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# Performance Feedback and Business Model Innovation: Insights from a Case Study-based Analysis

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## Abstract

Business Model Innovation (BMI) enables companies to increase performance and achieve sustainable competitive advantage. Although BMI research has intensified during the last years, the role of firm performance (FP) as an antecedent to BMI is still scarcely investigated. Taking a Performance Feedback Theory (PFT) perspective, we study the relationship between FP and BMI by looking at the way companies innovate their business models based on their past and current competitive performance aspirations. The paper uses a multiple-case study approach and finds that, when performing above aspiration and having slack resources, companies engage in adding a new business model (BM) to the existing one. Reversely, when performing below aspiration and do not possessing slack resources, companies tend to change the original BM by replacing it with a new one (replacive BMI) or exploiting synergies with the current BM to create a new but related one (synergetic BMI). Hence, this research deals with the relationship between the PFT and BMI literatures and contributes to a better understanding of FP's role in triggering BMI. Moreover, it broadens the perspective by using a qualitative research method for exploration in PFT, a domain which has been so far dominated by quantitative studies.

**Keywords:** performance feedback, business model innovation, firm performance, organizational aspirations, multiple case study.

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## 1 Introduction

To achieve sustained growth, enhance profitability, and ensure survival, firms must adapt their business logic (Latifi et al., 2021; Brenk et al., 2019). Since the rise of the Internet, business model (BM) and business model innovation (BMI) have attracted substantial interest in both academia and industry (Foss & Saebi, 2017). A BM outlines how a company creates, delivers, and captures value (Teece, 2010), while BMI refers to changes in the key components of a firm's BM or in the relationships among these components (Foss & Saebi, 2017). A well-constructed BM can develop and deliver compelling value propositions for customers, fosters revenue generation and competitive advantage (Teece, 2010) and therefore, ensure firm performance (Latifi et al., 2021).

BMI's impact on firm performance has recently become a focal point of interest (Latifi et al., 2021; Lepännen et al., 2023; Karimi & Walter, 2016). The adoption of such "a new logic,

paradigm or approach to create and capture value" (Schneider, 2019, p. 401) generates a major alteration of the business meta-routine in place to create and capture value (Osiyevskyy & Dewald, 2015) and consequently effects firm performance (Cheng et al., 2022). However, while innovations can transform organizations and industries, they could trigger risks such as uncertain financial outcomes or loss of existing customers (Osieyvsky & Dewald, 2015). Hence, such a strategic choice represents a significant challenge for firms' managers (Latifi et al., 2021).

Firms own different resources, apply different approaches to division of labor, and use diverse operational processes. This translates into differences in their internal structures. This diversity causes managers to seek out different types of information, approach the search process for innovation in distinct ways, and interpret their environments in unique manners (Gavetti et al., 2012; Shinkle, 2012). In spite of these differences, performance feedback scholars suggest that firms establish their aspirations more or less in the same way, that is based on their own performance and the performance of their peers (Lant, 1992; March & Shapira, 1992; Bromiley & Rau, 2014). However, since firms leverage distinct resources to pursue these goals, they will exhibit varying organizational adaptation capabilities, making some firms better equipped than others to create and capture value in specific contexts (Najmaei, 2018; Menter et al., 2023). As a result, firms' ability to innovate their business model is dependent on performance and resource settings (Najmaei, 2018).

Nevertheless, one important question remains: "What drives companies to innovate their business models?" Authors distinguish between external and internal drivers of BMI and argue that drivers, in general, have not been sufficiently studied (Foss & Saebi, 2017, Spieth et al., 2023; Menter et al., 2023). Specifically, little is known about what drives BMI in the absence of exogenous change (Martins et al., 2015). For example, only a few studies (e.g., Cheng et al. 2022; Najmaei, 2018; Yu et al., 2020) consider performance as a potential driver for BMI. While extant literature focuses on the effect of BMI on performance, it neglects the influence of performance on BMI.

To gain a deeper understanding of how performance can drive BMI in firms, we adopt a Performance Feedback perspective. According to the Performance Feedback Theory (PFT), the decision to engage in organizational changes based on innovation mainly depends on the firm's performance as well as the aspirations the firm intends to reach (Baum et al., 2005). Aspiration levels are defined as the "desired performance levels in specific organizational outcomes" (Shinkle, 2012, p. 416; Cyert & March, 1963). These aspiration levels depend on (i) the performance relative to prior aspirations, and the performance of comparable firms (Cyert & March, 1963). Recent Performance Feedback research suggests that performance feedback can shape firms' strategic responses regarding value creation and value capture. For example, Cheng et al. (2022) categorize firms' strategic responses aimed at improving performance into value creation and value appropriation. While this classification provides a valuable framework for understanding how performance feedback shapes firms' efforts to change their BMs, it does not take into account all the components of a firm's BM nor focuses on its innovation. Hence, to the best of our knowledge, neither the PFT literature nor the BMI literature has explored firm performance implications for BMI. Accordingly, in the attempt to understand the extent to which firm's performance can influence BMI, we ask the following research question: "*To which extent is BMI driven by firm performance*?"

To answer this question, we consider BMI in the context of PFT. 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, or a slack search, leading firms to use slack resources to improve their performance (Greve, 2003b; Rhee & Kim, 2015). Conversely,

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 performance, we extend the PFT logic to explain BMI in the context of organizational aspiration. To do so, we conduct a multiple case study-based research to understand whether companies leverage performance feedback to innovate their BMs. Our findings suggest that while companies monitor their main competitors over time, their decisions regarding BMI seem separated from the competition's performance and are rather dependent on the aspiration level set based on the company's own performance. In addition, our exploratory study leads to two propositions emerging from the developed case studies. The first proposition states that companies engage in adding a new business model to the existing model when they perform above aspiration and have slack resources. Indeed, several companies in our sample possess extra resources (slack resources) resulting from their past performance. The second proposition shows that companies do not add a new, completely different, business model when they perform below aspiration and do not possess slack resources. Instead, they tend to change the original BM by replacing it with a new one (replacive BMI) or exploit synergies with current BM by creating a new but related one (synergetic BMI).

