

Tomorrow is already here. Exploring how corporate foresight can contribute to ambidexterity.

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Abstract

Corporate foresight involves strategically exploring multiple potential futures and serves as a tool to guide organisational decision-making processes. Despite its significance, a predominant focus on immediate, short-term issues often characterises the operational mindset of many companies. As a result, companies frequently encounter challenges in achieving organisational ambidexterity – the ability to balance and leverage both the exploitation of current capabilities and the exploration of new opportunities in the future. In this paper, we propose a theoretical investigation of corporate foresight. We develop a conceptual framework that delineates different relationships between corporate foresight and organisational ambidexterity, providing a structured approach to understand how these concepts interact and influence each other. Our framework proposes three ways corporate foresight can significantly enhance ambidexterity within organisations. First, corporate foresight can be pivotal in identifying and analysing future trends and disruptions, which can inform strategic decision-making. Secondly, corporate foresight can better align an organisation's long-term strategic goals and short-term operational objectives, thus enhancing ambidexterity. Finally, corporate foresight can bridge different organisational units, promoting collaboration and knowledge sharing, aiding in developing a holistic approach to strategic planning that encompasses daily operational excellence and future-oriented strategic posture.

Keywords: corporate foresight, ambidexterity, strategy, exploitation, exploration, innovation.

JEL Code: M10

EFM Code: None

Summary: The paper contends that while corporate foresight methods are extensively used in strategic decision-making, their effectiveness in balancing short-term and long-term goals remains suboptimal. By integrating the concept of foresight processes in organisational ambidexterity practices (and vice-versa), it is possible to better reconcile the imbalance of different temporal goals.

Key points:

1. *Limited Effectiveness of Corporate Foresight:* Despite its popularity, the real-world impact of corporate foresight in guiding long-term strategy is constrained by various organisational factors.
2. *Short-termism vs. Long-term Vision:* Companies predominantly focus on short-term goals at the expense of long-term opportunities, which limits the efficacy of foresight methods.

3. *Concept of Organizational Ambidexterity*: The paper explores the idea of organisational ambidexterity as a potential solution for balancing short-term actions with long-term strategies.
4. *Foresight and Ambidexterity Synergy*: The paper hypothesises that corporate foresight can contribute to organisation's ambidexterity, enhancing its strategic effectiveness.

1. Introduction

Corporate foresight methods are extensively integrated into decision-making processes within various organisations, as highlighted by the popularity of the scenario method, as well as the extensive use of road mapping and the Delphi technique. This integration is confirmed by academic research, including Bradfield et al. (2005), Chakrabarty, Nijssen, and Valkenburg (2022), and Flostrand, Pitt, and Bridson (2020). The efficacy of these methods is evidenced through historical cases such as the Shell scenarios of the 1970s. In this instance, Shell anticipated a future oil crisis through scenario planning, a foresight that diverged from the prevailing industry belief of stable oil prices, as noted by Van der Heijden (2006). Similarly, the innovative application of roadmaps by corporations like Motorola and Philips has significantly contributed to corporate innovation and financial performance. This is further supported by academic insights from sources such as Kerr and Phaal (2020), Rohrbeck & Kum (2008), and Barton, Manyika, and Williamson (2017). These examples and scholarly works collectively emphasise the critical role of foresight in strategic planning, underscoring its value in shaping successful business trajectories.

The challenge for many organisations lies in overcoming the focus on short-term goals, often at the expense of long-term strategic vision. This short-term orientation, or organisational myopia, can substantially limit the effectiveness of corporate foresight, a tool crucial for long-range planning and innovation. Organisations should address this dyadic conflict between short-term and long-term objectives to fully harness corporate foresight's benefits (Amsteus, 2014). In fact, companies necessitate the development of strategies that not only meet immediate operational needs but also encompass long-term exploratory ventures. Such a balanced approach is embodied in the concept of organisational ambidexterity.

Building on this, effective corporate foresight does more than anticipate future trends and challenges; it plays a pivotal role in formulating strategies that bridge the dyadic conflict between short-term and long-term objectives. Doing so enables organisations to adeptly navigate the delicate equilibrium between present demands and future possibilities. In this context, foresight becomes a key informant for ambidextrous strategies, aligning immediate needs with long-term aspirations. This integrated approach could significantly enhance the impact of foresight activities in corporate decision-making and strategic planning. It could transform foresight into a practical instrument that can guide organisations towards sustainable growth and innovation, balancing short-term achievements with long-term goals.

Beginning with the premise that various forms of ambidexterity exist, this article investigates how corporate foresight can help to render organisations ambidextrous. It is crucial to understand the demands this places on corporate foresight methods and processes, including the timing and manner of their application in the pursuit of organisational ambidexterity. Consequently, this article addresses the following research question: "How can foresight contribute to making companies ambidextrous?" Specifically, in addressing this research question, we explore the following issues: 1) What are the findings of previous studies on the relationship between corporate foresight and ambidexterity? 2) How can the relationships between corporate foresight and ambidexterity be modeled? 3) How do different strategies of ambidexterity correlate with various types of corporate foresight methods?

Viewing corporate foresight as a tool for fostering ambidexterity in companies offers a multifaceted approach to bridging the gap between short-term and long-term objectives. This perspective posits that corporate foresight can aid in various ways: firstly, by supporting the development and implementation of different extant ambidexterity strategies; secondly, by enabling companies to achieve or maintain an ambidextrous state; and thirdly, by positioning foresight itself as a potential strategy for ambidexterity.

In our study, we adopt a conceptual perspective towards both corporate foresight and ambidexterity. Based on this approach, we systematically reviewed the literature and built a conceptual framework that delineates potential relationships between corporate foresight and ambidexterity. Leveraging the concept of ambidexterity, we propose three distinct avenues through which corporate foresight can be augmented. Additionally, we formulate a future research agenda, laying the groundwork for further exploration and understanding of the interplay between corporate foresight and organisational ambidexterity.

2. Theoretical Background

2.1 Corporate Foresight

Corporate foresight, as defined by scholars like Battistella (2014) and Ruff (2015), involves the identification of weak signals and emerging trends to anticipate future market developments and inform corporate strategies and innovation policies. Rohrbeck and Kum (2018) simplify this to a set of practices for achieving a superior future market position. Corporate foresight is a systematic activity for gathering and interpreting future data to aid present-day decision-making. Here it is not viewed as an end in itself, but a means to enhance a company's strategic capabilities. Foresight encourages creativity and serendipity in thinking about the future, as seen in Shell's 1970s scenarios, which predicted an oil crisis that others missed. This approach exemplifies Louis Pasteur's adage, "Chance favours the prepared mind," illustrating how foresight prepares companies for future uncertainties.

