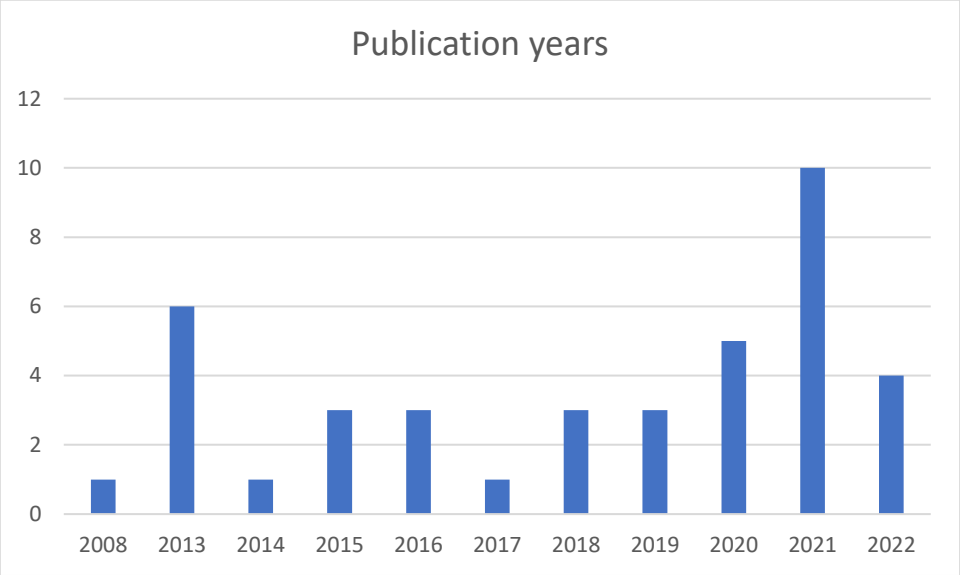

Figure 4. Publication years

We also investigated the methodological approaches used by articles in the final sample. Research on BMI and FP is dominated by empirical investigations. In our sample, four articles are theorical (e.g., Baden-Fuller & Haelfliger, 2013; Zhang et al., 2021), and 36 are empirical (e.g., Kim & Min, 2015; Futterer, Schmidt & Heidenreich, 2018). Whereas all theoretical articles are literature reviews (Baden-Fuller & Haelfliger, 2013; White et al., 2022; Zhang et al., 2021), the empirical studies leverage different methodologies. Four articles have qualitative research designs (e.g., Hamelink & Opdenakker, 2019); 31 are based on quantitative research (e.g., Kim & Min, 2015; Futterer, Schmidt & Heidenreich, 2018), and one article relies on mixed research methodologies (Clauss et al., 2021). The qualitative articles make use of the case study methodology. Among the quantitative articles, the most used method is panel data based experimental design, which accounts for 19 articles. It can also be observed that the PLS-SEM (9 articles) is the most frequently applied statistical method. Hence, the methodological approaches demonstrate that BMI literature is increasingly relying on quantitative methods for theoretical development at the firm performance level.

Finally, we further looked at the theoretical approaches adopted in our review. The most common theories used as a basis for the BMI-FP

investigation are the Dynamic Capabilities, Resource-Based View (RBV), Contingency Theory and the Transaction Cost Economics (TCE).

The Dynamic Capability theory developed by Teece (2007) accounted for 5 of the articles present in our review. The argument advanced by the literature resides in the fact that dynamic capability can help firms identify market opportunities when an environmental change occurs and meet the new market demands. Dynamic capabilities can include technological innovation, organizational structure change, and management processes improvement that, in turn, change the BM elements and stimulates BMI. Recently, Teece (2018) explained that BM design requires sensing, seizing, and reconfiguring firm's competences and skills to adapt to ever changing customer needs and environments. More specifically, the literature highlights different mechanisms through which dynamic capabilities can trigger BMI. For instance, Spieth et al. (2023) through their review, show that recent research looks at the ways through which dynamic capabilities allow for BMI, including the development of "strategic sensitivity, collective commitment, resource fluidity (Hock et al., 2016)", external knowledge acquisition capabilities and their integration to the firm's' internal knowledge, BMI capabilities meanwhile maintaining a sustainable performance in parallel, ambidexterity, collaborative capabilities, new technologies specific capabilities, and micro-capabilities related to innovation, networking and resource capitalization (Spieth et al., 2023). Hence, the dynamic capability appear as an essential element for firm to innovate their business model, in order to counter long run success threats and integrate new technologies (Menter et al., 2023).

The Resource Based View (RBV) represents 4 articles in our review. Developed by Barney (1991), the RBV argues that the way firms use and combine their resources leads to their differences in competitiveness (e.g., hard to imitate or substitute) and performance (Schnekenberg et al., 2022). From a BMI perspective, Menter et al. (2023) shows that the resource allocation can be an important tool for BMI. Indeed, the simultaneous innovation of specific BM dimensions (e.g., value creation, value capture, etc.) can lead to a complementarity or substitute effect that can create synergies or conflict in the way resources are allocated and lead to further BM and performance development. Similarly, the way resources are spread across the diverse innovation activities throughout the firm's BM, can impact

its innovation and further enhance firm performance (Menter et al., 2023). Therefore, firms can use their resources or acquire new ones in order to move toward BMI and further improve their performance.

Contingency theory represents one of the most widely used theoretical foundations for the study of the BMI-FP. Accounting for 4 articles, contingency theory maintains that "organisational effectiveness results from fitting characteristics of the organization […] to contingencies that reflect the situation of the organisation" (Donaldson, 2001, p 1). Therefore, firm performance is contingent on both internal and external environments. From this perspective, firms seek to ensure the fit and alignment of their BM using their defined set of contingency variables and the changing external environment, in order to improve their performance. Thus, contingency variables play an essential role in improving BMI for firms to adapt to their environment and increase their performance.

Transaction Cost Economics (TCE) is also used as a theoretical basis in two selected articles. TCE argues that the main reason for firms to exists is to decrease market transaction costs through the establishment of a stable governance system (Williamson, 1981). BMI literature using TCE as a theoretical lens tends to sustain that firms need to move toward BMI (e.g., by innovating the content, structure, and governance of transactions) in order to seize market opportunities (George & Bock, 2011). More specifically, Amit & Zott (2010) consider BM designs as an activity system governing intra and interfirm transactions to further seize market opportunities. Hence, the efficiency of the inter and intrafirm transactions appears as an additional way for firms to proceed to BMI and reinforce their competitive advantage through cost leadership and their performance based on new costs logics (e.g., cost structure optimization, economies of scale, leveraging operations, etc.) (Menter et al., 2023).

2.5. Topics and Contributions on BMI-FP

We analyze the sample obtained and categorize the literature into four research categories: (1) the direct relationship between BMI-FP, (2) Moderators and mediators of the BMI-FP relationship, (3) BMI acting a moderator and mediator, (4) FP and BMI, that are presented hereafter.

2.5.1. The BMI-Firm Performance : a direct relationship

Many contributions demonstrate that BMI is an important driver of firm performance (Zott et al., 2011; Foss & Saebi 2017; White et al., 2022). There is also a growing consensus that BMI is a key component that allows firms to optimize, redesign and innovate key processes and their profit model in order to reduce costs, ensure value creation, and deliver high efficiency, thus enabling performance improvement (Casadesus-Masanell & Zhu, 2013). In fact, the new business model can directly impact the firm's performance (Leppänen et al., 2021; Morris et al., 2013; Nunes & Pereira, 2021; Visnjic et al., 2016). More specifically, BM elements, which are value creation, value capture and value proposition, can significantly impact firm performance. For instance, certain value propositions are associated with specific customer segments, ensuring customer satisfaction, thus improving performance (Nunes & Pereira, 2021). In the field of digital startups, Guo et al. (2022) found that value proposition innovation positively impacts performance, whereas value creation and value capture innovation mediate the relationship. In addition, the type of business model developed can also play an important role in improving firm performance (Morris et al., 2013; Visnjic et al., 2016). For instance, Visnjic et al. (2016) shows that the adoption of a service BMI and its simultaneous interaction with product innovation results in long-term performance with a degree of short-term performance sacrifice. Similarly, BM designs (e.g., novelty, efficiency) changes can influence firm performance. Indeed, firms' combination of novelty-based with efficiency-based BM designs leads to a higher performance (Leppänen et al., 2021).

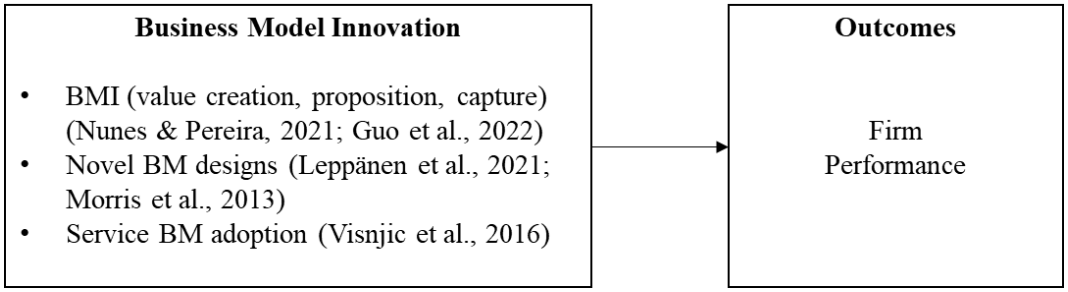

Figure 5. Direct relationship between BMI and Firm Performance

2.5.2. BMI and Firm Performance : a moderated/mediated relationship

The relationship between BMI and FP can be more complex and involve different factors. Indeed, 18 articles deal with a mediated or moderated relationship between BMI and FP.

2.5.2.1. Mediators of the BMI-FP relationship

The strategy adopted by companies while innovating their BM can highly influence their performance. Previous research showed that, while a firm's strategy and its BM are two different constructs, business model constitutes the reflection of a firm's strategy (Casadesus-Masanell & Ricart, 2010). Indeed, firms can combine different types of business model designs with firm's strategies to ensure performance. For instance, BM designs that focus on novelty together with product market strategies (e.g., early market entry, cost leadership or differentiation strategy) positively influence firm performance (Zott & Amit, 2008). Hence, firm strategy can constitute an essential driver for the BMI and FP relationship. This is especially true in the case of young firms or startups, which might not have an established strategy yet, but already developed their business model, and where BMI can help shape their firm's strategy which, in turn, impact their firm performance.

The firm's value network may also be critical to the way BMI affects firm performance. For example, as part of the firm's value network, a firm may need to integrate a new supply chain in order to ensure the implementation of the new BM and ensure firm performance. For example, Liu et al. (2021) found that Efficiency Business Model Design (EBMD) directly improves operational performance, while Novelty Business Model Design (NBMD) indirectly increases it, as supply chain integration mediates the relationship. On the one hand, EBMD aims to optimize the current transactions of companies and their supply chain partners, which can directly increase revenues and reduce costs, thus, improving operational performance. On the other hand, to adopt a NBMD, firms need to invest in new ways of transactions between firms and supply chain partners, increasing operational risks and costs. Therefore, to move towards NBMD, firms need to find support from supply chain partners, through integration with suppliers and customers, to reduce operational risk and cost and, thereby, improving operational performance. In this sense, the level of integration of supply chain stages can affect the relationship between BMI and firm performance.

BMI can help companies evolve and improve their competencies and capabilities, affecting positively firm performance (Latifi et al., 2021; Nair et al., 2013). Latifi, et al. (2021) found that organizational capabilities mediate the relationship between BMI and firm performance. Following the same logic while considering the service industry, Nair et al. (2013) found that identifying, using and effectively organizing firm's core competencies, and building the business model around them, can enhance firm performance. Hence, identifying and developing the right competencies and capabilities can help firms while innovating their BM and further ensure firm performance.

The relationship between BMI and firm performance may also depends on the firm's relationship with its customers (Chen et al., 2021; Sohl et al., 2020). In fact, Chen et al. (2021) found that BMI positively impacts SME performance, with customer trust and commitment acting as mediator. The authors shows that BMI allows for the establishment of a trusted and committed relationship with customers which, promotes a manufacturing advantage and, in turn, improve firm performance. Moreover, Sohl et al. (2020) suggest that demand-related business model addition increases firm performance and effect, which is mediated and reinforced by customers per capita income (heterogeneity) and the number of potential users of the online BM (demand). Therefore, customer relationship appears as an important driver for the BMI-FP relationship.

Finally, the company's legitimacy[2] can be an important element in the relationship between BMI and firm performance (Wang & Zhou, 2020). More specifically, Wang & Zhou (2020) show that BMI has a positive impact on social enterprise performance and that the legitimacy of the organization appears as a partial mediator. In this sense, organizations need to ensure legitimacy in the process of innovating their BM and aligning it with their value networks including customers, in order to obtain the necessary resources, achieve strategic benefits and maintain their competitive advantage. Thus, legitimacy appears as a crucial driver for the BMI-FP relationship.

[2] Legitimacy has been defined by Suchman in 1995 as "*a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions*" (Suchman, 1995, p. 574).

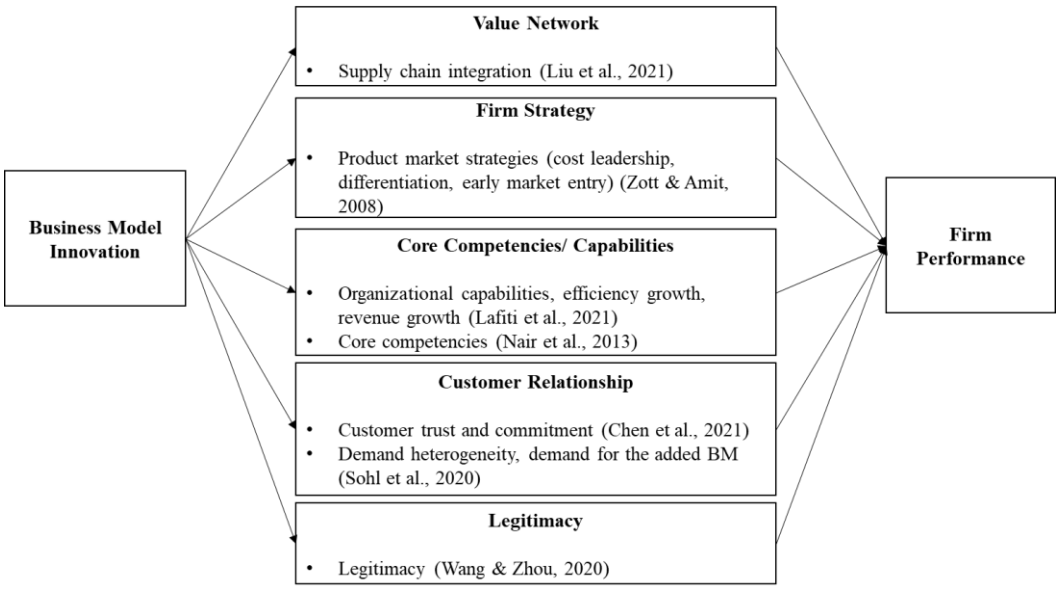

Figure 6. The mediated relationship between BMI and Firm Performance

2.5.2.2. Moderators of the BMI-FP relationship

The innovative capabilities of a company can play an important role in the relationship between BMI and FP (Liu et al., 2022; Guo et al., 2020; White et al., 2022; Desyllas et al., 2022). Indeed, innovation creates opportunities for firms to meet potential customers needs that were not addressed so far. For instance, Liu et al. (2022) found that the technology capability (e.g., firm's capability to develop new technologies and products by managing its technology resources) positively moderates the relationship between efficiency-based BM and SME performance. Similarly, Guo et al. (2020) show that both technology and consumer orientation are beneficial for the start-ups performance. Moreover, while the positive relationship between consumer orientation and firm performance is reinforced in a highly open technological environment, it is weaker in high user interactivity environments. In addition, the commercialization of such technology-enabled BMs requires for the firm to possess significant marketing capacities to ensure the new BM adoption. This is found by Liu et al. (2022) who show that the marketing capability (e.g., firm's capability to meet customers' needs by managing its marketing resources) positively moderates the interaction between novelty-based BM and SME performance. White et al. (2022) also identify BMI novelty and frequency as moderators, while showing that firms periodically engaging in BMI will benefit from a higher performance than

firms frequently innovating their BM. Another example is the work by Desyllas et al. (2022) who found that the level of innovation moderates the effect of the Business Model Reconfiguration (BMR) breadth on firm performance. Therefore, moderated levels of BMR breadth increase firm performance when BMR is complemented by a high level of innovation. Hence, innovative capabilities act as an important driver for the BMI-FP relationship.

The relationship between BMI and FP is also highly influenced by the firms' complementary assets (Cucculelli & Bettineli, 2015; Hamelink & Opdenakker, 2019; Kim & Min, 2015; Velu, 2015; Visjnic & Van Looy, 2013). Teece (1986) considers that complementary assets appear at the technological innovation chain level, including assets for innovation such as manufacturing, after-sales services and marketing assets. Later on, Taylor and Helfat (2009) have extended Teece's view, showing that complementary assets include tangible assets, intangible assets and organizational capabilities. Cucculelli & Bettineli (2015) found that the relationship between BMI and FP is moderated by intangible assets investments. Similarly, Hamelink & Opdenakker (2019) show that BMI's positive effect on firm performance depends on the BM designs selected by firms, notably complementarities-based BM designs. On the one hand, an efficiency-based BM design would result in higher performance for large-scale applications and increased customer satisfaction. On the other hand, a complementarities-based BM design would result in increased numbers of partnerships, customer segments, and channels, contributing to higher customer satisfaction for small-scale applications. In addition, Kim & Min (2015) suggest that the existence of complementary assets (e.g., possession of valuable resources and assets) between the established and the new business model lead to a higher performance when the new business model is added early (e.g., managerial choice on the timing of new business model addition) as part of the main business. However, in the presence of conflicting assets, incumbents should add the new business model as an autonomous and separate business. Hence, complementary assets, the new business model addition timing as well as conflicting assets are identified as moderators of the relationship between BMI and FP. Moreover, Velu (2015) found that partnering with third-party firms that have complementary assets reduces the performance of new firms as the level of BMI increases. Hence, partnering with third-party firms and having complementary assets appear as

moderators of the relationship between BMI and firm performance. Visjnic & Van Looy (2013), identified as well sales complementarity as a moderator between BMI and firm performance. The authors found that the substitution of products by services during the BM servitization allowed the firm to enact sales complementary dynamics that further increase firm profitability. Thus, by leveraging complementarity assets, firms can acquire and deploy resources to share or exchange them across their value network to achieve competitive advantage. Reliance on complementarity assets allows firms to decrease the cost and difficulty of acquiring new resources, providing spillover resource benefits and support for BMI and further improving FP.

Finally, the relationship between BMI and FP depends on the environmental context. Firms face a certain degree of unpredictability and change in their environment, which requires them to constantly assess and adjust their BMs in order to respond quickly to this environmental uncertainty. While a constant exposure to change can be challenging for firms, it can also push them to seek new opportunities to secure and maintain their competitive advantage, which in turn will affect their performance. For instance, Pati et al. (2018) found that companies with novelty-oriented BMs tend to exhibit higher performance than efficiency-based BMs when the environment is dynamic. Similarly, White et al. (2022) demonstrate that BMI positively impacts performance and that the relationship is context dependent, showing that both political environment and economic instability would increase the BMI-performance relationship. Hence, environmental context plays an essential role in the BMI-FP relationship.

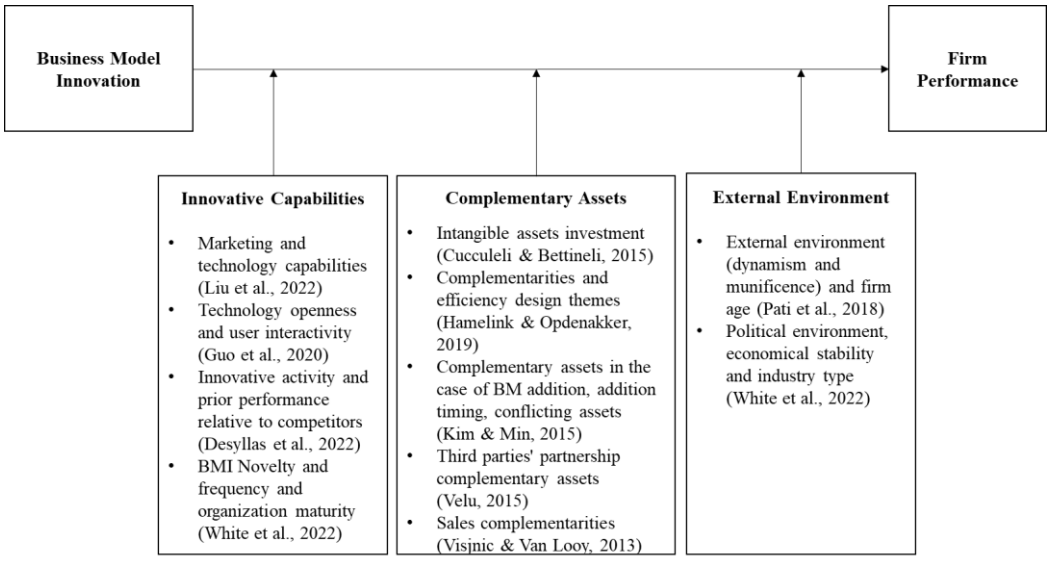

Figure 7. The moderated relationship between BMI and Firm Performance

2.5.3. BMI acting as a moderator/mediator for firm performance

BMI can also act as a moderator or mediator between other variables and firm performance. Indeed, 15 studies in our sample consider BMI a moderating or a mediating variable.

2.5.3.1. BMI as a Mediator

Firms' behavior can impact performance. This impact can be moderated by BMI (Futterer et al., 2018; Huang et al., 2013; Pati et al., 2021). For instance, taking an entrepreneurial perspective, Futterer et al. (2018) identified BMI as a mediator, showing that both effectuation and causation logics lead to BMI in situations of moderate industry growth, and, in turn, BMI enhances corporate venture performance. Similarly, Pati et al. (2021) identified BM novelty as a mediator of the relationship between entrepreneurial behavior (including bricolage, affordable loss, pre-commitment, flexibility, and experimentation) and firm performance. In another study that focuses on organizational inertia, Huang et al. (2013) found that BMI mediates the relationship between organizational inertia and firm performance. In effect, the organizational inertia can have a negative influence on BMI which, in turn, impacts firm performance.

While proceeding to changes in the strategic organization, companies might require a certain flexibility and agility which can be enhanced by BMI (Bhatti et al., 2021; Clauss et al., 2021; Najmaei, 2016; Pati et al., 2021; Wei et al., 2017). More specifically, Bhatti et al. (2021) identified BMI as a mediator of the relationship between organizational agility and firm performance. Similarly, Clauss et al. (2021) found that BMI serves as an important mediator through which a firm's ability to recombine and reconfigure its existing resources and capabilities (strategic agility) contributes to superior firm performance. Hence, organizational agility enables firms to effectively manage innovation in their business models which, in turn, allows them to achieve a better performance. As previously mentioned, Pati et al. (2021) identified Business Model novelty as a mediator of the relationship between entrepreneurial behavior (including firm's flexibility) and firm performance. Najmaei (2016) also demonstrates that BMI is a mediator of the relationship between firm's process modularity (synonym of flexibility) and performance.

Moreover, Wei et al. (2017) show that manufacturing flexibility promotes both efficiency- and novelty-centered business model designs and subsequently firm performance. Hence, organizational flexibility helps companies to better manage the process of the innovation of their business model, which further impact their firm performance.

Innovating a business model can also contribute to increasing the efficient use of a company resources and capabilities to improve the firm performance (Bouwman et al., 2019; Pang et al. 2019; Zhang et al., 2021; Gronum et al., 2016; Bhatti et al., 2021; Denicolai et al., 2014). For instance, Bouwman et al. (2019) found that BM experimentation positively mediates the relationship between resource allocation and firm performance. Similarly, Pang et al. (2019) identified BMI as a mediator of the relationship between integrative capabilities, defined as the ability of constantly reconfiguring a firm's resources and capabilities to capture market opportunities (Teece et al., 1997), and firm performance. Zhang et al. (2021) identified BMI as a mediator of the relationship between internal (e.g., internal resources and capabilities) factors and firm performance. In this sense, BMI allows for firm to effectively allocate and integrate their resources and capacities, subsequently improving their performance. As previously exposed, Bhatti et al. (2021) identified BMI as a mediator that exerts influence on how knowledge absorptive capacity and top management mindfulness impacts firm performance. In the same vein, Denicolai et al. (2014) also found that knowledge intensity provides more degrees of strategic freedom for the BM value creation architecture in medium- and high-technology firms and further improving firm performance. Therefore, BMI represents an essential tool for firm to integrate the knowledge gathered and acquired which, in turn, results impact their performance. Furthermore, Zhang et al. (2021) identified BMI as a mediator of the relationship between external (e.g., value network, technology innovation) factors and firm performance. Finally, Gronum et al. (2016) identified BM design themes (novelty, transaction efficiency, and user simplicity) as mechanisms for value appropriation from the firm's business model that mediate the relationship between innovation and firm performance. Hence, BMI can help companies increasing the efficient integration of innovation, which consequently, impact their performance.

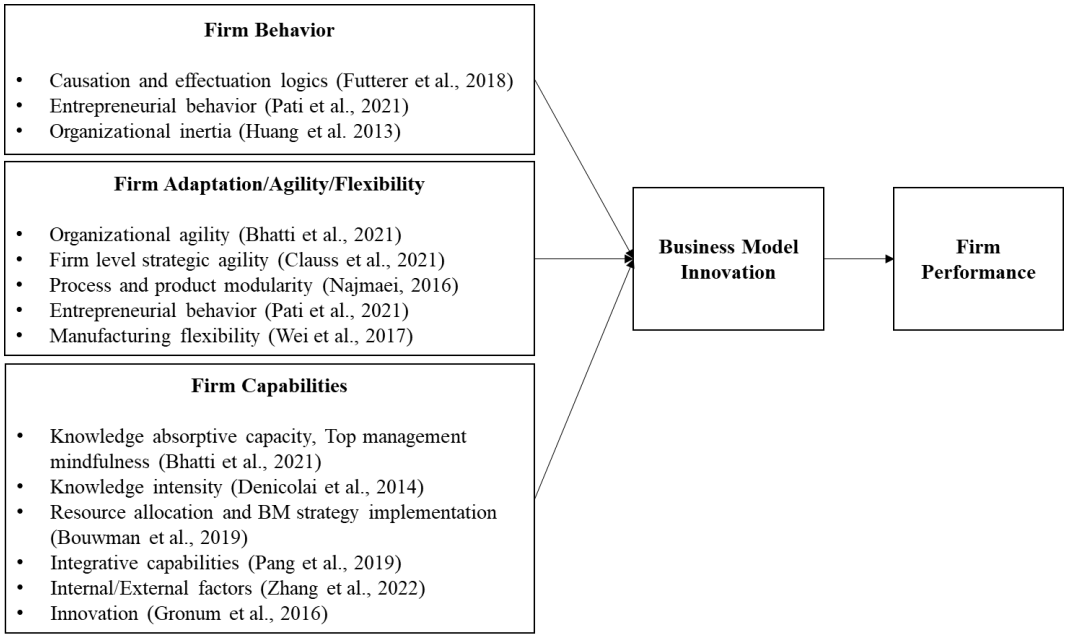

Figure 8. BMI as a mediating variable for firm performance

2.5.3.2. BMI as a Moderator

The literature has also identified BMI as an essential mechanism through which companies can leverage their innovative capabilities to improve their firm performance (Baden-Fuller & Haefliger, 2013; Denicolai et al., 2014; Rask & Günzel-Jensen, 2020; Visjnic et al., 2013). More specifically, Baden-Fuller & Haefliger (2013) identified business model choice as a moderator of the existing relationship between technological innovation and firm performance. Additionally, Rask & Günzel-Jensen (2020) show that the business model design acts as a moderator of the relationship between an emerging technology and its influence on firm performance. Similarly, Denicolai et al. (2014) found that the positive effect of knowledge intensity for external knowledge acquisition supports firm growth. In addition, knowledge intensity provides more degrees of strategic freedom for the BM value creation architecture in medium- and high-technology firms. Thus, BMI appears a moderator of the relationship between knowledge intensity and firm performance. Finally, Visjnic et al. (2013) show that the interaction between service BMI and product innovation leads to firm performance. Service BMI is a moderator between product innovation and firm performance.

