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# **Board of Director's influence on Innovation in Established Firms: An Exploratory Study**

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This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Please note that neither the institution nor the examiners are responsible – through the approval of this thesis – for the theories and methods used, or results and conclusions drawn in this work

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## Executive Summary

This thesis aims to explore how boards of directors in established firms facilitate innovation through exerting specific activities. We explore this phenomenon by conducting interviews with key informants who serve as board members in various established companies in Norway. Through in-depth semi-structured interviews with 18 informants, we find and present board members' activities aiming to facilitate innovation within the organization.

Our primary research question is:

*“Through what activities do board members aim to facilitate innovation within established firms”?*

We identify eleven activities that the board members who are closely involved in innovation adopt to facilitate innovation within the organization. These activities can be grouped into the three pillars of the dynamic capability framework, namely *sensing*, *seizing*, and *transforming*, which according to existing research are necessary organizational-level capabilities for innovation and to sustain competitive advantage. While previous research has focused on the role of top management, our findings show how board members can assist firms to develop these capabilities with their specific activities. Moreover, our research shows that some of the boards of directors have limited involvement in innovation and we identify internal and external factors hindering them from active involvement. We develop two models that show an overview of two types of board involvement with specific activities to foster innovation and contextual factors behind limited involvement.

This study contributes to the existing literature by shedding light on the role of a new set of actors at the very top of the organizational hierarchy – the board of directions. Our study offers a set of empirically based activities practiced by board members that can enable organizational dynamic capabilities, aiming to ultimately result in enhanced innovation. Moreover, the study sheds light on various external and internal factors that can explain limited involvement of boards.

In terms of practical implications, the research puts forth various activities that can be embraced by boards of directors seeking to enhance the established firms' engagement in innovation. Additionally, the identification of factors behind limited involvement offers practitioners new perspectives to explore, with the aim of investigating and resolving this issue.

## Preface

This thesis is written as part of the Master of Science in Economics and Business Administration at the Norwegian School of Economics (NHH), where we are pursuing majors in Business Analysis and Performance Management & Strategy and Management.

This thesis is also part of an ongoing research project pursued in collaboration between NHH and Samfunns- og næringslivsforskning (SNF), called RaCE (Radical Technology-Driven Change in Established Firms). RaCE aims to develop research-based knowledge on how established and well-performing firms successfully may respond to and manage radical technology-driven change. By participating in RaCE program, we were able to not only enrich our research with valuable insights from experienced researchers but also exchange knowledge with fellow students.

Firstly, we would like to express our utmost gratitude to our supervisor, Professor Inger G. Stensaker, for her exceptional support throughout the process of this thesis. Her valuable insights, constructive criticism, timely feedback, and unwavering support played a vital role in the successful completion of this research. We are truly grateful for her guidance and contribution, which greatly enhanced the quality of this thesis.

Secondly, we would like to extend our gratitude to the other informants who generously dedicated their time and shared their knowledge and experiences with us. Their valuable insights and perspectives were instrumental in shaping the outcomes of this thesis. Without their willingness to participate and contribute, the completion of this research would not have been possible.

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# 1. Introduction

Innovation is crucial for firms to establish and sustain a competitive advantage (Gopalakrishnan & Damanpour, 1997; Johannessen et al., 2001; Krogh & Raisch, 2009). However, established firms often face challenges in engaging in innovation, particularly radical innovation, due to their reluctance to change. This conservatism leads to underinvestment in generating and commercializing new ideas, as firms fear wasting prior investments in technology-specific assets and knowledge (Colombo et al., 2017). Additionally, internal culture and pressures in established firms tend to prioritize low-risk, short-term projects, making it difficult to obtain support for innovation (Dougherty & Hardy, 1996; McDermott & O'Connor, 2002). To overcome these obstacles, the board of directors, comprising both internal and external members, can play a vital role in supporting organizational innovation.

The board of directors has a crucial role in corporate governance and strategic decision-making (Allemand et al., 2017; Klarner et al., 2018). Indeed, there is a growing consensus among researchers regarding the importance of boards of directors in influencing organizational innovation (Jaskyte, 2012; Wu and Lee, 2007). However, despite extensive research on the impact of board characteristics on innovation, there remains an unanswered question concerning the specific roles of the board in firm innovation. While some studies have examined the influence of various board activities on firm innovation, the findings have been inconclusive. Some studies suggest that the involvement of board members in innovation governance can enhance a firm's ability to pursue innovation, other studies propose that board members should provide managers with more discretion rather than focusing solely on monitoring, to encourage long-term innovation. This lack of consensus calls for further investigation into the appropriate level of board involvement in innovation and the other activities that boards can undertake to foster innovation.