The prioritisation of short-term objectives over long-term considerations extends beyond individual companies to society at large (Amsteus, 2014). This is evident in global challenges like climate change, economic and societal inequality, and increasing political oppression. While not all these issues stem directly from short-term versus long-term imbalances, the lack of foresight in decision-making plays a significant role (Paliokaitė et al, 2014). Given companies' integral role in our economic system, aligning their short-term actions with long-term interests is crucial for addressing these widespread global challenges.

Although corporate foresight is widely recognised for its importance in addressing future uncertainties, its practical value is often limited and outdated. This is partly because companies tend to focus on short-term considerations, as Marginson and McAulay (2008) and Halinen et al. (2023) observed. Other factors include underutilisation of corporate foresight's creative potential (MacKay and McKiernan, 2010), its weak integration with strategic processes (Van der Duin and Den Hartigh, 2009), and top managers' preoccupation with operational issues over strategic planning (Sabelis, 2004). Additionally, Catino (2013) highlights 'organisational myopia' as a key factor in major crises, and Marginson and McCaulay (2008) point out the prevalence of 'short-termism' in managerial thinking, which often overlooks long-term implications. In many companies, short-term considerations dominate over long-term planning in terms of attention, funding, and resource allocation. This emphasis often results in entrenched organisational routines or even core rigidities, leading to an over-focus on immediate gains (exploitation) and a reactive increase in exploratory efforts to achieve balance (Leonard-Barton, 1992; Lee, Kim, and Joshi, 2017). Consequently, companies struggle to prioritise long-term issues in strategic decision-making. Thus, the effectiveness of corporate foresight in fostering organisational ambidexterity remains insufficiently realised, highlighting the need for further research in this area.

Companies and scholars have continuously sought ways to enhance the effectiveness of corporate foresight in strategic decision-making, focusing on areas like innovation and strategy. This includes aligning foresight methods with different innovation management styles (Von der Gracht, Vennemann, and Darkow, 2010), ensuring foresight studies are both plausible and inspiring (Rollwagen, Hogmann, and Schneider, 2008), and fostering open and collaborative foresight practices (Li, Sarpong, and Wang, 2020).

Notable examples include Apple, Amazon, and Netflix, which have demonstrated the significant impact of foresight on organisational ambidexterity and long-term strategy. Apple's foresight has driven its sustained innovation and market leadership by balancing improvements in existing products with breakthroughs like the iPhone and Apple Watch. Amazon's foresight led to early investments in e-commerce and cloud computing, transforming it into a global powerhouse. Netflix's foresight in streaming services over DVD rentals has not only revolutionised content consumption but also established its dominance in the streaming industry. These cases underscore the importance of integrating foresight into corporate strategy for long-term success and market leadership.

2.2 The Capability to Foresight

The challenge of balancing short-term operations with long-term strategic planning, known as organisational ambidexterity, has long intrigued scholars across various management disciplines, including those who study corporate foresight (Chandler, 1990; Christensen, 1997; Nelson & Winter, 1982; Porter, 1980; Tushman & Romanelli, 1985). This concept, involving the juxtaposition of exploitation (focusing on efficiency, production, and refinement) and exploration (emphasising innovation, risk-taking, and flexibility), has been particularly prominent in discussions about dynamic capabilities (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997). However, practical guidance on effectively managing these dual demands remains limited. This is largely because organisations must simultaneously engage in both activities, which often require different capabilities and organisational structures, thus posing a significant management challenge (March, 1991; Abell, 1999; Tushman and Smith, 2004).

Discontinuous innovation ('exploration') requires an entrepreneurial organisational setting consisting of small units characterised by decentralised product structures, experimental cultures, loose work processes, and relatively young and heterogenous human resource profiles (idem.). Lastly, McCarthy and Gordon (2011) state that exploitation is about short-time horizons, efficiency, control, reliability, and refinement, whereas exploration is about long-time horizons, search, experimentation, innovation, and adaptability. And to add a prosaic line to the more formal characterisations of ambidexterity: "We recognise that you need people to develop the weapons and people to fight in the terrain" (Mirvis, Ayas and Roth, 2003, pp.119-120). Indeed, ambidexterity is closely linked to the concept of 'dynamic capabilities', which involves three key managerial activities: sensing (identifying external opportunities), seizing (mobilising resources to capitalise on these opportunities), and transforming (constantly renewing the organisation) (Teece and Pisano, 2018; Bodwell & Chermack, 2010). This concept is contrasted with 'operational capabilities', which focus on ongoing activities to support current products and services, essentially maintaining the status quo and ensuring present-day viability (Helfat and Winter, 2011). Thus, ambidexterity integrates the need for both dynamic capabilities (exploration) and operational capabilities (exploitation) within an organisation.

2.3 The challenge of ambidexterity

Ambidexterity research often focuses on barriers to balancing innovation (exploration) and efficiency (exploitation). This includes challenges like core rigidities, path dependency, and competency traps which stem from reluctance or delay in adopting new technologies

(Heracleous et al., 2017; Leonard-Barton, 1992; Rialti et al., 2020). Ambidexterity is a complex managerial challenge that requires balancing efficient business operations with the pursuit of long-term, uncertain innovation, often leading to a diversion of resources from exploration to short-term profit maximisation (March, 1991; O'Reilly and Tushman, 2008; Rialti et al., 2020). Despite these challenges, ambidexterity is nonetheless linked to longer organisational survival, improved learning, and innovation, and is seen as a key factor for sustained competitive advantage, with ambidextrous companies often outperforming their counterparts (Cottrell & Nault, 2004; Holmqvist, 2004; Rothaermel & Deeds, 2004; Kouropalatis, Hughes and Morgan, 2012). Thus, the concept of ambidexterity refers to an organisation being able to simultaneously explore, exploit and thus adapt over time. While this sounds fine in theory in practice there are clearly practical challenges here, such as dealing with the tensions that the pursuit of different business models requires (Smith and Tushman, 2005). Indeed, Christensen concludes that it is not possible to resolve the “innovator's dilemma” and argues that, confronted with disruption, managers cannot simultaneously explore and exploit. They must spin out the exploratory business unit (Christensen, 1997).

It is worthy of note that for many years, scholars have continued to emphasise that an organisation's ability to simultaneously pursue exploratory and exploitative activities is critical to ensuring a sustainable competitive advantage (O'Reilly and Tushman, 2008; Raisch and Birkinshaw, 2008). Yet the coexistence of these two fundamentally different organisational competences, creates paradoxical challenges (Jansen et al., 2006; Smith, 2014; Smith and Tushman, 2005). However, little is known about how to build an ambidextrous organisation in terms of what capabilities are needed and how they can be developed. One avenue of research that continues to offer possible help is the analysis of ambidexterity at the individual level. Research on organisational members, individually and collectively may help open the black box of organisational ambidexterity and address the microfoundations of the exploration/exploitation dilemma to uncover how it can be achieved (Tarba, et al., 2020). A recent systematic review of the literature published since 1991 of 122 articles, by Kassotaki (2022) stressed the need for a more multilevel approach to ambidexterity and emphasised the importance of ambidexterity management in technology-intensive industries. To underscore this point in a comprehensive review of the literature, Guerrero (2021) illustrates research in organisational ambidexterity has been exponentially rising. He notes that much of the research was initially focused on strategic management journals. Recently there has been more emphasis within entrepreneurship journals. Nonetheless, he finds that new approaches are required to address the linkages between: strategic management, innovation, and entrepreneurship fields.