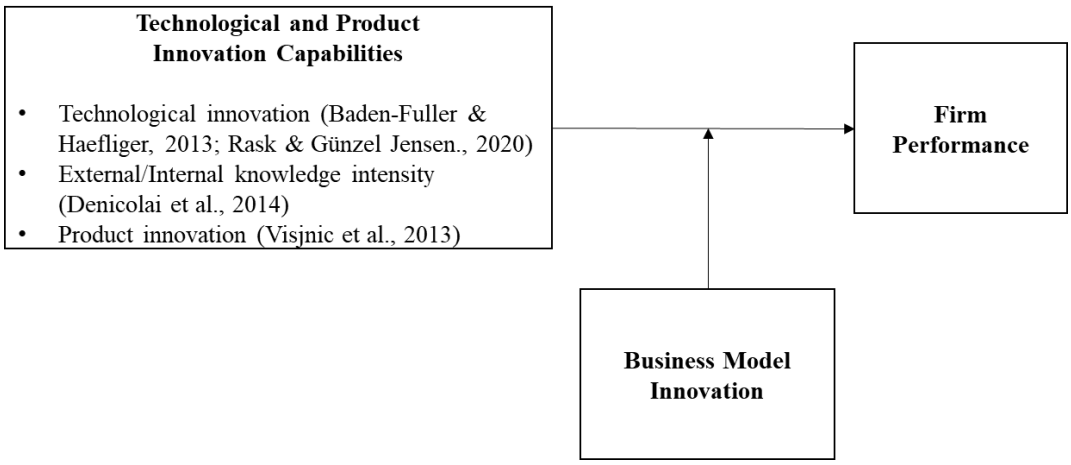

Figure 9. BMI as a moderating variable for firm performance

2.5.4. Firm Performance and BMI

As opposed to the articles reviewed above, which studied the relationship between BMI and firm performance, three articles present in our sample looked at the opposite direction by studying the influence of firm performance on BMI. To our surprise, the majority of the literature on BMI and firm performance focuses on how BMI influences performance, but not on how performance can impact BMI. We, therefore, explore the articles that look at firm performance as an antecedent of BMI.

Najmaei (2018), using a behavioral and performance theoretical lens, examines how executives make necessary adjustments to the current firm's business model. The author shows that the current business model serves as a reference point, shaping executives' aspirations and business modeling goals. These goals, along with the firm's performance, influence executives' decisions to make minor or major changes to the firm's business model. More specifically, the author proposes that executives set three complementary goals: value-description goal, value creation goal, and value capture goal, which will influence their decision on the type of changes they will make to their BM. In addition, the author suggest that executives evaluate the results of their value creation activities based on three criteria: "(a) their firm's historical value creation performance, (b) the current value creation performance of similar firms, and (c) value creation expectations," combining the PF concepts of historical aspirations, social aspirations and expectations with the BM elements. Therefore, executives' perception of their aspiration levels impacts their strategic emphasis on value creating or

value capturing activities. For example, “perceived performance above or below the aspiration levels on value creating goals would shift emphasis of executives to evaluating outcomes of value capturing activities and vice versa.” (Najmaei, 2018, p. 209). Thus, discrepancies in performance relative to aspirations influence the business model transformation based on executives’ perceptions of whether the current business model is failing to meet expectations.

Similarly, Cheng et al. (2022) examined how PF relates to firms’ relative strategic emphasis on value creation (VC) and value-appropriation (VA), adopting a performance theory and competitive theory perspective. Their results suggest that board independence and media coverage moderate this relationship and, more specifically, that negative PF increases firms’ strategic emphasis on VC relative to VA because VC represents an exploratory aspect that allows firms to seek new sources of economic rents. A low to medium level of positive PF increases firms’ relative emphasis on VC, while a medium to high level of positive feedback decreases it with a focus on VA, as it possesses an exploitative aspect, allowing the firm to continue leveraging the existing value. Thus, the authors show that firm’s strategic emphasis is guided by performance relative to aspirations, thus adapting their strategic choices to the discrepancies between firm’s actual performance and the target, which in turn affects their business model characteristics.

Yu, Hao & Wang (2020) empirically investigated the relationship between organizational search and BMI, using knowledge-based theory and organizational theory. Both perspectives are deeply rooted in the Behavioral Theory of the Firm, Resource Based View and Transaction Cost Theory (see Kaplan, 2001). Efficiency-centered BMI is found to be influenced by local search, whereas novelty-centered BMI is influenced by boundary-spanning search. Knowledge inertia mediates the relationship between organizational search and BMI by strengthening the effect of local search, but weakening the effect of boundary-spanning search. Hence, organizational search initiated by a deviating performance from aspirations affects the different BMI designs adopted by the firms.

Thus, all three articles clearly suggest that the performance feeds back into BMI.

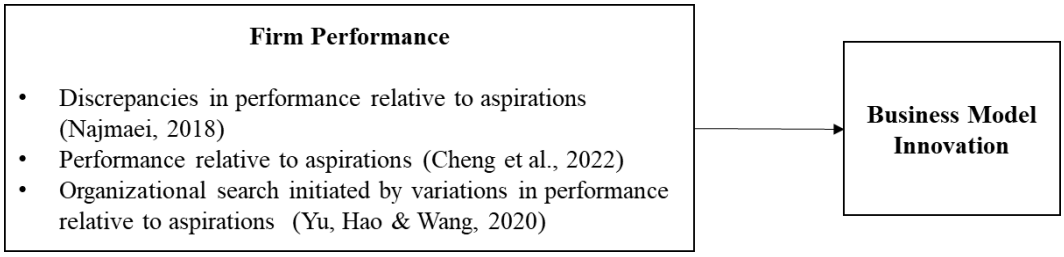

Figure 10. Firm Performance and BMI

2.6. Discussion and Future Research Agenda

After reviewing and analyzing how business model research has addressed, so far, the BMI-FP relationship and its main findings, we here present an agenda including directions for future research.

2.6.1. Direction 1. Further explore the BMI-FP

While the contributions on BMI-FP present in our review are essential in consolidating the empirical evidence proving the positive impact of BMI on FP, little is known on the negative impact that BMI could have on performance. BMI, in order to generate good performance, must pass through several trial and errors phases, which constitute a long and iterative process before reaching a certain maturity that allows for firm performance (Johnson, 2010). Hence, at the beginning of such an innovative process, firms might start by generating a negative performance before being able to reach a mature enough BM that generates a positive performance (Johnson, Christensen & Kagermann, 2008; White et al., 2022). In addition, when BM innovativeness is high, the market might not be ready to adopt it and BMI might not always be conductive to FP. The complexity of the new interacting BM elements, while ensuring a competitive advantage in making it hard to imitate in the short-run, might not make it easy to predict the real performance implications in the long run, eventually taking an inverted U-shape form, with a negative performance followed by a positive one later on. Hence, future research could further look into the negative aspects that innovating a BM can imply and their effect on FP.

The way performance is measured can also highly influence the way BMI impacts it. Firm performance appears to be a multidimensional construct. Most of the literature is measuring FP in two ways: (a) by using financial measures representing firms growth and profitability, such as sales growth

rate, profit margin, and return on assets (ROA), return on equity (ROE), stock market value, operating performance or innovation performance (e.g., Clauss et al., 2021; Morris et al., 2013), and (b) by means of perceptive measurements through interviews or surveys capturing the perception of senior or top level managers about firm performance (Zhang et al., 2021). While these types of measurement allow one to develop and explore the BMI-FP relationship, there is a need to diversify performance metrics to better study and enlarge the scope by which we understand FP (Porter & Siggelkow, 2008). For instance, future research could consider performance measurement based on sustainability-based variables or social-based components.

Most of the research conducted focus on the impact that BMI has on FP, but do not question if the reverse is true. While many antecedents of BMI have been identified in the literature, our review reveals that FP is still scarcely addressed as a potential driver for BMI. Hence, future contributions to the BMI literature must explore if FP constitutes a potential driver for BMI. Looking at this reverse relationship could shed a light on the mechanisms allowing firms to innovate their BM based on their performance.

2.6.2. Direction 2. Contingencies, mediators and moderators

2.6.2.1. Internal drivers for firm performance

The role of firm capabilities. A set of internal drivers is represented by the role that firm capabilities have to enhance firm performance. These capabilities include a large set of core competencies and resources that a company possesses and that are useful to develop a new BM and enhance firm performance. For instance, our review shows that innovative capabilities are essential in order for a firm to innovate BM and achieve performance. Our review further shows that complementary assets can be an important driver for the BMI-FP relationship. The learning process emerging from such a resource sharing mechanism can help firms internalize external capabilities or knowledge, further improving the firm's innovative capacities and fostering BMI. Hence, innovative capabilities that leverage complementary assets inside value networks are crucial drivers for the BMI and firm performance relationship.

The role of BM designs. Novelty-centered BMs allow firms to reinvent or recombine their current BM components to increase value creation and

appropriation by implementing new activities that permit the firm to connect previously unrelated parties, linking activities in new ways, or designing new transaction mechanisms. Efficiency-centered BM aims at reducing transaction complexity and uncertainty among the BM elements. Therefore, both BM designs can affect the relationship between BMI and firm performance, notably by influencing the strength of the effect that BMI has on FP.

While previous research has shown that BM designs moderate or mediate the BMI-FP relationship, the real effect of each BM design on improving FP is still under researched. Future studies could investigate better the effect of BM designs, notably when passing from one design to another and the way this process is impacting firm performance.

2.6.2.2. *External drivers for firm performance*.

The relationship between BMI and FP can be highly influenced by the firm's external environment. Contingency variables such as environmental dynamism, instability or uncertainty represent important external drivers that moderate or mediate the BMI-FP relationship. For instance, in an environment with low uncertainty, customer demand is relatively stable and competitors' behavior is quite predictable. Therefore, firms might be reluctant to change anything in their current BM, as the effect of BM change on performance is unclear. However, in a highly uncertain environment, firms will be pushed to assess, acquire and integrate competencies and resources. Firms will be required to redesign their value proposition, their internal organization and external network, while simultaneously adapting BM elements. Hence, environmental uncertainty affects the relationship between BMI and FP.

The firms' technological environment can also impact the BMI-FP relationship. The introduction of disruptive technologies requires some to incorporate a new BM to enhance value creation and meet the new customer demand (Markides, 2021, 2006) . The commercialization of such new technology must be associated with an appropriate BM, involving the creation of a new BM to achieve the required performance. Hence, the technological environment represents an important driver that influences the BMI-FP relationship.

When firms address the impact of their environmental context, they may face an innovation legitimacy issue. In fact, BMI could affect the existing relationship existing between the firm and its stakeholders. For example, the agreements established and associated with the existing BM, such as government support, customers' needs, attracting investors, might not be aligned once the BM is innovated. Therefore, legitimacy appears to be a crucial external factor influencing the BMI-FP.

While previous literature has clearly established that the external environmental context has an impact on the BMI-FP relationship, a large part of the spectrum and variety of drivers remain to be explored. In this sense, future research could consider the impact of additional external drivers (e.g., political instability, social context, etc.) and their role in mediating or moderating the BMI-FP relationship.

2.6.3. Direction 3. BMI as a moderator/mediator

Our results show that BMI acts as a mean to translate firm behavior into performance. In fact, BMI can act as a mediator between different behaviors (e.g., effectuation and causation logics), and corporate performance. Therefore, BMI appears to be an essential tool for integrating firm's behavior. Hence, future research could investigate the way in which firm behavior can enhance BMI and increase firm performance.

The literature suggests that resources and capabilities influence the BMI that firms can achieve. However, our review shows that BMI can also be a means by which firms develop new capabilities and resources that allow them to reassess and update their current strategy and improve their performance. In this sense, BMI acts as a tool in order for firms to transform their resources and capabilities into customer value, by integrating a new value proposition and leveraging new approaches to value creation. For example, research has shown that resource allocation and capability integration (e.g., knowledge absorptive capacity, innovative capability, technological innovation, knowledge acquisition, etc.) can be achieved through BMI, which in turn has a positive impact on firm performance (Bhatti et al., 2021; Pati et al., 2019). Therefore, BMI may represent an approach through which firms can allocate their resources more efficiently and integrate capabilities to further improve their performance. Thus, future research could further investigate the role of

BMI in enhancing and influencing the relationship between firm's resource allocation and capability integration and firm performance.

In addition, the literature explains that BMI can be a facilitator for the strategic flexibility and agility of the firm. While making changes in the strategic organization, firms may need a certain flexibility and agility, for which BMI can help. In fact, the organizational structure is highly interconnected to the elements of a BM, and, hence, is inevitably affected when a firm innovates its BM. Therefore, changes in the firm's organizational structure by innovating BM can enable firms to develop their strategic agility and flexibility, which determines their readiness to face external events in a timely manner (Doz & Kosonen, 2010). This enables the firm to overcome organizational inertia by switching from one BM to another while improving firm performance. Therefore, future research could further investigate the role of BMI in enhancing firm's flexibility and agility and its impact on firm performance.

2.6.4. Direction 4. BMI studies characteristics

Theoretical approaches. Our review sheds light on the common theories used as a basis for the BMI-FP investigation. Dynamic capability (Teece, 2007), RBV (Barney, 1991), Contingency Theory, and TCE appeared as the most adopted theoretical bases. While all these theories helped the exploration of the BMI -FP relationship, many other theoretical lenses are still needed to be explored.

Future research could expand the theoretical lens by looking at the Performance Feedback Theory (PFT). Developed from the Behavioral Theory of the Firm, the PFT shows that performance relative to aspirations ("desired levels of performance in specific organizational outcomes", Shinkle, 2012, p. 2) influences risk taking, organizational change, organizational innovation such as new product innovation, innovation search and R&D intensity (Shinkle, 2012). However, exploring the applicability of PFT to BMI is still missing in the current literature.

Another theory to be explored is the social network theory. According to this theory, the value network enables firms to access different types of external resources and knowledge, which allows them to identify opportunities and find appropriate partners (Chesbrough, 2010; Guo et al., 2017). Therefore,

future research could explore the role of value network for promoting BMI and enhancing FP.

Methodology. Our review shows that the BMI-FP relationship is increasingly being studied quantitatively. Although this implies that the field is actually expanding and shifting from conceptual and theoretical research to more empirically data-based research, most of the studies contained mainly applied a survey methodology combined to a Structural Equation Modelling (SEM) method. Therefore, future research could consider the use of other quantitative methods. For instance, the simulation method has proven to be useful for firms to reduce the trial-and-error phase and to help them test their new BMI before implementing it in real life. The application of such method could allow developing a forward-looking perspective on the BMI-FP relationship, especially in the case of predicting long-term performance, rather than looking backward like it is the case in regression-based studies.

2.7. Conclusions

This review provides a systematic overview of existing academic contributions related to the relationship between BMI and FP and, proposes avenues for future research. The literature on the BMI and FP relationship was analyzed and clustered into three distinct research streams. Potential theoretical foundations were discussed and directions for future research on BMI-FP were suggested. Three major emphases of existing publications were identified throughout the systematic review conducted. First, the identification of the ways, in which BMI directly affects FP are investigated. Second, the elements that constitute mediators and moderators to the BMI-FP relationship are explored. Third, the consideration of BMI acting as a mediator or moderator and its effect on FP are analyzed. The rising number of publications clearly indicates a strong interest in the topic. Additionally, the wide spread of publications across multiple and various management fields indicates that research on BMI and FP has not found its theoretical base yet and attracts interest to further explore it from different perspectives.

Four particular directions for future research have emerged while analyzing the current state of literature within the identified research streams. First, the question of the direction in which BMI and FP mutually impact each other needs to be further addressed. Second, a greater understanding of the moderators and mediators influencing the BMI-FP relationship is needed.

Third, the effects of BMI acting as a mediator or moderator on a firm's results need to be further emphasized. Fourth, besides a large amount of qualitative and exploratory research, the need for additional empirical studies to further increase our understanding of the BMI-FP relationship still persist, along the necessity for different theoretical perspectives and more diverse methodological approaches that can increase the development of the BMI-FP research field.

From a managerial point of view, this paper facilitates and improves the discussion on business model innovation and its impact on firm performance. Making adjustments to established business models or introducing a new one demands for a firm to focus on the current state and the potential developments of its business model to ensure and sustain its performance. BMI requires a firm to focus its attention on the available tools and arising opportunities within the firm's environment to be able to use them to keep its performance afloat.

This research presents several limitations. First, the interdisciplinary nature of the BMI and FP research made it a major challenge to synthetize the data, assess their quality and incorporate the findings without favorizing any form of knowledge, while producing a "meta-analysis" (Pittaway, 2004). Another limitation encountered while conducting the review, has been related to the preference of certain type of publications in some disciplines (Foss & Saebi, 2017). To some extent, the findings may have overlooked some important contributions from certain fields (e.g., sociology or ecology). This happens because systematic reviews rely heavily on detailed searches in citations databases. Therefore, in a discipline where the publication preference tends to favor document types such as books or books chapters (as in sociology for example), there is a high probability for the systematic review to overlook these contributions (Zott et al., 2011). Therefore, the literature published in other type of documents might have been overlooked due to the methodology adopted. Indeed, numerous books or chapters have been published in recent years that might bring a wider view on the BMI and FP concepts, but have been excluded from the review (Spieth et al., 2014; Zott et al. 2011). However, the current databases available allow for controlling for this kind of bias and allow to easily remove these limitations.

Chapter 3

Does Performance Feed Back?
Understanding The Interrelationship Between Business Model Innovation And Performance Feedback

ABSTRACT

The emerging BMI literature has demonstrated the importance of BMI for firm performance. However, insights on the effect of firm performance on BMI have been fragmented. Accordingly, this conceptual development paper reviews the PFT literature to provide insights on the effect of firm performance on BMI. We further provide a research framework suggesting the need for a new theoretical approach that could broaden both BMI and PF literature perspectives.

Keywords: Performance Feedback, Business Model Innovation, Organizational Aspirations, Research Framework.

3.1. Introduction

Over the last years, BMI has gained importance, as the success of its implementation has been associated with competitive advantage and firm performance (Casadesus-Masanell & Zhu, 2013; Massa & Tucci, 2014). BMI is defined as new changes to one or several elements of a business model: value creation, value proposition, and value capture (Clauss, 2017; Foss & Saebi, 2017; Klein et al., 2021; Teece, 2010). However, as underlined by Greve (2003a), innovations can transform organizations and industries, but are also repleted with risk. In this sense, BMI can represent a risk such as uncertain financial outcomes and loss of existing customers for organizations because the decision to engage in such an organizational depends on their performance and aspirations (Baum et al., 2005). In fact, managers compare their expected firm performance with aspiration levels defined as the "desired performance levels in specific organizational outcomes" (Shinkle, 2012, p. 416; Cyert and March, 1963), which depend on performance relative to prior aspirations, and performance of comparable firms (Cyert and March, 1963). A large literature on the Performance Feedback Theory (PFT) evolving out of the Behavioral Theory of the Firm (BTOF) demonstrates that performance relative to aspirations (or "attainment discrepancy") influences risk taking (March & Shapira, 1987; Fiegenbaum, 1990; Bromiley, 1991; Baum et al., 2005; Miller & Chen, 2004). Although some connections can be drawn between the different concepts and theories previously evoked, such as both organizational aspirations and BMI being theorized as influencing firm performance, these two theoretical streams have evolved independently, which might in part be due to the newness of the BMI literature (Foss & Saebi, 2017).

Therefore, the purpose of this paper is to explore the relationship between PF and BMI. As companies adapt over time, the study examines why and how performance relative to organizational aspiration levels promote change and innovation at the business model level. Based on the existing literature and analysis of empirical findings, we suggest that BMI and organizational aspirations evolving from the PFT, can contribute to a better understanding of the antecedents of BMI. Therefore, this paper aims to answer the following question: *How performance feeds back to business model innovation?*

Toward this aim, this conceptual development paper elaborates on the PFT literature. Overall, our study makes several contributions to the BMI and PFT

literature. First, this research provides an up-to-date and comprehensive overview of the conceptual basis and methodologies used in the fields. Second, the literature reviewed unveil the mechanisms and drivers of the process to BMI, allowing to shed a light on PF as one of the under researched perspective applied to BMI and further explore the nature of their relationship, notably showing that PF constitutes an antecedent to BMI. Fourth, we define a framework for future research to further enhance the study of the relationship between PF and BMI. Finally, a brief discussion and conclusions are provided.

3.2. Theoretical Background and Purpose

The emergence of new and disruptive internet-based businesses in the 1990s has put into question the way in which managers and entrepreneurs were making strategic choices in existing firms. Since then, evolving out of the research on business models and the fact that they are constantly subject to innovation and adaptation over time, the term Business Model Innovation has emerged in the BM literature. According to Foss & Saebi (2017, p. 201), BMI involves the "designed, novel, nontrivial changes to the key elements of a firm's business model and/or the architecture linking these elements." Amit & Zott (2021) further conceptualized BMI as adding novel resources or activities, finding new ways to link resources or business activities, shifting one or more parties involved in performing business model activities, or innovating the business model value logic itself such as the adoption of a new revenue model. Therefore, BMI has been coined as a particularly relevant and interesting unit of analysis for academics who study them and practitioners that leverage BMI to ensure the success of their companies (Doz & Kosonen, 2010; Sosna et al., 2010; Casadesus-Masanell & Zhu, 2013).

Although research on BMI has intensified during the last decade, the triggers of BMI are still not well investigated. Moreover, a large part of the research has focused on the performance implications of BMI by directly addressing the impact of BMI on firm performance (e.g., Cucculelli & Bettinelli, 2015; Guo et al., 2017; Kim & Min, 2015), while others explored the effects of different BM designs such as novelty-centered and efficiency-centered BMs on firm performance (e.g., Wei et al., 2014; Zott & Amit, 2008). However, the majority of these studies implies that BMI plays an important role in enhancing firm performance, but do not explore if the reverse is true. Therefore, despite the literature focusing on BMI and firm performance

relationship, little is known about the impact of firm performance on BMI, in other words, how firm performance might feed back into BMI.

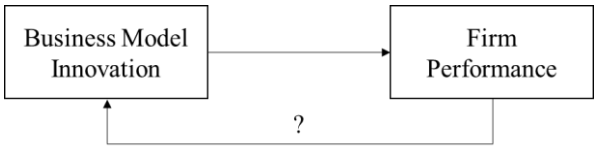

Figure 11. Gap in the BMI- Firm Performance relationship

In the attempt to better understand the role of firm performance in explaining why firms embark on BMI and explore how firm performance feeds back into BMI, we draw on the PFT as a theoretical lens. Intuitively, companies exhibiting a high level of performance may not have any incentive to change their business models: why change a business model that functions well? However, for a firm that is experiencing a strong decline in performance, any BMI may come too late, as the company may have already lost competitive advantage, making any attempt to improve the situation look rather desperate. Thus, firms may find themselves trapped in a difficult dilemma when they envisage changing their business models.

According to PFT, the decision to engage in such innovation based organizational changes mainly depends on the firm's performance as well as the aspirations the firm intends to reach (Baum et al., 2005). Indeed, PFT states that managers compare firm's performance to aspiration levels defined as the "desired performance levels in specific organizational outcomes" (Shinkle 2012, p.416; Cyert and March, 1963). These aspiration levels depend on two aspects: (i) the performance relative to prior aspirations, and (ii) the performance of comparable firms (Cyert & March, 1963). A fair body of literature on PFT, which evolved out of the Behavioral Theory of the Firm (BTOF), demonstrates that performance relative to aspirations (or "attainment discrepancy") influences risk-taking (March & Shapira, 1987; Fiegenbaum,1990; Bromiley, 1991; Miller & Chen, 2004), organizational change (Baum et al. 2005; Cyert & March, 1963; Greve, 1998, 2003a,b), organizational innovation such as new product innovation (Parker, Krause & Covin, 2017), innovation search (Yu, Minniti & Nason, 2019) and R&D intensity (Xu, Zhou & Du, 2019). The applicability of PFT to BMI has not been explicitly investigated. However, it seems reasonable to argue that PFT

is a relevant perspective that can support the understanding of the impact of firm performance on BMI and further explore the implications of PF for BMI.

Consequently, reviewing the literature on PFT serves two specific purposes. The first objective is to capture the current literature addressing both PF and BMI. Based on the findings from the literature review conducted in Chapter 1, the literature relating both PF and BMI is scarce. Indeed, the PFT has evolved independently from the BMI literature and takes its roots in organizational behavior, as opposed to BMI, whose roots are still to be clarified by the research community (Spieth et al., 2014; Wirtz et al., 2016; Foss and Saebi, 2017). Therefore, given the lack of literature addressing both PF and BMI observed, the second purpose of this conceptual development paper is to further conduct a comprehensive review of the PF literature in order to identify key insights on how the PFT can be related to BMI and propose a future research framework opening new avenues to extend this body of knowledge.

3.3. Methodology

Following Tranfield et al. (2003), the search process begun by looking for published articles since 1990. In early 1990s, BMI literature started to emerge (Foss & Saebi, 2017), whereas the literature on PF was starting to mature (Gavetti et al., 2012). We conducted our search using the Web of Science Core Collection database and verified for reliability of the results with a double check using the EBSCO Source Ultimate and Scopus databases, being consistent with previous studies (e.g., Pittaway 2004; Gilal et al., 2021). As a primary database, the search engine Web of Science Core Collection was chosen, given its comprehensive coverage of peer-reviewed research publications especially in the social sciences area (Pittaway 2004; Shinkle 2012; Gilal et al. 2021). The search was performed in October 2022 and supported by pre-defined search strings.

Previous reviews on PF helped us identify relevant keywords (e.g., Fiegenbaum et al., 1996; Greve, 1998, 2003; Baum et al., 2005; Shinkle, 2012). We also restricted our search to “articles”, which constitute the standard format for scholarly published papers (e.g., Podsakoff et al. 2005; Klang et al. 2014) and to “English”, the language, in which scholarly discourse is published resulting in a sample of 276 articles. We examined the articles’ titles, abstract and keywords to assess their relevance for this

research based on predefined inclusion and exclusion criteria. Out of scope articles are eliminated. The inclusion and exclusion criteria were set according to previous reviews on PF (e.g., Fiegenbaum et al., 1996; Shinkle, 2012). The inclusion/exclusion criteria led to the exclusion of 160 articles, resulting in a sample of 116 articles. The full texts were retrieved. We excluded 91 articles related to BMI and PF solely as a theorical hook, not a central concept (Shinkle, 2012). This step resulted in 25 articles. Finally, a hand search was conducted to look for relevant references that are cited in all 25 articles (Adams et al., 2017; Soto-Simeone et al., 2020), and an additional study was added leading to a final set of 26 articles.

3.4. Descriptive Findings

Our sample is characterized by 26 articles. In addition, we further evaluated the distribution of articles by journal. The articles in our sample have been published in 18 renowned journals, with the journals of the *Academy of Management Journal* (=3), *Long Range Planning* (n=2), *Organization Science* (n=2), *Strategic Organization* (n=2) and *Journal of Business Research* (n=2) being the main outlets where the literature has been published. Moreover, we looked at the distribution of the sample over the years. We can observe that most of the articles present in the sample have been published during the years 2019 (n=5), 2021 (n=4) followed by 2020 (n=3). Finally, we had a look at the methodological approach. While one article presents a theoretical method addressing PF and BMI together by proposing conceptual propositions (Najmaei, 2018), the majority of research on PF is based on empirical investigations at the firm level of analysis, representing 25 articles in our sample (e.g., Greve, 2003; Iyer & Miller, 2008).

Moreover, we can observe that our sample is dominated by quantitative research designs that account for 25 articles (e.g., Iyer & Miller, 2008; Labianca et al., 2009). When looking at the method used, the PF literature is mainly using panel data based experimental design, accounting for 20 articles. When taking a closer look at the statistical analysis methods, we can observe that the literature on PF is widely using multiple regressions (n=8) and OLS regressions (n=8). These descriptive results show that the PF literature is dominated by quantitative studies and mainly built based on theories such as the BTOF. In addition, it shows the maturity of the field,

reflecting the objective of clarifying and reaching more detailed results, notably regarding the implications of different aspiration levels. Hence, the literature on PF was largely developed by exploring and applying the initial basis of its seminal theory, but has not looked to further expand theoretically, notably due to the lack of qualitative work to further explore the underlying mechanisms of the relationship between PF and other elements, among which BMI.

3.5. Sample Findings

In the next section and based on the previous sample characteristics, we will further explore the findings of our research by clustering our sample into 2 categories: (1) Extant research on PF and BMI and (2) A review of the current PF theory investigations.