Our research contributes to the literature on BMI (Amit & Zott, 2012; Foss & Saebi, 2017) through an empirical exploration of performance as a trigger of BMI. Our study also contributes to the literature on Performance Feedback (Greve, 2003a; Shinkle, 2012), notably by empirically showing its link to BMI while using a qualitative approach.

The remainder of the paper is structured as follows. After the introduction section, we provide a literature background section on BMI and Performance Feedback literatures, present the qualitative research method adopted as well as the data collection and analysis processes, illustrate our research findings obtained through within-case and cross-case analyses, and finally discuss how our research contributes the BMI and PF literatures, while suggesting avenues for future research.

## 2 Literature Background

### 2.1 BMI and its drivers

#### A General Overview of BMI

The investigation of the BM concept started in the 1990s together with the development of the Internet and online businesses. Being a reflection of corporate strategy (Casadesus-Massanel & Ricart, 2010), the BM 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). It constitutes the firm's meta-routine for creating and capturing economic value (e.g., Osiyevskyy & Zargarzadeh, 2015; Zott et al., 2011; Zott & Amit, 2007; Chesbrough, 2007). BMs are frequently subject to innovation and adaptation over the years, which represents a challenge for firms and the managers that execute them (Doz & Kosonen, 2010; Sosna et al., 2010; Casadesus-Masanell & Zhu, 2013).

A core question of strategic management and entrepreneurial research is what drives value creation and capture, and, thus, firm performance (Amit & Zott, 2001; Brandenburger & Stuart, 1996). First investigated empirically by Zott & Amit (2007, 2008) in entrepreneurial ventures, the effect of BMs on firm performance has recently been gaining an increasing interest by being further explored in various industries and countries, both in new and established firms, (e.g., Andries, Debackere & van Looy, 2013; Lepännen et al., 2023; Snihur, Zott & Amit, 2021; Zott & Amit, 2010).

A BM serves to convey and execute strategic decisions (Lambert & Davidson, 2013) and is regarded as a tangible manifestation of a company's strategy (Casadesus-Masanell & Ricart, 2010). It outlines how resources can be utilized effectively, how new revenue streams can be harnessed, and how costs can be minimized (Chesbrough, 2007). With a new BM, a company can exploit market opportunities, potentially creating an entirely new market niche (Hartmann et al., 2013). For instance, the potential of new technologies can often only be realized through a revised BM (Chesbrough & Rosenbloom, 2002), which may also influence the development of new organizational capabilities enhancing firm performance. Fundamentally, both scholars and practitioners recognize the importance of BMs to the success of organizations, particularly those aiming for growth (Teece, 2010), competitive advantage (Afuah, 2000), long-term performance improvement (Bock et al., 2012), or as a source of innovation (Zott et al., 2011). According to Latifi et al. (2021), examples of companies that were able to improve their performance or competitive advantage through BMs are Hewlett Packard in the computer industry, Wal-Mart in retail, and Uber in transportation. Firms can approach new BMs 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), potentially leading to BMI replacement (replacive BMI) or BMI addition (additive BMI) (Santos et al., 2015).

However, new BM initiatives do not always achieve the expected performance improvements. Restructuring essential elements of the BM can adversely affect stakeholders by, for example, eliminating existing suppliers, building new skill sets for employees, and potentially alienating customers (Latifi et al., 2021). An example includes IKEA's Boklok concept for prefabricated homes (Latifi et al., 2021). Therefore, new BMs can be viewed as a double-edged sword, capable of delivering a significant increase in performance or even leading to bankruptcy. Hence, compared to product, service, or process innovation, new BMs involve higher risks and greater uncertainty, thus making it a major challenge for companies' managers.

### BMI Drivers

Business models are constantly innovated and adapted over time (Doz & Kosonen, 2010; Sosna et al., 2010; Casadesus-Masanell & Zhu, 2013). Researchers have investigated the motivations for firms to pursue BMI, which can be internal or external (Foss & Saebi, 2017; Spieth et al., 2023; Menter et al., 2023).

On the one hand, external drivers such as external discontinuities and disruptions constitute major drivers to proceed to BMI (e.g., de Reuver et al., 2009; Doz & Kosonen, 2010), including technological developments (e.g., Teece, 2010; Wirtz et al., 2010; Sabatier et al., 2012), demand for social and sustainable efforts (e.g., Zollo et al., 2013; Joyce & Paquin, 2016), and globalization and deregulation (e.g., Casadesus-Masanell & Ricart, 2010; Teece, 2010). On the other hand, internal drivers have recently caught the attention of the researchers. These refer to managerial cognition (Schneider, 2019), dynamic capabilities such as external knowledge acquisition (Spieth et al., 2023) and resource allocation (Menter et al., 2023).

Exploring external BMI drivers, literature has discussed that firms seek to ensure the fit of their BM to the changing external environment, in order to improve their performance (Spieth et al., 2023). While investigating internal BMI motivations, researchers highlight the relationship between the identified driver, BMI and firm performance. For instance, resource allocation can impact the innovation ability of a firm, thus in turn its performance (Menter et al., 2023).

While research investigated many internal and external drivers of BMI, only a few studies (e.g., Cheng et al., 2022; Najmaei, 2018; Yu et al., 2020) dealt with how firm's performance affects BMI decisions.