2.4 Ambidexterity strategies

Ambidexterity strategies aim to strike an optimal balance between exploitation and exploration rather than solving ambidexterity. These strategies include organisational ambidexterity, where different units balance both activities; contextual ambidexterity, assigning every employee roles in both exploration and exploitation; sequential ambidexterity, alternating these activities over time; and leadership ambidexterity, where senior management navigates the competing demands of both approaches. Each strategy requires different levels of management involvement and organisational structuring to effectively manage the inherent tensions between short-term efficiency and long-term innovation.

Simsek et al. (2009) structure forms of ambidexterity strategies according to that part of the organisation in which ambidexterity is pursued (within the same unit or across units) and by how ambidexterity is pursued (sequential or simultaneous). Based on this, four types of organisational ambidexterity are distinguished: 1) harmonic: simultaneous, within a unit); 2) partitional: simultaneous, across a unit; 3) reciprocal: sequential, across a unit); 4) cyclical: sequential, within a unit (Simsek et al., 2009). There is, however, in our view a difficulty with

sequential, because the problem of ambidexterity arises because an organisation has to do both types of activities at the same time. Few organisations have the ‘luxury’ of dividing both activities in time. Nevertheless, one could argue that the ‘problem of sequentiality’ has been addressed by Abernathy and Utterback (Abernathy & Utterback, 1978) in their theory on process innovations succeeding product innovation depending on the stage of the life cycle in which the company operates (Prange et al., 2015). They consider process innovations as more exploitative and product innovations as more explorative. In addition, the theory on time pacing (e.g., Eisenhardt, 1998; Shi, Bo, Guo & Ji, 2022) states that organisations can sequentially organise and structure their incremental and radical innovation.

Another significant consideration here is organisational size: Cembrero, Ruize de Olano and Gonzalez-Bree (2011) conclude that large companies tend to apply structural ambidexterity and small-medium sized companies prefer contextual ambidexterity. Industry sector is also of influence: “Industrial firms prefer to set up a different unit, technological firms prefer embedding innovation in the organisation and financial firms are changing from one model to the other without a clear tendency” (idem.). An option for SMEs to become ambidextrous is to organise in clusters (Jacob et al., 2020).

Finally, R&D strategy, typically not labeled as an ambidexterity strategy, functions as one by adopting a portfolio approach to allocate resources between short-term incremental and long-term radical R&D or innovation. This strategy often involves dividing investments into three categories: supporting existing businesses, developing future businesses, and exploring future significant technologies. The usual allocation is 80% for current, 15% for near-future, and 5% for long-term projects. This approach mirrors the ambidexterity concept, balancing resources between current and future business needs. However, the challenge lies in whether companies can effectively practice corporate foresight within this framework, especially considering the tendency to prioritise short-term gains, which may lead to underfunding foresight activities. This strategy resembles the 'portfolio-approach' of business, like the General Electric and Boston Consulting Group matrices, aiming to balance resource distribution across different time horizons and activities. Yet, these models don't explicitly guide how to achieve this balance, linking back to the concept of ambidexterity in strategic planning.

2.5 Research into relations between foresight and ambidexterity

Considering the conceptual relationship between foresight and ambidexterity it is not a surprise that this relationship has been studied before. For example, Bodwell and Chermack (2010) propose scenario planning to realise organisational ambidexterity. They see this corporate foresight technique as a “critical tool for balancing the ability to 'see' new opportunities, while maintaining a focus on current operating advantages” (Bodwell & Chermack, 2010, p.198). In particular, they establish the linkage between scenario planning and ambidexterity using the three elements of strategic capabilities: sensing, seizing, and reconfiguring (Teece & Pisano, 1997). In each of these characteristics, scenario planning can play a specific and positive role by establishing a link between scenario planning and ambidexterity.

Similarly, Appiah and Sarpong (2015) explored how strategic foresight integration impacts organisational ambidexterity, discovering that involving all units fundamentally in strategic planning enhances foresight integration. They suggest alternating the focus between exploitation and exploration based on foresight's nature. Whereas, Amniatallah and Ansari (2016) found that strategic foresight directly and positively influences organisational ambidexterity, thereby improving competitive advantage in Iranian nanotechnology companies. Paliokaitè and Paçèsa (2014) also confirmed foresight's positive contribution to ambidexterity, especially in driving explorative innovation. Lastly, Meyer, Von der Gracht, and Hartmann (2022) analysed 'future preparedness' as a blend of a company's exploitative and explorative

capabilities, noting a tendency for companies to focus more on exploiting internal resources while less on adapting to global environmental changes, with the company size and industry playing a significant role.

To sum up, these studies are important for exploring the linkages between corporate foresight and ambidexterity by, for instance, empirically validating and confirming the positive relationship between corporate foresight and ambidexterity or by exploring how a particular foresight method can contribute to ambidexterity. These studies, however, consider foresight only in relation to innovation, both incremental and radical, which we consider as just one side of ambidexterity. As previously stated, ambidexterity is about balancing innovation (exploration) and operational activities (exploitation) (March, 1991). In addition, establishing a quantitative relationship between corporate foresight and ambidexterity is important for assessing their interdependence, but it does not give deep insight into the nature of this relationship or how this is being established. In-depth case studies could provide this (see also Bodwell & Chermack, 2010). This is particularly problematic because organisations can only become ambidextrous following the result of managerial decisions based on a strategic choice between different ambidexterity-strategies (Ng, 2019). Thus, the research gap is to understand how the process of using corporate foresight in achieving ambidexterity is taking place and how that could be managed. Therefore, in the following section we schematise the concepts of corporate foresight, ambidexterity, and the strategic decision-making process of a company to clarify the various possible relationships.

3. A theoretical framework for the relationships between foresight and ambidexterity

Corporate foresight is instrumental in aligning short-term actions (exploitation) with long-term planning (exploration), contrary to its usual association with only long-term developments. It serves not as an end goal but as a means for strategic decision-making, helping organisations prepare for uncertain futures. The effectiveness of corporate foresight is evident when its studies lead to present decisions that adapt to future uncertainties. This approach moves beyond viewing short and long term as contradictory, instead fostering a balanced and dialectical relationship between the two. Hence, images of the future (created in a corporate foresight study) are an input to decisions made in the present (Van der Duin, 2016; Ahlqvist, 2022). ‘Anticipation’, a recent development in the general field of foresight, stresses this anticipating on the future in order to make decisions in the present, although the unit of analysis in this approach to the future is more in systems than on companies (Poli, 2017, p.3). Once again, in exploitation-exploration terms, this means that anticipatory or foresight activities focus on the future (exploration) to guide decisions in the present (exploitation).