3.5.1. Does Performance Feed Back Into BMI ?

While conducting the comprehensive review, our search for the literature lead to same number of articles dealing with both BMI and PF literature as discovered in Chapter 2. Indeed, only three articles present in our sample are studying the influence of firm performance on BMI and being the same as in Chapter 2. We hereafter provide a short summary to recall the article content and a representation of the relationship established between PF and BMI (Figure 10) as well as a detailed analysis of the articles is provided in Chapter 2 section 2.5.4.

The first article from Cheng et al. (2022) is looking at how PF relates to firms' value-creation (VC) and value-appropriation (VA) relative strategy focus. The findings suggest that board independence and media coverage moderate this relationship and, more precisely, that negative PF increases firms' strategic emphasis on VC versus VA. Therefore, the authors show that firm's strategic emphasis is guided by performance relative to aspirations, adapting their strategic choices to the discrepancies between firm's actual performance and goal, in turn impacting their business model characteristics.

Similarly, the second article from Najmaei (2018) investigates how executives proceed to required adjustments to the current firm's business model, by adopting a behavioral and performance theoretical lens. The author shows that the current business model acts as a reference point and shapes executives' aspiration and business modeling goals. These goals together

with the firm performance, influences executives' decisions for minor or major changes to the business model of the firm. Thus, discrepancies in performance relative to aspirations influences the business model transformation based on executives' perceptions on whether the current business model fails to meet goals expectations.

The third article developed by Yu, Hao & Wang (2020) empirically studies the link between organizational search and BMI. The authors found that efficiency-centered BMI is affected by local search, whereas novelty-centered BMI is affected by boundary-spanning search. Knowledge inertia mediates the relationship between organizational search and BMI by strengthening the impact of local search, but weakening the effect of boundary-spanning search. Hence, organizational search initiated by variations in performance relative to aspirations impacts the different BMI designs adopted by the firms.

Finally, these three articles clearly suggest that the performance feeds back into BMI. Hence, given the scarcity of the articles found on the firm performance implications in BMI, we decided to further review the literature on Performance Feedback Theory (PFT) and further explore the role of firm performance and its influence on BMI.

3.5.2. Performance Feedback Theory

In this section, we review the literature found on PFT with the goal of exploring the how performance feed back into BMI. The 23 articles are analyzed and categorized into different streams of research and a summarizing table is present in Annex 4.

3.5.2.1. Direct relationship between Performance Feedback and Organizational Change

Our sample only consists of two articles, which are directly related to PF and organizational changes. Thus, we here explore how PFT applies to organizational changes in companies and how it can transfer to BMI.

First, Ceci, Masciarelli & Prencipe (2016) investigated the relationship between the scope of architectural change of a firm and its performance relative to its aspirations. The authors show that organizations pursue different strategies depending on their performance. Therefore, the size of the performance gap affects the scope of the change that the firm undertakes in

its organizational architecture. Second, Jirásek (2017) examines the R&D investment behavior of companies in the US pharmaceutical industry and finds a direct link between the level of aspiration (historical and social) and the change and intensity of R&D spending. For example, the author shows that a decrease of increase in R&D budgets can significantly affect firms' short-term performance. The results further support Bromiley & Washburn's (2011) critique of single-variable aspiration models and, show that R&D intensity change as an explanatory variable seems to fit with BTOF assumptions better than R&D expenditure change. This result demonstrates the importance of social aspiration, particularly through the observed response implied by the author's model of R&D intensity change including a one-year lagged social discrepancy. The author shows that a decrease in R&D spending while failing to reach a social aspiration level seems logical because a firm needs to improve its performance immediately as its financial situation be critical. Thus, the author further confirms the impact of performance feedback on R&D investment and the change it can promote at the organizational level when firms do not reach their desired aspiration level.

These two first studies clearly show the existing direct relationship between PF and organizational change, suggesting the existence of a relationship between firm performance and BMI. However, in some cases, this relationship may not be that straightforward and may involve additional factors.

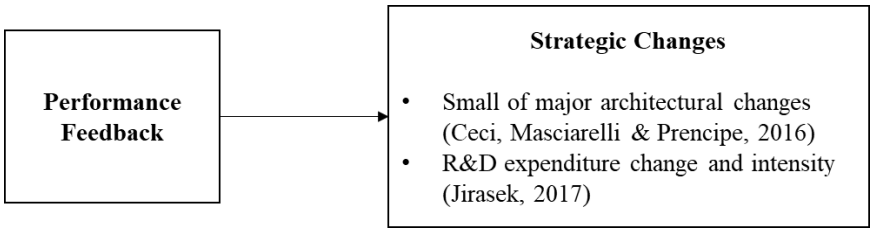

Figure 12. Direct relationship between Performance Feedback and Organizational Change

3.5.2.2. The role of slack, performance discrepancies and additional moderators

Slack resources. Six articles in the sample identified slack as a moderator. Slack resources constitute an essential asset for companies, particularly when

they perform below their aspiration level. For instance, Chen (2008) identified slack resources as a moderator of the relationship between performance, aspirations, expectations, and firms' R&D search investments decision making. The author's findings show that when firms underperform, their problem-driven R&D search activity increases. In contrast, R&D search intensity of underperforming firms is reduced while being above social aspirations but increases when above historical aspirations. Hence, slack resources play an essential role in increasing R&D intensity, which can further lead to organizational changes. Examining the effects of performance relative to aspiration level, slack, and proximity to bankruptcy on firm's corporate acquisitions timing, Iyer & Miller (2008) show that firms performing below aspirations increase acquisition activity, but not when firms perform above aspirations. Therefore, slack increases the acquisition likelihood while it is prevented by financial distress. Lu & Fang (2013) looked at how firms adjust their R&D investment when answering to performance discrepancies and how these adjustments impact slack resources. The authors determined slack (absorbed: capacities tied up to companies' current operations, vs. unabsorbed: currently uncommitted resources), distance from bankruptcy and BG (Business Group)-affiliated and unaffiliated firms as moderators of the relationship studied, finding that when faced with performance discrepancies firms will increase R&D investment but, when close to bankruptcy, will decrease R&D spending. Moreover, unabsorbed slack positively impacts R&D investment and absorbed slack negatively affects R&D investment. Lu & Wong (2019) further confirmed that financial slack is a moderator of the relationship of how, in response to PF, firms adapt their exploratory and exploitative innovation activities. Indeed, the higher (lower) a firm's performance is above (below) aspirations, the lower (higher) will be the share of exploratory innovation activities. Thus, financial slack increases the share of exploratory innovation activities, except when the firm is underperforming. In the same vein, Manzaneque et al. (2020) looked at how performance below aspirations levels impacts innovation efficiency, identifying levels of financial slack and the level of family involvement in the firm's management as moderators. Indeed, when firm's performance is below aspiration, firms are more efficient in converting R&D expenses into technological innovation, both in the short and long run. This effect is reinforced in the presence of high levels of financial slack but is lowered as family involvement in management

increases, family's involvement in the firm permits the pursuit of specific family-related goals and strategies that further influences the firm's innovation efficiency. Wang & Lou (2020) studied how PF relative to aspiration levels affects firm's unplanned marketing investment. The authors identified slack resource, analysts' stock recommendations and competition intensity as variables moderating the relationship. Moreover, when a firm's performance falls below historical aspiration, marketing investments increase. In contrast, social performance has an indirect impact. These effects are reinforced when a firm receives favorable stock recommendations, has increased slack resources, or faces increasing competition.

Performance Discrepancies. Eight articles identified performance discrepancies as moderator variable. Differences in performance can highly influence organizational changes undertaken by a firm and further impact the business model. For example, in examining how PF relative to aspirations affects firms R&D decisions, Chung & Shin (2021) found that the type of performance problem is a moderator of the relationship. Indeed, when a firm's performance is below its historical aspiration level, it tends to exploit its current technology. On the other hand, when firm performance appears below the social aspiration level, it tends to increase R&D investment. Second, Goyal & Goyal (2022) examined the impact of industry peer performance on the firm's own interpretation of the performance gap and how it affects the firm's R&D search behavior. The authors found that shared and relative performance shortfalls moderate the relationship and show that, depending on the firm's interpretation of performance shortfalls, firms trigger self-enhancement or problem-solving modes, which discourage or motivate them to proceed with R&D search. In addition, Greve (2002) examined whether firms with different past aspirations attain different strategic positions and whether these differences result in selection processes that favor fast or slow updaters, identifying aspiration level updating as a moderator. The author finds that slow updating of aspiration levels leads to higher performance and that in the presence of a stronger selection, slow updaters dominate more quickly.

Furthermore, in examining the link between external competitive and striving comparisons affects firms' planned change, Labianca et al. (2009) found that competitive and striving discrepancies have different moderating effects. In fact, while performing well relative to competitors, firms do not necessarily

become inertial, but instead, engage in striving comparisons. Therefore, underperforming firms are more likely to pursue radical organizational change, as are overperforming firms when they perceive their performance to be below a particular set of competitors. In addition, Miller & Chen (2004) examined managers' risk preferences shifting attention between survival and aspiration levels, identifying distance to bankruptcy as a moderator. Their results show that underperforming firms take greater risks when nearing bankruptcy. Conversely, overperforming firms are taking lower risk as performance relative to aspirations improves. Similarly, Villagrasa et al. (2018) examined the impact of CEOs' cognitive performance interpretations impacts on planned strategic changes and whether context moderates the relationship. Their results show that context (understood as "performance compared to the industry") was a moderator of the relationship and that when the firm's performance is below social aspiration levels, CEOs' satisfaction with PF tends to negatively affect strategic changes. This effect is reversed when performance relative to the industry is extremely high.

Ye, Yu & Nason (2021) examined the role of PF persistence in distinguishing between historical and social aspiration levels, identifying high-profit-persistence industries[3] and low-profit-persistence industries as having different moderating effects on the relationship. Their results further show that peer PF appears as more persistent than historical PF. Hence, negative peer PF leads to greater innovative search.

Additional moderators. Several additional moderators have been identified. For example, Banerjee, Lampel & Bhalla (2019) studied if macro- level problemistic search[4] is resulting from search activity (local vs. distant) at the micro-level in response to negative PF. Their results show that organizational search is a combination of local and distant search activities, with a shift towards more distant search activities when an external stimulus such as

[3] The authors define a high-profit-persistence industry as "*differences in the intensity of interfirm mobility barriers. Industries vary in attributes such as rivalry, switching cost, economies of scale, and information impediments to imitation. In high-persistence industries, these "mobility barriers" make it even harder for underperforming firms to catch up and ensure that overperforming firms enjoy superior performance for longer durations*." (Yee, Yu & Nason, 2021, p.1062). Reversely, low-profit-persistence industry is characterized by low mobility barriers.

[4] As seen in Chapter 1, Problemistic search is a major concept in the Behavioral Theory of the Firm, suggesting that companies search for a solution to solve their performance problem and meet their aspiration level (Cyert and March, 1963)

performance shortfall information is provided, identifying search activities as a moderator. In the same line, Greve (2003) studied the relationship between PF and risk taking and how it affects the firm's strategic choices and its performance. The author found that problemistic and slack search moderate the relationship and found that high performance causes low asset growth, but no effect on slack. In addition, Jirásek (2020) examined PF characteristics and how their impact on firm behavior identifying slack and problemistic search as moderators of the relationship. Indeed, firms that perform above aspirations are more likely to have high demand for strategic activities, making them less active given the available portfolio of strategic activities. Conversely, the decreasing attractiveness of the portfolio is more likely to increase the search for new and better alternatives.

Focusing on firms' innovative capabilities, Dong (2021) investigated the performance and risk implications of different organizational aspirations on technological choices finding technological choice as a moderator. Dong (2021) observes that technological uncertainty can increase the relative risk discrepancy between various aspirations, whereas market uncertainty can decrease the relative risk discrepancy between various aspirations. Similarly, Eggers & Suh (2019) examined how firms react to failure and how the choices resulting from this feedback impact firm performance, identifying new product introduction as a moderator of the relationship. Indeed, negative feedback on new funds launched in new domains are detrimental for firm performance, as firms favors already exploited domains. Negative feedback in experienced domains can encourage action to search for both local and distant solutions to rectify the problem or to expand firm's opportunities.

Adopting a micro perspective, Greve (1998) examined how PF influences the probability of risky organizational changes and the consequences on organization's performance, defining motivation, opportunity, and capabilities as moderators of the relationship. The author shows that underperforming radio stations engage in more format changes, while overperforming stations engage in fewer format changes. The effect of over performance appears stronger than that of underperformance. Risky organizational changes are taken when motivation, opportunity, and capabilities are present. Similarly, He, Huang & Yang (2021) studied how performance below aspiration pushes firms that are underperforming to make R&D investment intensity adjustments. To do so the authors looked at how

managerial cognition affects firms' executive perception of innovation as a relevant solution to address performance problems and, therefore, moderating the relationship between negative performance feedback and the firm's decision to invest in innovation. Indeed, when performance falls below aspiration levels, firms increase investment in R&D. Managerial cognition influences firms' attention allocation to innovation and formats organizational responses to negative PF.

Finally, Iyer et al. (2019) investigated the firm's triggers for switching from local to distant search determining industry and skills relatedness as moderators of the relationship and further showing that when performing below aspirations, firms increase both industry- and skill-related acquisitions through problemistic search. However, when they persistently perform below aspirations, firms engage in acquisitions that are more unrelated, expanding search boundaries from local to distant search.

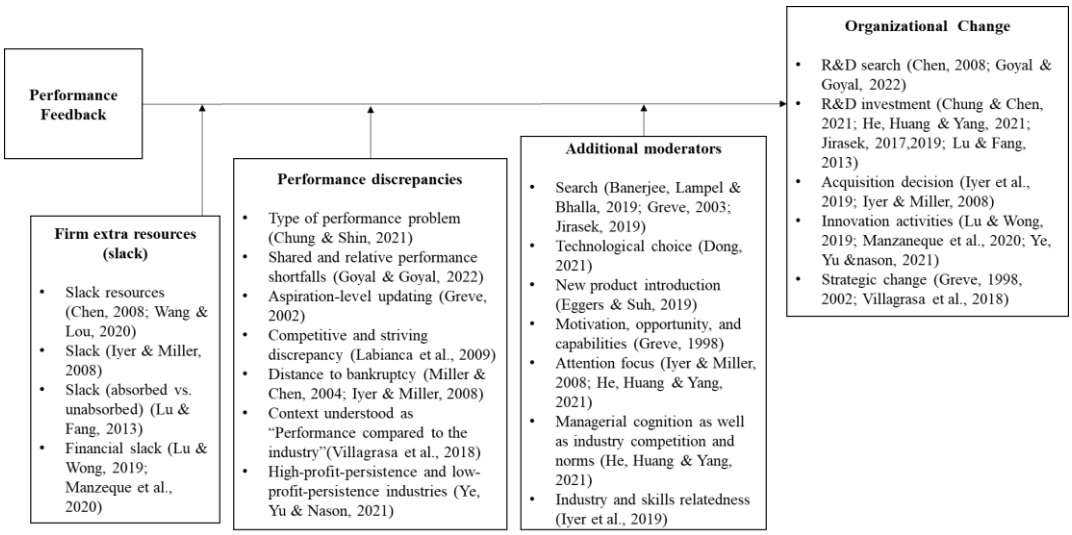

Figure 13. The moderated relationship between Performance Feedback and Organizational Change

3.6. The PF-BMI Framework

Based on the previous literature review and analysis, we further develop a framework for future research.

As stated by the PF literature previously reviewed, performance above aspiration can represent a good reason for firms to avoid a risky change such as BMI as their performance is already satisfying. In this case, firms are

expected to continue the status quo (Bromiley et al., 2015), thus fostering organizational inertia (Greve, 1998; Akgün et al., 2007). They avoid actions that might result in a change of established routines, even though they may still strive for achieving slightly higher performance (Cyert & March, 1963). When performance just exceeds organization's aspirations, decision-makers may, also, tend to frame the outcomes of risk-taking in terms of falling below aspirations. However, they do not engage in such risk-taking to avoid the potential loss (Kahneman & Tversky, 1979), hence inhibiting organizational changes such as BMI (Shinkle, 2012; Snihur, 2018). In addition, performance above aspirations reinforces lessons learned from earlier experience (Levitt & March, 1988). Organizations tend to keep on learning through improving their existing routines and beliefs as well as reinforcing their status quo (Nelson & Winter, 1982), as they might not possess any slack resources, inhibiting the active search for alternatives such as new business models (Akgün et al., 2007; Becker, 2010; Snihur, 2018). Hence, we suggest the following proposition:

- P1: *Companies are inert and do not engage in **business model innovation** when they are performing above aspiration and do not possess slack resources.*

However, and as shown by Greve (1998) in his study of radio station chains, organizations performing above aspirations may also enjoy extra resources that motivate decision makers to engage in a "slack search" dynamic that enables them to experiment and work on new opportunities, perhaps revisiting promising ideas previously abandoned because they were deemed too risky, increasing investment in R&D or innovative activities (Baum et al., 2005; Greve, 2003; Iyer & Miller, 2008), and enjoying extra resources to innovate their business model. The intensity of this search is dependent on "the extent to which goals are achieved and the amount of organizational slack" (Cyert & March, 1963, p. 116). We here propose the following:

- P2: *Companies engage in **business model innovation** when they are performing above aspiration and possess slack resources.*

Because decision makers react more strongly to threats than opportunities (Tversky & Kahneman, 1986), performance below aspiration is more likely to trigger risk taking, and possibly enhance BMI (Greve, 2011; Cheng et al. 2022). Baum et al. (2005) suggest that an organization that performs below

aspiration cannot achieve acceptable performance through local search and incremental adjustment. Instead, decision makers must increase their emphasis on more risky undertakings that offer the possibility of raising the organization's performance to its aspiration level. Therefore, failing to achieve the aspiration level is suggested to trigger problemistic search that drives organizational change (Cyert & March, 1963; Greve, 2003; Shinkle, 2012; O'Brien & David, 2014). Hence, unsatisfactory outcomes put existing practices and strategies into perspective (Levitt & March, 1988), pushing organizations to embark on organizational changes such as BMI without necessarily having the needed competences, information, or understanding of the on-going changes and using their extra slack resources (Greve, 2003; Snihur, 2018). Thus, organizations enter a process of unlearning characterized by "changing the organizational beliefs, norms, values, procedures, behavioral routines, and physical artifacts" (Akgün et al., 2003, p. 847), and abandoning old routines to develop new ones (Tsang & Zahra, 2008). Hence, we suggest the following proposition:

- P3: *Companies engage in **business model innovation** when they are performing below aspiration and possess slack resources.*

When there is an absence of slack resources and companies are performing below aspiration, two configurations dilemma can be framed. On the one hand, companies might engage in business model changes[5], particularly due to the high-risk tolerance of managers when performance is below the aspiration target and their urgent need to improve their performance. On the other hand, for a firm that is experiencing a strong decline in performance and not having any slack resources available, any BMI may come too late, as the company may have already lost competitive advantage, making any attempt to improve the situation vain. Hence, we propose:

- P4a: *Companies engage in **business model change** when they are performing below aspiration and possess slack resources.*

[5] We here make the distinction between BMI and BM change (BMC). BMI is defined as new to the firm, in other words, that no precedent of it is known in that space (Amit and Zott, 2012) and implying "*designed, novel, and nontrivial changes to the key elements of a firm's BM and/or the architecture linking these elements*." (Foss & Saebi, 2017, p. 201). Following Osiyevskyy and Dewald (2015, p. 59) definition, BMC is defined as "*an alteration of the meta-routine of value creation and appropriation*". Hence, BMI involves a degree of novelty that is not present in BMC.

- P4b: *Companies do not engage in* ***business model change or innovation*** *when they are performing below aspiration and do not possess slack resources.*

The propositions suggested above are further integrated into the framework present in Figure 14 to guide future research. The propositions derived from the PF literature, clearly show the importance of the link that can be established between PF and BMI and how performance can feed back into BMI.

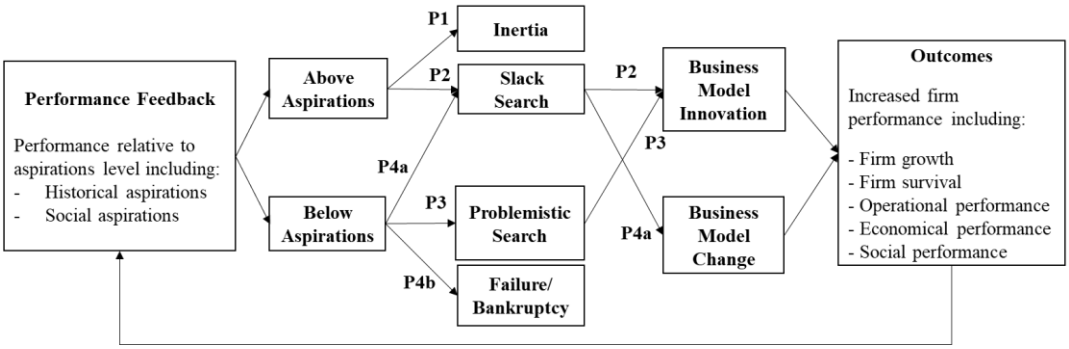

Figure 14. PF-BMI research framework

3.7. Discussion and Conclusions

Since the original literature review of Foss & Saebi (2017), research on BMI has highly evolved, with a rapid rise in publications number over the last years. While BMI literature is consolidating itself, our literature review shows that BMI studies are still underrepresented in the PFT research. This can be a problem since BMI research possesses multiple aspects on which a parallelism with the PFT studies (e.g., their link to firm performance). The BMI literature offers a holistic perspective that can allow to revitalize the traditional discourse established in the PFT literature and start new ones. In response to this gap, this literature review explores the relationship between BMI and PF, particularly showing how PF plays a key role as an antecedent in unlocking the behavioral mechanisms that can enhance BMI. Based on the behavioral factors that have been developed since Cyert and March's (1963) seminal work, this review synthesizes the theorical and empirical findings to date into systematic clusters showing the organizational factors of the relationship between BMI and PF. These insights further lead to the development of a framework suggesting different avenues for future research and seek to broaden both BMI and PF literature perspectives, overcome existing gaps and encourage future research in these areas.

By conducting this review, we make several contributions. First, by leveraging Performance Feedback Theory as a theoretical lens, the research establishes a relationship between PF and BMI and contributes to better understanding of the role of firm performance in influencing BMI. Indeed, we explored the link between BMI literature to the PFT in order to explain how performance relative to organizational aspirations is impacting firm's decision-makers to innovate their business model. This consideration of firm performance as a BMI antecedent addresses the current limitation of existing research on BMI and answer the different calls raised by researchers for the enlargement of the extant visions in both the BTOF (Shinkle, 2012; Gavetti et al., 2012) as well as in the BMI (Schneider & Spieth, 2013; Foss & Saebi, 2017) fields. Moreover, we shed a light on some of the connections existing between the two research fields, producing new insights by integrating two disconnected research domains.

Secondly, by linking BMI to performance feedback models in a same theorical plan by developing a framework, our study provides a better understanding of the challenges that organizations face, notably regarding the decision-makers answer to diverse organizational performance. Indeed, instead of categorizing the literature into defined antecedents, moderators and mediators or outcomes (e.g., Foss & Saebi, 2017), our review synthetizes the BMI and PF literatures into a single framework, with propositions allowing for the distinctions between various situations that link the perceived relationship between their different concepts. Our review represents the first attempt to integrate the literature on BMI and PFT. This integration does not only synthesize disconnected streams of literature on the origins of BMI or the impact of firm performance, it also complements existing research on problemistic search, slack resources and organizational inertia (e.g., Posen et al., 2018; Kotiloglu et al., 2021), opening new perspectives on the traditional BMI and PF literatures constituting a basis for future research.

Third, we expand the current literature by merging the BMI and PF research streams offering new avenues for future studies that can enrich the BMI discussion as well as the long-standing debate on the organizational response to performance relative to different aspirations levels and establish a new dialogue between the two. Our framework does not only represent the analysis of recent research directions, but also proposes promising trajectories for future BMI and PF research that, so far, either can be revitalized, remained neglected or lack deeper insights. By making several

propositions to be empirically tested, this literature review answers to these trajectories by offering specific suggestions on how to integrate the BMI and PFT into their respective ongoing conservations and inform novel ones. Hence, this future research framework contributes to the further establishment of the PF concepts into the BMI literature and the BMI concepts into the PFT one.

From a practical perspective, our review provides valuable insights for practitioners. First, our review suggest that performance can feed back into BMI, which could help managers better understanding the implications of firm performance regarding BMI initiation. Thereby, our review also introduces the BMI as an additional type of innovation to which firm performance can lead, alongside other types of innovation (e.g., product, services, etc.). Second, our framework can help practitioners deal with different performance situations and evaluate the best options for their organization. Finally, managers responsible for the firm's business or strategy development may focus only on certain BMI drivers (e.g., dynamic capabilities, resource allocation, etc.). Hence, our research helps to highlights different drivers of BMI and suggest for managers to consider additional ones such as slack resources, adopting a performance feedback perspective.

Chapter 4

Opening The Performance Feedback Horizon: A Qualitative Approach

ABSTRACT

Qualitative research design can provide unique contributions to research on Performance Feedback literature. Several strategies are available to realize qualitative research and qualitative approaches can be used to understand complex phenomena that is not allowed by quantitative methods of formal hypothesis testing. Qualitative research may be used to gain insights about phenomena and mechanisms within the organization and to improve our understanding of social interaction and processes present in the Performance Feedback field. In this paper, we outline the use of qualitative research to inform the Performance Feedback literature. We provide an overview of qualitative methods available in the management field and how they can be used to expand and refine the Performance Feedback research perspectives.

Keywords: Performance Feedback, Qualitative research, Qualitative methods

4.1. Introduction

The Performance Feedback (PF) literature is initially taking its root in qualitative research present in the grounding work of Cyert & March (1963), *A Behavioral Theory of the Firm* (BTOF), and previous advances in March & Simon (1958). Over time, however, such methods have been progressively marginalized as quantitative methods have become the norm in Performance Feedback studies. Indeed, the majority of the PF literature focuses on the BTOF concept of aspirations (also called goals or attainment discrepancy) and its effect on firm performance using statistical model as main research method (e.g., Audia & Greve, 2006; Greve, 2003a, b; Lant, 1992; March & Shapira, 1992; Miller & Chen, 2004).This shift of emphasis is reflecting the broader trend toward more positivistic empirical methods in social sciences (Bluhm et al., 2011). While clear merits can be attributed to quantitative methods, the multi-dimensional and dynamic nature of the field of PF might lend itself into a broader range of research methodologies, as for example qualitative methods (Posen et al., 2018), which might particularly be handful when it comes to study aspirations in the context of other BTOF concepts such as cognition, attention or learning (Gavetti et al., 2007; Shinkle, 2012).

To understand the complexities of evolving and emergent phenomena and the differentiated contexts typical to many topics under investigation in PF, to engage in thick description, exploratory research and comparative case analysis that focus on inductive theory building and hypotheses generation may be more suitable to provide in-depth insights and richer information on the complex phenomena studied (Plakoyiannaki & Budhwar, 2021). In recent years, a growing call and recognition of the value of qualitative research has emerged in the management literature, notably for its ability to bring new knowledge, introduce theory in completely different directions, and allowing to broaden perspective (Ariño et al., 2016; Bansal et al., 2018; Bettis et al., 2015). In this sense, some authors have made important attempts to bring it closer to the fore, as for example explaining the relevance of certain methods such as case studies and how to conduct and design research based on such method (e.g., Creswell's 2014 book on Qualitative Inquiry and Research Design; Yin's 2014 guide on Case Study Research Design and Methods). However, despite the efforts made by scholars and journal editors, the number of articles that use qualitative methods in leading management journals remains relatively low (Cornelissen, 2017; Bettis et al., 2015; Ariño

et al., 2016; Bluhm et al., 2011). This represents a particular loss in the PF field, where qualitative methods could play an essential role in translating and understanding the complexity and plurality of phenomena in addition of the contexts and their link to firms.

Qualitative methods are characterized by a closeness with the subject studied in which researchers strive to be at one with their research phenomena in a way that other methods do not require, allow, or even encourage. In 1979, John Van Maanen, was one of the first author in encouraging and inviting management researchers to use and develop qualitative methods and analytical tools to increase the insight's sources and discovery into organizational phenomena. Two decades later, Lee et al. (1999) conducted a review of qualitative research that had been produced since Van Maanen's call further increasing interest in the qualitative approach to organizational research. They were the firsts in defining the characteristics and the various best practices in qualitative research while shedding a light on where the field stood and recommending ideal future research directions. Hence, we here adopt Van Maanen's (1979, p. 520) definition of qualitative research, as being "an umbrella term" that encompasses an "array of interpretive techniques that can describe, decode, translate, and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world". By doing so, we aim at proposing an alternative to the issues related to the PF research conceptualization as well as additional conceptions emerging from neighboring work branches, and that have not been sufficiently integrated into the conceptualization of PF, resulting in an incomplete theoretical understanding of PF concepts and a holdback of empirical progress (Posen et al., 2018).