Given the conflicting perspectives in the literature and the increasing focus on dynamic capabilities as drivers of innovation (Teece 2007, 2016; Teece et al., 2016; Schoemaker et al., 2018; Teece et al., 1997), our study aims to delve deeper into the level of board involvement in innovation and explore associated activities they undertake to facilitate innovation processes. Additionally, we seek to understand how these activities, when implemented, contribute to the development of organizational dynamic capabilities. Therefore, the research question that this study aims to investigate is: *“Through what activities do board members aim to facilitate innovation within established firms?”*

To answer this question, we conducted a qualitative exploratory study consisting of interviews with 18 active board members in established Norwegian firms to explore their activities undertaken to facilitate innovation in their organizations. The purpose of this study is twofold. The first objective of this research is to complement the research stream about the board of directors and innovation in established firms. Second, it aims to provide practical insights and valuable guidance to the practitioners and board members about how involve board members should be in organizational innovation and specific activities they should undertake to foster innovation processes.

The thesis starts by providing an overview of the relevant literature related to the research question. Next, the methodology employed in the study and its inherent strengths and weaknesses are described in detail. We then present the findings of the study which includes direct quotes from informants involved in the research as well as two models that have been developed to show both board active involvement and limited involvement. The findings are then analyzed and discussed in relation to the existing literature, highlighting how they align with, contradict, or complement the existing theory in the field. Lastly, in the thesis final remark section, we provide a summary of the study's key findings and explain the contributions of this study to theory, implications for practitioners, study limitations, and suggestions for future research.

## 2. Literature Review

*This section establishes the theoretical foundation for this thesis by providing relevant research streams that will be complemented by the results of this study. In particular, relevant insights from innovation in established firms, the role of the Board in firms and in innovation, and dynamic capabilities in relation to this thesis' research question will be synthesized.*

### 2.1 Innovation in established firms

Innovation has been seen as a means for a firm to build and maintain its sustainable competitive advantage (Gopalakrishnan & Damanpour, 1997; Johannessen et al., 2001; Krogh & Raisch, 2009). The growing importance of innovation makes innovation get explosive attention among both press and academics (Johannessen et al., 2001). Hence, definitions of innovation abound. In this dissertation, we use the definition proposed in Baregheh et al. (2009) study, in which they undertook a content analysis of extant definitions of “innovation” as a basis for their proposal. They defined innovation as “*the multi-stage process whereby organizations transform ideas into new/improved products, services or processes, in order to advance, compete and differentiate themselves successfully in their marketplace*”.

Established firms engaging in innovation can face numerous challenges. The underlying reluctance to change is one of the primary sources of risk for businesses that engage in innovation, particularly radical innovation. More specifically, it has been discussed in the previous literature that established firms tend to be more conservative and under-invest in the generation and commercialization of new ideas since they fear that they would waste their prior investments in developing technology-specific assets and knowledge (Colombo et al., 2017). Also, it seems that getting support for innovation projects in established firms is difficult as internal culture and pressures usually force the organization to follow low-risk projects that focus on short-term benefits (Dougherty & Hardy, 1996; McDermott & O'Connor, 2002). Considering many of these obstacles and pressures can be influenced by the board, we argue that it's critical to look at the role and practices played by the board in facilitating firm innovation.

### 2.2 The Role of Board of Directors

The board of directors plays an important role in ensuring the survival and success of a company. To carry out their duty as members of a board, they meet regularly with key leaders of the top management team, including the CEO, in formally scheduled board meetings. Board members



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are not full-time firm employees, usually having either current or previous experience from significant senior level jobs in other firms. In general, the board of directors of an organization is the body that determines policies for corporate management and makes critical decisions on major company issues (Krechovská & Procházková, 2014). There is a vast stream of studies about the roles of the board of directors, including control of the actions of managers, advice and provision of resources to the organization, and influence on the strategic decision-making process (Hillman et al., 2008). While the early literature on board of directors tended to focus on control, monitoring and provision of resources, the more recent literature increasingly focuses on the important strategic role of the board. We elaborate on each of the three key roles below.

### **2.2.1 Control role**

The directors' control role includes monitoring managers' performance, hiring the CEO, and establishing the rewards for the top management team (Zahra & Pearce, 1989). A key aspect of the board's role is to delegate responsibilities and monitor those responsibilities delegated to the management and ensure that they act in line with the interests of not only the shareholders (American Law Institute, 1994), but also broader stakeholders (Adams et al., 2011; Hillman et al., 2001; Huse, 1998). Garg (2013) describes the monitoring role of boards as "the activities of the board and its individual directors that track the significant behavior of executives, the outcomes of their actions, and the performance of the venture to ensure that corrective actions are taken as needed".

The board of directors' monitoring role has been identified as conceptually and normatively critical in most theories of corporate governance (Johnson et al., 1996). Agency theory is the academic theory that describes and accounts for the board's monitoring role. It assumes that the owner(s) and senior management may have partly conflicting interests, hence the principal (the owner or representatives of the owner) need to control the agent (senior management) (Jensen & Meckling, 1976). The board as an independent mechanism is designed to monitor and control these conflicting interests (Fama & Jensen, 1983).

#### *CEO succession plan*

*"Succession planning is really where the board can make an impact on the company".*

(Schepker et al., 2018)

According to Cannella et al. (2009), CEO succession is a natural part of a company's lifecycle and has significant implications for the company's future. The board of directors, as identified

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by Mace (1971), is responsible for CEO succession and should aim to select a successor who will optimize the company's future performance (Sundaram & Inkpen, 2004) while ensuring a seamless transition in leadership (Biggs, 2004).