## 2.2 BMI and Firm Performance

### Firm Performance: A BMI driver?

Literature does not explicitly deal with firm performance as a driver, although it is reasonable to assume that firms embark on business model change as a reaction to poor performance. Nevertheless, there are several indications in the literature that performance could be a driver of BMI. For example, Xu et al. (2019) found that performance can alter firms' R&D investments and their propensity for unethical practices such as bribery. Kuusela et al. (2017) demonstrated that a performance shortfall compared to aspirations can lead to a decrease in firms' mergers and acquisitions (M&A) activity, while simultaneously increasing divestment efforts. Cheng et al. (2022) found that in the case of limited resources, which can be the consequence of a decrease in performance, a firm might prioritize a strategic answer over others, thus restricting its ability to allocate sufficient resources to other initiatives such as BMI (Cheng et al., 2022). A few researchers further explored this latter perspective by studying how the Behavioral Theory of the Firm (BTOF) could contribute to the BMI literature. For example, Najmaei (2018) examined how executives make necessary adjustments to the current firm's BM and showed that the current BM serves as a reference point, which shapes executives' aspirations and business model goals. These goals, along with the firm's performance, influence executives' decisions to make minor or major changes to the BM. More specifically, 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 introduce to their BM (Najmaei, 2018).

In addition, Yu et al. (2020) empirically investigated the relationship between organizational search and BMI by leveraging knowledge-based theory and organizational theory, two perspectives deeply rooted in the BTOF, Resource-Based View and Transaction Cost Theory (see Kaplan, 2001). Yu et al. (2020) found that efficiency-centered BMI is 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. Therefore, organizational search initiated by a performance below aspirations could affect the BMI designs adopted by the firm, which can be either efficiency-centered or novelty-centered.

All the studies reviewed above point to a potential impact of performance on BMI, but do not deal explicitly with performance as a BMI driver.

### Performance (feedback) as driver of BMI

While scholars have started to classify BTOF firms' strategic answers—aimed at enhancing performance—into BMI value creation and value appropriation components (Cheng et al., 2022, Najmaei, 2018), none of them have considered how performance might feedback into BMI. Hence, to gain a deeper understanding of how performance constitutes a driver for BMI in firms, we adopt a Performance Feedback lens.

Having evolved from the BTOF developed by Cyert & March in 1963, PFT states that firms' strategic behavior is guided by the discrepancy between organizational aspirations and performance (Ansoff, 1979; Cyert & March, 1963; Fiegenbaum, Hart, & Schendel, 1996; Shinkle, 2012). 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; Cyert & March, 1963). Both the theory and existing empirical results suggest that organizational aspirations adapt to a combination of two factors (also called aspiration level): 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). On the one hand,

historical aspirations, 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 in terms of value creation and value capture (Cheng et al., 2022). On the other hand, social aspirations involve comparisons with industry peers and represent a good indicator of the firm's capabilities in contrast to its competitors (Massini et al., 2005). 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 in terms of value creation and value capture (Greve, 1998; Baum et al., 2005; Cheng et al., 2022).

This behavioral view of the firm shows that firms are inherently heterogeneous, differing in resources, knowledge, and operational processes (Bromiley & Rau, 2014). As a result, their internal organization is diverse. This diversity leads executives of similar firms to search for different information in different ways and uniquely interpret their environment (Gavetti et al., 2012; Shinkle, 2012). Consequently, firms vary in setting their aspirations based on their performance, and by utilizing their own specific resources to meet these aspirations (Lant, 1992; March & Shapira, 1992). Such differences result in distinct capabilities for organizational adaptation, making some firms more suited than others to create and capture value in specific contexts and, therefore, to innovate or not their BM in certain performance settings (Najmaei, 2018). Hence, a key prediction of the PFT is that a firm's adaptative behavior is influenced by the gap between its aspirations and actual performance (Shinkle, 2012; Bromiley & Rau, 2014). Since executives have control over the outcomes of their actions, they set goals and respond to feedback on goal attainment (Lant & Shapira, 2008). This approach aims to enhance their success in achieving these aspirations (Lant, 1992). Indeed, assuming bounded rationality, performance feedback models further suggest that performance's evaluation can be simplified to a comparison between realized performance and aspirational targets (Cyert & March 1963). When actual performance does not meet aspiration, firms receive negative performance feedback, associated with failure; when actual performance exceeds aspiration, firms receive positive performance feedback, associated with success. This prediction has been empirically validated across various strategic activities, including innovation (Greve & Taylor, 2000), risky strategic changes (Greve, 1998), resource acquisition (Greve, 2011), product quality management (Rhee, 2009), and R&D intensity (Chen & Miller, 2007), but not at the BMI level.

*Performing above aspirations and slack resources*. Research has explored how organizations respond to performance that exceeds aspirations, primarily from two distinct perspectives. Some studies suggest that organizations typically do not abruptly stop the actions that helped them reach their aspiration levels. Instead, they are more likely to continue with strategies that proved effective when performance was below aspirations, although at a gradually declining intensity (Greve, 2003b; Kacperczyk et al., 2014; Lehman & Hahn, 2013). Numerous empirical studies support this idea, showing that organizations may slowly reduce the intensity of their actions—such as R&D efforts (Alessandri & Pattit, 2014; Lucas et al., 2018), new product launches (Joseph & Gaba, 2015; Parker et al., 2017), and strategic changes (Lin, 2014)—as performance surpasses aspirations. Conversely, other research indicates that organizations performing above their aspirations tend to increase their intensity of actions (Bromiley & Washburn, 2011; Lounsbury & Beckman, 2015). These studies argue that exceeding aspirations can either generate (Salge et al., 2015) or provide easier access to slack resources (Baum et al., 2005), which in turn motivates exploration. If slack resources enable organizations to pursue promising opportunities that might otherwise go unnoticed (Chen, 2008), then performance exceeding aspirations could result in heightened organizational activity.