We believe that qualitative methods can play an important role in overcoming the missing link between PF conceptualization and empirical progress, notably through an in-depth understanding of micro-processes (e.g., managers influence in the process of organizational change) and of the interplay between organizations and context (e.g., the influence of the competitive environment on firms behaviors) in the collaboration and integration of strategic activities (e.g. proceeding or not to strategic changes). Qualitative research is highly adequate for "unpacking" phenomena of interest as it comprises a diverse set of "interpretive techniques" that can deliver a richer and deeper understanding of the issues under investigation

(Van Maanen, 1979, p. 520; Bluhm et al., 2011; Lee, 1999). Rather than simply apply discipline-based methodological approaches that make researchers subordinate to other scholarly fields, we believe that PF researchers need to leverage and exploit their unique perspectives and capabilities.

It is important to note that we are not suggesting an abandonment of the quantitative methods that have allowed for the PF field development until now; rather, we are encouraging a coexistence of qualitative and quantitative approaches. The multi-faceted context and interactions that characterize today's complex organizational environment require a more nuanced epistemological approach rather than mainly a positivist one (Redding, 1994). By showing the broad range of approaches covered by the single label of "qualitative research," we hope to motivate and encourage researchers to more fully embrace opportunities that advance PF theoretical perspectives through qualitative methods. In doing so, we believe that the theoretical insights generated will highly contribute to our collective understanding of tackling some of the world's most intractable management and organizational challenges (Eisenhardt et al., 2016; Bansal et al., 2018) and open new horizons for the development of the PF research.

The remainder of the paper is structured as follows. We (1) Briefly introduce the Performance Feedback literature, (2) present the existing qualitative research and methods, while presenting a taxonomy of qualitative strategies used to conduct qualitative studies in the business and management fields, and (3) discuss how qualitative research can contribute the PF literature.

4.2. Theoretical Background

4.2.1. A brief introduction to Performance Feedback

Taking their origins in Cyert and March (1963) seminal work, and previous advances in March & Simon (1958), models of organizational aspirations are central to research on organizational and managerial risk-taking. Indeed, managers compare their expected firm performance to aspiration levels defined as the "desired performance levels in specific organizational outcomes" (Cyert & March, 1963), which depend on performance relative to prior aspirations (a.k.a., historical aspirations), and the performance of comparable firms (a.k.a. social aspirations) (Cyert & March, 1963). When a

firm's performance appears below its aspiration, which constitutes the future performance's level considered as acceptable, a problemistic search mechanism is generated to look for a potential solution that could solve the emerging problem, resulting in behavioral changes to build back the performance to the aspired level (Posen et al., 2018). Reversely, when a firm's performance appears above its aspiration level, firms tend to stay inert or possess slack resources that can then be used to further improve their performance (Posen et al., 2018).

The most widely used measures of aspirations in PF research are statistically determined (Bromiley & Harris, 2014). Because numerical values might constitute only one manifestation and not the total sum of a firm's aspiration, they are not able to fully capture the value-behavior link. This deficiency explains, at least in part, why there are often conflicting findings regarding the impact of aspirations dimensions (e.g., Historical vs. Social aspirations) on managerial behavior and firm strategy. Hence, with the development of the PF field comes a need for a deeper understanding of its fundamental constructs.

In this sense, qualitative methods can take us beyond Greve (2003) and March & Shapira (1992) seminal research to generate new conceptualizations and interpretations of aspirations allowing to better capture the complex nature of rich organizations life experiences and yield a more nuanced understanding of how PF precedes, explains, and leads to various organizational behaviors and outcomes, such as, for instance, organizational adaptation (Greve, 2013), strategic change (Baum et al., 2005), strategic reorientation (Greve, 2002), risk-taking (Greve, 1998; Miller & Chen, 2004), knowledge generation (Shinkle, 2012), new resource creation (Gavetti et al., 2007), organizational learning (Baum & Dahlin, 2007), and innovation (Posen et al., 2018).

4.3. Qualitative research and methods

4.3.1. Qualitative research in Business and Management studies

Qualitative research has a long history within the social sciences and made a significant contribution to many areas of management research (Cassell, 2016; Bettis et al., 2015; Ariño et al., 2016). The range of topics to which qualitative research has contributed to in management is very broad and deep

including innovation, collaboration across firms, diversification, acquisitions, new ventures, internal organization, top management teams, decision making, organizational learning, dynamic capabilities, strategic renewal, among others (Bettis et al., 2015; Ariño et al., 2016). Qualitative research has also allowed to spark debates on many questions in the management field, such as, for instance: How can firms balance exploration and exploitation? When do cognitive heuristics facilitate or constrain strategic decision making and firm performance? When do managers help or limit strategic change? How do firms' strategic actions interact with social welfare? (Bettis et al., 2015).

Management researchers who decide for quantitative methodologies can investigate a managerial phenomenon without sharing the business context: by acquiring some data and, using a variety of statistical and mathematical tools, they can write studies on production activities without ever having set a foot on a production site, or conduct research about distribution networks without ever having an exchange with a supplier about a client, or talked to a client about a supplier (Guercini, 2014). Moreover, this analytical setting remoteness from the context in which the object of study appears is further proved by the very instruments of quantitative research (Guercini, 2014). Instead, in qualitative research, the analytical setting, and the management context overlay allows for methodologies such as ethnography or direct participant observation to obtain results unreachable by other methods (e.g., theory formulation, research hypothesis) (Ariño et al., 2016). Indeed, the interpretive qualitative approach to research is unique in its ability to address issues of description, interpretation, and explanation, whereas quantitative research is better suited to address questions of prevalence, generalizability, and calibration (Lee, 1999).

While quantitative and qualitative research have different fundamental assumptions in terms of approach, it is also the case at the philosophical level and notably about the nature of reality (Ariño et al., 2016). Within the social sciences, a common distinction is whether researchers adopt a positivistic or a constructionist perspective in doing qualitative research (Ariño et al., 2016). A positivist approach sees reality as something that already exists "out there" in the world, and researchers adopting this perspective use research methods as tools for discovering and dissecting it (Redding, 1994). Through this approach, social realities are part of the physical world and considered

as something that exists independently of the study being conducted on it, something that is led by cause-and-effect relationships, and that may be hidden from the researcher sight only because he or she needs better tools for discovering it (Ariño et al., 2016). Hence, researchers adopting a positivist approach realize objective descriptions and reality explanations and intend to understand why and how a phenomenon takes place. In contrast, a constructionist approach considers reality as being created by people or accomplished through behavior and interaction. Through this lens, social reality does not exist independently of the study being conducted on it, obliging researchers to be careful and reflective on how the methods they are using help to constitute the very "objects" of their study (Ariño et al., 2016). Thus, qualitative researchers adopting a constructivist view make subjective interpretations of reality, realizing a search of meaning, rather than relying on natural law.

Given the wide range in which qualitative data may appear, a researcher's approaches to the analytical process are often shaped by its onto-epistemological assumptions (Bansal et al., 2018). These assumptions reside in the variety of ways that qualitative researchers can discover new phenomena or relationships of potential interest in the field. Sometimes qualitative researchers begin their study in a rather undirected way, by observing an organization's people, practices, and processes, not totally being sure of what they are searching for and not necessarily driven by any predefined theories or hypotheses, but with an educated expectation that they will locate phenomena worth investigating and explicating (Ariño et al., 2016). This first approach is called induction and consists of making discoveries of new phenomena or of new relationships between variables through careful observation, note taking, and coding of researcher encounters with the subjects of the study (Ariño et al., 2016). Thus, inductive theorizing represents a linchpin for qualitative research. Indeed, while quantitative methods use the deduction approach to build new knowledge highly relying on logical reasoning from prior insights and expanding understanding along extent or parallel paths, qualitative research discovers new insights grounded in data, enlarging the researcher epistemological frame with longer leaps, that often yield completely new ideas and drive theory in new directions (Wright, 2017; Mantere & Ketokivi, 2013). Hence, inductive theorizing appears as highly adequate for empirical contexts, where relatively little prior work has

been conducted, is understudied or new, allowing researchers to discern perspectives inaccessible through hypothetico-deductive logic (Wright, 2017). By doing so, the induction approach enables lateral shifts in knowledge that are often difficult to observe using deductive methods, allowing qualitative research to advance critical thinking and scholarship (Bansal et al., 2018; Bamberger & Pratt, 2010).

On the other hand, some qualitative researchers know what they are looking for and use observations, interviews, and allied methods to discover it and document it more fully. This second approach called abduction, allows researchers to discover something that is theoretically under specified, completely new, or unexpected (Ariño et al., 2016). Providing the foundation for theoretical progress, abduction is well suited for theoretical refinement which consists of modifying the theory based on either the desire to develop a deeper understanding of the phenomenon through the addition of more concepts, or the failure of the new observations to match the theory (Wright, 2017; Mantere & Ketokivi, 2013).

Several strategies of inquiry, based on the previously evoked philosophical and epistemological approaches, each comprising distinct methods to conduct qualitative research, are described in the next section. Although we present distinctions, in practice such strategies often overlap. The distinguishing features include disciplinary theory brought to bear on the interpretations, aspects of the research questions, and features of the findings (e.g., explanatory, and analytic vs. purely descriptive nature of the findings, degree to which findings are informed by existing theory) (Bluhm et al., 2011).

4.3.2. Qualitative methods in Business and Management studies

Qualitative research is characterized by the fact that researcher's experience is not dissociated from the analysis (Mills, 1959, p. 195-226; Guercini, 2014). Such an approach is common to the data collection and interpretation methods in all qualitative research fields, therefore unifying management studies to other social sciences such as sociology, anthropology (Van Maanen, 1988; Vidich & Lyman, 1994), linguistics (Manning, 1979) and history (Tuchman, 1994), notably on the methodological plane. Such "transdisciplinary contamination" is clearly highlighted by work such as

Yin's (1981, 1984, 1993), linked to research in the field of pedagogy (Yin, 2005, 2014), being among the most cited for case study research in management as well. Given this transdisciplinary nature, management literature has a long history and a wide body of work on the use of case studies, ethnography, and action research (Gill & Johnson, 1991; Mintzberg et al., 1976; van Maanen, 1979).

Furthermore, the emergence of new methods in qualitative management research, has allowed for researchers' creativity which can highly contribute to new research designs formulation, as well as to new instruments of research development (e.g., software) (Zhang & Segall, 2010). The study of internet communities also allows researchers to exploit and build new research methods, such as digital ethnography or net-ethnography (e.g., Bowler, 2010). Additional qualitative and interpretive methods variety can be mentioned here, and notably recent narrative and story analysis applications to organizational research (e.g., Beech, 2008); discourse and rhetorical analysis advances (e.g., Shepherd & Challenger, 2013) and organizational research use of visual methods (e.g., Cassell, 2016). In management studies, the issue of research methodologies is particularly important as it has significant effects on communication opportunities between researchers and business policy makers, in both data collection and results dissemination (Guercini, 2014). Hence, adopting new qualitative methods can help reducing the gap between theory and practice in management studies (Guercini, 2004).

When looking at the publication aspect, in absolute terms, the number of qualitative research studies published in leading business and management international journals has grown over the last decades (Ariño et al., 2016; Bettis et al., 2015; Bluhm et al., 2011). This increasing trend not only highlights the widely supportive position towards qualitative research within the field, but also the common efforts of different stakeholders (e.g., journal editors or reviewers) in supporting qualitative researchers to publish their work (Cornelissen, 2017). Through their work, qualitative researchers use a variety of methods to capture and describe the depth, richness, and complexity of the phenomena they study. The many types of qualitative research designs and methods mainly include ethnography, discourse analysis, ethnomethodology and conversation analysis, phenomenology, archival and historical methods, structured interviews and focus groups, case

study, grounded theory, action research and narrative analysis (Ariño et al., 2016; Bansal et al., 2018; Creswell, 2009, 2014), which are further described here below:

• *Ethnography*, which originates from the field of anthropology, is used to describe characteristics of culture within groups, communities, and organizations (Creswell, 2009, 2014). Researchers using this approach of inquiry try to access the perspectives and understandings of members through participant observation (e.g., working directly with members), observations and field notes (e.g., creating their own database of firsthand data collection and descriptions), and interviews (Creswell, 2009, 2014). The increasing use of internet and social network has also allowed the development of digital ethnography also called net-ethnography or netnography, which consists in understanding social interaction in contemporary digital communications contexts (Guercini, 2014). A significant amount of the data used in this latter method is originating from the digital traces of naturally occurring public conversations recorded by contemporary communications networks. (Bowler, 2010; Hine, 2000; Kozinets, 2002).

• *Discourse analysis*, which originates from the field of linguistics, is used to explicate the forms and functions of semiotic events such as written words, spoken dialogue, and visual texts (Ariño et al., 2016; Bansal et al., 2018). One type of discourse analysis is content analysis, which has been used by management scholars as a method for examining language and its effects on individual and organizational outcomes(Ariño et al., 2016; Bansal et al., 2018) .

• *Ethnomethodology and conversation analysis*, which emerged from the field of sociology, examine the methods that people use to produce and understand the social order of everyday activity (Ariño et al., 2016).

• *Phenomenology* involves a philosophical commitment to privileging the uniqueness of an individual's lived situation and provides a first-person point of view (Ariño et al., 2016). This method explores the experiences of individuals to obtain a comprehensive description of a phenomenon (Creswell, 2014). The aim is to determine what the experience means for the individuals having the experience (Creswell, 2014). From the individual descriptions of the experiences, general or universal concepts can be

developed (Creswell, 2014). The emphasis is on description rather than explanation of the experience (Creswell, 2014).

• *Archival and historical methods* employ the practices of historians in describing past events, toward accounting for the present and anticipating the future (Bansal et al., 2018).

• *Structured interviews and focus groups*, which are especially popular in the field of management, are designed to increase the reliability and credibility of qualitative data, as research subjects provide comparable and contrasting responses to the same interview questions (Ariño et al., 2016; Bansal et al., 2018).

• *Case study* has been the object of increasing attention, giving rise to a specialized body of literature focusing on its role as a management methodology (Eisenhardt & Graebner, 2007; Yin, 2014). Despite its limitations and the criticisms leveled at it, case research has been viewed as a prime source of "grounded theory" (Eisenhardt, 1989; Glaser & Strauss, 1976) and a "systematic combining" of theory and empirical research (Dubois & Gadde, 2002). Given its many merits, case research is to be considered a consistently useful method (Yin, 1981).

• *Grounded theory* was built from real life observations by Barney Glaser and Anselm Strauss in 1967 in their book "*The Discovery of the Grounded Theory*". This approach consists in developing theory from the data rather than developing the theory based on empirical testing (Glaser & Strauss, 1976). The grounded theory is defined by Glaser & Strauss as "The theory that was derived from data, systematically gathered, and analyzed through the research process" (Strauss & Corbin, 1990, p.12). Moreover, Creswell (2009, p.13), describes grounded theory as the "Researcher attempts to derive a general, abstract theory of a process, action, or interaction grounded in the views of participants in a study". The grounded theory's main principles are (Glaser & Strauss, 1976): (1) The researcher must realize tasks allowing the development and discovery of new methods of investigating and understanding processes and interactions of a social nature, and (2) The analysis purpose resides in the generation or discovery of a theory relying on life's fundamental patterns.

• *Action research* is a process aiming at combining extant organizational knowledge with scientific knowledge through theory and action integration; as well as solicitating the people of the investigated system to solve real organizational problems (Coghlan, 2011). Action research is not part of only one academic field but has been built as an approach emerging from diverse disciplines over time and, hence, possesses a complex history (Brydon-Miller et al., 2003). It is a qualitative research approach that seeks to improve practice by using action and investigate the action's effects (Streubert & Carpenter, 2002).

• *Narrative analysis* represents the analysis of narrative text and human relationships characteristics meaning in various contexts, including, for instance, historical, social, as well as cultural ones (Felton & Stickley, 2018). It is based on the narratives described by people while talking about themselves or some events; and focuses on the person's story sequential unfolding creating a character's emphasis, instead of searching for subjects emerging from an account (Creswell, 2009). Hence, considered as an entire entity, the story possesses a beginning, middle, and an end. Some examples of narrative analysis include studies with a specific contextual focus, such as, students in a classroom, organizations stories, biographical subjects, life history, or one's or several individuals' personal reflections oral history (Creswell, 2014).

4.4. Discussion

4.4.1. Potential contributions of qualitative research to Performance Feedback

PF represents a heterogeneous field in constant evolution as shown in the different results obtain in the literature. Indeed, both the BTOF and existing empirical results suggest that organizational aspirations adapt to two factors: the firm's own historical performance (historical aspiration) and the performance of other referent firms (social aspiration) (Cyert & March, 1963; Greve, 2003a). However, empirical findings on their individual influences are not always aligned, as several researchers have found higher significant effects for historical aspiration levels than for social aspirations in their quantitative studies (e.g., Audia & Greve, 2006; Greve, 2003b; Ref & Shapira, 2017, and vice versa (e.g., Labianca et al., 2009; Moliterno et al., 2014).

Moreover, as previously evoked, quantitative studies have shown that performance below the aspiration level triggers a problemistic search (Cyert & March, 1963; Greve, 2003a). The greater the gap between performance and the aspiration level, the more the firm is seeking to engage in risk taking, which has been demonstrated through various empirical researches showing the resulting forms of risks and firm actions, including R&D and innovation (Chen, 2008; Chen & Miller, 2007; Greve, 2003a), acquisition (Iyer & Miller, 2008), business expansion (Audia & Greve, 2006), new product introduction (Greve, 1998), new market entry and position (Joseph & Gaba, 2015). On the other hand, when firm performance is above an aspiration level, two scenarios are possible. First, firms are risk averse, fearing any potential loss, resulting in inertia, and conserving their status quo (Greve, 1998, 2003a). Second, slack resources are accumulated, hence firms appear more likely to engage in risk taking and experiment with new practices and changes (Iyer & Miller, 2008), which increases innovativeness (Argote & Greve, 2007; Baum et al., 2005).

Although these assumptions have been demonstrated quantitatively, researchers point out the heterogeneity existing at the predictor variable level: some studies take slack resources as a predictor (Chen, 2008; Greve, 2003b; Iyer & Miller, 2008), while others consider performance above aspirations and make it equal to slack resources (Miller & Chen, 2004; Ref & Shapira, 2017), or use both performance and slack resources attributing them the same capacity argument (e.g., Chen & Miller, 2007). Based on the empirical heterogeneity present in performance feedback studies, several gaps are to be filled in, and for which qualitative research can help to explore.

Kotiloglu et al. (2021) show through their recent review that most of the studies looking at organizational responses to performance feedback mainly rely on only one performance metric, namely the ROA (Return On Asset). The authors also underline that, even if other metrics are considered for the study, they are often undifferentiated from financial metrics. While the use of performance metrics play a central role in PFT, the consideration of a more qualitative approach to looking at the difference and variations in performance, might help to enlarge their understanding and the discovery of non-financial metrics being useful in explaining certain mechanisms in the PFT literature.

In addition, Kotiloglu et al. (2021) noticed the dominance of the archival data and US publicly listed firms in PFT studies. The authors further recommend for the use of different data sources and collection methods. Indeed, the fact that the majority of the studies look at US based companies might have implications for the influence of a specific context that might not be applicable in a different one. Therefore, the enrichment of the data collected, notably by looking at different countries and industries, as well as using a qualitative method can greatly contribute to our understanding of the underlying PFT mechanisms.

We suggest here an illustrative example of how qualitative can be beneficial for future research on PF and that could be used for future research. Let us take back our initial example of problemistic search. As posed by Posen et al. (2018), a variance based theoretical approach (Mohr, 1982) has been adopted in research on problemistic search. This approach focuses on covariation between, for instance, a performance deficit and changes in behavior, and possesses a static nature, leading researchers such as Greve & Gaba (2017) to conclude that the "middle step of problemistic search has seen much less investigation than work simply linking performance to organizational change or risk change." Therefore, Posen et al. (2018) underline that the PF literature has the tendency to lock into a black box the problemistic search processes without really opening the box to measure of observe the processes or subprocesses it might contain inside. Hence, looking into this black box might help the PF field unfolding different problemistic search stages possibly being of a recursive nature. These stages might encompass the (i) drops in performance relative to an aspiration recognition, (ii) mechanisms through which the firms sequentially search for solving the performance problem with change alternatives, and (iii) mechanisms that stop search (Posen et al., 2018).

Although this process has served the PF literature to ease empirical investigation, additional efforts in looking into the underlying problemistic search mechanisms is needed and might require a drastically different perspective. Adopting a qualitative approach and a process perspective might serve PF researchers in investigating "questions about how and why things emerge, develop, grow, or terminate over time" (Langley et al., 2013, p.1), helping the PF field to access the black box inside and look at how

problemistic search is emerging and carried out in organizations (Posen et al., 2018).

Porac & Tschang (2013) go even further arguing that it is time to recognize that managers actions latitude in notably in routinized contexts (Feldman & Pentland, 2003). The authors also argue that we must acknowledge that, both at the managerial and the organizational level, actions are rooted into cognitive processes (Walsh, 1995). Gavetti & Levinthal (2000, p. 113–133) describe cognition as "a forward-looking form of intelligence that is premised on an actor's beliefs about the linkage between the choice of actions and the subsequent impact of those actions on outcomes. Such beliefs derive from the actor's mental model of the world (Holland, Holyoak, Nisbett, & Thagard, 1986)." Focusing on cognition, at the macro level is increasingly widespread in the Carnegie tradition work. For instance, recent work on micro foundations (Barney & Felin, 2013; Felin et al., 2015; Foss & Pedersen, 2016) "resides not in studying individuals' behaviors per se, but rather from identifying how individual behaviors interact and aggregate to generate macro-level phenomena" (Aggarwal et al., 2017, p. 1213). Hence, investigating cognition, in addition to adopting a perspective based on process, might help to the incorporation of diverse behaviors explanations into PF literature, notably the behaviors related to search triggers and inhibiters, which have not been predicted so far by the current model being highly mechanistic (Posen et al., 2018).

Thus, studying more closely and qualitatively the PF concepts may lead to new research possibilities, as empirical research is still missing in probing cognitive argument, analyzing the stopping behaviors developments and mechanisms, or integrating momentum theory and problemistic search theory, leaving an important future research avenue (Posen et al., 2018).

4.4.2. Potential contributions of qualitative research to Business Model Innovation

This section shows the benefits and the ways in which Business Model Innovation (BMI) theory has been developed over the recent years mainly based on qualitative work, as an example of how qualitative approach can bring about an entire field of research.

A first example is reflected in the work of Andries et al. (2013) that show that “ventures can either change their business model configurations through local search, i.e., by changing one single business model component at a time, or through distant search, i.e., by altering multiple business model components in each new experiment." The authors show that simultaneous search paths originally start from the same business model and later expand into various directions, allowing for the pursuit of different business models in parallel and the creation of a considerable variety of options, increasing the chances for survival and growth.

In the same line Berends et al. (2016) demonstrates that it exists two basic modes of organizational learning, namely cognitive search, and experiential learning. While cognitive search refers to a representation that is used to create and select alternatives according to their consequences, experiential learning instead is backward looking, in the sense that past experiences get encoded in routinized actions, such that failures are abandoned, and successful actions are retained. Indeed, other studies have described BMI as a process that emerges primarily from the domain of action, related to concepts such as effectuation (Chesbrough, 2010), experimentation (McGrath, 2010), and trial-and- error learning (Mezger, 2014; Sosna et al., 2010). In experiential learning, the relation between cognition and action is reversed: action and its effects are the sources of learning.

The work of Osiyevskyy & Dewald (2015) reflects the previous perspective. As stated by the authors the "development of new organizational capabilities and the direction of search activities (local or distant) in response to the disruptive change is driven, to a large extent, by managerial cognition (namely, managerial beliefs).” The authors further apply this perspective to explorative and exploitative business model change, arguing that incumbent strategies are driven by divergent managerial beliefs and perceptions of the disruptive approach. The authors argue that the explorative choices can have either flexible or rigid consequences (or both), as the need to embrace a completely new and disruptive approach might involve difficult choices implying rigid consequences, such as major change at the organizational level or considerable investments into development and acquisition of new capabilities, which are usually rigid and not easy to revert once engaged in (Casadesus-Masanell & Ricart, 2010).

On the other hand, the exploitative choice aims at strengthening the existing business model being a typical reaction of established companies to disruption. In most cases, the exploitative choice will reinforce the existing rigid consequences within the existing business model (Casadesus-Masanell & Ricart, 2010). Notably, the incumbents' preference for exploitative (incremental) rather than explorative (radical) business model change can be a deliberated choice, particularly when the disruptive business model is driven by a discontinuous technological change (Trispas, 1997). The adoption of these two strategies can be moderated by experience. Osiyevskyy & Dewald (2015a) show that for example, experience working in other industries improves cognitive flexibility enhancing the ability to conceive innovative strategies, while experience working in the current industry leads to cognitive rigidity, commitment to the status quo, and reluctance in making strategic changes.

Osiyevskyy & Dewald (2015, p. 71) found that the most influential factor is "the manager's prior experience of making successful changes in risky situations: it amplifies the intention to change the existing business model (explorative and exploitative dimensions) in response to disruption, both directly (significant positive main effect) and indirectly (through reinforcing the perceived opportunity)." Finally, the authors underline that the manager's risk tolerance and self-efficacy are reinforced by prior successful risk experience, making their opportunity recognition capability more efficient.

In the same line Aspara et al. (2013, p. 461) sustain that "managers often try to retain such business model elements which they perceive as having contributed to their corporation's past business successes." The authors also argue that "losses loom larger than gains" and found that "factors associated with past failures may have carried more weight in their cognitive processes than those related to past successes."

The previous examples expose how qualitative research can highly contribute to develop a rich and deep understanding of phenomena emerging from different research streams, such as organizational learning, cognition, or attention, to inform and develop BMI Theory. Moreover, the development of such streams can help future research in connecting them to additional and, so far, disconnected research lines, as it is the case for BMI and PFT.

4.5. Conclusions

Quantitative research, including observational, survey, and randomized controlled trial methods, is not sufficient to answer all questions of interest and relevance to Performance Feedback research (Posen et al., 2018). Qualitative research provides unique methods to help understand complex phenomena, explore areas of limited knowledge, and inform investigators about optimal study designs for subsequent studies in a research program (Ariño et al., 2016; Bansal et al., 2018; Bluhm et al., 2011). Qualitative research can also help to generate explanatory models and theories about the organization (Bettis et al., 2015; Bluhm et al., 2011). While, numerous advances in our understanding of managerial mechanisms have been made through qualitative research in the management field (Bansal et al., 2018; Bluhm et al., 2011; Guercini, 2014), we here show that such a qualitative inquiry is specifically missing in the PF field and would be a valuable addition to the traditional repertoire of methodologies used in this stream of research to deepen and open the knowledge and perspectives as well as offer opportunities for future research, notably regarding the PF-BMI relationship.

Chapter 5

Performance Feedback And
Business Model Innovation:
Insights From A Case Study-Based Analysis

ABSTRACT

An increasing attention of practitioners and researchers has been dedicated to Business Model Innovation (BMI) over the last decade. BMI implementation enables companies to increase performance and achieve sustainable competitive advantage. Although BMI research has intensified, the role of firm performance as an antecedent to BMI is still scarcely investigated. In the attempt to better understand the reasons why firms innovate their business models, this research investigates the relationship between firm performance and BMI, while focusing on the extent to which companies consider performance as a driver of BMI. To do so, we ask the following research question: "*Do companies change or innovate their business models based on their performance?*"

Taking a Performance Feedback Theory (PFT) perspective, we study the relationship between performance relative to organizational aspirations and BMI, looking at the way companies change or innovate their business models based on their past and current competitive performance. The application of PFT leads to four propositions that are discussed by means of five case studies conducted in various industrial sectors. Our case studies support, in part, our theoretically driven propositions. For example, our findings show that companies with good performance and few resources may still engage in so-called synergetic business model development, thus against the predictions of PFT. In addition, our case studies demonstrate that, whereas companies monitor their main competitors over time, their decisions regarding BMI seem to be decoupled from the performance of competition. Consequently, by leveraging the PFT as a theoretical lens, this research establishes a relationship between Performance Feedback and BMI and contributes to better understand the role of firm performance in influencing BMI.