A famous example of a CEO succession plan is that of General Electric (GE). GE began the process of selecting a successor to longtime CEO Jack Welch in 1994, seven years before Jeff Immelt's appointment as CEO. The board of directors implemented a well-planned process that included grooming and evaluating possible CEO candidates, with Welch playing a significant role in the process. The board went on regular site visits to meet potential candidates, and a "horse race" between the three primary candidates helped identify the final candidate (Bartlett & McLean, 2003).

This example illustrates a proactive CEO succession plan. However, some CEO successions happen more suddenly because of unwanted or unavoidable situations. Nevertheless, the CEO succession plan still requires careful planning and consideration (Berns & Klarner, 2017).

In general, to prepare for CEO succession, boards should assess potential candidates, identify necessary skills for future leadership, and create plans to develop potential successors. Schepker et al. (2018) suggest three main categories of board succession planning activities. First, boards outline the planning process by distinguishing roles and responsibilities. Second, boards determine the skills necessary to drive the firm's future. This forward-thinking behavior builds a candidate profile by identifying capabilities needed for a future CEO, rather than previously beneficial skills. Third, the board can create plans to develop successor candidates; for example, by providing challenging growth assignments.

### *Establishing rewards*

Another responsibility of board members in the control role is establishing rewards for the top management team. According to the agency theory scholars, establishing rewards can help reduce the principal-agent problem, resulting in the reduced risk of moral hazard among executives (Cosh, 1975; Forbes & Watson, 1993). The board members, in accordance with shareholders, can establish a reward system, linked to the financial performance of the firm, in order to incentivize managers to achieve the desired outcomes of shareholders. This will harness managers' self-interest and redirect their attention away from pursuing opportunistic behaviors,

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thereby maximizing shareholder value and promote the firm's long-term wealth (Devers et al., 2007).

### **2.2.2 Resource provision**

Monitoring and controlling the managers' actions and decisions is not the only role of the board of directors, they also provide management with advice regarding strategic opportunities through sharing their knowledge, resources, counsel, and maintain the formal and informal relationships with the organizations' stakeholders by overcoming the inherent conflicts between them (Klarnar et al., 2021; Tomsic, 2013). This particular role highlights the board's ability to provide valuable resources to the organization Hillman & Dalziel (2003). Resources, as defined by Wernerfelt (1984) encompass anything that can be considered a strength or weakness of a firm.

An academic theory that describes and explains this role of the boards is the "resource dependency perspective" which argues that board members, especially outside directors, enable firms to minimize dependence or gain resources (Pfeffer, 1972). This theory views firms as open systems whose performance depends on their ability to gain access to critical resources from other firms through reciprocal exchanges (Pfeffer & Salancik, 1978). Based on this theory, boards can be beneficial to the firms in four ways: (1) counsel and advice, (2) channels of communication between the external environment and the firm, (3) preferential support and access from the important elements outside the firm, and (4) legitimacy (Pfeffer & Salancik, 1978). These responsibilities are closely associated with the skills, experience, knowledge, and network of ties possessed by board members (Hillman et al., 2008).

### **2.2.3 Strategic role**

The boards will also influence strategic decisions made by the top management team. From a legal standpoint, the fiduciary duty of the board is commonly acknowledged to encompass the evaluation and oversight of strategy (Stiles & Taylor, 2002). In the realm of management literature, a more expansive perspective is adopted. According to Pugliese et al. (2009), "boards are legally responsible for the strategy, and they are in an excellent position to contribute to strategy". The board's involvement in strategy incorporates various elements, such as defining the organization's business, formulating a mission and vision, scanning the business environment, and selecting and implementing strategic choices (Tricker, 2015; Pearce & Zahra, 1991; Hilmer, 1993). As such, Goodstein et al. (1994) have defined the strategic role of the board as "taking important decisions on strategic change that help the organization adapt to important

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environmental changes", while Judge & Zeithaml (1992) have characterized it as "making exceptional resource allocation decisions at the organizational level that influence the long-term performance of the organization". Hence, while the previous role had to do with providing resources, the strategic role includes the responsibility of making sure that sufficient resources are allocated.

This role of the board of directors can be described based on the *Stewardship theory*, which argues that boards can contribute through their knowledge, expertise, and commitment that will enhance their strategic role in the end (Muth & Donaldson, 1998). According to Adams & Ferreira (2007), boards, by using their expertise and knowledge to counsel the management on the strategic direction of their firms, are fulfilling their advisory role, which takes a more hands-off approach. The advisory role of board members depends mostly on information that the CEO of the firm provides as directors need sufficient information to play an active role when making strategic decisions (Adams & Ferreira, 2007; Song & Thakor, 2006).