*Performing below aspiration and the problemistic search mechanism*. PFT suggests that performance below aspiration is problematic. Indeed, Cyert & March (1963) initially proposed that when performance falls below an aspiration level, it prompts a "problemistic" search to rectify the shortfall, whereas performance exceeding that level stops such searches. Therefore, problemistic search is a major mechanism developed in the BTOF, suggesting that companies search for a solution to solve their performance problem and meet their aspiration level (Cyert & March, 1963). In a similar vein, March (1994, p. 28) stated that "search continues as long as achievement is below the target and ends when the target is exceeded." Building on Cyert & March's work, earlier studies concentrated mainly on situations where performance is below aspirations, demonstrating that poor performance indeed compels organizations to intensify their search efforts and take on more risk (e.g., Bromiley, 1991). 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), acquisition (Iyer & Miller, 2008), business expansion (Audia & Greve, 2006), new product introduction (Greve, 2003a), as well as new market entry and position (Joseph & Gaba, 2015).

The importance of these PFT views is manifested in the fact that behavioral components involved in decision-makers' actions bound firms' abilities to create and capture value (Gavetti, 2012) and, highly alter the firms BM belonging on whether the performance appears above or below aspiration. Hence, drawing on the scarce previous insights from the BTOF perspective on BMI, we further explore the different ways in which firms interpret performance and how it can result in BMI from a PFT view.

# 3 Methodology

## 3.1 Case Sampling and Data Collection

This exploratory research relies on a qualitative approach by leveraging a multiple case study methodology (Eisenhardt & Graebner, 2007). The multiple case study method can be used in exploratory research where theory is inductively constructed (Eisenhard, 1989; Yin, 2014). It allows the collection of rich observations on complex relational processes, which cannot be achieved by a quantitative approach (Eisenhardt, 1989; Eisenhardt & Graebner, 2007; Wrona & Gunnesch, 2016). This methodology has been used in many recent empirical works on BMs (Winter, 2023; Kemppainen et al., 2022; Kukkamalla et al., 2020; Dahmani et al., 2020; Beckett & Chapman, 2018). Therefore, this methodology was considered as appropriate to gain more understanding and explore how companies innovate their BM based on their performance.

After having reviewed relevant literature and as suggested by Glaser & Strauss (1967), we adopt a theoretical sampling, as selecting cases makes it possible to shed light on the relationship between constructs (Eisenhardt & Graebner, 2007). The case studies are identified by applying the following criteria: (1) the case study companies should have existed for at least five years to increase the likelihood that they had BM changes throughout their history; (2) 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).

Data was mainly collected by means of semi-structured interviews (Kemppainen et al., 2022; Kallio et al., 2016). For three of the case studies, more than one interview has been conducted, and one interview for the two others. All interviews were conducted and recorded by using Microsoft Teams ® and then transcribed. The anonymized company names, along with the interviewees,

and the duration of the interviews, are listed in Table 1. Our key informants were based in Italy, Spain, the U.S. and France. All interviews have been conducted in English between June 2022 and November 2022. In total, we conducted five case studies as illustrated by Table 1: (1) Logistics company, (2) Electronic components provider, (3) Printing company, (4) Medical device consulting company and (5) Chocolate producer. The interviews were supported by an interview guide (Appendix 1) consisting of questions that addressed elements of the companies' BMs and their performance. The interview questions were made accessible to the participants in advance. The semi-structured interview approach gave the researchers the possibility to ask additional questions beyond those in the predefined list (Kallio et al., 2016), such as seeking clarification or further elaboration on topics that arose during the conversation. During the interviews, all participants recommended materials, which they believed could help the researchers better understand their business model. This secondary data such as company reports and websites was incorporated as supporting material and was used for triangulation to enhance validity. By applying thematic analysis to supplementary data, we use these sources to corroborate, or contrast interview findings.

**Table 1.** Interviewed Companies.

| Case | Country | Founding Year | Company Size (Employees Number) | Expertise | Informant's Role and reference | Length of the interview | Supplementary material |
|---|---|---|---|---|---|---|---|
| A | Italy | 1946 | Large ($> 12\,500$) | Logistics | Senior Manager (A1) | 1h 02 min. | Company's website, annual reports |
| | | | | | Business Development Manager (A2) | 50 min. | |
| | | | | | Retail and Asset Senior Manager (A3) | 1h 04 min. | |
| B | Spain | 1921 | Large ($> 15\,000$) | Electronic Components Provider | Area Technical Manager (B1) | 52 min. | Company's website, annual reports |
| | | | | | Country Director (B2) | 53 min. | |
| C | Spain | 1939 | Large ($> 58\,000$) | Printing | Retail Media Manager (C1) | 54 min. | Company's website, annual reports |
| | | | | | Automotive Segment Manager | 1h 01 min. | |
| | | | | | R&D Firmware Project Manager (C2) | | |

| Case | Country | Founding Year | Company Size (Employees Number) | Expertise | Informant's Role and reference | Length of the interview | Supplementary material |
|---|---|---|---|---|---|---|---|
| D | USA | 2007 | Small ($< 25$) | Medical Device Consulting Services | Vice President Of Business Development (D) | 48 min. | Company's website, annual reports |
| E | France | 1922 | Medium ($< 1000$) | Chocolate Producer | Regional Sales Manager Europe (E) | 56 min. | Company's website, presentation and annual reports |

## 3.2 Data analysis

The collected data was subsequently subject to a qualitative content analysis (Gioia et al., 2013) by using the Atlas.ti version 23 software. The following steps were applied for the analysis. First, the text was read through several times by the researchers to make sense of the data. Next, the codes were defined. Most of the codes are deductive and refer to constructs identified in the PFT literature: "slack resources", "problemistic search", "slack search", "aspiration levels", "historical aspiration", "social aspiration" (Cyert & March, 1963; Greve, 2003 a,b). The deductive codes related to BMI are "additive" and "replacive" business model innovation (Santos et al., 2015). Deductive coding is additionally complemented with inductive coding. The code "synergetic" business model innovation emerges from the content analysis. By applying Gioia et al.'s (2013) clustering methodology, all codes were grouped into first- and second-order themes as presented in Table 2. The coding was initially conducted by one of the researchers and then, verified and discussed with the other researchers during several meetings to reach agreement on the system of codes and ensure its consistency. The main findings are then summarized for each theme and company, allowing for inter-case comparisons.