Keywords: Performance Feedback, Business Model Innovation, Firm Performance, Organizational Aspirations, Multiple Case Study.

5.1. Introduction

Over the last decade, an increasing attention of practitioners and researchers has been dedicated to Business Model Innovation (BMI) (Spieth et al., 2014;Wirtz et al., 2016; Foss & Saebi, 2017). BMI implementation enables companies to achieve sustainable competitive advantage and increase performance (Casadesus-Masanell & Zhu, 2013; Massa and Tucci, 2014). According to Amit & Zott (2012), BMI denotes the introduction of a business model that is new to the focal firm and its industry, and so far, not known in that space before (Amit & Zott, 2012). Thus, a BMI implies "designed, novel, and nontrivial changes to the key elements of a firm's BM and/or the architecture linking these elements." (Foss & Saebi, 2017, p.201).

Although BMI research has intensified during the last decade, the triggers of BMI are still not well investigated. Intuitively, companies exhibiting a high level of performance may not have any incentive to change their business models: why change a business model that functions well? However, for a firm that is experiencing a strong decline in performance, any BMI may come too late, as the company may have already lost competitive advantage, making any attempt to improve the situation rather look desperate. Because of this, firms may find themselves trapped in a difficult dilemma when they envisage to change their business models.

In the attempt to better understand the reasons why firms do BMI, we ask the following research question: "*Do companies change or innovate their business models based on their performance?*" Companies may be reluctant to introduce change and innovation. As underlined by Greve (2003a), while innovations can transform organizations and industries, they are repleted with risk. Being a specific type of innovation, BMI can trigger risks such as uncertain financial outcomes and loss of existing customers. According to Performance Feedback Theory (PFT), the decision to engage in organizational changes because of innovation mainly depends on the firm's performance as well as the aspirations the firm intends to reach (Baum et al., 2005). Managers compare firm's performance to aspiration levels defined as the "desired performance levels in specific organizational outcomes" (Shinkle, 2012, p.416; Cyert & March, 1963). These aspiration levels depend on two aspects: (i) performance relative to prior aspirations, and (ii) the performance of comparable firms (Cyert &d March, 1963). A fair body of literature on the PF theory, which evolved out of the Behavioral Theory of

the Firm (BTOF), demonstrates that performance relative to aspirations (or "attainment discrepancy") influences risk-taking (March & Shapira, 1987; Fiegenbaum,1990; Bromiley, 1991; Miller & Chen, 2004) as well as organizational change (Baum et al. 2005; Cyert & March, 1963; Greve, 1998, 2003a,b).

Although not yet investigated, we draw on the PFT as a theoretical lens to explain why companies embark on BMI. BMI in the context of PFT may also be understood as a strategic result of a behavioral process encored in the BTOF. Indeed, PFT argues that performance above aspirations triggers organizational inertia, being seen as a good reason to avoid the complexities engendered by an organizational change (Greve, 2003b; Rhee & Kim, 2015), while performance below aspirations may trigger a problemistic search process to look for potential solutions (Cyert & March, 1963; Greve, 1998, 2011). Given that BMI might serve as a strategic response to the performance feedback, we extend the BTOF logic to explain BMI in the context of organizational aspiration. Further, we postulate organizational aspirations as an undiscovered antecedent of BMI and provide insight to this unsolved puzzle.

Methodologically, we adopt a qualitative approach by designing a multiple case study research to generate rich data and examine current managerial challenges faced by different industries and their main players.

Finally, this research contributes to the literature on several aspects. First, our study aims to contribute to the emergent literature on BMI (Amit & Zott, 2012; Foss & Saebi, 2017) through an empirical exploration of the way companies change their business models. Second, our study also aims to contribute to the literature on Performance Feedback (Greve, 2003b; Shinkle, 2012), notably by empirically showing its link to BMI and using a qualitative approach. Finally, our study contributes to the literature by showing the organizational change mechanisms in different industries, bringing a missing behavioral lens that allows to open and broaden new avenues for future research.

5.2. Theoretical Background

5.2.1. Business Model Innovation

The investigation of the business model concept has started in the 1990s together with the development of the Internet and online businesses. The

emergence of disruptive and new firms has put in question the way managers and entrepreneurs used to make strategic choices in existing firms. Being complementary to corporate strategy, the business model concept is conceived as "a value-centered activity system that is designed and enabled by a focal firm in order to meet perceived market needs." (Amit & Zott, 2021, p.15). According to Zott & Amit (2010), the business model is composed of four key aspects: the content (e.g., what are the activities contained in the business model), the structure (e.g., how the activities comprised in the business model are linked together), the governance (e.g., who is in charge of performing the activities), and the value logic, (e.g., why is the business model creating value and is enhancing value appropriation).

Business models are frequently subject to innovation and adaptation over the years, which represents a challenge for both academics that study them and practitioners that execute them (Doz & Kosonen, 2010; Sosna et al., 2010; Casadesus-Masanell & Zhu, 2013). While the BMI literature has grown rapidly (for a literature review, see Foss & Saebi, 2017), there is still a need for an agreement on what business model modification can be called innovation (Foss & Saebi, 2017; Schneider, 2019). For instance, Spieth and Schneider (2016) emphasize the need to identify for whom the innovation is new. Foss & Saebi (2017) further distinguish between different degrees of novelty (new to the firm vs. new to the industry) and innovation's scope (modular vs. architectural change). Their research differentiates between four BMI typologies: evolutionary (modular, new to the firm), focused (modular, new to the industry), adaptive (architectural, new to the firm) and complex (architectural, new to the industry). In general terms, BMI can be defined as "a firm's adoption of a new logic, paradigm or approach to create and capture value" (Schneider, 2019). It comes as a complement to product and process innovations (Amit & Zott, 2012).

Several studies have shown firms' motivations to pursue BMI. For instance, external discontinuities and disruptions are major BMI drivers (e.g., de Reuver et al., 2009; Doz & Kosonen, 2010), in addition to technological developments (e.g., Teece, 2010; Wirtz et al., 2010; Sabatier et al., 2012), social and sustainable efforts increasing demand (e.g., Zollo et al., 2013; Joyce & Paquin, 2016), and globalization and deregulation (e.g., Casadesus-Masanell & Ricart, 2010; Teece, 2010). In addition, firms can approach BMI differently, e.g., through exploration and experimentation, with a particular

focus on trial-and-error as well as learning (e.g., Sosna et al., 2010; Andries & Debackere, 2013; Andries et al. 2013).

Foss & Saebi (2017) further argue that BMI's external antecedents and internal drivers have not been sufficiently studied. Martins et al. (2015) observe that despite the growing body of BMI literature, very little is known about how BMI may be driven in the absence of exogenous change. Furthermore, linking the firm's environment to internal BMI drivers such as managerial cognition has only recently caught attention (Schneider, 2019). For instance, Osiyeveskyy & Dewald (2015) showed the consequences of different perceptions: while perceiving critical threats (e.g., supposed bankruptcy) appeared to be negatively correlated with exploitation behaviors, both perceived performance reducing threats in terms of anticipated losses and opportunity perception appeared to be positively correlated with explorative behaviors.

Additionally, the effect of BMI on firm performance, which was first investigated empirically by Zott & Amit (2007, 2008) in entrepreneurial ventures, has been further explored in various industries and countries, both in new and established firms, by many researchers such as Wei et al. (2014), Cucculelli & Bettinelli (2015), Pati et al. (2018), and Futterer et al. (2018). Despite the existing evidence that BMI influences firm performance, there are only a few studies (e.g., Cheng et al. 2022; Najmaei, 2018; Yu et al. 2020) that consider performance a potential driver for BMI. In other words, while extant literature focuses on the effect of BMI on performance, it neglects the influence of performance on BMI.

5.2.2. Performance Feedback Theory: The Role of Organizational Aspirations

PFT considers performance as an antecedent of organizational change and innovation. Models of organizational aspirations are central to research on organizational and managerial risk-taking (Bromiley, 1991; March & Shapira, 1992; Greve, 1998, 2003b). Indeed, decision-makers evaluate organizational performance relative to their "aspiration level". An aspiration level is, thus, a reference point that identifies the boundary between perceived success and failure (March & Simon, 1958). Both the theory and existing empirical results suggest that organizational aspirations adapt to two factors: the firm's own historical performance (historical aspiration) and the

performance of other reference firms (social aspiration) (Cyert & March, 1963; March & Simon,1958; Greve, 2003b).

Historical aspiration levels, which refer to the firm's past performance, shape strategic behavior and may be used as a forecasting tool of future performance (Cyert & March, 1963; Levinthal & March, 1981; Shinkle, 2012). An organization's recent performance history is a benchmark against which the organization evaluates its current performance.

Social aspirations involve comparisons with industry peers (Massini et al., 2005) and represent a good indicator of the firm's capabilities in contrast to its competitors. In this case, the recent performance of an organization's reference, or peer group, is the benchmark against which the organization evaluates its current performance. Available research indicates that salience, ease of observation and comparability are important factors affecting how decision makers form a reference group of peer organizations used for social comparison (Reger and Huff, 1993; Lant & Baum, 1995; Porac et al., 1995; Greve, 1998; Baum et al., 2005).

As explained by Greve (1998, p.61), "historical and social aspiration levels can be seen as results of the decision maker behaving as an intuitive scientist, interpreting available data based on simple processing rules, in order to forecast future performance, which sets the aspiration level". This simplified information processing obtained by categorizing outcomes as successes or failures, shows that risk-taking is highly sensitive to performance outcomes relative to aspiration levels (March & Simon, 1958; Greve, 1998), and depending on whether the organization's performance is above or below aspirations (March and Shapira, 1992), thus highly impacting the propensity of an organization to engage in organizational change and, more particularly, to innovate or not its business model (Shinkle, 2012; Snihur, 2018).

The behavioral explanation of aspirations is also linked to models of learning, search, and sequential attention to goals (Greve 2003b; March & Shapira, 1987). One important idea behind these studies is that risk-taking is goal oriented, and, as previously-mentioned, that decision makers' actions differ depending on whether their performance is above or below some goal or aspiration level relative to either their own historical performance or the performance of their peers (Kahneman & Tversky, 1979; March & Shapira, 1992; Greve, 1998, 2003a, b; Baum et al, 2005). Decision makers appear to

be willing to engage in riskier types of behavior with more uncertain outcomes (e.g., reorient strategies, change markets, introduce new organizational practices and processes, raise R&D intensity, emphasize breakthrough innovations, launch products based on new technologies) when their performance does not reach their aspiration level (Nohria & Gulati, 1996; Greve, 1998, 2003a; Baum et al, 2005). Performance relative to aspiration levels thus appears to serve as a "master switch" (Greve, 2003b) that influences risk taking across a wide range of organizational behaviors.

5.3. Analytical Framework: The Aspiration-Slack Matrix For Business Model Innovation

Performance above aspiration can represent a good reason for firms to avoid a risky change such as BMI. In this case, firms are expected to continue the status quo (Bromiley et al., 2015), thus fostering organizational inertia (Greve, 1998; Akgün et al., 2007). They avoid actions that might result in a change of established routines, even though they may still strive for achieving slightly higher performance (Cyert & March, 1963). When performance just exceeds organization's aspirations, decision-makers may, also, tend to frame the outcomes of risk-taking in terms of falling below aspirations. However, they do not engage in such risk-taking to avoid the potential loss (Kahneman & Tversky, 1979), hence inhibiting organizational changes such as BMI (Becker, 2010; Shinkle, 2012; Snihur, 2018).

In general, performance above aspirations reinforces lessons learned from earlier experience (Levitt & March, 1988). Organizations tend to keep on learning through improving their existing routines and beliefs, reinforcing their status quo (Nelson & Winter, 1982) and inhibiting the active search for alternatives such as new business models (Akgün et al., 2007; Becker, 2010; Snihur, 2018). As shown by Greve (1998) in his study of radio station chains, organizations performing above aspirations may also enjoy extra resources that motivate decision makers to engage in a "slack search" dynamic that enables them to experiment and work on new opportunities, perhaps revisiting promising ideas previously abandoned because they were deemed too risky, increasing investment in R&D or innovative activities (Baum et al., 2005; Greve, 2003a; Iyer & Miller, 2008), and enjoying extra resources to innovate their business model. The intensity of this search is dependent on "the extent to which goals are achieved and the amount of organizational slack" (Cyert & March, 1963, p. 116).

Because decision makers react more strongly to threats than opportunities (Tversky & Kahneman, 1986), performance below aspiration is more likely to trigger risk taking, and possibly enhance BMI (Becker, 2010; Greve 2011). Baum et al. (2005) suggest that an organization that performs below aspiration cannot achieve acceptable performance through local search and incremental adjustment. Instead, decision makers must increase their emphasis on more risky undertakings that offer the possibility of raising the organization's performance to its aspiration level. Therefore, failing to achieve the aspiration level is suggested to trigger problemistic search that drives organizational change (Cyert & March, 1963; Greve, 2003a; Shinkle, 2012; O'Brien & David, 2014). Problemistic search is major concept in the Behavioral Theory of the Firm. Still, however, firms can adapt aspiration toward the actually experienced performance (Cyert & March, 1963).

Unsatisfactory outcomes put existing practices and strategies into perspective (Levitt & March, 1988). Organizations have to embark on organizational changes such as BMI without necessarily having the needed competences, information, or understanding of the on-going changes (Greve, 2003b; Snihur, 2018). Thus, organizations enter a process of unlearning characterized by "changing the organizational beliefs, norms, values, procedures, behavioral routines, and physical artifacts" (Akgün et al., 2003, p. 847), and abandoning old routines to develop new ones (Tsang & Zahra, 2008). While it is a risky endeavor, it enables the organization to survive and only pays off in the long term (Chesbrough 2010; Snihur, 2018). In addition, decreasing performance relative to social aspirations indicates that the firm's competitive position is slipping (Wiseman & Bromiley, 1996).

Building on the different theoretical perspectives previously exposed, we hereafter propose a set of propositions that we will further explore empirically. When companies perform above aspirations and possess slack resources, they can explore new potential business models that can be further added to the existing one. Some existing examples of additive BMI while companies are performing above their aspiration level can be observed in the literature. For instance, companies present in the automotive industry (e.g., Volkswagen, General Motors, etc.) have recently integrated the development of car sharing services in addition of their original product-based business model relying on selling cars. Moreover, other companies such as Amazon and Google are as well constantly adding new business models in parallel to

what they are initially doing, such as Amazon Web Services (AWS) which proposes cloud storage, machine learning, blockchain and databases services, in addition to the initial Amazon selling platform. Hence, we suggest that:

- *P1: Companies engage in **additive business model innovation** when they are performing above aspiration and have slack resources.*

For example, IBM had a replacive business model as it moved from product-centric to service-centric BM in the 90s (Amit & Zott, 2010). Before switching to the service model, IBM was below aspirations. Hence, it is interesting to observe that the company did not give up its original business model in spite of low performance and tried to add a business model and then eventually replace it with a new one. Another example can be found in the bookstores, which added an online channel to their initial physical store. Internet-based business models have been increasingly leveraged during the pandemic, where most companies added a new BM based on online distribution. Hence, we propose that:

- *P2: Companies engage either in **additive or replacive business model innovation** when they are performing below aspiration and have slack resources.*

When there is an absence of slack resources and companies are performing below aspiration, companies might engage in business model changes (not experimentation), notably due to the high-risk tolerance of managers when performance is below the target. One example is the Swatch company, which replaced its business models after being massively disrupted by the Asian electronic watches manufacturers while being below aspiration and without possessing any slack resources at that time. Hence, the following proposition:

- *P3: Companies engage in **replacive business model innovation** when they are performing below aspiration and do not have slack resources.*

When an organization is performing above aspirations and does not possess any slack resources, it might consider that the situation is good enough that it does not need to process to any changes in its business model. This tendency makes these companies potential candidates to be disrupted. Kodak is an example, as while the company was performing well during the early 2000s, it did not consider necessary to change its business model. However,

it has soon got disrupted by digital cameras and smartphones, which made its analog film-based business model obsolete. Hence, we propose that:

- *P4: Companies are **inert** and therefore do not change their business models when they are above aspiration and do not have slack resources.*

The propositions are integrated in a framework represented by Figure 15, where additive BMI stands for a new BM that is created in addition to the old one and replacive BMI means that the new BM replaces the old one.

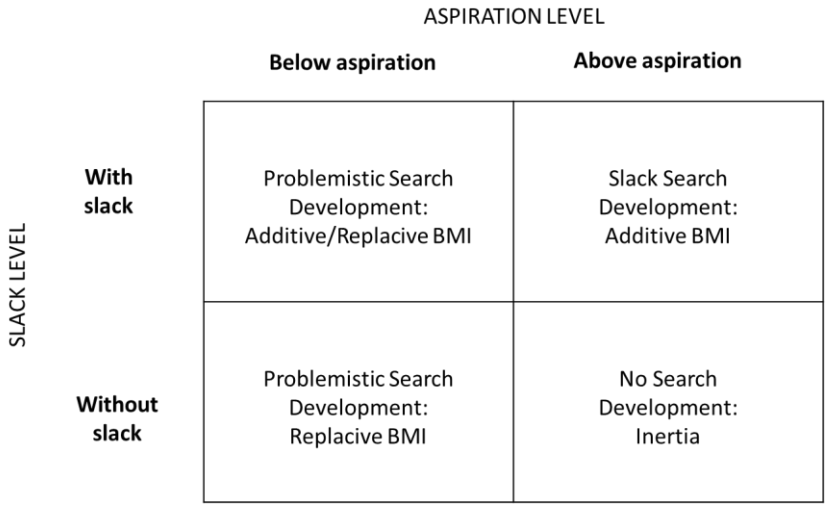

Figure 15. The Aspiration-Slack Matrix for BMI

5.4. Methodology

5.4.1. Research design

A case study methodological approach was selected because it allows the collection of rich observations on complex relational processes, which cannot be achieved by a quantitative approach (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). The exploratory nature of the research topic justifies the use of the case study method (Eisenhardt & Graebner, 2007). Case study research has been used in exploratory research where theory is inductively constructed (Eisenhard, 1989; Yin, 1994, 2014). Moreover, this methodology has been used in many recent empirical works on business models (Kukkamalla et al., 2020; Dahmani et al. 2020) since it enables the collection of rich data. Moreover, multiple case studies generate more robust results as

compared to a single case study and allow for a cross-case analysis (Eisenhardt & Graebner, 2007; Yin, 1994, 2014).

5.4.1.1. Case Sampling and Data Collection

This study aims to explore how companies change or innovate their business model based on their performance. Therefore, after having reviewed relevant literature and derived the propositions, and as suggested by Glaser & Strauss (1967), we chose a theoretical sampling, as selecting cases makes it possible to shed a light on the relationship between constructs (Eisenhardt & Graebner, 2007) and identified the case studies, while applying the following criteria:

(1) Companies needed to exist since at least 5 years to be able to retrace the past changes and facilitate the mapping of the firm's evolution over time, in particular the BMI processes.

(2) Referring to Yin (2009) and recent BMI literature, research focus was placed on elements within companies that provided added value towards an innovative value proposition for the company.

(3) Informants in the case study companies needed to be knowledgeable and willing to communicate about the topic (Eisenhardt & Graebner, 2007). Only informants being in the position to provide insights into our research area were selected (e.g., executives, upper management).

Based on these criteria, the search and choice of the cases were conducted. The companies selected were existing since at least 5 years and passed through BM changes. We do not focus on any specific industry or company size in order to have a general overview on how the company's BM change across different industries and to have a large panel of size representation. Since the literature on PFT is mainly quantitative and in order to offer a new qualitative perspective, our reference for sampling were based on BMI references (e.g., Björkdahl (2009) with 3 case studies, etc.).

In total, we conduct five case studies as illustrated by Table 4: (1) Logistics company, (2) Electronic components provider, (3) Printing company, (4) Medical device consulting company and (5) Chocolate producer.

For each case study, sufficient data could be collected. For three of the case studies, more than one interview has been conducted, and one interview for

the two others. The interviews were semi-structured and supported by an interview guide including questions that addressed elements of the companies' business models and their performance and presented in Table 5. In addition, company reports and websites as well as further documents such as company presentations made available by the companies themselves have been consulted to triangulate the data sources. Our key informants were based in Italy, Spain, U.S. and France. All interviews have been conducted in English in the time period between June 2022 and November 2022. Case details are summarized in Table 4.

Nr.	Case	Company size	Company	Informant's Role	Length
1	Logistics	Large	A	Senior Manager	1h 02min
2	Logistics	Large	A	Business Development Manager	50min
3	Logistics	Large	A	Retail and Asset Senior Manager	1h 04min
4	Electronic Components Provider	Large	B	Area Technical Manager	52min
5	Electronic Components Provider	Large	B	Country Director	53min
6	Printing	Large	C	Retail Media Manager	54min
7	Printing	Large	C	Automotive Segment Manager & R&D Firmware Project Manager	1h 01min
8	Medical Device consulting	Small	D	Vice President Of Business Development	48min
9	Chocolate Provider	Medium	E	Regional Sales Manager Europe	56min

Table 4. Data Sample

Nr.	Questions
1	Could you describe your company, the sector in which it is operating, as well as the products and services that it provides to the customers? Who are your main customers?
2	Could you remember some past situations where your company did not achieve its goals? Why did the company not achieve the objectives? And, how was the management reaction to improve the situation? What has been done to improve the situation ?
3	To measure the level of your performance, what are the main KPIs that you use? How do you set the target values for these KPIs?
4	Do you foresee money or extra capacities for unexpected research, innovation, or improvement projects? How do you prioritize these projects? Do you qualify your company as “rich”?
5	What are the core activities in your value chain (e.g., research, design, development, production, assembly, services)? Are your core activities similar to those of competitors in the same industry? What is your firm’s level of vertical integration? Is it higher or lower than industry average?
6	Did you experience in the past situations that led to changes in the activities you are doing, changes in the assignment of these activities to organizational units, or changes in the sequence these activities are conducted? Do you also review your pricing and the way you are generating revenues?
7	Do you remember the triggers of such changes in the activities of your value chain?

Table 5. Interview Guide

5.4.1.2. Data analysis

All interviews were recorded with the help of Microsoft Teams ® and transcribed. The collected secondary data (e.g., company reports and websites, presentations, etc.) was subsequently subject to a qualitative content analysis (Gioia et al., 2013) by using the Atlas.ti version 23 software. The following procedure was performed for the analysis:

(1) Deductive codes based on previously identified constructs in the literature were applied to the interview content (e.g., slack resources, problemistic search, slack search, and aspiration levels).

(2) The obtained deductive codes were additionally complemented by applying inductive coding approach that resulted from the content analysis. By applying Gioia et al. (2013) clustering methodology, all codes were grouped into first- and second-order themes present in Figure 16. Once the coding completed the results were checked to ensure intra- and intercoder-reliability as well as validity.

(3) The main findings were then summarized for each theme and for each company, allowing for intra-case and inter-case comparisons.

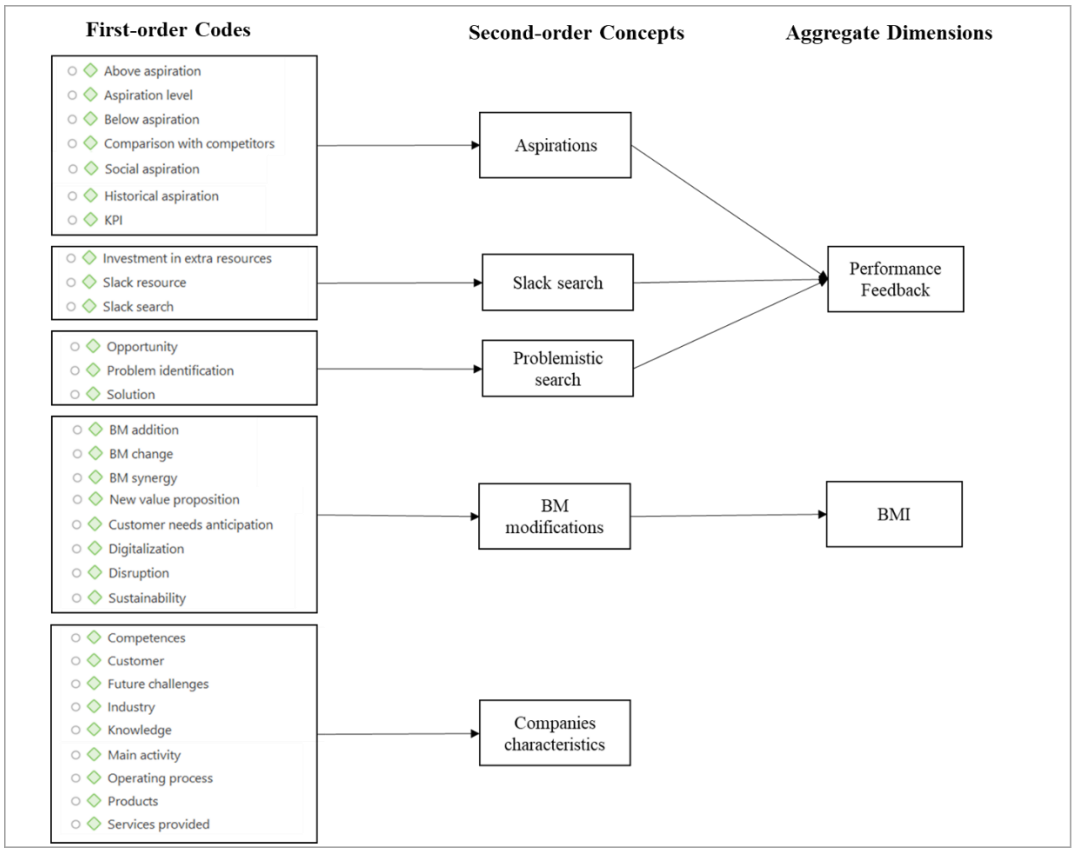

Figure 16. Coding structure

5.5. Findings

5.5.1. Within-Case Analysis

The analysis of the data collected in our study suggest that the companies change their business models based on previous performance and competition comparison. In the following, we dig deeper into each company case to further analyze how firms proceed to BMI based on their performance.

5.5.1.1. Company A

Company A is a logistics company operating worldwide with more than 11 500 employees. Over the years, it has become market leader by introducing several changes to its business model. Company A leverages specific KPIs (e.g., revenue, profit, gross margin, costs, delivery, collection, cycle time, stock) to evaluate its own performance (historical aspiration). It also constantly monitors competition (social aspiration). Company A noticed that its role was changing from simple logistics to a company that *"…helps solving problems, simplifying things*". This shift in the value proposition was one of the first BMI realized. This allowed the company to widen the offer to its customers by providing consultancy services in addition to the logistics operations. For instance, these services include contract management (develop contracts with retailer to help them manage their internal processes or help customer find a contractor) and inventory management (help distributors to manage their inventory). Moreover, the company realized the need to make its offers more sustainable. It is underlined that "*there was the problem of sustainability*", which pushed the company to further innovate its business model by integrating measures such as making the "*product … completely*" and "*collaborative transport solution*" in order to optimize the transport of goods by controlling the space in the trucks and allow for more delivery points to be served. Finally, company A decided to invest in the digitalization of its business model by developing its own "*application that you can download on your Android. It's really smart, quick, simple, simple means usable. Simple means that quickly will be adopted and that is able to interact with many integrated systems that maybe also our supply already have*.", helping it to track and receive in real time information on the deliveries. The addition of this application allowed to company A to acquire new resources especially by hiring new employees specialized in the field. In addition of the application development, Company A also added services such as the drone assisted distribution centers scanning to conduct audits or the introduction of digital pallets including "*a GPS location, Wi-Fi location, GMS location, with other several information*" helping them to track their products in real time and avoid any loss.

Being a leader in its industry, Company A proceeded to all these business model modifications while being above its aspirations level and possessing slack resources. Hence, company A is constantly investing in extra resources

(slack search) allowing it to acquire new resources and competences and, in turn, to innovate its business model by adding new services while keeping its initial BM, also called additive BMI.