In our study, we model the interplay between corporate foresight and ambidexterity, highlighting the pivotal role of strategic decision-making. Referring to our conceptualisation in Figure 1, we emphasise that corporate foresight is not an end in itself but a crucial input into the strategic decision-making process. This process, in turn, can significantly enhance the potential for organisations to become ambidextrous (Paliokaitė et al, 2014; Paliokaitė & Pačėsa, 2015).

Our analysis of the literature reveals the complex and multifaceted nature of the relationship between corporate foresight and ambidexterity. These studies indicate that decisions about emerging markets and innovations are characterised by uncertainty, complexity, and potential organisational conflict (Amit & Schoemaker, 1993). This highlights the significance of environmental scanning and strategic selection capabilities (Paliokaitė & Pačėsa, 2015), which are essential elements of corporate foresight. These capabilities allow firms to navigate vast information flows, pinpoint relevant innovative information, and integrate it with the company's strategic goals (Paliokaitė & Pačėsa, 2015). Additionally, the model acknowledges the critical mediating role of strategic decision-making. Drawing on

strategic process theory, we suggest that the implementation of strategic orientations is crucial for transforming ambidexterity-oriented decisions into innovative results (Smith & Tushman, 2005; Volberda & Lewin, 2003).

Our research underscores that strategic decision-making serves as a bridge between corporate foresight and ambidextrous capabilities. It mediates the relationship by translating the insights gained from foresight activities into actionable strategies that balance exploration and exploitation. This nuanced understanding opens up new avenues for research, focusing on how strategic orientation and decision-making processes can be effectively aligned with foresight activities to foster a culture of ambidexterity within organisations.

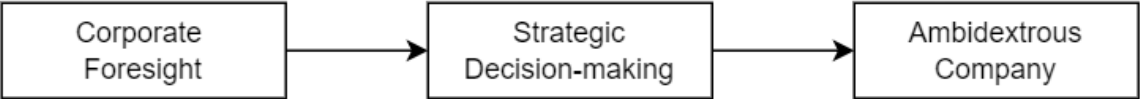


Figure 1: The input of corporate foresight to strategic decision-making contributing to companies striving to become ambidextrous.

In our analysis, as delineated in Section 1, we find that strategic decision-making in organisations is significantly influenced by immediate, short-term operational concerns, often characterised as exploitation. This focus on immediate operational matters frequently overrides the longer-term considerations typically associated with corporate foresight initiatives. The predominance of short-term thinking in strategic decisions can lead to a phenomenon known as path-dependency, where past or present choices heavily influence future trajectories, limiting the organisation's ability to adapt to new situations or innovate effectively (Heracleous et al., 2017). This path-dependency can, in turn, solidify into core rigidities (Leonard-Barton, 1992), where established routines and processes become so entrenched that they hinder the organisation's ability to engage in exploration and exploit new opportunities. Consequently, this emphasis on short-term operational matters can be a significant barrier to achieving organisational ambidexterity, which requires a balanced approach to both exploitation and exploration. Figure 2 represents this relationship and its implications, illustrating how the predominance of short-term operational input in strategic decision-making can impede the development of an ambidextrous company capable of adapting and thriving in dynamic environments.

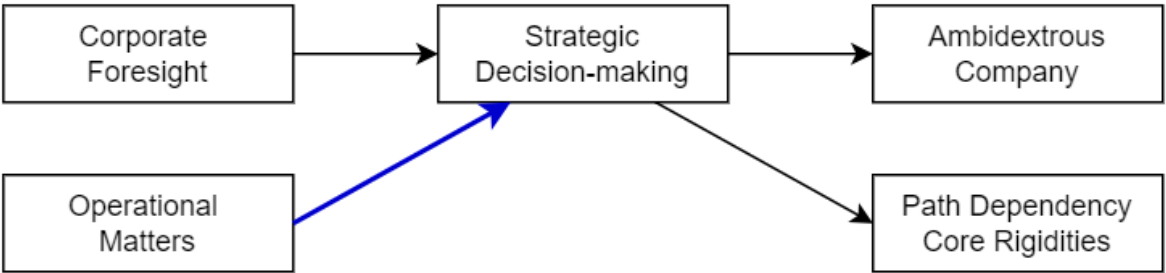


Figure 2: The input of both corporate foresight and operational matters into strategic decision-making and their impact on companies striving to become ambidextrous.

In Section 2.3, we examined the diversity of ambidexterity strategies available to organisations aiming to achieve a state of ambidexterity. These strategies serve both as a product and a determinant of strategic decision-making processes within organisations (Prange et al., 2015). The selection and implementation of a particular ambidexterity strategy are directly influenced by the organisation's strategic decisions (O'Reilly III & Tushman, 2008; Maertins, 2016). This

interplay signifies that the chosen approach to ambidexterity is not only an outcome of the strategic decision-making process, but also actively shapes future strategic choices and directions.

Ambidexterity strategies can be varied, including organisational ambidexterity, contextual ambidexterity, sequential ambidexterity, and leadership ambidexterity (Chakma, Paul and Dhir, 2021). Each strategy offers a distinct approach to balancing exploitation (optimising current capabilities and resources) and exploration (pursuing new opportunities and innovations). The choice of strategy depends on numerous factors, such as the organisation's structure, culture, and industry context, as well as its long-term goals and vision.

Once an organisation opts for a specific ambidexterity strategy, this choice becomes an integral part of its strategic framework. It shapes how the organisation allocates resources, prioritises projects, and approaches innovation and market competition. In essence, the selected ambidexterity strategy becomes both a reflection of the organisation's strategic thinking and a guiding principle for future decisions and actions (Simsek et al., 2009).

This dynamic, where strategic decision-making influences and is influenced by the choice of ambidexterity strategy, underscores the cyclical nature of strategic management. It highlights the need for organisations to continually reassess and adapt their strategies to ensure alignment with their evolving internal and external environments. By doing so, organisations can better position themselves to achieve the delicate balance of simultaneously exploiting existing competencies while exploring new opportunities, which is the essence of being ambidextrous. Figure 3 synthesises the core concepts we have discussed and their interconnections. Notably, it features an arrow depicting the flow from 'operational matters' to 'strategic decision-making,' which is deliberately made thicker to emphasise the substantial impact of operational considerations on strategic decisions within an organisation. This depiction aligns with the observation that day-to-day operational concerns often exert a more immediate and forceful influence on strategic decisions than long-term planning initiatives, such as those informed by corporate foresight.