**Table 2.** Coding structure.

| Aggregated Dimensions | 2nd Order Concepts | 1st Order Codes | Interview citation examples |
|---|---|---|---|
| Aspiration Level | Historical Aspiration | Financial KPI (e.g., revenue, profit, etc.) | "We use the **classical KPI**. [...] So, we see **the revenue**, we see **the cost**, and also we have our **underlying profit**, so we see from which side growth was led and if we are growing in the proper way" (A1) |
| | Social Aspiration | Comparison to competitors | "Today then probably our biggest competitors in our market is another [company 5], located in [country 2]. [...] Yes, we are looking at them" (B2) |

| Aggregated Dimensions | 2nd Order Concepts | 1st Order Codes | Interview citation examples |
|---|---|---|---|
| Slack search | Slack resources | Investment in extra resources | "But really we needed to **acquire more technical skills**" A1; "for example, we **invested quite a lot in digital**" (B1) |
| | | Presence of extra resources | "The **people are very important** because, for example, now with the market contingency, the **people did the difference** with the customer to understand the real necessity, the real forecast." (A2) |
| | Firm performance above aspiration level | Use of extra resource when having a good firm performance | "**You need to invest when you have the money** to invest", "You need to **invest when everything is going fine**" (B1) |
| Problemistic Search | Problem identification | Firm performance problem identification | "So, now, **we have 3 problems**. We have the price increase of wood. We have the Russian and the Ukrainian market topped and then we have the behavior of the retailers in terms of stock. **These three things together create decreases of availability of products** to serve our existing customer and for grow." (A2) |
| | Solution search | Search for a solution to improve firm performance | "So, **we translate the need of the market**, in which in the next 5 year we want to work on and **we update that year by year** in order to be prepared and **to anticipate** also which could be **the problems** of our customer." (A1) |
| | Firm performance below aspiration level | Decline in firm performance | "We **perform a little bit worse**", "So right now, many of those brands are **selling even at a loss** just to get rid of this stock.", "We still have **few problems** with stock" (C1) |
| Business Model Innovations | Additive Business Model Innovation | New value proposition | "So I think that we are doing a lot [...] **to understand and to create the business model of the future.** [...] We are building a new sales model, **a new value proposition**, and a new internal organization of the team." (A2) |
| | | New sustainability based value proposition | "**Sustainability** means that by end of 2025, we should be zero C02 emission; [...] this is really something that **is critical success factor** to stay in that market." (A1) |

| Aggregated Dimensions | 2nd Order Concepts | 1st Order Codes | Interview citation examples |
|---|---|---|---|
| | | New technology based value proposition | "In Europe, **we're announcing the multi-jet technology.**" (C2); "**we are building an app** to track all the deliveries for our customer because, actually we have no very reactive approach on that." (A2) |
| | Synergetic Business Model Innovation | New and complementa-ry value proposition | "We **acquired that IP.** [...] There are **aspects of that technology that could be replicated** into other products." (D) |
| | Replacive Business Model Innovation | New and substitutive value proposition | "They have already subsidiaries in many places; they have offices with a team, with everything... **we are merging step by step.**" (E) |

# 4 Findings

## 4.1 Within-Case Analysis

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

### Company A

Company A is a logistics company operating worldwide with more than 12 500 employees. Over the years, it has become market leader while introducing several changes to its BM. 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"* (A1). This shift in the value proposition was one of the first BMI realized. This allowed the company to widen the range of offers to its customers by providing consultancy services in addition to the logistics operations. For instance, these services include contract management (developing contracts with retailers to help them manage their internal processes or help customers find a contractor) and inventory management (helping 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*" (A1), which pushed the company to further innovate its BM by integrating measures such as making the "*product ... completely recyclable*" (A1) and providing "*collaborative transport solution*" (A1) in order to optimize the transport of goods by controlling the space in the trucks and allow for more delivery points to be served. Company A also decided to invest in the digitalization of its BM by developing its own "*application that you can download on Android. It's really smart, quick, simple which means usable. It means that it will quickly be adopted and is able to interact with many integrated systems that maybe our suppliers already have.*" (A1), helping it to track and receive in real time information on the deliveries. The addition of this application allowed company A to acquire new resources including human capital by hiring new digital experts specialized in the management of the new application. In addition to the

application development, Company A also added services such as 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*" (A3), helping them to track their products in real time and avoid any loss.

As a leader in its industry, Company A proceeded with all these BM 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 BM by adding new services while keeping its initial BM, also called additive BMI.

**Company B**

Company B is an electronic component provider with more than 15 000 employees worldwide. Similar to company A, company B's BM underwent many changes during the previous years. KPIs such as profitability, sales gross profit, revenue, and operating costs are leveraged to monitor performance (historical aspiration) and compare it with competition (social aspiration). The BM 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*" (B1), 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.*" (B1) (e.g., online technical support, digital tools development, work from home programs implementation, etc.). The BM evolution 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. . . , and this is something that we were obliged to acquire to be able to support our customer*" (B2). These acquisitions allowed the company to integrate essential knowledge to offer a wider range of products. Over the years, the increased demand for customers' specific 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*" (B2). Hence, the company has integrated consulting service activities into its initial BM of electronic components to support its offers.