In sum, with their designated roles, as controlling, providing resources and strategizing, the board has the capacity to exert influence across diverse domains such as finance and management, which are integral to organizational effectiveness and performance. However, the focus of this thesis is to shed light on the relationships between the board of directors and organizational innovation. Innovation goes beyond control, resource provision and strategizing, as it is widely recognized as a critical pathway for attaining superior firm performance and enhancing competitive advantage (Ahuja et al., 2008; Arunachalam et al., 2018; Damanpour, 1991; Rosenbusch et al., 2011). Consequently, innovation emerges as a vital and deserving subject that demands attention and proactive measures from the board.

### **2.3 The Role of Board of Directors in Innovation**

Multiple scholars have indicated that the board can exert influence over organizational innovation (Huse, 2007; Wu & Lee, 2007). The endorsement of innovation by the board holds paramount significance, not only for the board's performance but also for the executive team and the overall organization.

A careful examination of the literature on boards reveals that researchers have primarily explored the effect of the board's characteristic factors on innovations (Sierra-Morán et al., 2021). However, empirical evidence is inconclusive for such relationships between the board and innovation, with board characteristics serving as potential mediators.

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For instance, board size, which has been extensively studied in relation to the board-firm innovation relationship, yields mixed findings. Some studies, such as Chen et al. (2015), De Cleyn & Braet (2012), and Wincent et al. (2012), provide empirical support for a positive association between board size and innovation. Conversely, several other empirical studies present negative arguments (Blibech & Berraies, 2018; Chen, 2012; Lin & Chang, 2012; Rossi & Cebula, 2015; Sharma et al., 2018).

Regarding board meeting frequencies, Bianchi et al. (2012) and Sharma et al. (2018) find that the frequency of board or strategy committee meetings, respectively, positively impacts innovation. However, Chen (2012) does not find a significant effect of board meeting frequency on R&D investments.

In terms of gender diversity, Mukarram et al. (2018) find a positive relationship between gender diversity on the board and firm innovation. However, other authors, such as Bianchi et al. (2012), Jiraporn et al. (2017), and Whitler et al. (2018), do not find a significant association between the presence of women on the board and innovation. In fact, Rossi and Cebula (2015) identify a negative relationship between gender diversity and innovation.

While a wide range of researchers have examined the above-mentioned effect of the board's characteristics on innovations, there is still an unanswered question in the literature that should be addressed concerning the roles of the Board in firm innovation. Board roles encompass both "what" and "how"; i.e., what problems the board wants to work on (topic) and how they choose to act on those topics (their activities). The existing research still lacks consensus on how the board should engage in the firm's innovation and leaves many questions unanswered, such as whether the board should participate in developing innovation strategies, i.e., execute their advisory role, or focus on oversight roles that are limited to reviewing and approving management plans. By addressing the unanswered question surrounding the "how" of board roles in innovation, we can also deepen our understanding of the intricate dynamics at play. This includes understanding the dynamics of the extent of the board's involvement in organizational innovation.

Several studies attempt to examine the influence of different board activities on firm innovation. Jhunjhunwala et al. (2021) emphasize the importance of active board participation in meetings and engagement in discussions to understand the organization's innovation efforts and support their management team in the implementation of innovation within the organization. Cortes &

Herrmann (2021) argue that both board members and top management use their authority and position to guide ideas during innovation stages and are seen as active contributors of new product ideas, selectors of preferred innovation alternatives, or carriers of vital experience to lead successful innovation. Collaboration and communication between the board and management team are emphasized by Manso (2011), Klarner et al. (2020), and Kang et al. (2018). Chen (2012), Chen (2014), and Kor (2006) highlight the board's role in facilitating access to external resources and minimizing innovation-related risks. Resource allocation is advocated by Wong et al. (2017), while decision control is emphasized by Garcia Osma (2008) and Gabrielsson & Politis (2006). Notably, Garcia Osma (2008) paper suggests that independent directors are likely to question managerial decisions and efficiently constrain myopic R&D cuts, implying that board members can push managers to be more long-term orientated regarding the R&D investments through challenging and questioning them.

However, while some papers mentioned above indicate that the involvement of board members in innovation governance can enhance a firm's ability to pursue innovation, there are some studies suggest that board members should not focus too much on monitoring but provide managers with more discretion to encourage long-term innovation. Faleye et al. (2011) argue that an excessive focus on monitoring from boards can steer managers towards more routine projects rather than on risky innovation projects whose results are perceptible in the long term. Similarly, Ben Rejeb et al. (2020) contend that boards need to give managers more discretion to engage in long-term innovation projects.

This disagreement calls for further investigation into the appropriate level of board involvement in innovation and other activities that boards can undertake to foster innovation. In Table 1 below, we summarize relevant prior reviews and their arguments on the board activities.