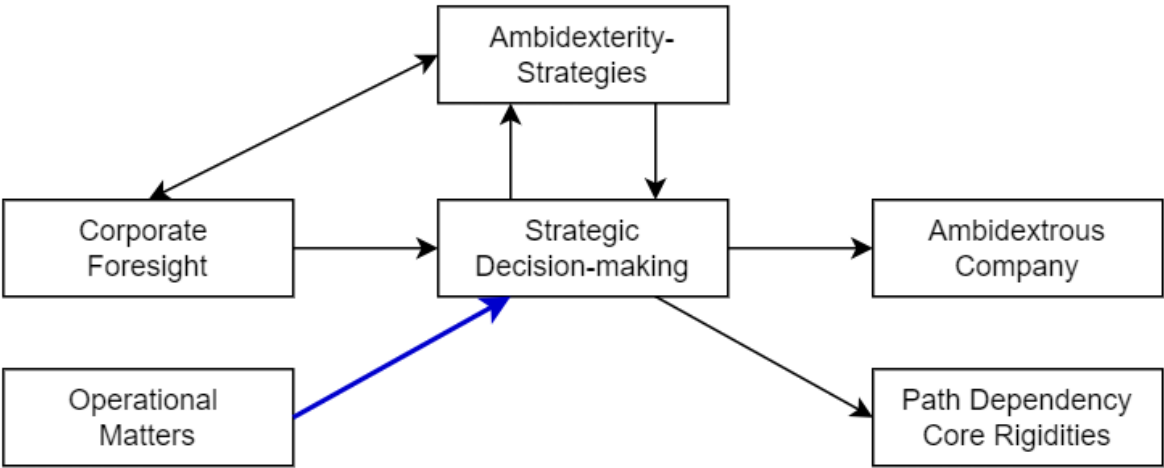


Figure 3: The relationships between corporate foresight, ambidexterity-strategies, operational matters, strategic-decision-making, and ambidexterity.

In Figure 3, we also incorporate the concept of ambidexterity strategy as both an outcome and a component of the strategic decision-making process. This dual role reflects the cyclical nature of strategic management: the chosen ambidexterity strategy is a result of strategic decisions, and once implemented, it subsequently informs and shapes ongoing

strategic decision-making. This dynamic interplay suggests that the formulation and execution of an ambidexterity strategy are not isolated activities but are deeply embedded within the broader strategic framework of the organisation. In essence, these figures illustrate the interconnected and dynamic nature of strategic decision-making, operational concerns, corporate foresight, and ambidexterity strategies within organisations. They underscore the importance of integrating both immediate operational needs and long-term strategic foresight in decision-making processes to achieve a state of organisational ambidexterity, which is crucial for sustained success in an ever-evolving business landscape.

4. The contributions of corporate foresight to ambidexterity

The purpose of this paper is to explore how corporate foresight can contribute to ambidexterity, we suggest this can take place in three different ways: 1) by supporting existing ambidexterity strategies; 2) as a meta-approach in which corporate foresight provides insight into which future factors might play a role for organisations to become or remain ambidextrous; and 3) as a specific method to realise ambidexterity.

As a result, corporate foresight enhances ambidexterity strategies by adapting its role to complement four established ambidexterity approaches: structural ambidexterity, contextual ambidexterity, leadership ambidexterity, and sequential ambidexterity. This integration allows corporate foresight to reinforce and align with the specific requirements and orientations of each ambidexterity strategy.

4.1 Structural ambidexterity

The primary challenge of structural ambidexterity lies in the mismatch between strategic and operational activities, as they inherently differ in nature (March, 1991). Corporate foresight plays a crucial role in highlighting the comprehensive nature of both future prospects and organisational dynamics. Organisations, often segmented into various units like business teams, essentially function as systems where internal cohesion is pivotal. The existence of an organisation is contingent upon efficient internal collaboration. By crafting a forward-looking vision, corporate foresight has the potential to harmonise the strategic (exploratory) and operational (exploitative) facets, thus fostering an integrated organisational system. A collective vision of the future, developed through extensive involvement across diverse organisational divisions, facilitates a unified perspective (Kaiser, Fahrenbach & Martinez, 2021). This approach narrows the gap between short-term and long-term objectives, encouraging mutual recognition and collaboration between the different facets of the organisation for its overarching success.

4.2 Contextual ambidexterity

Realising contextual ambidexterity through corporate foresight bears resemblance to the process of achieving structural ambidexterity. While structural ambidexterity leverages corporate foresight to unify different departments towards a shared future, contextual ambidexterity focuses on aligning individual employees at a similar level. This approach addresses the distinction between operational (incremental) and strategic (radical) activities by utilising a future vision as the unifying element among employees. In contextual ambidexterity, it is essential that the future vision is clearly articulated, detailing how each employee can contribute to the organisation's future goals. This is crucial to ensure that all employees, irrespective of their strategic or operational roles, understand their part in shaping the future.

4.3 Leadership ambidexterity

Corporate foresight plays a pivotal role in facilitating leadership ambidexterity, primarily by ensuring that individual employees are encouraged and supported to focus on both short-term

and long-term goals. This requires the backing of top management, a critical element for successful innovation (Van der Panne, et al., 2004). Top management's support is crucial as they possess the necessary authority and decision-making power to effectively shape organisational processes. This includes the ability to transform current organisational power structures, thus enabling every employee to contribute to future-oriented goals without excessive pressure or judgment based on short-term results. In this context, leadership ambidexterity is not just about balancing different time horizons but also about creating an organisational culture where the future is a shared responsibility, transcending the conventional focus on immediate outcomes.

4.4 Sequential ambidexterity

Sequential ambidexterity, effectively satisfies both short-term and long-term organisational needs by minimising the concurrent demand for scarce resources. This approach delineates a clear temporal separation between different types of activities, ensuring they do not conflict or overlap. Within the framework of corporate foresight, this necessitates meticulous planning, particularly during the organisation's 'resting periods.' Such strategic timing allows for the implementation of foresight activities during periods of full operational capacity. It is crucial to promptly integrate the insights gained during these operational periods into strategic planning, thereby shaping both immediate strategies and future visions.