As a leader in its industry, company B has been performing above its aspiration level, while possessing slack resources. By operating in a very dynamic market, company B is always looking for ways to reorganize its internal processes and product offer, as well as making investments by leveraging its slack resources. This constant slack search permits company B to acquire essential new resources and competences, allowing it to innovate its BM by adding new services and competences while keeping its initial BM and adding new BM (additive BMI).

**Company C**

Company C is a market leader in the printing industry with 58 000 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 BM over time by leveraging its existing competencies and knowledge of 2D printing technologies. Indeed, several years ago, company C started to integrate 3D printing, as "*3D printing 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*" (C2). This has allowed company C to add to its razor and blade-based BM (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 BM allowed the company 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 BM on the computer side by extending its gaming PC offer and providing a cybersecurity service called "*wolf security, already embedded in the top computers*" (C1), as well as by acquiring a headset company, allowing it to enlarge its equipment offer to the work-from-home market.

The numerous BM changes conducted by company C were possible because the company has been performing above its aspiration level and possesses slack resources. Being one of the leaders in its industry, C invested in extra resources (slack search) in order to add new services, develop a new technology and find new functionalities for the existing one. Thus, the constant slack search operated by Company C allowed it to innovate its BM by adding a subscription-based BM for 2D ink delivery service and 3D printing machines, in addition to its existing 2D printers razor-blade BM, thus realizing an additive BMI.

**Company D**

Company D is a US-based medical device consulting firm employing up to 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 projects related to medical devices. While operating its BM, the company is facing a challenge in terms of workforce, as it does not have enough consultants available to quickly integrate new projects, as *"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*." (D). This labor shortage problem has further pushed the company to reorganize its internal processes by reconsidering the way in which it is selecting projects and revising its hiring process. The labor availability issues also constrained company D to look for solutions that generate continuous revenue streams instead of only relying on its project-based business. Based on the insights gathered through the realization of different consultancy projects, company D was able to identify common problems among their customers, for which it developed specific technological solutions. This is based on knowledge absorption by learning from the companies that company D was consulting. By patenting these technologies and leveraging them during future projects, company D has been able to generate licensing fees from their customers, while exploiting synergies with its initial project-based BM.

The BM modifications introduced by company D are due to its below-aspiration performance. The company engaged in a problemistic search, out of which a synergetic BMI has emerged. The BM harmonizes well with the company's initial business. Its discovery, however, would not have been possible, had the company not been operating its initial project-based model. Indeed, company D was able to gradually extend its project-based BM by accommodating a licensing-based BM evolving out of the synergies existing between the old and the new BM.

**Company E**

Company E is a worldwide chocolate producer with about 1000 employees and more than 800 customers, including restaurants, hotels, particular, etc., company E uses KPIs such as revenue, sales, turnover, number of importers, competitors' brands, geographical coverage, and client satisfaction (historical aspiration). It also constantly monitors the performance of its competition (social aspiration). E's BM changes have occurred after a drop in performance. The problem was 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 at the beginning was to go and see all our clients[and] end users, to actually change the mentality and to show the new products and the quality improvements.*" (E). 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 internal competition by introducing an additional and similar chocolate brand to the company's portfolio, further contributed to the BM changes. Sharing a common DNA, markets and capacities (e.g., R&D), the merger of its two main internal brands will allow the company to leverage its existing competencies to create a new BM.

These BM modifications allowed the company to evolve its BM and replace it with a more sophisticated one. These modifications were due to the fact that company E was performing below its aspiration level and going through a problemistic search process. Indeed, the new BM of company E has been innovated step by step by integrating the resources and competences brought by the initial and newly introduced brand into a new BM.

## 4.2 Cross-Case Analysis

### Aspiration level measure

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 in our sample define their historical aspirations based on KPIs such as previous years revenue. For example, as mentioned by A1 "*we look at the revenue, the cost, and also our underlying profit to see from which side growth was led and if we are growing in the proper way".* Additionally, all of them monitor competition performance by developing a social aspiration based on the comparison of KPIs such as, e.g., their own revenue, in contrast to the ones of their competitors.

### Performance above aspiration, slack resources and BMI

Thanks to their large size, companies A, B, and C were performing above aspiration and possess slack resources, allowing them to conduct a slack search that resulted in an additive BMI. Indeed, Company A is migrating toward a solution provider with sustainability and digitalization at the core of its additive BM. As stated by A1 *"sustainability means that by the end of 2025, we should have zero emission of C02 emission. [...] This is really something that is critical to stay in that market."* Company B has evolved through diverse company acquisitions by accommodating new consultancy services and providing an integrated value proposition for its additive BMI. As mentioned by interviewee B1, *"you need to invest when everything is going fine."* Company C, originally running a razor-and-blade model, leveraged its technological and market competencies to provide an additive BM that is subscription-based and relying on 3D printing (*we're announcing in Europe the multi-jet technology."* C2*)*.

### Performance below aspiration, problemistic search and BMI

Lacking slack resources, in particular because of their small sizes, companies D and E felt the necessity of adapting their BMs while performing below their aspirations by opting for a problemistic search mechanism. Company D was unable to further scale up its project-based BM because of labor force shortage. To cope with the lack of growth opportunities, it introduced a second licensing-based synergetic BM that is well compatible with the company's initial project-based model. The licensing model is based on a patented technology that the company developed based on its project-based experience. D explains, *"we acquired that IP, as there*

*are aspects of that technology that could be replicated into other products"* (D). In the case of company E, BM adaptations were focused on consolidation inside the internal organization by merging brands to achieve complementary effects (*"We are merging step by step."* E), allowing it to perform a replacive BMI. All the main observations are summarized hereafter in table 3.