<b>Review</b>	<b>Board activities</b>	<b>Relevant Findings</b>
Jhunjhunwala et al. (2021)	Active participate in board meeting	Active involvement in board meetings enables members to gain a deeper understanding of the organization's innovation landscape, thus facilitating their ability to assist the management team in implementing innovation strategies

Cortes & Herrmann, (2021)	Guiding innovation ideas	Board members as well as the top management team use their authority and position to guide ideas during innovation stages and are seen as active contributors of new product ideas, selectors of preferred innovation alternatives, or carriers of vital experience to lead successful innovation.
Manso (2011)	Collaboration with administration team in the innovation activities	Innovation typically involves the exploration of new and untested ideas, at every stage of the innovation process. It is vital for management and the board to engage in thorough discussions, and for the board to provide timely feedback on the strategies for the next stage of development
Klarner et al. (2020)	Transfer information	The board gathers and processes information and insights about product innovation with organizational members then transfers their knowledge to other directors and employees.
Kang et al. (2018)	Connect closely with CEO	Close ties between the board and the CEO encourage firms to achieve more patents and produce better innovations.
Chen (2012); Chen (2014); Kor (2006)	Acquire innovation resources	The board enables the firm to access external resources for innovation and minimize the risk involved in making decisions related to innovation
Garcia Osma (2008)	Question managerial decisions	Independent directors are likely to question managerial decisions and efficiently constrain myopic R&D cuts.
Wong et al. (2017)	Monitor resource allocation	Independent directors play a key role in mitigating the abuse of power by overconfident CEOs concerning the allocation of resources for innovation

Gabrielsson & Politis (2006)	Supervise and make crucial decision	Board involvement in decision control may promote corporate innovation
Faleye et al. (2011)	Not focus intensely on monitoring	Boards can lead managers to focus on more routine projects rather than on risky innovation projects whose results are perceptible in the long term.
Ben Rejeb et al. (2020)	Give managers more discretion to engage in long-term innovation projects	Board members' emphasis on monitoring the management team will encourage managers to focus on short-term. Boards control roles has a negative effect on innovation. Boards need to give managers more discretion to engage in long-term innovation projects.

*Table 1: Several prior reviews on the board of directors' activities in organization innovation*

Given the conflicting perspectives in the literature and the increasing focus on dynamic capabilities as drivers of innovation (Teece 2007, 2016; Teece et al., 2016; Schoemaker et al., 2018; Teece et al., 1997), our study aims to delve deeper into the level of board involvement in innovation and explore associated activities they undertake to support innovation processes. Additionally, we seek to understand how these activities, when implemented, contribute to the development of organizational dynamic capabilities. Before addressing this question, we will further explore the concept of dynamic capabilities in the remainder of the literature review.

## **2.4 Organizational Dynamic Capability**

Dynamic capability, a concept extensively discussed in strategic management and organizational theory, originates from resource-based theory and focuses on how firms can sustain and enhance their competitive advantage in the face of changing environments (Adner & Helfat, 2003; Eisenhardt & Martin, 2000; Helfat, 1997; Teece et al., 1997).

The original definition of dynamic capability, proposed by Teece et al. (1997) describes it as "the firm's ability to integrate, build, and reconfigure internal and external competencies to address and shape rapidly changing business environments." In his definition, Teece considered dynamic capabilities as processes and routines at the organizational level. As confirmed by the research carried out by Di Stefano et al. (2010) and supported by others (Peteraf et al., 2013),



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the literature on dynamic capabilities is far from converging toward a unique definition and conceptualization. Among such a vast and varied portfolio of definitions, we will focus primarily on the perspective taken by Teece et al. (1997), Teece et al. (2016), and Schoemaker et al. (2018) for several reasons. First, this dynamic capability is proposed to have the greatest value in a moderately dynamic environment (Schilke, 2014), which fits our study context of the Norwegian market. Secondly, their works stress the importance of the role of individuals in developing firm-level capabilities (Schoemaker et al., 2018). In addition, Teece (2007) analytically decomposes dynamic capability in nested clusters including sensing, seizing, and transforming, and contrasted these capabilities to ordinary capabilities within the firm.

While ordinary capabilities enable the identification of important process innovations, dynamic capabilities help identify new products and services, potentially opening new markets in which rivals have not yet appeared. Dynamic capabilities comprise a broad range of activities, including new product development, business model innovation, and alliance formation (Schoemaker et al., 2018). A firm's well-honed ordinary capabilities can help it perform efficiently its current activities. Dynamic capabilities, when combined with a good strategy, enable firms to identify profitable configurations of competencies and assets, assemble and orchestrate them, and exploit them to deliver value to customers (Teece, 2012).. Thus, dynamic capabilities are critical for a firm's innovation process.

The manager's role is a highlighted component in the dynamic capability framework. The existing literature has primarily focused on the role of top managers in creating and deploying dynamic capabilities within the firm. Authors refer to these higher-level managers as top management (Tripsas & Gavetti, 2000), CEO (Kor & Mesko, 2013; Teece, 2016), senior managers (Ambrosini & Bowman, 2009; Kor & Mesko, 2013), or general managers (Martin, 2011). Notably, Adner & Helfat (2003) introduced the concept of dynamic managerial capabilities, which serve as the micro-foundations for a firm's dynamic capabilities. This underscores the importance of managers' abilities to identify and seize opportunities, as well as reconfigure assets to adapt to evolving environmental conditions (Helfat & Peteraf, 2014). However, limited attention has been given to exploring the influence of the board of directors on the deployment of organizational dynamic capabilities.