Although sequential ambidexterity does not demand an exclusive focus on long-term goals, it facilitates the development of a long-term orientation essential for radical innovation. While it might be ideal for organisations to dedicate uninterrupted time to future-oriented thinking and planning, it is not always feasible due to ongoing operational demands. Therefore, it's important to recognise that while sequential ambidexterity offers certain advantages, such as focused periods of innovation, its efficacy could be compromised if these 'future periods' are not effectively integrated with regular operational phases. This integration ensures a continuous and connected approach to organisational development, balancing immediate needs with future aspirations. As a result, Figure 4 summarises how corporate foresight supports existing ambidexterity strategies

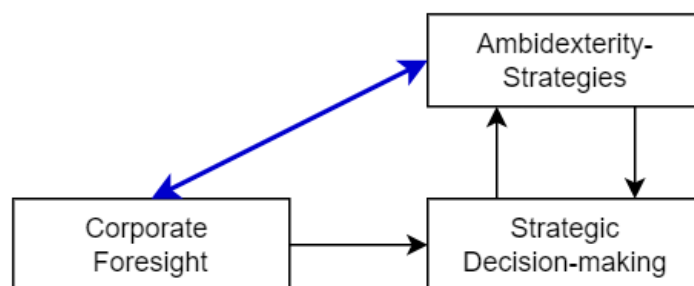


Figure 4: Corporate foresight supporting ambidexterity-strategies by fitting corporate foresight to the type of ambidexterity-strategy.

4.5 Corporate foresight for organisations to become or remain ambidextrous

The second method through which corporate foresight can contribute to ambidexterity begins with recognising that ambidexterity is not a static attribute within organisations. At any given moment, an organisation might achieve a balance between exploitation and exploration, reaping the benefits of ambidexterity (O'Reilly III & Tushman, 2008). However, this balance is not guaranteed to persist into the future. Viewing corporate foresight as a 'meta-concept' for ambidexterity implies that it can generate future scenarios encompassing new exploitative and explorative situations that an organisation may need to address. This transition towards a renewed form of ambidexterity is a process, as organisations must recognise when their current

ambidextrous state no longer aligns with their needs and seek new forms or levels of ambidexterity (Maertins, 2016; Mallon and Lanivich, 2023). A prolonged transition period risks misalignment with the organisational environment, potentially leading to contingency issues, as noted by Shenkar & Ellis (2021). Corporate foresight can thus play a crucial role in minimising the duration of this misalignment, aiding organisations to stay in tune with the external demands and contextual changes (Öner et al, 2014). This dynamic interaction between corporate foresight and ambidexterity is illustrated in our theoretical framework in Figure 5, where the bold arrow highlights the influence of foresight on strategic decision making and, in turn, to ambidexterity-strategy.

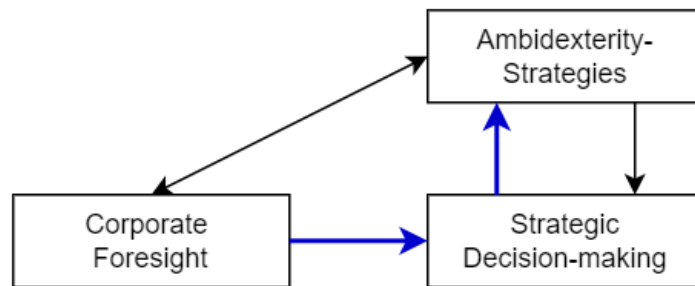


Figure 5: Corporate foresight supporting ambidexterity-strategies through impacting the content of strategic decision-making.

4. 3 Corporate foresight as a specific method to realise ambidexterity

The third approach to establishing the relationship between corporate foresight and ambidexterity is to consider corporate foresight itself as a method for achieving ambidexterity. Among various corporate foresight methods, the 'Three Horizons' framework is an illustrative example for its emphasis on different time horizons and its consideration of employee perspectives across these horizons.

As described by Sharpe (2013) and Curry and Hodgson (2008), the 'Three Horizons' method bridges the present with potential futures and identifies divergent futures that may emerge from the interplay of the current system and these envisioned futures. It segments the future into three parts: Horizon 1 represents the current system; Horizon 2, an intermediate space marked by the clash of values from the first and third horizons, leading to instability; and Horizon 3 envisions a future that, although marginal at present, has the potential to radically transform the existing system. This method acknowledges the distinct mindsets of employees working within these horizons, where each horizon has its unique set of values, attitudes, and responsibilities. For instance, employees in Horizon 1 may view Horizon 2 as overly risky, those in Horizon 2 may see Horizon 3 as impractical, and individuals in Horizon 3 may perceive Horizon 1 as outdated. The positive mindset within each horizon aims to balance these perspectives, fostering alignment and collaboration across horizons for more effective organisational functioning. The 'Three Horizons' method thus provides a nuanced approach to strategic planning and corporate foresight by focusing on multiple time frames (short-term, mid-term, long-term) and linking the present with various future scenarios. In our theoretical framework, this interplay between corporate foresight and ambidexterity, facilitated by the 'Three Horizons' method, is depicted by the bold arrow in Figure 6, illustrating the strategic importance of foresight in navigating organisational ambidexterity.

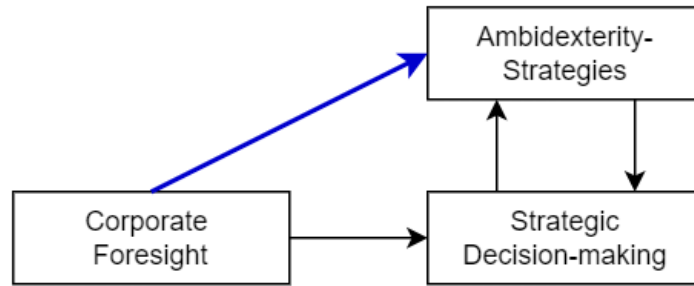


Figure 6: Corporate foresight directing impacting ambidexterity-strategies by distinguishing between (three) different time horizons.

5. Discussion and Future Research Agenda

Ambidexterity, while extensively studied in management studies, has been less frequently explored in corporate foresight research, despite its significant impact on decision-making in companies. Enhancing our understanding of how corporate foresight aids firms in achieving ambidexterity can increase its practical value. This knowledge would help companies utilise corporate foresight more effectively in current decision-making, moving beyond merely creating distant future projections.

The traditional view in management theory often posits a dichotomy between exploitation (short-term focus) and exploration (long-term focus), treating them as opposites (March, 1991; Maertins, 2016). However, this perspective might be overly simplistic and potentially misleading. The Three Horizons-method offers a more nuanced approach by introducing an intermediate time horizon that bridges short-term and long-term objectives (Amsteus, 2014; Sharpe, 2013). This serves as a transitional phase, where elements of both exploitation and exploration coexist and interact.

This method challenges the conventional dichotomy by suggesting that exploitation and exploration, as well as short-term and long-term planning, are not necessarily in opposition. Instead, they can be viewed as part of a continuum or spectrum where strategic choices are made. Within this spectrum, various options are available that combine elements of both approaches, allowing for a more integrated and flexible strategy. This perspective suggests that the stark contrast between short-term and long-term planning may be a false dichotomy, as organisations can simultaneously pursue both, albeit to varying degrees at different times or in different organisational units.