5.5.1.2. Company B

Company B is a worldwide electronic component provider with more than 14 000 employees. Similar to company A, company B's business model underwent many changes during the previous years. KPIs such as profitability, sales gross profit, revenue, costs, and operating are leveraged to monitor performance (historical aspiration) and compare it with competition (social aspiration). The business model changes started 10 to 15 years ago with the internationalization of the company (e.g., opening subsidiaries abroad, expanding customer base abroad), the creation of an "*Innovation Department, …, 5-6 years ago, we build up a specific innovation department*", as well as the company's digitalization including "*selling online. So, with the credit card you can go to our website and buy. We did this type of digitalization long time ago, probably even 10-15 years ago."* (e.g., online technical support, digital tools development, work from home programs implementation, etc.). The evolution of the business model was further achieved through acquisitions, as mentioned by one key informant: "*we have acquired a couple of companies… These are… [competencies] that we never had in our knowledge base, and this is something where we were obliged to acquire to be able to support our customer*." These acquisitions allowed the company to integrate essential knowledge to offer a wider range of products. Over the years, the increased demand for customers' solutions further pushed the company to develop an offer based on "*a solution that included the components…, but also… software, firmware, consultancy, and so on*." Hence, the company has integrated consulting service activities into its initial business model of electronic components to support its offers.

The introduction of such business model changes has been possible thanks to the fact that, being one of the leader of its industry, company B is performing above its aspiration level while possessing slack resources. Operating in a very dynamic market company is always looking for ways to reorganizing its internal processes and product offer, as well as investing in extra resources (slack resources). This constant slack search permits company B to acquire essential new resources and competences allowing it to innovate its business

model by adding new services and competences while keeping its initial BM operating, also known as additive BMI.

5.5.1.3. Company C

Company C is a market leader in the printing industry with 52.000 employees worldwide. Many KPIs such as revenue, profit, return on investment, gross margin, and costs are currently used to track performance (historical aspiration). Some of these metrics are even used to check performance relative to competition (social aspiration). Company C developed its business model over time by leveraging its existing competencies and knowledge on 2D printing technologies. Indeed, seven years ago, company C started to integrate "*3D print is leveraging not only…the leading inkjet technology, but also the go-to-market and business to business strategies that come with other 2D print businesses that we have*.". This has allowed company C to add to its razor and blade-based business model (2D printers with ink) a subscription model (for 2D ink delivery service and 3D printing machines including the powder component at the industrial level). The addition of the new business model allowed the companies to extend its printing offer (e.g., plastic-based products such as dental aligners mold, golf putter, car parts, as well as metal-based products), while relying more on product customization. Moreover, Company C further developed its business model on the computer side, especially through the enlargement of its gaming PC offer, the development of the service called "*wolf security, they embedded already especially in the top computers of [C] that is cybersecurity*", as well as the acquisition of a headset company allowing it to enlarge its equipment offer related to the work from home market.

The numerous business model changes conducted by Company C has been allowed thanks to the fact that the company has been performing above its aspiration level and possesses slack resources. Being one of the leaders in its industry, Company C invested in extra resources (slack search) in order to add new services, develop new technology and find new functionalities for the existing one. Thus, the constant slack search operated by Company C allowed it to innovate its business model by adding a subscription-based business model, in addition of its existing razor-blade BM, realizing an additive BMI.

5.5.1.4. Company D

Company D is a US-based medical device consulting firm employing 25 persons. To monitor its own performance, company D tracks KPIs such as revenue, profitability, turnover, costs, and number of projects (historical aspiration), as well as the competition (social aspiration). Company D's value proposition is based on providing specialized and skilled experts (e.g., engineering, quality, regulatory and some operations services) for the realization of medical device projects. While operating its business model, the company is facing a challenge in terms of workforce, not having enough consultants available to quickly integrate new projects, *"And now everyone, not just in our industry …, there's just a labor shortage. So, we've got more companies looking for projects, because they don't have the people and for us it's hard to find the people*.". This labor shortage problem has further pushed the company to reorganize its internal processes by reconsidering the way in which it is selecting its projects, and revising its hiring process (e.g., focusing on the hire expertise to be able to expand into different market and enlarge its product line specialization) *"expanding our technical expertise for the types of projects or expanding our product portfolio for the types of devices, I think that's another way that we've talked about growing and just getting better at."*. The drop in labor availability issue also constrained company D to look for solutions to generate continuous revenue streams that could not be ensured by solely relying on its project-based business model. Based on the insights gathered through the realization of different consultancy projects collaboration, company D was able to identify common problems among their customers, for which it developed specific technological solutions based on knowledge and resource optimization (e.g., knowledge absorption by learning from collaborator and further integrate the expertise inhouse). The evolution of company's D business model also derived from the inability for some of their customers to pay for the project fees. In order to find a solution, company's D offered to "*discount our fees for an equity stake in a company or royalty*" and further transform it into an IP. By further patenting these technologies and leveraging them during future projects, company D is able to generate licensing fees from their customers, exploiting synergies to develop a new BM.

The business model modifications operated by company D while performing below its aspiration and through a problemistic search, have allowed it to

conduct a synergetic BMI. Indeed, Company D was able to gradually shift its project-based BM into a licensing-based BM evolving out of the synergies existing between the old and the new BM.

5.5.1.5. Company E

Company E is a worldwide chocolate producer with about 100 employees and possessing more than 800 customers, including restaurants, hotels, particular, etc. Company E uses KPIs such as revenue, sales, turnover, importers, competitors' brands, geographical coverage, and client satisfaction (historical aspiration). It also constantly monitors the performance of its competition (social aspiration). Company's E business model changes have occurred after a drop in performance and solved through the acquisition of several competitor brands in the premium sector. This allowed the company to change its value proposition and position itself as a more premium and artisanal brand, "*We have changed a lot of things.…So, I remember that one of the missions also at the beginning, it was really to go and see all our clients … end users, to actually change the mentality to show … the new products and the quality improvements.*". The internationalization of the company through the creation of an export department seven years ago and the investment in R&D capacities, as well as the development of an internal competition by introducing an additional and similar chocolate brand to the company's portfolio, further contributed to the innovation of its business model. Finally, sharing a common DNA, markets and capacities (e.g., R&D), the future merger of its two main internal brands will permit to the company to leverage its existing competencies to innovate its business model, as Company E "*is going to be also another brand that they're going to have in their subsidiaries. So, you see, we are merging step by step*".

All these business model modifications allowed the development of a replacive BMI, while Company E was performing below its aspiration level and going through a problemistic search. Indeed, the main BM of company E is slowly being innovated by integrating the resources and competences that are evolving out of the synergies existing between its BM and the internal brand competitor one, helping to slowly replace the initial BM through a merger.

We further summarize our within-case findings by placing each case in the aspiration-slack matrix in Figure 17.

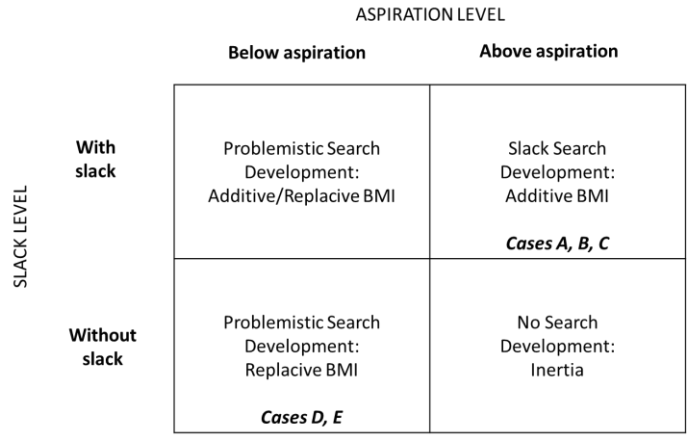

Figure 17. The Aspiration-Slack Matrix for BMI

5.5.2. Cross-Case Analysis

According to PFT, companies base their aspiration level on two main components: (i) historical aspirations (past performance) and (ii) social aspirations (competitors' performance). All the companies present in our sample define their historical aspirations based on KPIs such as revenue or profit. Additionally, all of them monitor competition performance, thus developing a social aspiration based on KPIs such as sales and profitability measures. Companies A, B, C thanks to their large size, possess slack resources allowing them to conduct an additive BMI. Company A is migrating toward a solution provider with sustainability and digitalization at the core of its actions; Company B has evolved through diverse company acquisitions by accommodating new consultancy services, thus providing an integrated value proposition; and Company C, originally with a razor-and-bladed model, leveraged its technological as well as market competencies to provide an additive business model relying on 3D printing and being subscription-based. While lacking financial resources, in particular because of their small sizes, companies D and E felt the necessity of adapting their business models because they performed below their aspirations. As company D is unable to scale up more its project-based business model due to the shortage of labor, it introduced a second licensing-based business model. This constitutes a reaction of company D to restrained opportunities on growth imposed by the employment market. Company E's business model adaptations are rather focused on consolidation inside of the internal

organization, e.g., by merging brands to achieve synergy effects. All the main observations are summarized in Table 6.

	Company A	Company B	Company C	Company D	Company E
KPIs leveraged	Revenue, profit, gross margin, costs, delivery collection, cycle time, stock, full truck rate	Profitability, sales gross profit, revenue, costs, operating income	Revenue, profit, return on investment, gross margin, costs	Revenue, profitability, turnover, costs, number of projects	Revenue, sales, turnover, importers, competitors' brands, geographical coverage, client satisfaction
Aspiration level	Above aspiration	Above aspiration	Above aspiration	Below aspiration	Rather below aspiration
Slack resource (Yes/No)	Yes	Yes	Yes	No	No
Problemistic/ Slack search	Slack Search	Slack Search	Slack Search	Problemistic Search	Problemistic Search
Additive/ Replacive BMI	Additive BMI	Additive BMI based on company acquisitions	Additive BMI (2D and 3D business models are co-existing)	Replacive (Synergetic) BMI	Replacive BMI

Table 6. Cross-case analysis

5.6. Discussion

The following discussion contains of two parts. In the first part, we will discuss whether our propositions are supported or not through our case studies. The second part of the discussion will reflect on our findings against the Performance Feedback literature, while highlighting our contribution to the literature.

5.6.1. Discussion of the propositions

	Company A	Company B	Company C	Company D	Company E
Proposition 1	Supported	Supported	Supported	Not supported	No contradiction with the case
Proposition 2	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Proposition 3	No contradiction with the case	No contradiction with the case	No contradiction with the case	Not supported	Supported
Proposition 4	No contradiction with the case	No contradiction with the case	No contradiction with the case	No contradiction with the case	No contradiction with the case

Table 7. Discussion of the propositions

Our research shows that proposition 1 is supported by three cases (A, B, C). A, B, and C are performing above their aspiration level and were in possession of slack resources. These two factors allowed them to conduct a slack search, which in turn permitted them to find ways to innovate their business model by adding a new one (additive BMI). The case of company E also does not contradict our proposition, as its starting position was different from A, B, and C, and the company did not engage in an additive BMI. The case of D, however, does not support our proposition, as the company embarked on a synergetic business model because of its inability to scale up its original business. Proposition 2 states that companies engage either in additive or replacive BMI when they are performing below aspiration and have high level of slack resources. In our sample, we have no companies that

satisfy both conditions, as the case companies were either above aspiration with slack, or below aspiration without slack. Proposition 3 is supported by case E, but not supported by company D, which embarked on a synergetic BMI despite lower slack levels and lower performance than what the company aimed for. Cases A, B and C do not contradict proposition 3. Proposition 4 states that companies that do not have slack resources, but are satisfied with current performance, will not change their business models. Our case studies do not contradict this proposition, as all companies in our sample engaged in BMI and had different starting positions because they were either above aspiration/with slack, or below aspiration/without slack.

5.6.2. Discussion against the background of existing literature

This study sheds light on the extent to which our findings are in line or deviate from the mainstream literature. First, our research makes the distinction between replacive and additive BMI. While previous literature speaks of BMI in general, our case study analysis clearly shows that companies innovate their business model in different ways, leading to the development of different types of BMI (Foss & Saebi, 2017).

Second, our case studies support, only in part, our theoretically-driven propositions. The PFT literature suggests that companies performing below aspirations and without slack resources engage in problemistic search (Baum et al. 2005; Greve 2003a). This fact is supported by our analysis. Indeed, Company D and E innovated their business models, while being below aspirations and despite the lack of slack resources. More specifically, company D aimed to achieve continuous revenue flows through licensing fees, whereas company E replaced its business model based on acquisitions and internal business reconfigurations. In particular, company D engaged in what we call synergetic business model development. A business model is synergetic if it harmonizes well with the company's initial business. Its discovery, however, would not have been possible, had the company not been operating its initial model.

Additionally, our case studies show that companies may engage in BMI, not only because of performance below aspiration levels, but also because of expected performance in the future due to threats such as the case of company C. This finding suggests that companies might consider additional aspirations in parallel to the historical and social ones existing in the PFT literature

(Greve, 1998, 2003 a, b) and might as well be looking forward and not only backward (Greve & Zhang, 2022; Wirtz et al., 2010).

Finally, the PFT literature states that firm performing above aspirations might stay inert (Greve, 2003a; Baum et al., 2005). While we could not test it directly, our case study allowed us to show that this proposition is not contradicted, as all the companies present in our sample had different starting positions (above aspiration/with slack, and below aspiration/without slack) but still engaged in BMI. Moreover, we could not further test the argument that companies performing below aspirations but possessing slack resources might innovate their business model.

5.7. Conclusions and Directions for Future Research

PFT predicts that companies with high performance may not have any incentive to change their business models. However, firms possessing extra resources might engage in BMI, as BMI helps them maintain a high performance, as in the case of companies A, B, C, allowing them to develop additive BMI. For a firm that is experiencing a strong decline in performance, BMI may represent the only solution for survival, and can result from a problemistic search process allowing for the development of an additive or replacive business model such as the cases of companies D & E.

Our research makes several contributions. First, by leveraging PFT as a theoretical lens, the research establishes a relationship between Performance Feedback and BMI and contributes to better understand the role of firm performance in influencing BMI. Indeed, we link existing BMI literature to the BTOF (Gavetti et al., 2012) in order to explain how performance relative to organizational aspirations is impacting firm's decision-makers to innovate the business model. This consideration of firm performance as a BMI antecedent addresses the current limitation of existing research on BMI and answers the different calls raised by researchers for the enlargement of the extant visions in both the BTOF (Shinkle, 2012; Gavetti et al., 2012) as well as in the BMI (Schneider & Spieth, 2013; Foss & Saebi, 2017) fields. Second, by linking BMI to Performance Feedback models, our study enables a better understanding of the challenges that face organizations, notably regarding the decision-makers' answer to organizational performance. Finally, our research allows to widen the methodological approach to Performance Feedback, as most of the studies present in this literature are based on

quantitative designs and hence permits the exploration of uncovered mechanisms through a qualitative approach answering the call raised by Posen et al. (2018).

From a practical perspective, managers could use this research to understand the implications of firm performance regarding BMI initiation. In addition, the research highlights additional drivers of BMI and demonstrates that companies can add new business models even when slack resources are not available. Companies can also engage in BMI when they anticipate future drops in performance, e.g., because of degradation of the general economic conditions.

We acknowledge some limitations to our study and provide directions for future research. First, we focus on the firm's financial performance and do not consider nonfinancial indicators of performance, which might play some role in the relationship studied. Therefore, future research should further explore and integrate this type of indicators to uncover their impact on BMI. Second, we recognize that firms may have different reference points and that their strategic actions may change depending on their position in relation to these reference points (Audia & Greve, 2006; Chen, 2008; Hu et al., 2011). Future research may consider these latter characteristics. Third, our research focused on certain industry types. We acknowledge that these industries are unique in some respects, notably regarding the production process and the technology used that might differ from other industries. Thus, future research can be conducted in other industries to further validate our results in different contexts. Finally, our work points to the potential moderating effect of factors such as attention, managerial cognition, and mindfulness. The investigation of these moderators could bring new insights at the managerial and academic levels.

Chapter 6

Conclusions

6.1. Conclusions

This dissertation advances the understanding of the impact of firm performance in enhancing BMI in the context of Performance Feedback Theory. It addresses the establishment of an intertwined perspective on the way in which firms can innovate their business model based on their performance and further clarifying the real impact of BMI on performance, subjects that are currently dispersed in different bodies of literature. Based on original literature and empirical contributions, the research conducted in this dissertation intends to close the existing knowledge gap reflected in the low rate of research connecting the PFT and BMI literature and studying the impact of firm performance on BMI as opposed to the interest shown by researcher in investigating the impact of BMI on firm performance. Overall, this dissertation highlights that the extant BMI literature and its relationship to firm performance, often takes a one-sided perspective while assessing the potential implications for organizations, overlooking the fact that firm performance can also have implications for BMI which in turn can impact firm performance as well. This dissertation argues for the need to expand and explore the dynamics behind the process through which companies can innovate their business model based on performance, and further establish a comprehensive view on performance feedback implications for BMI in organizations, besides the research trend to focus on the potential and expected impact of BMI on firm performance.

Given the dissertation's research objectives, this research is aiming at unveiling the link between performance feedback and BMI to explore the mechanisms of their relationship and develop the appropriate research ground to further enhance their understanding and future investigation. The dissertation's conclusions on each chapter and the specific objectives they intend to look at are presented in the following section as well as summarized in Table 8. Secondly, the theoretical and managerial contributions of the dissertation are highlighted. Finally, the limitations and potential research direction for future research advancement are specified.

6.1.1. Conclusions on Chapter 2

The second chapter of the dissertation focuses on the nature of relationship between BMI and FP through a systematic overview of existing academic contributions, as well as proposing avenues for further research. The

literature on BMI and FP relationship was analyzed and clustered into distinct research streams, exploring the prominent methods, data sources, as well as determinants identified in the literature. The inquiry into the perspectives of BMI and FP from primary studies allowed for the identification of three major emphases of existing publications while conducting the review. First, the identification of the ways, in which BMI directly affects FP. Second, the elements that constitute mediators and moderators to the BMI-FP relationship. Third, the effects and results achieved through the consideration of BMI as a mediator or moderator on FP. The rising number of publications clearly indicates a strong interest in the topic. Additionally, the wide spread of publications across multiple and various management fields indicates that research on BMI and FP has not found its theoretical base yet and attracts interest to further explore it from different perspectives, confirming the first observation on the lack of consistency in identifying the real effect of BMI on FP in existing literature and the research limitations it implies. The analysis of the literature further contributes to the identification of four particular caveats that future research could explore and that have emerged while reviewing the current state of literature within the identified research streams. First, the question of the direction in which BMI and FP mutually impact each other needs to be further addressed. Second, a deeper understanding of the process in which the BMI-FP relationship is mediated or moderated needs to be gained. Third, the effects of business model innovation acting as a mediator or moderator on a firm's results need to be further emphasized. Fourth, besides a large amount of qualitative and exploratory research, the need for additional empirical studies to further increase our understanding of the BMI-FP relationship still persist, along the necessity for different theoretical perspectives and more diverse methodological approaches that can increase the development of the BMI-FP research field.

Hence, this second chapter helped to determine and understand the current nature of the relationship between BMI and FP, showing the existing gaps in the literature and confirming the need to further investigate the way in which firm performance can enhance BMI and enlarge the theoretical perspective adopted.

6.1.2. Conclusions on Chapter 3

The third chapter offers, through the realization of a conceptual development paper, a review of the relationship between BMI and PF. With the aim of exploring and understanding how performance feeds back into BMI and propose a novel theoretical perspective, Chapter 3 allows to show how PF plays a key role as an antecedent in unlocking the behavioral mechanisms that can enhance BMI. Based on the behavioral conceptualization that have been developed since Cyert & March's (1963) seminal work through the PFT, this chapter synthesizes the theorical and empirical findings to date into different clusters, showing the organizational factors of the relationship between BMI and PF. These insights further lead to the development of a framework suggesting several propositions for future research. Seeking to broaden both BMI and PF literature perspectives, this chapter permits to overcome the existing gaps and encourage future research in these areas.

Therefore, this third chapter allows to lay the foundations for the exploration and understanding of how performance can feed back into BMI thanks to the development of a comprehensive framework linking both the BMI and PF literature, as well as the development of propositions to be further tested empirically.

6.1.3. Conclusions on Chapter 4

The fourth chapter of the dissertation evolved out of the previous study of the literature conducted in Chapter 2 and 3, which contributed to the observation of the fact that PFT is principally relying on quantitative research. However, the sole use of quantitative research appears as insufficient to answer all questions of interest and relevance to Performance Feedback research (Posen et al., 2018) and, in particular, when it comes to questions related to how performance feeds back into BMI. Indeed, qualitative research provides unique methods to help understand complex phenomena, explore areas of limited knowledge, and help to generate explanatory models and theories about the organization (Ariño et al., 2016; Bansal et al., 2018; Bettis et al., 2015; Bluhm et al., 2011). While, numerous advances in our understanding of managerial mechanisms have been made through qualitative research in the management field (Bansal et al., 2018; Bluhm et al., 2011; Guercini, 2014), Chapter 4 unveils that such a qualitative inquiry is specifically missing in the PF field. Through this research, the suggestion of the addition of

qualitative research to the traditional repertoire of methodologies used in the PF stream of research is highlighted, notably in order to deepen and open the knowledge and perspectives as well as offer opportunities for future research regarding the PF-BMI relationship.

Thus, Chapter 4 proposes a new methodological approach to PFT to further help expand the study of the BMI-FP relationship.

6.1.4. Conclusions on Chapter 5

The fifth chapter of the dissertation focuses on the empirical analysis of the way in which companies innovate or change their BM based on their performance. With the use of a multiple case study method, Chapter 5 enriches and assesses the insights previously gathered on the PF and BMI relationship, by empirically exploring it. The theory-driven data collection and the analysis of the empirical findings derived from experts' insights shed a light on the key role that performance is playing in enhancing or not BMI. Some of the findings reveal that firms possessing extra resources engage in BMI, as BMI helps them maintain a high performance and allowing them to develop additive BMI. This research also highlights that for a firm that is experiencing a strong decline in performance, BMI may represent the only solution for survival, and can result from a problemistic search process allowing for the development of an additive or replacive business model. The empirical evidence from companies of the fact that variations in firm performance impact a firm's decision to innovate its business model as well as the type of business model being developed through BMI, allows to shed a light on the future implications of developing research on the PF and BMI relationship.

Hence Chapter 5, by empirically analyzing the way in which companies innovate or change their BM based on their performance, allows to pave the way for future research on the PF-BMI relationship to be conducted and extended.

Table 8. Chapters conclusions summary

	Chapter 2	Chapter 3	Chapter 4	Chapter 5
Specific Objective	Determine and understand the nature of the relationship between BMI and FP by looking at the extant literature in the field.	Explore and understand how performance feeds back into BMI and propose a novel theoretical perspective	Propose a new methodological approach to PFT to further help expand the study of the BMI-FP relationship	Analyze the way in which companies innovate or change their BM based on their performance
Research Question Associated	What is the nature of the relationship between BMI and FP?	How performance feeds back to BMI?	Can PFT benefit from a qualitative approach?	Do companies change or innovate their business models based on their performance?
Findings	• Unilateral studies on BMI-FP • Numerous moderators/ mediators that influence the BMI-FP relationship • BMI acting as a moderator/ • mediator • Extend the research theoretical and empirical perspectives	• Scarcity of research looking at the impact of FP on BMI • PF as an antecedent to BMI • Development of a comprehensive framework as well as proposition on the study of how PF can feed back to BMI to be tested	• PFT is highly quantitative-based literature • Can benefit from a more qualitative approach to explore the mechanism of the PF-BMI relationship	• Confirmation of companies' expert that performance plays a role in the decision to innovate or change their BM • Need for future studies to explore more empirically the PF-BMI relationship

6.2. Contributions

6.2.1. Academic contributions

By conducting this dissertation, several academic contributions have been made. First, by leveraging Performance Feedback Theory as a theoretical lens, the research establishes a relationship between PF and BMI and contributes to better understanding of the role of firm performance in

influencing BMI. Indeed, we explored the link between BMI literature and the PFT in order to explain how performance relative to organizational aspirations is impacting firm's decision-makers to innovate their business model. This consideration of firm performance as a BMI antecedent addresses the current limitation of existing research on BMI and answer the different calls raised by researchers for the enlargement of the extant visions in both the PFT (Shinkle, 2012; Gavetti et al., 2012) as well as in the BMI (Schneider & Spieth, 2013; Foss & Saebi, 2017) fields.

Second, by linking BMI to Performance Feedback in the same theoretical plan, our study enables a better understanding of the challenges that organizations face during BMI, particularly regarding the decision-makers' answer to organizational performance. The related framework and propositions developed can further allow the exploration and the extension of both the BMI and PF literature and further enhance the understanding of the mechanisms through which companies innovate their BM.

Third, with reference to the BMI literature, this research further allows for the distinction between different type of BMI conducted by companies, and notably differentiating between replacive and additive BMI. While previous literature speaks of BMI in general, our research clearly shows that companies innovate their business model in different ways, leading to the development of different types of BMI (Foss & Saebi, 2017). Moreover, this investigation introduces the term of "*synergetic business model*" by defining it as a business model that harmonizes well with the company's initial business.

Fourth, regarding the PFT literature, our research confirms the assumptions made in the literature on the topic. Indeed, our research shows that companies performing below aspirations and without slack resources engage in problemistic search (Baum et al. 2005; Greve, 2003a). Additionally, the PFT literature states that firm performing above aspirations might stay inert (Greve, 2003a; Baum et al., 2005). While we could not test it directly, our case study allowed us to show that this proposition is not contradicted, as all the companies present in the study had different starting positions (e.g., above aspiration/with slack, and below aspiration/without slack) but still engaged in BMI. Furthermore, the case study-based research conducted in Chapter 5 shows that companies may engage in BMI, not only because of performance below aspiration levels, but also because of expected

performance in the future due to threats. This finding suggests that companies might consider additional aspirations in parallel to the historical and social ones existing in the PFT literature (Greve, 1998, 2003 a, b) and might as well be looking forward and not only backward (Greve & Zhang, 2022; Wirtz et al., 2010).

Finally, our research allows to widen the methodological approach to Performance Feedback, as most of the studies present in this literature are based on quantitative designs and hence permits the exploration of uncovered mechanisms through a qualitative approach answering the call raised by Posen et al. (2018).

6.2.2. Practical contributions

From a managerial point of view, this dissertation facilitates and improves the discussion about business model innovation and its impact on firm performance. First, making adjustments to established business models or introducing a new one demands a firm to focus on the current state and the potential developments of its business model to ensure and sustain its performance. BMI requires a firm to focus its attention on the available tools and arising opportunities within the firm's environment to be able to use them to keep its performance afloat.

Secondly, managers could use this research to understand the implications of firm performance regarding BMI initiation and notably consider additional resources for BMI such as slack resources.

Thirdly, this research demonstrates that companies can add new business models even when slack resources are not available. Therefore, companies' managers can also consider BMI when they anticipate future drops in performance (e.g., because of degradation of the general economic conditions).

Finally, on the one hand, this research can benefit to managers looking for insights on the advantages and consequences of BMI, notably in terms of how engaging into BMI can constitute a competitive advantage, as for example bringing new sources of revenue, or new customers. On the other hand, managers can also observe through our research how engaging in BMI can constitute a challenge, notably when it comes to implement important organizational changes.

6.3. Limitations and Future Outlook

While attempting to optimize research rigor throughout the research development, this dissertation contains inevitable limitations. However, the author highly believes that the existing limitations further presented do not jeopardize the validity and reliability of the research findings, but that exposing them can shed some light on the potential avenues for future research development.

First, the lack of existing literature linking BMI and PF research made it a major challenge to synthetize the data, assess their quality and incorporate the findings without favorizing any form of knowledge, while reviewing the literature (Pittaway, 2004). While this might be attributed to the fact that the BMI and PFT literature have evolved as two separated streams of research, future research should further investigate the underlying hindering factors restricting the connection between the two literature and further explore the ways in which they can be related.

Second, while investigating performance relative to organizational aspirations, we acknowledge a focus on firm's financial performance and the non-consideration of other non-financial indicators of performance, which might play some role in the relationship studied. Therefore, future research should further explore and integrate this type of indicators to uncover their impact on BMI. In addition, we recognize that firms may have different reference points and that their strategic actions may change depending on their position in relation to these reference points (Audia & Greve, 2006; Chen, 2008; Hu et al., 2011). Future research may consider these latter characteristics.

Third, this research being of an exploratory nature to clarify the extant development of the specific relationship studied, may draw some concerns regarding the generalizability of the findings, notably due to the size of the sample used in the multiple-case study. Indeed, case-based research is often criticized regarding the sample selection process and whether the sample size permits statistical representativeness. However, given the emerging nature of our subject of research and the lack of theoretical history, as well as a diffused empirical base, this methodological choice appears as unavoidable in order to achieve the research objectives targeted. Therefore, we encourage future research to consider and further explore the relationship between PF and BMI

using diverse research methods (e.g. quantitative designs or mixed methods) to further develop the generalizability of the findings presented in this study.