Nonetheless, dynamic capabilities are organizational-level capabilities rather than individual capabilities. They are not bound to a specific business division or manager but stretch the enterprise and can provide underpinnings for a sustainable competitive advantage (Schoemaker

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et al., 2018; Teece, 2007). Asija & Ringov (2020) provide evidence that board monitoring can have varying impacts on a firm's dynamic capability. However, their study primarily focuses on evaluating the effects of board monitor as a corporate governance mechanism on dynamic capabilities, rather than examining the specific activities conducted by the board to facilitate organizational dynamic capabilities.

In the following sections, we further elaborate on three concepts within dynamic capability theory: sensing, seizing, and transforming.

### **2.4.1 Sensing**

Sensing capability refers to the alertness and discovery process that leads to identifying opportunities and threats in the business environment (Schoemaker et al., 2018; Teece, 2007, 2016). In Teece's (2016) work, he acknowledges that in large organizations, research and scanning activities can be facilitated by established routines. However, he points out that sensing opportunities, which relevants to entrepreneurial activities, may require a different approach. While Teece (2016) highlights the role of managers in deploying this capability, and claims that managers play a central role in sensing, he also emphasizes that this capability should not be restricted to the CEO or top management team but spread throughout the firm.

Existing research suggests that to identify and shape opportunities, the firm must go beyond simply identifying customer needs and technological developments. It needs to comprehend the underlying demand, and structural shifts happening in markets and industries, and to predict how suppliers and competitors will react (Teece, 2007). Moreover, it should constantly scan, search, and explore across technologies and markets, both “local” and “distant” (Barney et al., 1987). When an opportunity is first glimpsed, interpreting and contextualizing it can also change the nature of the opportunity that the firm will pursue and the way the competition will unfold (Teece, 2007).

We anticipate that the board may be actively involved in sensing, or it may focus primarily on securing systems and processes for sensing within the firm.

### **2.4.2 Seizing**

Seizing refers to the ability of an organization to respond to opportunities and threats that have been sensed (Helfat & Peteraf, 2014; Schoemaker et al., 2018; Teece, 2007). Seizing is not only about deciding when, where, and how much to invest but also to select or creating a business model that defines its commercialization strategy and investment priorities (Teece, 2007). It is

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about mobilizing resources to address needs and opportunities and capture value from doing so (Teece et al., 2016).

Seizing is characterized by its decision-making nature. It is the capacity to make high-quality, unbiased but interrelated investment decisions in the context of network externalities, innovation, and change (Teece, 2007).

This decision-making nature explains why a firm can sense a business opportunity but fail to seize it. Established firms, especially those with hierarchical structures, tend to have bureaucratic decision-making processes that involve layered standard procedures, established capabilities, complementary assets, and administrative routines (Teece, 2007). Seizing capacity requires managers to play an important role, both entrepreneurship and leadership, to capture opportunities (Teece, 2014, 2018). However, depending solely on managerial skills and decision-making may not be enough, especially when managers lack expertise.

In our analysis, we aim to explore how involved the board is in decision-making versus its role in overseeing decisions once they are made.

### **2.4.3 Transforming (reconfiguring)**

After sensing and seizing business opportunities, the next critical step is to effectively manage the associated threats by redefining the corporate business model and innovating the ways in which economic value is generated. Transforming/reconfiguring entails aligning and reconfiguring the firm in response to market and technological changes, such that it retains evolutionary and economic fitness. The concept includes the capacity to identify the need or opportunity for change, formulate a response to such a need or opportunity, and implement a course of action, hence can be used as a foundation for understanding the processes of strategic renewal (Helfat & Peteraf, 2009; Teece, 2016). It may involve mergers, acquisitions, and divestments (Teece, 2007).

Teece, (2007) argues that continuous renewal is unlikely to occur in enterprises without a high degree of decentralization. This argument raises an important question regarding the role of the board in enabling and facilitating this dynamic capability within the organization. We aim to explore whether and how the board can contribute to this capability of established firms.

## 2.5 Summary of literature

Existing research shows that the role of the board of directors has gone beyond just monitoring, controlling and providing resources to involving more in strategy. The literature on strategy and innovation suggests that innovation is needed for companies who seek for sustainable competitive advantage. Board of directors as an important body influencing and governing the strategy of the companies should be investigated regarding how they can support innovation within the established firms.

Prior research has focused mainly on the relationship between board characteristics and innovation performance of firms. Furthermore, there is a body of research with contrasting arguments regarding board involvement in innovation. While most of scholars argue that board members should involve actively in innovation, there are others who believe in delegation of discretion to the top management team. Therefore, the purpose of this study is to delve deeper into the level of board involvement in innovation and explore associated activities they undertake to support innovation processes.

In addition, since it is accepted by management scholars that companies can achieve sustainable competitive advantage through developing organizational dynamic capabilities, we draw on this framework to investigate “*through what activities board members aim to facilitate innovation within established firms*”. While prior research mainly focused on the role of managers in the development of organizational dynamic capabilities, our master’s thesis aims to bring a new insight to the literature through examining how board of directors can support the development of these capabilities, and consequently aiming to foster innovation in established firms through undertaking specific activities.