Our analysis of the relationship between ambidexterity and corporate foresight reveals two types of ambidexterity. On the one hand, there is ‘narrow’ ambidexterity, which focuses on the range of innovation from incremental to radical. On the other hand, there is ‘broad’ ambidexterity, which extends across a wider spectrum of innovative activities (both radical and incremental) to operational activities. This potential positive contribution to innovation, both incremental and radical, is logical and has been empirically proven, as discussed in Section 4. However, the real ambidexterity ‘tension’ occurs when activities are significantly different from each other, because in this situation the trade-off is the most pronounced. This raises the question of how and to what extent corporate foresight can contribute to organisational ambidexterity, making it even more crucial for foresight to demonstrate its added value in producing inspiring and relevant future images, as well as improving decision-making.

5.1 Practical Implications

Incorporating corporate foresight offers significant advantages for companies seeking to harness the benefits of ambidexterity. Traditionally, ambidexterity strategies have

predominantly focused on organisational and process-related aspects, such as the structure and culture of the organisation, leadership styles, internal communication, collaboration practices, and employee incentives. While these components are crucial for effectively implementing ambidexterity strategies, as detailed in Section 3.1, they often overlook the broader, content-driven perspective that corporate foresight offers.

Creating a more balanced equilibrium among short-, medium-, and long-term business activities is vital. This can be achieved through specific strategies and structural modifications within an organisation, as emphasised by Teece, Pisano, and Shuen (1997), and O'Reilly and Tushman (2008). Current corporate environments often exhibit a pronounced predisposition towards short-term operational concerns driven by external market pressures and shareholder expectations. This inclination can be counteracted by elevating the importance of long-term considerations within strategic planning processes. As Leonard-Barton (1992) and Heracleous et al. (2017) have indicated, the tendency towards short-termism can lead to 'core rigidities' and a lack of innovative capacity. Therefore, managers should advocate for a paradigm shift that emphasises long-term sustainability and innovation, aligning with the principles of ambidexterity. This approach aligns with the views of Marginson and McAulay (2008), who stress the importance of overcoming short-termism in managerial thinking. It is crucial to designate clear organisational units responsible for each period to effectively manage the balance between short-, medium-, and long-term activities. This strategy, known as 'structural ambidexterity', as described by Simsek et al. (2009), involves creating separate divisions or teams that focus exclusively on either exploitation (short-term) or exploration (long-term) activities. This separation allows for a more focused and dedicated approach to each set of activities, reducing the inherent tensions between them.

To effectively bridge the gap between long-term foresight and short-term actions, managers should ensure that insights from corporate foresight studies are promptly translated into actionable steps. This recommendation aligns with the principles articulated by Bodwell and Chermack (2010), who emphasise the importance of scenario planning as a tool for balancing future opportunities with current operational advantages. By translating foresight studies into specific, short-term actions, organisations can demonstrate a clear commitment to their long-term strategic objectives. Managers should articulate how short-term actions, derived from foresight studies, contribute to achieving long-term goals.

The alignment of corporate foresight style with the specific ambidexterity strategy adopted by an organisation is a critical aspect of strategic management (Rialti et al., 2020). It is relevant to ensure that the approach to foresight is in coordination with the organisational structure and ambidexterity strategy being pursued. For example, contextual ambidexterity aligns with a more open and democratic form of corporate foresight. This approach involves a wide range of internal actors and stakeholders in the foresight process, fostering a culture of inclusivity and collective strategic thinking. Such a participatory approach helps to engage diverse groups into foresight activities. This enriches the foresight process; ensuring it resonates with the contextual needs of the organisation.

On the other hand, structural ambidexterity, which involves creating distinct units for exploitation and exploration, may benefit more from a corporate foresight process where participants are selected based on their expertise and organisational seniority. In this scenario, corporate foresight activities can be more focused and directed, with contributions from individuals with significant experience and a deep understanding of the organisation's strategic goals. This ensures the foresight process is grounded in a solid understanding of the organisation's core competencies and strategic direction.

In conclusion, managers are prompted to recognise that different future scenarios may require varying approaches to ambidexterity. The balance between exploration and exploitation

may need to be recalibrated as the external environment evolves. This could mean shifting from a structural ambidexterity approach, which separates explorative and exploitative activities into different organisational units, to a more contextual form of ambidexterity where individuals engage in both activities within the same role (Li, Sarpong, and Wang, 2020).

5.2 Future Research Agenda

Our proposed future research agenda encompasses a comprehensive approach to deepen understanding of the interplay between corporate foresight and organisational ambidexterity. Thus, we propose two distinct pathways: a set of general research directions and four specific research questions.

Regarding the general research directions, firstly, empirical validation of our outlined theoretical relationships is crucial. Studies that delve into the actual decision-making processes shaped by corporate foresight can provide tangible insights. Additionally, exploring how capabilities such as robustness, resilience, adaptivity, anticipation, agility, and strategic flexibility operate within the context of foresight and ambidexterity can offer a comprehensive view of how organisations can navigate future challenges (De Haan et al., 2011; Brozovic, 2018).

Incorporating public governance and sustainability perspectives can further enhance this exploration, especially in understanding organisational reactions to external shifts (Quay, 2010). For example, governments' multifaceted response to the COVID-19 pandemic underscores the need for agility and adaptability in policy-making and organisational structuring, reflecting a kind of 'dynamic ambidexterity' in practice.

Building upon the work of Clauss et al. (2021), Rohrbeck and Gemuenden (2010), and Vecchiato (2015), future research should also examine the contribution of strategic foresight to firms' agility and their ability to capitalise on first-mover advantages. This could involve in-depth case studies or longitudinal analyses of firms that exemplify agility in their strategic foresight and decision-making processes. Furthermore, investigating how different industries and corporate cultures integrate foresight into their strategic planning, as suggested by Heger and Rohrbeck (2012), will provide valuable insights into the varying methodologies of foresight implementation and its impact on organisational ambidexterity.