Fourth, our research focused on certain industry types. We acknowledge that these industries are unique in some respects, notably regarding the production process and the technology used that might differ from other industries. Thus, future research can be conducted in other industries to further validate our results in different contexts.

Finally, our work opens new avenues for future research, notably on potential moderating effect existing behind our study, including behavioral meso-level moderators such as organizational learning (Greve, 2008), or micro-level moderators such as managerial cognition (Gavetti et al., 2012), attention (Ocasio, 1997; Ref & Shapira, 1992; Frankenberger & Sauer, 2019) or mindfulness (Foss & Saebi, 2017), and that could be developed and tested based on our study. Conducting any further investigation considering these moderators could bring new insights that can have meaningful implications both at the academics, as well as managerial level.

References & Annexes

References

Achtenhagen, L., Melin, L., & Naldi, L. (2013). Dynamics of business models–strategizing, critical capabilities and activities for sustained value creation. *Long Range Planning*, *46*(6), 427-442.

Adams, R.J., Smart, P. & Huff, A.S. (2017). Shades of grey: guidelines for working with the grey literature in systematic reviews for management and organizational studies. *International Journal of Management Reviews*, *19*, 432–454.

Aggarwal, V. A., Posen, H. E., & Workiewicz, M. (2017). Adaptive capacity to technological change: A microfoundational approach. *Strategic Management Journal*, *38*(6), 1212–1231.

Akgün, A.E., Lynn, G.S., & Byrne, J., (2003). Organizational learning: a socio-cognitive framework. *Human Relations*, *56*, 839-68.

Akgün, A.E., Lynn, G.S., Byrne, J., & Keskin, H., (2007). Organizational unlearning as changes in beliefs and routines in organizations. *Journal of Organizational Change Management*, *20*(6), 794-81.

Amit R. & Zott C. (2012). Creating Value Through Business Model Innovation. *MIT Sloan Management Review*, 38-46.

Amit, R. and Zott, C. (2021). *Business Model Innovation Strategy: Transformational Concepts and Tools for Entrepreneurial Leaders*. John Wiley & Sons: Hokobonen, New Jersey.

Andries, P., & Debackere, K. (2013) Business Model Innovation: Propositions on the Appropriateness of Different Learning Approaches. Creativity and Innovation Management 22(4), 337-358.

Andries, P., Debackere, K., & Van Looy, B. (2013). Simultaneous Experimentation As A Learning Strategy: Business Model Development Under Uncertainty. *Strategic Entrepreneurship Journal*, *7*(4), 288-310.

Argote, L., & Greve, H. R. (2007). A Behavioral Theory of the Firm - 40 years and counting: Introduction and impact. *Organization Science*, *18*(3), 337–349.

Ariño, A., LeBaron, C., & Milliken, F. J. (2016). Publishing Qualitative Research in Academy of Management Discoveries. *Academy of Management Discoveries*, *2*(2), 109–113.

Aspara, J., Lamberg, J., Laukia, A. & Tikkanen, H. (2013). Corporate Business Model Transformation and Inter-Organizational Cognition: The Case of Nokia. *Long Range Planning, 46*(6), 459–474.

Audia, P. G., & Greve, H. R. (2006). Less likely to fail: Low performance, firm size, and factory expansion in the shipbuilding industry. *Management Science, 52*(1), 83–94.

Baden-Fuller, C., & Haefliger, S., (2013). Business Models and Technological Innovation. *Long Range Planning, 46*(6), 419-426.

Bamberger, P. A., & Pratt, M. G. (2010). Moving Forward by Looking Back: Reclaiming Unconventional Research Contexts and Samples in Organizational Scholarship. *Academy of Management Journal, 53*(4), 665–671.

Banerjee, A., Lampel, J., & Bhalla, A. (2019). Two cheers for diversity: An experimental study of micro-level heterogeneity in problemistic search. *Strategic Organization, 17*(4), 450-469.

Bansal, P., Smith, W. K., & Vaara, E. (2018). New Ways of Seeing through Qualitative Research. *Academy of Management Journal, 61*(4), 1189–1195.

Barney, J. B., & Felin, T. (2013). What are microfoundations? *Academy of Management Perspectives, 27*(2), 138–155.

Baum, J. A. C., & Dahlin, K. B. (2007). Aspiration performance and railroads' patterns of learning from train wrecks and crashes. *Organization Science, 18*(3), 368–385.

Baum, J. A., Rowley, T. J., Shipilov, A. V., & Chuang, Y.-T. (2005). Dancing with Strangers: Aspiration Performance and the Search for Underwriting Syndicate Partners. *Administrative Science Quarterly, 50*, 536–575.

Becker, K., (2010). Facilitating unlearning during implementation of new technology. *Journal of Organizational Change Management, 23*(3), 251-268.

Beech, N. (2008). On the Nature of Dialogic Identity Work. *Organization, 15*(1), 51–74.

Berends, H., Smits, A., Reymen, I., & Podoynitsyna, K. (2016). Learning while (re) configuring: Business model innovation processes in established firms. *Strategic Organization, 14*(3), 181-219.

Bettis, R. A., Gambardella, A., Helfat, C., & Mitchell, W. (2015). Qualitative empirical research in strategic management. *Strategic Management Journal, 36*(5), 637–639.

Bhatti, S. H., Santoro, G., Khan, J., & Rizzato, F. (2021). Antecedents and consequences of business model innovation in the IT industry. *Journal of Business Research, 123*, 389-400.

Bigelow, L. S., & Barney, J. B. (2021). What can strategy learn from the business model approach? *Journal of Management Studies, 58*(2), 528-539.

Björkdahl, J. (2009).Technology cross-fertilization and the business model: The case of integrating ICTs in mechanical engineering products. *Research Policy, 38*(9), 1468-1477.

Bluhm, D. J., Harman, W., Lee, T. W., & Mitchell, T. R. (2011). Qualitative Research in Management: A Decade of Progress. *Journal of Management Studies, 48*(8), 1866–1891.

Bolton, M. K., (1993). Organizational innovation and substandard performance: When is necessity the mother of innovation. *Organization Science, 4*, 57-75.

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.

Bowler, G. (2010). Netnography: A Method Specifically Designed to Study Cultures and Communities Online. *The Qualitative Report, 15*(5), 1270–1275.

Bromiley, P., (1991). Testing a Causal Model of Corporate Risk Taking and Performance. *Academy of Management Journal, 34*, 37-59.

Bromiley, P., & Harris, J. D. (2014). A comparison of alternative measures of organizational aspirations. *Strategic Management Journal, 35*(3), 338–357.

Bromiley, P., McShane, M., Nair, A., & Rustambekov, E. (2015). Enterprise risk management: Review, critique, and research directions. *Long Range Planning, 48*(4), 265-276.

Bromiley, P., & Washburn, M. (2011). Cost reduction vs innovative search in R&D. *Journal of Strategy and Management, 4*(3), 196-214.

Brydon-Miller, M., Greenwood, D., & Maguire, P. (2003). Why Action Research? *Action Research, 1*(1), 9–28.

Casadesus-Masanell, R., and Ricart, J. E., (2010). From strategy to business models and onto tactics. *Long Range Planning, 43*(2), 195-215.

Casadesus-Masanell, R. & Zhu, F. (2013). Business model innovation and competitive imitation: The case of sponsor-based business models. *Strategic Management Journal, 34*(4), 464-482.

Cassell, C. (2016). European qualitative research: A celebration of diversity and a cautionary tale. *European Management Journal, 34*(5), 453–456.

Ceci, F., Masciarelli, F., & Prencipe, A. (2016). Changes in organizational architecture: Aspiration levels, performance gaps and organizational change. *International Journal of Innovation and Technology Management, 13*(01), 1650002.

Chen, W.-R. (2008). Determinants of Firms' Backward-and Forward-Looking R&D Search Behavior. *Organization Science, 19*(4), 609–622.

Chen, J., Liu, L., & Wang, Y. (2021). Business model innovation and growth of manufacturing SMEs: a social exchange perspective. Journal of Manufacturing Technology Management, 32(2), 290-312.

Chen, W.-R., & Miller, K. D. (2007). Situational and institutional determinants of firms' R&D search intensity. *Strategic Management Journal, 28*(4), 369–381.

Cheng, L., Xie, E., Fang, J., & Mei, N. (2022). Performance feedback and firms' relative strategic emphasis: The moderating effects of board independence and media coverage. *Journal of Business Research, 139*, 218-231.

Chesbrough, H.W., (2010). Business model innovation: opportunities and barriers. *Long Range Planning 43*(2–3), 354–363.

Chesbrough, H., & Rosenbloom, R. S. (2002). The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change, 11*(3), 529-555.

Chung, D., & Shin, D. (2021). When do firms invest in R&D? Two types of performance feedback and organizational search in the Korean shipbuilding industry. *Asian Business & Management, 20*, 583-617.

Clauss, T., Abebe, M., Tangpong, C., & Hock, M. (2019). Strategic agility, business model innovation, and firm performance: an empirical investigation. *IEEE transactions on engineering management, 68*(3), 767-784.

Clauss, T., Kraus, S., Kallinger, F. L., Bican, P. M., Brem, A., & Kailer, N. (2021). Organizational ambidexterity and competitive advantage: The role of strategic agility in the exploration-exploitation paradox. *Journal of Innovation & Knowledge*, *6*(4), 203-213.

Coghlan, D. (2011). Action Research: Exploring Perspectives on a Philosophy of Practical Knowing. *The Academy of Management Annals, 5*(1), 53–87.

Cornelissen, J. P. (2017). Preserving Theoretical Divergence in Management Research: Why the Explanatory Potential of Qualitative Research Should Be Harnessed Rather than Suppressed. *Journal of Management Studies, 54*(3), 368–383.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd Edition). SAGE Publications, Inc.

Creswell, J. W. (2014). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (4th Edition). SAGE Publications, Inc.

Cucculelli, M., & Bettinelli, C. (2015). Business models, intangibles and firm performance: evidence on corporate entrepreneurship from Italian manufacturing SMEs. *Small Business Economics, 45*, 329-350.

Cyert, R., & March, J. (1963). *A Behavioral Theory Of The Firm*. Prentice-Hall: Englewood Cliffs, NJ.

Dahmani S., Boucher X., Gourc D., Peillon S., & Marmier F. (2020). Integrated approach for risk management in servitization decision-making process. *Business Process Management Journal, 26*(7), 1949-1977.

De Reuver, M., Bouwman, H., & MacInnes, I., (2009). Business models' dynamics for start-ups and innovating e-businesses. *International Journal of Electronic Business, 7,* 269-286.

Demil, B. & Lecocq, X. (2010) Business model evolution: in search of dynamic consistency. *Long Range Planning, 43*(2-3), 227–246.

Denicolai, S., Ramirez, M., & Tidd, J. (2014). Creating and capturing value from external knowledge: the moderating role of knowledge intensity. *R&D Management, 44*(3), 248-264.

Desyllas, P., Salter, A., & Alexy, O. (2022). The breadth of business model reconfiguration and firm performance. *Strategic Organization, 20*(2), 231-269.

Donaldson, L. (2001). *The contingency theory of organizations*. SAGE Publications, Inc.

Dong, J. Q. (2021). Technological choices under uncertainty: Does organizational aspiration matter? *Strategic Management Journal, 42*(5), 898-916.

Doz YL, & Kosonen M. (2010). Embedding strategic agility: a leadership agenda for accelerating business model renewal. *Long Range Planning 43*(2), 370–382.

Dubois, A., & Gadde, L. E. (2002). Systematic combining: an abductive approach to case research. *Journal of Business Research, 55*(7), 553–560.

Eggers, J. P., & Suh, J. (2019). Experience And Behavior: How Negative Feedback In New Versus Experienced Domains Affects Firm Action And Subsequent Performance. *Academy of Management Journal, 62*(2), 309–334.

Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *Academy of Management Review, 14*(4), 532–550.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory Building From Cases: Opportunities And Challenges. *Academy of Management Journal, 50*(1), 25–32.

Eisenhardt, K. M., Graebner, M. E., & Sonenshein, S. (2016). Grand Challenges and Inductive Methods: Rigor without Rigor Mortis. *Academy of Management Journal, 59*(4), 1113–1123.

Feldman, M. S., & Pentland, B. T. (2003). Reconceptualizing Organizational Routines as a Source of Flexibility and Change. *Administrative Science Quaterly, 48*(1), 94–118.

Felin, T., Foss, N. J., & Ployhart, R. E. (2015). The Microfoundations Movement in Strategy and Organization Theory. *Academy of Management Annals, 9*(1), 575–632.

Felton, A., & Stickley, T. (2018). Rethinking risk: a narrative approach. *The Journal of Mental Health Training, Education and Practice, 13*(1), 54–62.

Fiegenbaum, A., (1990), Prospect theory and the risk-return association: An empirical examination in 85 industries. *Journal of Economic Behavior & Organization, 14*(2), 187-203.

Fiegenbaum, A., Hart, S., & Schendel, D. (1996). Strategic reference point theory. *Strategic Management Journal, 17*(3), 219-235.

Filser M., Kraus S., Breier M., Nenova I., & Puumalainen K. (2021). Business model innovation: Identifying foundations and trajectories. *Business Strategy & the Environment, 30*, 891–907.

Foss, N. J., & Pedersen, T. (2016). Microfoundations In Strategy Research. *Strategic Management Journal, 37*(13), E22–E34.

Foss, N. & 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.

Frankenberger, K., & Sauer, R. (2019). Cognitive antecedents of business models: Exploring the link between attention and business model design over time. *Long Range Planning, 52*(3), 283-304.

Futterer, F., Schmidt, J., & Heidenreich, S. (2018) Effectuation or causation as the key to corporate venture success? Investigating effects of entrepreneurial behaviors on business model innovation and venture performance. *Long Range Planning, 51*, 64-81.

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.

Gavetti, G., & Levinthal, D. (2000). Looking Forward and Looking Backward: Cognitive and Experiential Search. *Administrative Science Quarterly, 45*(1), 113–137.

Gavetti, G., Levinthal, D., & Ocasio, W. (2007). Neo-Carnegie: The Carnegie School's past, present, and reconstructing for the future. *Organization Science, 18*(3), 523–536.

George, G., & Bock, A. J. (2011). The business model in practice and its implications for entrepreneurship research. *Entrepreneurship Theory and Practice, 35*(1), 83-111.

Gilal, F.G., Paul, J., Gilal N.G.,& Gilal R.G. (2021) The role of organismic integration theory in marketing science: A systematic review and research agenda. *European Management Journal*, *40*(2), 208-223.

Gill, J., & Johnson, P. (1991). *Research methods for managers*. SAGE Publications, Inc.

Gioia, D.A., Corley, K.G., & Hamilton, A.L. (2013), Seeking qualitative rigor in inductive research: notes on the Gioia methodology. *Organizational Research Methods, 16*(1): 15–31.

Glaser, B. G., & Strauss, A. L. (1976). *The discovery of grounded theory : strategies for qualitative research* (A. de Gruyter, Ed.). Aldine Publishing Company: Hawthorne, NY.

Glaser, B., and Strauss, A., (1967). *The Discovery of Grounded Theory*. Aldine Publishing Company: Hawthorne, NY.

Goyal, L., & Goyal, V. (2022). Performance shortfall, feedback interpretation and R&D search: the differential effects of peers' performance below historical and social aspirations. *British Journal of Management, 33*(3), 1584-1608.

Greve, H. R., (1998). Performance, aspirations and risky organizational change. *Administrative Science Quarterly, 43*, 58-86.

Greve, H.R. (2002) Sticky aspirations: Organizational time perspective and competitiveness. *Organization Science, 13*(1), 1-17

Greve, H.R. (2003). Investment and the behavioral theory of the firm: Evidence from shipbuilding. *Industrial and Corporate Change, 12*(5), 1051-1076.

Greve, H. R., (2003a). A behavioral theory of R&D expenditures and innovations: Evidence from shipbuilding. *Academy of Management Journal, 46*, 685-702.

Greve, H. R., (2003b). *Organizational Learning from Performance Feedback: A behavioral perspective on innovation and change*. Cambridge: Cambridge University Press.

Greve, H. R., (2011). Positional rigidity: low performance and resource acquisition in large and small firms. *Strategic Management Journal, 32*, 103-114.

Greve, H. R., & Gaba, V. (2017). *Performance Feedback in Organizations and Groups: Common Themes*. In L. Argote & J. M. Levine (Eds.), The Oxford Handbook of Group and Organizational Learning (pp. 314–336). Oxford University Press.

Greve, H. R., & Zhang, C. M. (2022). Is there a strategic organization in the behavioral theory of the firm? Looking back and looking forward. *Strategic Organization, 20*(4), 698-708.

Gronum, S., Steen, J., & Verreynne, M. L. (2016). Business model design and innovation: Unlocking the performance benefits of innovation. *Australian Journal of Management, 41*(3), 585-605.

Guercini, S. (2004). Developing the researcher-manager interface in the case analysis process. *Management Decision, 42*(3–4), 464–472.

Guercini, S. (2014). New qualitative research methodologies in management. *Management Decision, 52*(4), 662–674.

Guo, H., Guo, A., & Ma, H. (2022). Inside the black box: How business model innovation contributes to digital start-up performance. *Journal of Innovation & Knowledge, 7*(2), 100188.

Guo, H., Tang, J., Su, Z. & Katz, J. (2017) Opportunity recognition and SME performance: the mediating effect of business model innovation. *R&D Management, 47*(3), 431-442.

Guo, H., Wang, C., Su, Z., & Wang, D. (2020). Technology push or market pull? Strategic orientation in business model design and digital start-up performance. *Journal of Product Innovation Management, 37*(4), 352-372.

Hamelink, M., & Opdenakker, R. (2019). How business model innovation affects firm performance in the energy storage market. *Renewable Energy*, *131*, 120-127.

Hartmann, P. M., Zaki, M., Feldmann, N., & Neely, A. (2016). Capturing value from big data–a taxonomy of data-driven business models used by start-up firms. *International Journal of Operations & Production Management*, *36*(10), 1382-1406.

He, L., Huang, L., & Yang, G. (2021). Invest in innovation or not? How managerial cognition and attention allocation shape corporate responses to performance shortfalls. *Management and Organization Review*, *17*(4), 815-850.

Hine, C. (2000). *Virtual Ethnography*. In C. Hine (Ed.), Virtual ethnography. SAGE Publications, Inc.

Hu, S., Blettner, D., & Bettis, R.A., (2011). Adaptive aspirations: performance consequences of risk preferences at extremes and alternative reference groups. *Strategic Management Journal, 32*(13), pp. 1426–1436.

Huang, H.C., Lai, M.C., Lin, L.H. & Chen, C.T. (2013) Overcoming Organizational Inertia to Strengthen Business Model Innovation: An Open Innovation Perspective. *Journal of Organizational Change Management, 26*, 977-1002.

Iyer, D. N., Baù, M., Chirico, F., Patel, P. C., & Brush, T. H. (2019). The triggers of local and distant search: Relative magnitude and persistence in explaining acquisition relatedness. *Long Range Planning*, *52*(5), 101825.

Iyer, D. N., & Miller, K. D. (2008). Performance Feedback, Slack, and The Timing of Acquisitions. *Academy of Management Journal*, *51*(4), 808–822.

Jirásek, M. (2017). R&D investment behavior of US pharmaceutical firms. *International Journal of Innovation Science*, *9*(2), 205-219.

Jirásek, M. (2020). Curvilinearity in the performance feedback and R&D relationship. *Journal of Strategy and Management*, *13*(1), 1-14.

Johnson, M.W. (2010) *Seizing the White Space: Business Model Innovation for Growth and Renewal*. Harvard Business Press: Boston.

Johnson, M. W., Christensen, C. M., & Kagermann, H. (2008). Reinventing your business model. *Harvard Business Review, 86*(12), 50-59.

Joseph, J., & Gaba, V. (2015). The fog of feedback: Ambiguity and firm responses to multiple aspiration levels. *Strategic Management Journal, 36*(13), 1960–1978.

Joyce, A., & Paquin, R. L. (2016). The triple layered business model canvas: A tool to design more sustainable business models. *Journal of cleaner production, 135*, 1474-1486.

Kahneman, D., and Tversky, A. (1979). Prospect theory: Analysis of decision under risk. Econometrica, 47, pp. 263-291.

Kaplan, S. L. (2001). *La fin des corporations*. Fayard.

Karimi, J., & Walter, Z. (2016). Corporate entrepreneurship, disruptive business model innovation adoption, and its performance: The case of the newspaper industry. *Long Range Planning, 49*(3), 342-360.

Kim, SK., & Min S. (2015) Business Model Innovation Performance: When Does Adding A New Business Model Benefit An Incumbent? Strategic Entrepreneurship Journal 9, 34-57.

Klang, D., Wallnofer, M. & Hacklin, F. (2014). The business model paradox: a systematic review and exploration of antecedents. International Journal of Management Reviews, 16, pp. 454–478.

Kotiloglu, S., Chen, Y., & Lechler, T. (2021). Organizational responses to performance feedback: A meta-analytic review. *Strategic Organization, 19*(2), 285-311.

Kozinets, R. V. (2002). The field behind the screen: Using netnography for marketing research in online communities. *Journal Of Marketing Research, 39*(1), 61-72.

Kukkamalla, P.K., Bikfalvi, A. & Arbussa, A. (2020). The new BMW: business model innovation transforms an automotive leader. *Journal of Business Strategy, 42*(4), 268-277.

Labianca, G., Fairbank, J. F., Andrevski, G., & Parzen, M. (2009). Striving toward the future: Aspiration-performance discrepancies and planned organizational change. *Strategic Organization, 7*(4), 433–466.

Langley, A., Smallman, C., Tsoukas, H., & Ven, A. H. van de. (2013). Process Studies of Change in Organization and Management: Unveiling Temporality, Activity, and Flow. *Academy of Management Journal, 56*(1), 1–13.

Lant, T. K. (1992). Aspiration Level Adaptation: An Empirical Exploration. *Management Science, 38*(5), 623–644.

Lant, T. K., & Baum, J.A.C., (1995). *Cognitive sources of socially constructed competitive groups: Examples from the Manhattan hotel industry*. In W. R. Scott, and S. Christensen (eds.), The Institutional Construction of Organizations: 15-39. Thousand Oaks CA: Sage.

Lant, T.K., Milliken, F. J., &Batra, B., (1992). The role of managerial learning and interpretation in strategic persistence and reorientation: An empirical exploration. *Strategic Management Journal, 13*, 585-608.

Lanzolla, G., & Markides, C. (2021). A business model view of strategy. *Journal of Management Studies, 58*(2), 540-553.

Latifi, M. A., Nikou, S., & Bouwman, H. (2021). Business model innovation and firm performance: Exploring causal mechanisms in SMEs. Technovation, 107, 102274.

Lee, T. W. (1999). *Using qualitative methods in organizational research*. Sage Publications, Inc.

Leonard-Barton, D. (1995). *Wellsprings of Knowledge: Building and Sustaining The Sources of Innovation*. Harvard Business School Press: Boston, MA.

Leppänen, P., George, G., & Alexy, O. (2023). When do novel business models lead to high performance? A configurational approach to value drivers, competitive strategy, and firm environment. *Academy of Management Journal, 66*(1), 164-194.

Levinthal, D.A., and March J.G., (1981). A model of adaptive organizational search. *Journal of Economic Behavior and Organization, 2*, 307-333.

Levitt, B., and March, J.G., (1988). Organizational learning. *Annual Review of Sociology, 14*, 319-340.

Liu, A., Gu, J., & Liu, H. (2022). The fit between firm capability and business model for SME growth: a resource orchestration perspective. *R&D Management, 52*(4), 670-684.

Liu, A., Liu, H., & Gu, J. (2021). Linking business model design and operational performance: The mediating role of supply chain integration. *Industrial Marketing Management, 96*, 60-70.

Lu, L. H., & Fang, S. C. (2013). Problematic search, slack search and institutional logic in corporate R&D strategy: An empirical analysis of Taiwanese electronics firms. *Journal of Management & Organization, 19*(6), 659-678.

Lu, L. H., & Wong, P. K. (2019). Performance feedback, financial slack and the innovation behavior of firms. *Asia Pacific Journal of Management, 36*, 1079-1109.

Manning, R. E. (1979). Impacts of recreation on riparian soils and vegetation. *JAWRA Journal of the American Water Resources Association, 15*(1), 30–43.

Mantere, S., & Ketokivi, M. (2013). Reasoning in Organization Science. *Academy of Management Review*, *38*(1), 70–89.

Manzaneque, M., Rojo-Ramírez, A. A., Diéguez-Soto, J., & Martínez-Romero, M. J. (2020). How negative aspiration performance gaps affect innovation efficiency. *Small Business Economics, 54*, 209-233.

March, J. G., & Shapira, Z. (1992). Variable Risk Preferences and the Focus of Attention. *Psychological Review*, *99*(1), 172–183.

March, J.G., and Shapira, Z., (1987). Managerial perspectives on risk and risk taking. *Management Science, 33*(11), 1404–1418.

March, J. G., & Simon, H. A. (1958). *Organizations*. John Wiley & Sons: New York, NY.

Markides, C. (2021). *Organizing for the new normal: Prepare your company for the journey of continuous disruption*. Kogan Page Publishers: London, UK.

Markides, C. (2006). Disruptive innovation: In need of better theory. *Journal of Product Innovation Management, 23*(1), 19-25.

Martins, L., Rindova, V. & Greenbaum, B. (2015) Unlocking The Hidden Value Of Concepts: A Cognitive Approach To Business Model Innovation. Strategic Entrepreneurship Journal, 9(1), 99–117.

Massa, L., & Tucci, C. L. (2014). Business Model Innovation. *The Oxford handbook of innovation management, 20*(18), 420-441.

Massa, L., Tucci, C. L., & Afuah, A. (2017). A Critical Assessment of Business Model Research. *Academy of Management Annals, 11*(1), 73-104.

Massini, S., Lewin, A.Y., Greve, H. A., (2005). Innovators and imitators: organizational reference groups and adoption of organizational routines. Research Policy, 34, pp. 1550–1569.

McGrath, R. G. (2010). Business models: A discovery driven approach. *Long Range Planning, 43*(2-3), 247-261.

Menter, M., Göcke, L., Zeeb, C., & Clauss, T. (2023). Disentangling the complex longitudinal relationships between business model innovation and firm performance. *Journal of Business Research, 168*, 114229.

Mezger, F. (2014). Toward a capability-based conceptualization of business model innovation: insights from an explorative study. *R&D Management, 44*(5), 429-449.

Miller, K. D., & Chen, W.-R. (2004). Variable Organizational Risk Preferences: Tests of the March-Shapira Model. *Academy of Management Journal, 47*(1), 105–115.

Mills, C. W. (1959). *The Sociological Imagination*. In New York: Oxford University Press. Mills The Sociological Imagination. Oxford University Press.

Mintzberg, H., Raisinghani, D., & Theoret, A. (1976). The Structure of "Unstructured" Decision Processes. *Administrative Science Quarterly, 21*(2), 275.

Mohr, L. B. (1982). Explaining Organizational Behavior . The Jossey-Bass social and behavioral science series.

Moliterno, T. P., Beck, N., Beckman, C. M., & Meyer, M. (2014). Knowing Your Place: Social Performance Feedback in Good Times and Bad Times. *Organization Science, 25*(6), 1684–1702.

Morris, M., Schindehutte, M., & Allen, J. (2005). The entrepreneur's business model: toward a unified perspective. *Journal of Business Research, 58*(6), 726-735.

Morris, M. H., Shirokova, G., & Shatalov, A. (2013). The business model and firm performance: The case of Russian food service ventures. *Journal of Small Business Management, 51*(1), 46-65.

Nair, S., Paulose, H., Palacios, M., & Tafur, J. (2013). Service orientation: Effectuating business model innovation. *The Service Industries Journal, 33*(9-10), 958-975.

Najmaei, A. (2016). Revisiting the modularity-performance nexus: Business model innovation as a missing mechanism. *International Journal of Innovation Management, 20*(07), 1650065.

Najmaei, A. (2018). A behavioral view of business modeling. In *Behavioral strategy for competitive advantage*. Information Age Publishing, Inc.

Nelson, S.G., and Winter, R.R., (1982). *An Evolutionary Theory of Economic Change*. Harvard University Press: Cambridge, MA.

Nielsen, C., Lund, M., Thomsen, P. P., Kristiansen, K. B., Sort, J. C., Byrge, C., (...) & Dumay, J. (2018). Depicting a performative research Agenda: The 4th stage of business model research. *Journal of Business Models, 6*(2), 59-64.