### 3. Methodology

*This section explains the methodology used to answer the study's research question. The section begins with the description of the research design and philosophy. Then, the techniques used to collect and analyze data are explained. Finally, strengths and weaknesses of this research and ethical considerations are examined.*

#### 3.1 Research design

Research design can be seen as a general plan for how to answer the research question, and it consists of several elements needed to structure the study (Saunders et al., 2016). Since the research question is to investigate “*through what activities board members aim to facilitate innovation within established firms*”, this thesis is conducted through a qualitative exploratory design using key informants (Ghauri & Grønhaug, 2010). An exploratory study is especially beneficial if the researcher wants to make an issue, problem, or phenomenon clear, and this type of research has the advantage of being flexible and adaptable to change. Therefore, the researchers should be able to change their direction if new insights or data appear in the process of research.

Researchers engaging in exploratory research need to observe, gather information, and generate explanations (Ghauri & Grønhaug, 2010). This type of study starts with a broad focus and then it will become narrower as the research progresses which allows the researcher to have an initial understanding of the phenomenon being studied.

Since the role of board members in facilitating innovation has not been studied sufficiently within the research on board of directors or the innovation research in general, the purpose of this study is exploratory. An exploratory study allows new insights and unexpected results to be unraveled due to its high level of flexibility (Saunders et al., 2016).

#### 3.2 Research Philosophy

In this qualitative study, we have adopted a constructivist research ontology aiming to comprehend the research participants' experiences and uncover their subjective truth. According to Elliot et al.'s (2000) learning approach, knowledge is actively created by individuals based on their experiences. With the application of constructivist ontology, we are not aiming to uncover universal and objective truths, but rather acknowledge the learners' construction of meaning

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through their experiences and consider that the meaning is shaped by the interaction of their prior knowledge and new events, as proposed by Arends (1998).

### **3.3 Data Collection**

For this type of study, exploratory research, it is useful to use qualitative data as it provides rich and flexible non-numeric data and can give a better understanding of the problem statement (Saunders et al., 2016). Exploratory studies that have an objective to generate new insights into underexplored topics in the existing theory qualitative methods are beneficial to be used (Ponelis, 2015).

In the following, detailed information about the sources and methods used to collect data will be presented.

#### **3.3.1 Data Source**

This study uses both primary and secondary non-numerical data.

The primary data used for this research was semi-structured interviews with board members of companies in different industries in Norway. Semi-structured interviews are often used in exploratory studies as they can provide the researcher with the opportunity to ask questions, where they want the informants to explain or build on their responses (Saunders et al., 2016). The interviews provided information on how they as board members attempted to support and facilitate innovation.

The secondary data used in this study consisted of public information in the form of company websites, profiles of informants, and government databases tracking companies' ownership histories. The secondary data provided background information on the firms the board members worked on.

#### **3.3.2 Sampling Key Informants**

The sampling technique is a process of choosing a sample of respondents (Saunders et al., 2016). Negotiating access to relevant sources of information is important for researchers to collect meaningful data (Saunders et al., 2016). Our research question requires access to board members. This research is conducted as part of the RaCE research program at NHH Norwegian School of Economics, which focuses on understanding how established firms can adapt to radical technology-driven change. Being part of this research project helped us with the data collection

part as our supervisor, Professor Stensaker, provided us with access to the key informants. This was crucially important for getting access to the board of directors of Norwegian companies. Our supervisor had connections with 40 board members who participated in *Board Executive Program on Innovation at NHH*, we contacted them through email and invited them to have an interview with us and we ended up with 18 informants accepting our invitation. An overview of the informants is shown in Table 1 which is a summary of the roles that are relevant and important during our interviews and analysis. Since we were interested to study *through what activities board members aim to facilitate innovation within established firms*, we selected informants who have experience as board members in different established companies; in addition to board experience, some of them have experience working closely with boards in other established companies.

In this study we refer to established firms as organizations that have been in business for a significant period of time and have a history of operations. They are contrasted with start-ups, which are newly founded companies with limited operating history. Therefore, the sampling technique used in this study is purposive theoretical sampling (Morse, 2010). This technique is well-suited for exploratory research.

<b>Informant</b>	<b>[Organization Code] Industry</b>	<b>Position</b>	<b>Organization size</b>	<b>Ownership</b>	<b>Current / Former position</b>
Informant A	[A1] Farming	Deputy Board Member	1,001-5,000 employees	Private company	Current
Informant A	[A2] Wholesale Building Materials	Board Member	51-200 employees	Private company	Current
Informant A	[A3] Forest management	Deputy Board Member	51-200 employees	Private company	Current
Informant B	[B1] IT Services and IT Consulting	Chairman	11-50 employees	Professional Association	Current