Moving to the specific research questions: organisations face a complex interplay of foresight and adaptive capabilities in exploring the relationship between corporate foresight and organisational concepts such as robustness, resilience, adaptivity, anticipation, agility, and strategic flexibility. Thus, we propose: *“How does corporate foresight relate to concepts such as robustness, resilience, adaptivity, anticipation, agility, and strategic flexibility from an organisational perspective where scarcity of corporate resources and organisational inertia are the starting point?”* Robustness in an organisation refers to its ability to survive external pressures and maintain its core functions without significant deviation from its goals (Brozovic, 2018; Kyrdoda et al., 2023). Corporate foresight contributes to robustness by enabling an organisation to foresee potential risks and challenges, thus allowing for the development of strategies that enhance its capacity to withstand future uncertainties (Brozovic, 2018). Resilience, on the other hand, extends beyond survival in the face of adversity; it encompasses the ability of an organisation to adapt, recover, and grow in the face of disruptive changes (Kyrdoda et al., 2023). Here, corporate foresight plays a central role in building resilience by providing insights into evolving market dynamics, technological advancements, and consumer behaviour changes, thus enabling organisations to adapt and evolve proactively (Öner et al., 2014). Adaptivity involves the capability of an organisation to alter its internal processes and structures in response to external environmental shifts. Corporate foresight can aid in adaptivity by continuously scanning the environment for signals of change, which can be integrated into strategic planning and decision-making processes (De Haan et al., 2011). Anticipation in an

organisational context is about predicting and preparing for future events. Through techniques such as scenario planning and trend analysis; corporate foresight equips organisations with the ability to foresee future developments and prepare and align their strategies accordingly. Agility refers to the rapidity and flexibility with which an organisation responds to changes in its external environment (Öner et al, 2014). In this regard, corporate foresight enhances agility by informing the organisation about potential opportunities and threats, thus enabling quicker and more flexible strategic responses. Lastly, strategic flexibility is the ability to switch between strategies or modify a strategy in response to environmental changes (Kyrdoda et al., 2023). Corporate foresight supports strategic flexibility by providing a range of potential future scenarios, thereby allowing organisations to plan for and adapt to multiple possible futures (Öner et al, 2014).

Next, we propose the research question, *"How can corporate foresight contribute to the substantive exploration of future themes that might become important for organisations in both the short and long term?"* This invites a wide examination of the role of corporate foresight in strategic organisational planning. Corporate foresight, a strategic function embedded within organisational processes, is not only about predicting future events; it involves a deep, nuanced understanding of potential trends, challenges, and opportunities that could shape the future landscape in which organisations operate (Battistella, 2014). This function goes beyond traditional market analysis by incorporating broader methodologies such as scenario planning, trend analysis, and expert insights, to identify and interpret change signals. The essence of corporate foresight lies in its ability to extend the organisational vision beyond the immediacy of current operations, allowing for the anticipation of transformative themes that may emerge in the future (Ruff, 2015). This anticipatory approach enables organisations to proactively adapt their strategies and operations, ensuring readiness and adaptability to imminent and long-term changes. Thus, by systematically exploring and analysing future-oriented themes, corporate foresight can help organisations to align their strategic objectives with the evolving external environment, ultimately facilitating sustainable growth and competitive advantage. This research question thus delves into understanding how corporate foresight can be effectively leveraged to identify, evaluate, and integrate emerging themes into organisational strategy, thereby ensuring resilience and relevance in a dynamically evolving business landscape.

The third research question *"How can different methods and processes of corporate foresight be balanced with the different strategies of ambidexterity?"* delves into the interplay between forward-looking practices and the strategic balancing act inherent in organisational ambidexterity. The challenge lies in aligning corporate foresight's varied methods and processes, which include trend analysis, scenario planning, Delphi studies, and environmental scanning, with the dual demands of ambidexterity (Kerr and Phaal, 2020). This alignment is complex, as the explorative aspect of ambidexterity requires a focus on long-term, often uncertain future trends and innovations (Annosi et al., 2020). In contrast, the exploitative aspect demands a more immediate, tangible return on current capabilities and resources. Corporate foresight, therefore, plays a critical role in bridging this gap (Rohrbeck & Kum, 2008). It must provide insights that fuel innovation and adaptability for future market conditions and technological advancements while at the same time support the optimisation and enhancement of current operations and product portfolios (Barton Manyika and Williamson, 2017). The root of this research question revolves around formulating a balanced approach where corporate foresight methodologies are effectively integrated into an organisations' ambidextrous strategies. This involves a dynamic and continuous process of adjusting foresight activities to ensure they are in sync with the shifting emphasis between exploration and exploitation. The goal is to understand how foresight can be strategically leveraged to support an organisation's adaptive capability in maintaining core competencies and venturing into new, unexplored

territories, thereby ensuring sustained growth and competitiveness in a rapidly evolving business environment.

Finally, the last research question probes the complex dynamics of strategic decision-making at different organisational levels—micro (individual or team level), meso (organisational characteristics), and macro (the broader strategic environment). *“How does the distinction between a separate strategic decision-making process (micro), the characteristics of an organisation (meso) and the strategic environment in which an organisation (macro) operates play a role in this?”* It seeks to understand how these distinct levels interact and influence the overall strategic process within an organisation. At the micro-level, decision-making is often driven by individual perceptions, biases, and experiences of those involved in the strategic process. This highlights the importance of leadership, team dynamics, and cognitive processes in shaping decisions (Balzano and Marzi, 2023). This level is characterised by the immediate, hands-on approach to strategy formulation and execution, often reflecting the agility and adaptiveness of individuals or teams to emerging situations. Moving to the meso-level, the focus shifts to the organisational characteristics such as culture, structure, resources, and internal processes (Vecchiato, 2015). The research question examines how these characteristics either enable or constrain the strategic decision-making process, shaping the organisation's ability to respond to internal and external pressures effectively. The meso-level bridges individual decision-making and the broader strategic context, translating individual actions into collective organisational outcomes. Finally, at the macro-level, the question addresses the broader strategic environment in which the organisation operates, encompassing market trends, industry dynamics, regulatory landscapes, and socio-economic factors. This level considers how external environmental factors influence organisational strategy, necessitating a broader, more long-term perspective in decision-making. The research question aims to unveil the interplay between these levels, exploring how decisions made at the micro-level are influenced by and, in turn, influence the organisational characteristics at the meso-level, and how both are shaped by and respond to the broader strategic environment at the macro-level.

5. Conclusions

Our paper has explored the intricate relationship between corporate foresight and organisational ambidexterity, investigating the potential of foresight practices to help steer organisations through the balance of exploitation and exploration activities. Our examination of the literature and subsequent development of a conceptual framework has highlighted three primary pathways through which corporate foresight can bolster ambidexterity: i). by supporting existing strategies, ii). providing a meta-approach to understanding future influential factors, and iii). serving as a unique method for realising ambidexterity.

We underscored the challenge organisations face in prioritising long-term strategy amidst the pressing demands of short-term operational goals. Our analysis revealed that while many firms acknowledge the importance of foresight, its integration into the strategic decision-making process is often hindered by an entrenched emphasis on short-term returns, a phenomenon referred to as 'short-terminism'. Our investigation into the applications of foresight—such as the scenario method, road mapping, and Delphi—demonstrated their success in various contexts, but also pointed to a common shortfall: the lack of sustained use of foresight in strategic planning.

The limitations of our study are inherent in its conceptual nature. The theoretical constructs we propose would benefit from empirical validation, and our insights are contingent upon the assumption that companies are capable of and willing to integrate foresight into their strategic processes effectively.

In conclusion, this paper advocates for a shift from static to dynamic ambidexterity, urging organisations to extend their foresight beyond internal processes and consider their broader, evolving environmental contexts.

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