Nohria, N., and Gulati, R., (1996). Is slack good or bad for innovation? *Academy of Management Journal, 39,* 1245-1264.

Nunes, M. P., & Pereira, R. D. V. (2021). Business model innovation and business performance in an innovative environment. *International Journal of Innovation Management, 25*(03), 2150036.

O'Brien, J.P., and David, P., (2014). Reciprocity and R&D search: applying the behavioral theory of the firm to a communitarian context. *Strategic Management Journal, 35*, 550–565.

Ocasio, W. (1997). Towards an attention-based view of the firm. *Strategic Management Journal, 18*(S1), 187-206.

Osiyevskyy, O. & Dewald, J. (2015). Explorative Versus Exploitative Business Model Change: The Cognitive Antecedents Of Firm-Level Responses To Disruptive Innovation. *Strategic Entrepreneurship Journal, 9*(1), 58-78.

Osiyevskyy, O. and Dewald, J. (2015a). Inducements, Impediments, and Immediacy: Exploring the Cognitive Drivers of Small Business Managers' Intentions to Adopt Business Model Change. *Journal of Small Business Management, 53*(4), 1011-1032.

Pang, C., Wang, Q., Li, Y., & Duan, G. (2019). Integrative capability, business model innovation and performance: Contingent effect of business strategy. *European Journal of Innovation Management, 22*(3), 541-561.

Parker, O.N., Krause, R. & Covin, JG. (2017) Ready, Set, Slow: How Aspiration-Relative Product Quality Impacts the Rate of New Product Introduction. *Journal of Management, 43*(7), 2333–2356.

Pati, R. K., Nandakumar, M. K., Ghobadian, A., Ireland, R. D., & O'Regan, N. (2018). Business model design–performance relationship under external and internal contingencies: Evidence from SMEs in an emerging economy. *Long Range Planning, 51*(5), 750-769.

Pati, R., Ghobadian, A., Nandakumar, M. K., Hitt, M. A., & O'Regan, N. (2021). Entrepreneurial behavior and firm performance: The mediating role of business model novelty. *R&D Management, 51*(5), 551-567.

Pittaway, L, M Robertson, K Munir, D Denyer & A Neely (2004). Networking and innovation: A systematic review of the evidence. *International Journal of Management Reviews, 5/6*(3/4), 137–168.

Plakoyiannaki, E., & Budhwar, P. (2021). From Convention to Alternatives: Rethinking Qualitative Research in Management Scholarship. *British Journal of Management, 32*(1), 3–6.

Podsakoff, P. M., MacKenzie, S. B., Bachrach, D. G., & Podsakoff, N. P. (2005). The influence of management journals in the 1980s and 1990s. *Strategic Management Journal, 26*(5), 473-488.

Porac, J., Thomas, H., Wilson, F., Paton, D., & Kanfer, A., (1995). Rivalry and the industry model of Scottish knitwear producers. *Administrative Science Quarterly, 40*, 203-227.

Porter, M., & Siggelkow, N. (2008). Contextuality within activity systems and sustainability of competitive advantage. *Academy of Management Perspectives, 22*(2), 34-56.

Posen, H. E., Keil, T., Kim, S., & Meissner, F. D. (2018). Renewing Research on Problemistic Search—A Review and Research Agenda. *Academy of Management Annals, 12*(1), 208–251.

Prahalad, C. K., & Hamel, G. (1990). The core competence. *Harvard Business Review*.

Rask, M., & Günzel-Jensen, F. (2019). Business model design and performance in nascent markets. *Management Decision, 58*(5), 927-947.

Redding, S. G. (1994). Comparative Management Theory: Jungle, Zoo or Fossil Bed?: *Organization Studies*, *15*(3), 323–359.

Ref, O., & Shapira, Z. (2017). Entering new markets: The effect of performance feedback near aspiration and well below and above it. *Strategic Management Journal, 38*(7), 1416–1434.

Reger, R. K., and Huff, S. A., (1993). Strategic groups: A cognitive perspective. *Strategic Management Journal, 14*, 103-124.

Rhee, M. & Kim, T. (2015). Great Vessels Take a Long Time to Mature: Early Success Traps and Competences in Exploitation and Exploration. *Organization Science 26*(1), 180–197.

Sabatier, V., Craig-Kennard, A., & Mangematin, V. (2012). When technological discontinuities and disruptive business models challenge dominant industry logics: Insights from the drugs industry. *Technological Forecasting and Social Change*, *79*(5), 949-962.

Schneckenberg, D., Matzler, K., & Spieth, P. (2022). Theorizing business model innovation: an organizing framework of research dimensions and future perspectives. *R&D Management*, *52*(3), 593-609.

Schneider, S. (2019). How to approach business model innovation: the role of opportunities in times of (no) exogenous change. *R&D Management, 49*(4), 399-420.

Schneider, S., and Spieth, P., (2013). Business Model Innovation: towards an integrated future research agenda. *International Journal of Innovation Management, 17*(01), 1340001.

Schumpeter, J. (1942), *Capitalism, Socialism and Democracy*. Harper and Brothers: New York, NY.

Shepherd, C., & Challenger, R. (2013). Revisiting Paradigm(s) in Management Research: A Rhetorical Analysis of the Paradigm Wars. *International Journal of Management Reviews, 15*(2), 225–244.

Shinkle, G. A. (2012). Organizational aspirations, reference points, and goals: Building on the past and aiming for the future. *Journal of Management, 38*(1), 415–455.

Snihur, Y., (2018). Responding to business model innovation: organizational unlearning and firm failure. *The Learning Organization, 25*(3), 190-198.

Sirmon, D. G., & Hitt, M. A. (2009). Contingencies within dynamic managerial capabilities: Interdependent effects of resource investment and deployment on firm performance. *Strategic Management Journal, 30*(13), 1375-1394.

Sirmon, D. G., Hitt, M. A., Ireland, R. D., & Gilbert, B. A. (2011). Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of Management, 37*(5), 1390-1412.

Sohl, T., Vroom, G., & McCann, B. T. (2020). Business model diversification and firm performance: A demand-side perspective. *Strategic Entrepreneurship Journal, 14*(2), 198-223.

Sosna, M., Trevinyo-Rodríguez, R.N. and Velamuri, S.R. (2010). Business model innovation through trial-and-error learning: the Naturhouse case. *Long Range Planning, 43*(2), 383-407.

Soto-Simeone, A., Sirén, C. & Antretter, T. (2020). New Venture Survival: A Review and Extension. *International Journal of Management Reviews, 22*(4), 378-407.

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*, 237-247.

Strauss, A., & Corbin, J. (1990). *Basics of Qualitative Research: Techniques and Grounded Theory Procedures for Developing Grounded Theory*. In The Modern Language Journal. SAGE Publications, Inc.

Streubert, H. J., & Carpenter, D. R. (2002). *Qualitative Research in Nursing: Advancing the Humanistic Imperative*. In Qualitative Research in Nursing: Advancing the Humanistic Imperative (3rd ed.). Lippincott Williams & Wilkins.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review, 20*(3), 571-610.

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, *51*(1), 40-49.

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319-1350.

Teece, D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning, 43*, 172-194.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal, 18*(7), 509-533.

Tranfield, D.R., Denyer, D. & Smart, P. (2003). Towards a methodology for developing evidence informed management knowledge by means of systematic review. *British Journal of Management, 14*(3), 207–222.

Tripsas, M. (1997). Surviving radical technological change through dynamic capability: Evidence from the typesetter industry. *Industrial and Corporate Change, 6*(2), 341-377.

Tsang, E. W. K., and Zahra, S. A. (2008). Organizational unlearning. *Human Relations, 61*(10), 1435-1462.

Tuchman, G. (1994). *Historical social science: Methodologies, methods, and meanings*. In N. K. Denzin & Y. S. Lincoln (Eds.), Handbook of qualitative research (pp. 306–323). SAGE Publications, Inc.

Tushman, M. L., & Philip Anderson (1986). Technological discontinuities and organizational environments. *Administrative Science Quarterly, 31*, 439-465.

van Maanen, J. (1979). The Fact of Fiction in Organizational Ethnography. *Administrative Science Quarterly, 24*(4), 550.

van Maanen, J. (1988). *Tales of the Field: On Writing Ethnography*. In Journal of Organizational Ethnography (Issue 2). The University of Chicago Press.

Velu, C. (2015) Business model innovation and third-party alliance on the survival of new firms. *Technovation 35*, 1-11.

Vidich, A. J., & Lyman, S. M. (1994). *Qualitative methods: their history in sociology and anthropology*. In N. K. Denzin & Y. S. Lincoln (Eds.), Handbook of Qualitative Research. SAGE Publications, Inc.

Villagrasa, J., Buyl, T., & Escribá-Esteve, A. (2018). CEO satisfaction and intended strategic changes: The moderating role of performance cues. *Long Range Planning, 51*(6), 894-910.

Visnjic Kastalli, I. V., & Van Looy, B. (2013). Servitization: Disentangling the impact of service business model innovation on manufacturing firm performance. *Journal of Operations Management, 31*(4), 169-180.

Visnjic Kastalli, I., Van Looy, B. & Neely, A. (2013). Steering Manufacturing Firms Towards Service Business Model Innovation. *California Management Review, 56*(1), 100-123.

Visnjic, I., Wiengarten, F., & Neely, A. (2016). Only the Brave: Product Innovation, Service Business Model Innovation, and Their Impact on Performance. *Journal of Product Innovation Management, 33*(1), 36-52.

Voelpel, S. C., Leibold, M., & Tekie, E. B. (2004). The wheel of business model reinvention: how to reshape your business model to leapfrog competitors. *Journal of Change Management, 4*(3), 259-276.

Walsh, J. P. (1995). Managerial and Organizational Cognition: Notes from a Trip Down Memory Lane. *Organization Science, 6*(3), 280–321.

Wang, X., & Lou, T. (2020). The effect of performance feedback on firms' unplanned marketing investments. *Journal of Business Research, 118*, 441-451.

Wang, Z., & Zhou, Y. (2021). Business model innovation, legitimacy and performance: Social enterprises in China. *Management Decision, 59*(11), 2693-2712.

Wei, Z., Song, X., & Wang, D. (2017). Manufacturing flexibility, business model design, and firm performance. International *Journal of Production Economics, 193*, 87-97.

Wei, Z., Yang, D., Sun, B., & Gu, M. (2014). The fit between technological innovation and business model design for firm growth: evidence from China. *R&D Management, 44*(3), 288-305.

White, J. V., Markin, E., Marshall, D., & Gupta, V. K. (2022). Exploring the boundaries of business model innovation and firm performance: A meta-analysis. *Long Range Planning*, *55*(5), 102242.

Williamson, O. E. (1981). The economics of organization: The transaction cost approach. *American Journal of Sociology*, *87*(3), 548-577.

Wirtz, B.W., Göttel, V., & Daiser, P. (2016). Business Model Innovation. Development, Concept, and Future Research Directions. *Journal of Business Models, 4*(1), 1–28.

Wirtz, B. W., Schilke, O., & Ullrich, S. (2010). Strategic development of business models: implications of the Web 2.0 for creating value on the internet. *Long Range Planning, 43*(2-3), 272-290.

Wiseman, R. M., and Bromiley, P. (1996). Toward a model of risk in declining organizations: An empirical examination of risk, performance and decline. Organization Science, 7, pp. 524-543.

Wright, P. M. (2017). Making Great Theories. *Journal of Management Studies, 54*(3), 384–390.

Xu, D., Zhou, K.Z., & Du, F. (2019). Deviant Versus Aspirational Risk Taking: The Effects of Performance Feedback On Bribery Expenditure And R&D Intensity. Academy of Management Journal 62 (4), 1226–1251.

Ye, Y., Yu, W., & Nason, R. (2021). Performance feedback persistence: comparative effects of historical versus peer performance feedback on innovative search. Journal of Management, 47(4), 1053-1081.

Yin, R. K. (1981). The Case Study Crisis: Some Answers. *Administrative Science Quarterly*, *26*(1), 65.

Yin, R.K. (1994). *Case Study Research: Design and Methods*. SAGE Publications, Inc.

Yin, R. K. (2005). *Introducing the World of Education: A Case Study Reader*. SAGE Publications, Inc.

Yin, R. K. (2014). *Case Study Research Design and Methods.* In The Canadian Journal of Program Evaluation (5th ed.). SAGE Publications, Inc.

Yu, B., Hao, S., & Wang, Y. (2020). Organizational search and business model innovation: The moderating role of knowledge inertia. *Journal of Knowledge Management, 24*(7), 1705-1718.

Yu, W., Minniti, M., & Nason, R. (2019). Underperformance duration and innovative search: Evidence from the high-tech manufacturing industry. *Strategic Management Journal, 40*(5), 836-861.

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.

Zhang, Q., & Segall, R. S. (2010). Review of data, text and web mining software. *Kybernetes*, *39*(4), 625–655.

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.

Zott, C., Amit, R., & Massa, L. (2011). The business model: Recent developments and future research. *Journal of Management, 37*, 1019-1042.

Annexes

Annex 1. Chapter 2 Systematic literature review articles inclusion criteria

No.	Criteria	Reason for inclusion
1	Theorical papers (internal/external validity)	The article contains the assumptions to be included in the review and possessing an internal and external validity (Pittaway, 2004).
2	BMI definition	BMI definitions considered in the article treat the concept in a nontrivial and nonmarginal way (Zott et al. 2011).
3	BMI - PF consideration	Must refer to BMI and PF as concepts related to business firms and their performance (Zott et al., 2011; Schneider and Spieth, 2013; Foss and Saebi, 2017).

Annex 2. Chapter 2 Systematic literature review articles exclusion criteria

No.	Criteria	Reason for exclusion
1	Document type	Document other than academic articles (e.g., book reviews, interviews, case studies, etc.) or not peer reviewed (Foss and Saebi, 2017).
2	Scope	The research scope is not within the social sciences, (e.g., Medicine, Engineering Sciences, Ecology) (Zott et al., 2011).

Annex 3. List of articles used in the systematic literature review present in Chapter 2

Authors / Year	Theoretical Perspective	Key Findings
Baden-Fuller & Haefliger (2013)	Management Theory	Business model choice determines the complementarity between business models and technology and the paths to firm performance.

Bhatti et al. (2021)	Knowledge Management Theory Upper Echelons Theory	Knowledge absorptive capacity, agility, and top management mindfulness are antecedents to BMI which, in turn, mediates the relationship between these antecedents and firm performance.
Bouwman et al. (2019)	Innovation Theory and BMI literature	Firms can improve their performance through (a) allocating more resources for BM experimentation and (b) enhancing their capacity to innovate either by increasing the number of innovation or spending more time for innovation.
Chen et al. (2021)	Social Exchange Theory	BMI positively impacts SME performance, with BMI indirect impact on customer trust and commitment acting as a mediator.
Cheng et al. (2022)	Performance Theory Competitive Advantage Theory	Negative performance feedback increases firms' strategic emphasis on VC versus VA. A low to medium level of positive performance feedback boosts firms' relative emphasis on VC, while a medium to high level of positive feedback decreases it.
Clauss et al. (2021)	Dynamic capability theory Organization Theory	BMI serves as an important intermediary mechanism through which firms' strategic agility contributes to superior firm performance.
Cucculelli & Bettinelli (2015)	Corporate Entrepreneurship (CE) Theory	Business model modification has a positive impact on firm performance, with a positive complementary effect on intangibles.
Denicolai et al. (2014)	Knowledge Theory BMI literature	The positive effect of knowledge intensity for external knowledge acquisitions supports the firm growth, and, for medium- and high-technology firms, provides more strategic degrees of freedom for the value creation architecture of the business model
Desallys et al. (2022)	Behavioral Theory of the Firm	Business model reconfiguration (BMR),irrespective of its breadth, is not associated with significantly better or worse performance. However, clear evidence is showing that the effect of the breadth of BMR depends on the firm's prior performance and level of innovation.
Futterer et al. (2018)	Effectuation Theory Behavioral Approaches	Both effectuation and causation behaviors lead to BMI in situations of moderate industry growth, and, in turn, BMI enhances corporate venture performance.
Gronum et al. (2016)	BM literature	Business model design themes, which are argued to be mechanisms for appropriating value from the firm's business model, mediate the relationship between innovation and firm performance.
Guo et al (2020)	Resource-based view and the demand-side perspective	Both technology and consumer orientations are beneficial to the performance of start-ups. However, it would be counterproductive for a

		digital start-up to seek a balance between both strategic orientations in business model design
Guo et al. (2022)	BM literature and demand-side perspective	Value proposition innovation is positively related to digital start-up performance. This relationship is mediated by value creation and value capture innovation value proposition innovation aimed at meeting consumer demand is the most critical element for the success of business model innovation in digital start-ups
Hamelink & Opdenakker (2019)	BM literature	Business model innovation affects firm performance in the energy storage market. With current legislation limiting a true new value proposition, for large-scale applications, the business model innovation with an efficiency design theme results in higher environmental performance and, therefore, increased customer satisfaction.
Huang et al. (2013)	BMI literature Open innovation Structural inertia Theory	Open innovation has a significant mediating effect on the relationship between organizational inertia and business model innovation, and the relationship between organizational inertia and firm performance; business model innovation also has a positive influence on firm performance.
Kim & Min (2015)	Theory Of Competitive Strategy (RBV)	By adding a new business model incumbents can improve performance by capitalizing on complementary assets (namely complementary and conflicting) and managing conflicting assets with wise managerial choices (namely timing and organizational mode).
Latifi et al. (2021)	Transaction Costs Theory Organizational Learning Theory Dynamic Capabilities	Efficiency growth, organizational capabilities and revenue growth mediate the relationship between BMI and firm performance and, in turn, have a positive impact on firm performance.
Leppänen et al. (2021)	Configuration Theory	Only novel business model design is not sufficient to ensure high performance, but becomes effective when combined with other value business model design elements (e.g., novelty and/or efficient BM designs).
Liu et al. (2021)	Dynamic capability theory Business model design literature	External integration fully mediates the effect of novelty-centered BMD on operational performance, and efficiency-centered BMD directly improves operational performance, while NBMD indirectly improves operational performance.
Liu et al. (2021)	Resource orchestration theory	NBM has a significant positive influence on SME performance while EBM does not. Moreover, the interaction of the efficiency-centered business model with technology

		capability and the interaction of the novelty-centered business model with marketing capability both positively impact SME performance.
Morris et al. (2013)	Dynamic capability theory Business model design literature	A typology of seven business models in food industry. Higher performance was characteristic of companies with significant breadth of menu and full service.
Nair et al. (2013)	Theory Of Competitive Strategy Core Competencies Theory	Identifying, using and effectively organizing firm's right core competencies, and building the business model around them, can enhance firm performance.
Najmaei (2018)	BTOF/ PT BM Literature	The current business model acts as a reference point and shapes executives aspiration and business modeling goals. These goals together with the firm performance, influences executives decision for minor or major changes to the business model of the firm.
Najmaei (2016)	Modularization in organization theory Modular system theory Business model literature	Pursuit of BMI is a missing mechanism only in the process modularity-performance nexus not the product modularity. In addition, contrary to predictions, we observe that environmental dynamism negatively moderates this relationship. pursuit of BMI enhances performance of the firm
Nunes & Pereira (2021)	Business model innovation literature	There is a positive correlation regarding BMI and business performance (BP) as main concepts. Value creation and proposition are also positively correlated, with BP as an aggregated variable and with customer satisfaction.
Pang et al. (2019)	Dynamic capability theory and contingency theory	BMI positively mediates the relationship between integrative capability and firm performance. Moreover, a differentiation strategy positively moderates the link between BMI and firm performance, while a cost leadership strategy presents a significantly negative moderating effect.
Pati et al. (2018)	Configuration theory Contingency theory BM design literature	BM novelty was of greater benefit to younger SMEs compared to mature SMEs, while BM efficiency was of greater benefit to more mature SMEs. The environmental dynamism positively moderated the relationship between BM novelty and performance but it negatively moderated the relationship between BM efficiency and performance.
Pati et al. (2021)	Bricolage Effectuation BM literature	Bricolage, pre-commitment, flexibility, and experimentation positively influence BM Novelty (BMN). However, affordable loss behavior had a negative impact on BMN. Moreover, our findings

		indicate that BMN mediates the Entrepreneurial Behavior-firm performance relationship.
Rask & Günzel-Jensen (2020)	BM/BMI literature	Typology of business model choices and performance where the four types of business models distinguish themselves by how the companies innovate or imitate the value proposition of the current industry as well as how they innovate or imitate the business model archetype.
Sohl et al. (2020)	Competitive Strategy Theory (RBV) Demand Side Perspective	Demand-related business model addition increases firm performance, effect that is mediated and reinforced by per capita income (heterogeneity) and the number of potential users of the online BM (demand).
Velu (2015)	Contingency Theory Profiting From Innovation Theory	Firms that possess a high or low degree of BMI have more chances to survive than new firms with a moderate degree of BMI. Partnering with third-party firms having complementary assets decreases new firms survival as the degree of BMI increases.
Visnjic & Van Looy (2013)	Theory Of Competitive Strategy Economic Theory (Economies Of Scale)	The transition from products to services implies the presence of initial short-term gains, but also that profitable growth looks feasible only under the condition of investing in service capability which can result in economies of scale.
Visnjic et al. (2013)	Theory Of Competitive Strategy	Service adoption and service coverage, reflect service market performance, and should be used in complement of a complementarity index. When combined, they permit firms to deploy a service-based business model.
Visnjic et al. (2016)	Theory Of Competitive Strategy; Demand-Based View On Value Creation; Complementarity View	The interaction between service business model innovation and product innovation results in long-term performance with a degree of short-term performance sacrifice.
Wang & Zhou (2020)	Legitimacy theory Social enterprises BMI literature	Business model innovation has a positive effect on social enterprise performance and an organization's legitimacy, acting as the partial mediator between them. The mediating effect of legitimacy is more positive when social enterprises are in the early growth stage.
Wei et al. (2017)	Theory of constraints and business ecosystem theory Transaction cost Theory BM design literature	Manufacturing flexibility promotes both efficiency- and novelty-centred business model designs and subsequent firm performance. Furthermore, the relationship between manufacturing flexibility and an efficiency-centred business model design is strengthened by competitive intensity but weakened by demand heterogeneity. In contrast, the relationship between manufacturing flexibility and novelty-centred

		business model design is weakened by competitive intensity but strengthened by demand heterogeneity
White et al. (2022)	Resource-based Theory BMI literature	The effect of BMI on performance is positive and the relationship is context dependent. Innovating a business model's structure and value-logic both lead to higher firm performance than do innovations to business model content and governance.
Yu et al. (2020)	Knowledge-Based Theory Organizational Theory (Inertia)	Efficiency-centered business model innovation is influenced by local search, while novelty-centered business model innovation is influenced by boundary-spanning search. Knowledge inertia mediates the relationship by strengthening the impact of local search, but weakening the effect of boundary-spanning search.
Zhang et al. (2021)	BMI literature Transaction cost Theory; Legitimacy; Social network theory; Upper echelon theory; Dynamic capabilities; Resource based view	There is a significant positive association between external and internal antecedents and BMI. Likewise, BMI is positively associated with firm performance.
Zott & Amit (2008)	Contingency Theory	Novelty-centered business models, coupled either with a differentiation or cost leadership strategy, enhance firm performance measured as the market value of a firm's equity.

Annex 4. List of articles used in review present in Chapter 3

Authors/ Year	Theoretical Perspective	Key Findings
Banerjee et al. (2019)	BTOF, PT	Organizational search is a combination of local and distant search activities, with a shift toward more distant search activities when external stimulus such as performance shortfall information is provided.
Ceci et al. (2016)	BTOF, PT	Organizations pursue different strategies according to the extent of the performance gap, hence, the size of the gap influences the scope of change.
Chen (2008)	BTOF, Prospect Theory	When firms underperform, their problem-driven R&D search activity increases. In contrast, when firms overperform, their R&D search intensity is reduced when above social aspirations, but increases when above historical. Slack increases R&D intensity.
Chung & Shin (2021)	BTOF, PT, Attribution Theory	When a firm performance appears below historical aspiration level, it tends to exploit its current technology. On the other hand, when performance appears below social aspiration level firms, it tends to increase R&D investment.

Dong (2021)	BTOF	Technological uncertainty can increase the relative risk discrepancy between various aspirations, whereas market uncertainty can decrease the relative risk discrepancy between various aspirations.
Eggers & Suh (2019)	BTOF	Negative feedback on new funds launched in new domains appears as detrimental for firm performance, as firms favors already exploited domains. On the other hand, negative feedback in experienced domains can encourage action to search for both local and distant solutions to rectify the problem or to expand firm's opportunities.
Goyal & Goyal (2022)	BTOF, PF	The cues defines if the firm considers its performance shortfall as shared with the industry peers (or unique to the firm) and non -controllable (or controllable). Depending on their interpretation, firms trigger self-enhancement or problem-solving modes, which dissuades or motivates them to proceed to R&D search.
Greve (1998)	BTOF, PT	Underperforming stations engage in more format changes, while overperforming stations engage in fewer format changes. The effect of over performance appear stronger than that of underperformance. Risky organizational changes are taken when motivation, opportunity, and capabilities are present.
Greve (2002)	PT, Prospect Theory	Aspiration levels' slow adjustments result in higher performance. In the presence of a stronger selection, slow adjusters faster dominate.
Greve (2003)	BTOF, PT, Prospect Theory	High performance causes low asset growth, but no effect on slack.
He (2021)	PT, Attention Based View	When performance falls below aspiration levels, firms increase investment in R&D. Managerial cognition influences firms' attention allocation to innovation to close performance gaps and formats organizational responses to negative performance feedback.
Iyer et al. (2019)	BTOF, PT	When performing below aspirations, firms increase both industry- and skill-related acquisitions through problemistic search. However, when they persistently performing below aspirations, firms engage in acquisitions that are more unrelated, expanding search boundaries from local to distant search.
Iyer & Miller (2008)	BTOF, PT, Performance Feedback, Acquisition, Slack	Firms performing below aspirations increases acquisition activity, but not when firms are performing above aspirations. Slack increases likelihood of acquisitions, and financial distress prevents acquisitions .Firms shift attention focus between survival, aspirations, and slack.
Jirásek (2020)	BTOF, PT, Performance Feedback	Firms performing above aspirations are more likely to have high strategic activities demands on the return of, making them less active given available portfolio of strategic.

		Reversely, the decreasing appeal of the portfolio will more likely enhance the search for new and better alternatives.
Jirásek (2017)	BTOF	The findings support Bromiley and Washburn's (2011) criticism of single variable aspiration models. R&D intensity change as an explained variable appears to have a better fit with the BTOF assumptions than R&D expense change.
Labianca et al. (2009)	PT, Prospect Theory Performance Feedback Learning, Cognition, Risk Taking	While performing well compared to competitors, firms do not necessarily become inertial, but instead, engage in striving comparisons. Hence, underperforming firms are more likely to proceed to radical organizational change, as well as overperforming firms if they judge their performance being below a particular set of competitors.
Lu & Fang (2013)	BTOF, PT	When faced with performance discrepancies firms will increase R&D investment but ,when close to bankruptcy, will decrease R&D spending. Moreover, unabsorbed positively impacts R&D investment and absorbed slack negatively affects R&D investment.
Lu & Wong (2019)	BTOF, PT	The higher (lower) a firm's performance is above (below) aspirations, the lower (higher) will be the share of exploratory innovation activities. Financial slack increases the share of exploratory innovation activities, except when the firm is underperforming.
Manzaneque et al. (2020)	BTOF, PT	When firm's performance appears below aspiration levels, firms are more efficient in converting R&D expenses into technological innovation, both in the short and long run. This effect is reinforced in the presence of high levels of financial slack, but is lowered as family management increases.
Miller & Chen (2004)	PT, Risk Preference, Attention	Underperforming firms take greater risks when neared bankruptcy. Reversely, overperforming firms are taking lower risk as performance relative to aspirations improves.
Villagrasa et al. (2018)	BTOF, PT	When firm's performance appears below social aspiration levels, CEOs' satisfaction regarding performance feedback tends to negatively impact strategic changes. This effects is reversed when performance compared to the industry is extremely high.
Wang & Lou (2020)	BTOF, PT	When firm's performance falls below historical aspiration, marketing investments increase. In contrast, social performance as an indirect impact. These effects reinforced when a firm receives favorable stock recommendations, has increased slack resources, or competition.
Ye et al. (2021)	BTOF, PT	Peer performance feedback appears as more persistent than historical performance feedback. Hence, negative peer performance feedback leads to greater innovative search.