**Table 3.** Cross-case analysis.

| | Company A | Company B | Company C | Company D | Company E |
|---|---|---|---|---|---|
| KPIs leveraged for historical and social aspirations | Revenue, profit, gross margin, costs, delivery collection cycle time, stock, FTR | Profitability, sales gross profit, revenue, costs, operating income | Revenue, profit, return on investment, gross margin, costs | Revenue, profitability, costs, number of projects | Revenue, profitability, cost, number of importers, competitors brands, geographical coverage, client satisfaction |
| Performance relative to 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 | Additive BMI | Synergetic BMI | Replacive BMI |

As observed in table 3, all the companies included in our study were leveraging different KPIs to define their aspiration level (combination of historical and social aspirations). More specifically, all companies were tracking certain metrics such as sales revenues, profitability and costs. Interestingly, some key metrics are specific to each company's sector. In the case of company A, logistic indicators such as the delivery collection cycle time and full truck rate (FTR) were monitored to determine their aspiration level. Company B concentrated on additional profitability drivers with an extra emphasis on sales gross profit and operating income. Company D depending on medical services measures the number of projects that the company has been involved in. Company E completed its aspiration level measure with data on sales, and specific competitors' factors such as the number of importers, presence of competitor brands, geographical coverage, and client satisfaction.

With regards to the performance relative to the aspiration level, companies A, B & C were performing above aspiration. They were, as well, possessing extra resources, which allowed them to enter a slack search process. This process then led to the addition of a new BM in addition to the existing one, hence, performing an additive BMI.

Reversely, while companies D and E were performing below their aspiration level, they did not possess any slack resources which made them enter a problemistic search process. Looking for a solution to their performance problem, companies D and E found a way to innovate their BM. In

the case of company D, exploiting the synergies present in its existing BM allowed it to establish a synergetic BMI. For company E, the development of an internal complementary BM allowed it to progressively replace the existing one, thus leading to a replacive BMI.

# 5 Discussion

## 5.1 Theoretical implications

By adopting a Performance Feedback lens, we seek to understand to which extent BMI is driven by firm performance. We highlight how firms use their performance aspiration level to decide on whether to proceed to BMI or not. In line with the theoretical expectations, our research shows that three companies (A, B, C) were 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 enabled them to find ways to innovate their BM by adding a new one (additive BMI; Santos et al., 2015). This observation confirms the theoretical argument that when performing above aspiration and possessing slack resources, firms might consider to keep on searching for new ways to create and capture value and proceeding to innovate the current BM to further improve their performance. This choice has led to the development of additive BMI which typically involves offering new products or services, along with potentially reengineering existing business processes and rethinking how value is created and redistributed within the firm without necessarily giving up the existing BM.

Some existing examples of additive BMI while companies are performing above their aspiration level can be also observed in the literature. For instance, automotive companies (e.g., Volkswagen, General Motors, etc.) have recently integrated the development of car sharing services in addition to their original product-based BM relying on selling cars (Amit & Zott, 2021). Moreover, other companies such as Amazon and Google are constantly adding new BMs in parallel to those they are initially operating, e.g., Amazon Web Services (AWS), in addition to the initial Amazon's e-commerce platform (Ritala et al., 2014). Additive BMI can also encompass experimentation with a new BM, seeking elements that align well with the capabilities of the company's existing BM (Santos et al., 2015). Hence, the following proposition:

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

Our research shows that both companies D and E were performing below their aspiration level and were not in possession of slack resources. In the case of D, its inability to scale up its original business pushed the company to look for a solution by acquiring an IP license from a technology it was familiar with. The role of this IP acquisition played an essential role and allowed company D to leverage the use of a new technology, advise it to their clients and obtain some licensing fees in return, thereby developing what we call a "synergetic" BMI and supporting the fact that BM can be innovated through the use of new technologies (e.g., Chesbrough, 2010). Company E embarked on a replacive BMI (Santos et al., 2015) in a situation where the company has lower slack levels and lower performance than what the company aimed for. This observation is consistent with the PFT argument that when performing below aspiration and not possessing slack resources, a problemistic search mechanism is triggered, pushing firms to find new ways to create and capture value with the objective of improving their performance.

Indeed, as mentioned in the literature (e.g., Najmaei, 2018; Foss & Saebi, 2017), due to limited resources, increasing engagement in a specific BMI may mean that firms cannot devote

sufficient resources to maintaining another BM. For example, firms may shift their focus to the high-end market by incrementally improving their products or services, while adding sophisticated features that appeal to up-market clients (Osievskyy & Dewald, 2015). Generally, this exploitative enhancement of the existing BM results in the reinforcement of the existing value creation and value capture associated with current choices (Casadesus-Masanell & Ricart, 2010, 2011). Importantly, the decision of firms to introduce incremental rather than radical changes to their BM can be a rational one, especially when it can ensure predictable returns that are sufficient to recover performance and bring it to satisfactory levels in the case of limited slack resources (Najmaei, 2018). Therefore, when slack resources are absent and performance is under the aspiration level, firms might engage in BM 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 BMs after being massively disrupted by the Asian electronic watches manufacturers while being below aspiration and without possessing any slack resources at that time (Markides, 2013). Hence, based on our findings and the previous literature, we formulate the following proposition:

> *P2: Companies engage in **replacive or synergetic business model innovation** when they are performing below aspiration and do not have slack resources.*

## 5.2 Managerial implications

From a practical perspective, managers can use this research to understand the implications of firm performance on BMI initiation. Depending on the availability of slack resources and current performance, companies can opt for an additive or replacive business model. A synergetic business model is appropriate in order to improve the current performance in the absence of extra resources. Thus, this research discovers a new BMI possibility that is relevant in particular for small companies with constrained resources in order to improve their current performance. The ability to discover a synergetic business model will depend on the ability of the firm to connect its business model to another model that leverages the existing resources and creates a new source of revenue. Furthermore, companies can also engage in BMI when they anticipate future drops in performance, e.g., because of degradation of the general economic conditions.

# 6 Conclusions

By leveraging PFT as a theoretical lens, our research establishes a relationship between Performance Feedback and BMI and contributes to a better understanding of the role of firm performance in influencing BMI. 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 PFT (Kotiglu et al., 2021; Posen et al., 2018) as well as in the BMI (Schneider & Spieth, 2013; Foss & Saebi, 2017) fields. Our case studies support the PFT literature suggestions that companies performing below aspirations and without slack resources engage in problemistic search to improve firm performance as well as the argument that firms performing above aspiration and possessing slack resources still engage in activities to improve firm performance (Baum et al., 2005; Greve, 2003 a,b). They also allow to shed a light on the organization responses in terms of BMI in both performance feedback situations, leading to the development of two propositions to be further tested empirically. Indeed, based on our observation, we suggest that firms possessing extra resources and performing above aspiration engage in additive BMI, while firms performing below aspiration and not possessing any slack

resources engage in either replacive or synergetic BMI. Moreover, while previous literature speaks of BMI in general, our case study analysis clearly shows that companies innovate their BM in different ways, leading to the development of different types of BMI (Foss & Saebi, 2017). In this regard, our research contributes to the enrichment of the insights on replacive, additive (Santos et al., 2015) BMI and the definition of what can be considered as a new type of BMI, namely a synergetic BMI.

Our analysis further supports the PFT assumptions that companies mainly determine their aspiration level based on the combination of the two factors: historical and social aspiration. This observation confirms that, to ensure firm performance, it is up to management to constantly monitor firm's key performance indicators (e.g., ROA, ROI, ROE, profit, etc.) as well as competition in order identify the right organizational responses and conduct the corresponding changes in terms of value creation and value capture, therefore impacting the firm's BM (Cheng et al. 2022). Therefore, firms own performance and competition monitoring serves as a catalyst for BMI.

Additionally, our research contributes to the current PFT debate regarding the composition of the aspiration level and the type of factors constituting it (Kotiglu et al., 2021). Indeed, our research observes 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 in some cases companies might consider additional types of aspirations in parallel to the historical and social (competitive) ones existing in the PFT literature (Greve, 1998, 2003a, b) and might as well be looking forward and not only backward (Greve & Zhang, 2022; Wirtz et al., 2010).

Our research also allows to widen the methodological approach to Performance Feedback research, a literature highly dominated by quantitative designs. Our approach permits the exploration of uncovered mechanisms through a qualitative aspect, answering the call raised by Posen et al. (2018).

We acknowledge some limitations of our study. First, in terms of sample size. Indeed, our research is exploring five different companies' cases developed by means of interviews. While our research allows to bring essential starting insights that companies base their decision to innovate their business model based on their performance, a larger sample could bring additional findings that would reinforce the generalizability of our findings. Moreover, our sample includes companies of different sizes, but the consideration of additional types of companies such as medium-sized companies or start-ups might enrich the insights brought by our research. Additionally, 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 and advise for the exploration of additional ones. The context in which companies evolve also might play a role in their decision making. Therefore, the consideration of contingencies including phenomenon such as waves of new technologies should be explored as companies will have to adapt to them.

Second, in terms of performance measurement, while we focused on the financial performance of companies, we did not consider non-financial indicators, which might play some role in the relationship studied. Additionally, we recognize that firms may have different performance starting points and that their strategic actions may change depending on their position compared to these performance starting points (Audia & Greve, 2006; Chen, 2008; Hu et al., 2011).

Third, our work does not take into account the potential moderating effect of factors such as attention, managerial cognition, and mindfulness of managers. For example, managers can have distinct perceptions of performance drops and react differently, in spite of being above the aspiration level (Rhee et al., 2019). For some managers, a performance drop can signal a serious

situation and may lead to a kind of "problemistic search", whereas for other managers, it can lead to a reinforcement of the status quo, especially if slack resources are not available (Wangrow et al., 2019).

Finally, this research sheds light on the fact that performance is feeding back into BMI adopting a PFT perspective. While PFT brings a novel theoretical lens that permits to explain and explore the why companies embark on BMI based on their performance, enlarging the exploration of the idea that BMI depends on firm performance and considering the "multisidedness" of BMI, might widen the implications.

## 6.1 Future research

Our research allowed us to shed light on whether or not companies innovate their business models based on firm performance, thus opening diverse avenues for future research. First, future research could explore additional aspects and reasons why companies embark in BMI. Indeed, PFT might appear as one-sided compared to the BMI literature that considers a larger set of issues related to performance. Some examples include the adoption and impact of new technologies (e.g., AI), sustainability regulations, or resilience capacities.

Our research also brings a new methodological approach, by looking at the link FP-BMI from a qualitative point of view. In order to validate the propositions developed in our research, future research could consider a larger and more diverse sample. Thus, future research can be conducted in other industries and using diverse methodology (e.g., mix-methods, quantitative, etc.) to further validate our results in different contexts.

Future research could also explore and integrate different types of indicators such as non-financial ones (e.g., sustainable or social indicators) to uncover their impact on BMI, e.g., the sustainability performance of companies and its implication for BMI. In addition, firms may have different performance starting points, which might change their strategic actions depending on their position.

Finally, future research can explore the effect of factors such as attention, managerial cognition, and mindfulness of managers as well as their role in the BMI-FP relationship.

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# 8 Appendix

**Appendix 1.** Interview Guide.

| Nr. | Questions |
|---|---|
| 1 | Could you describe your company, the sector in which it is operating, as well as the products and services provided 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? |

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