<b>Informant</b>	<b>[Organization Code] Industry</b>	<b>Position</b>	<b>Organization size</b>	<b>Ownership</b>	<b>Current / Former position</b>
Informant B	[B2] IT Consulting	Director (IT function)	10,001+ employees	Private company	Current
Informant C	[C1] Outsourcing and Offshoring Consulting	Deputy Chairman	1,001-5,000 employees	Private company	Current
Informant D	[D1] Accounting	Board Member	No information	Private company	Current
Informant D	[D1] Business Consulting and Services	Board Member	2-10 employees	Private company	Current
Informant E	[E1] Production of automation machines	Chief Marketing Officer	501-1,000 employees	Private company	Former
Informant E	[E2] Retail	Board Member	2-10 employees	Private company	Current
Informant F	[F1] IT Services and IT Consulting	External Board Member & then Board Member	51-200 employees	Private company (Employees-owned)	Former
Informant F	[F2] Financial Services	Board Member	51-200 employees	Private company	Current
Informant F	[F3] Financial Services	CEO	No information	Private company	Former



<b>Informant</b>	<b>[Organization Code] Industry</b>	<b>Position</b>	<b>Organization size</b>	<b>Ownership</b>	<b>Current / Former position</b>
Informant G	[G1] Non-profit Organizations	Deputy Chairman	1,001-5,000 employees	Private Institution/ NGO	Current
Informant H	[H1] Research Services	Board Member	201-500 employees	Private Institution	Current
Informant I	[I1] Hospitality	Chairman	2-10 employees	Private company	Current
Informant I	[I2] Engineering/ Manufacturing	CEO	51-200 employees	Private company	Former
Informant J	[J1] Hospitals and healthcare services	Board Member	10,001+ employees	Joint-stock company	Current
Informant K	[K1] Public administration	Board Member	501-1,000 employees	State-owned company	Current
Informant K	[K2] Construction	Board Member	5,001-10,000 employees	Joint-stock company	Current
Informant K	[K3] Construction	Board Member	1,001-5,000 employees	Joint-stock company	Current
Informant K	[K4] Research	Deputy Chairman	51-200 employees	Private Foundation	Current
Informant L	[L1] Finance	Board Member	11-50 employees	Private company	Current
Informant L	[L2] Real Estate	Director	51–200 employees	Private company	Current

<b>Informant</b>	<b>[Organization Code] Industry</b>	<b>Position</b>	<b>Organization size</b>	<b>Ownership</b>	<b>Current / Former position</b>
Informant L	[L3] Subsidiaries of L2	Board member	No information	No information	Current
Informant M	[M1] Holding company, investment	Chairman	No information	Family holding company	Current
Informant M	[M2] Construction Company	Board Member	11-50 employees	Family owned	Current
Informant N	[N1] Hospitals and Health Care	Chairman	501-1,000 employees	Private company	Current
Informant N	[N2] Oil and Gas	External Board Member	1,001-5,000 employees	Private company	Current
Informant N	[N3] Plumbing	Board member	No information	Private company	Current
Informant O	[O1] Construction	Chairman	51-200 employees	Private company owned by public organization	Current
Informant P	[P1] Food and Beverage Manufacturing	CFO	1,001-5,000 employees	Private company	Current

<b>Informant</b>	<b>[Organization Code] Industry</b>	<b>Position</b>	<b>Organization size</b>	<b>Ownership</b>	<b>Current / Former position</b>
Informant P	[P2] Food and Beverage Manufacturing	Board Member	No information	Private company (subsidiary of P1)	Current
Informant P	[P3] Retail	Board Member	201-500 employees	Private company	Former
Informant P	[P4] Food and Beverage Manufacturing	Financial Director	10,001+ employees	Stock Exchange	Former
Informant Q	[Q1] Food and Beverage Manufacturing	R&D Director	5,001-10,000 employees	Private company	Current
Informant Q	[Q2] Food and Beverage Manufacturing	Board member	No information	Private company (subsidiaries of Q1)	Current
Informant Q	[Q3] Research	Board member	No information	Private Institution	Current
Informant U	[U1] Media Production	Head of Product	1,001-5,000 employees	Foundation-owned group	Current
Informant U	[U2] Media Production	Board member	11- 50 employees	Joint stock company	Current

*Table 2: Summary of informants' information.*

### 3.3.3 Semi-structured Interviews

Qualitative semi-structured interviews were used as a source of collecting primary data, which is suitable for this master thesis's exploratory nature as it adds depth and significance to the

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collected data. Semi-structured interviews refer to non-standardized interviews which allow researchers to ask flexible and follow-up questions based on the responses given by the informants. These interviews also include predetermined key questions and themes in varying order from one interview to another (Saunders et al., 2016). In addition, semi-structured interviews offer the chance to uncover significant themes that the researchers may not have been aware of before the interview. This is an essential component of abductive research, and it was through these interviews that the more specific research question ultimately emerged.

Informants were first contacted through email and provided with relevant information about the study, the use of data, and they were also informed that their data will be anonymized during the study. Then, informants who accepted to take part in our study followed up by further emails to schedule the interviews.

Before conducting the interviews, all the participants were asked to sign a consent form drafted by the RaCE research program at SNF and NHH (see Appendix A). The consent form included information about the research project, information about confidentiality, and informants' rights.

For the interviews to be successful, interviewers need to prepare beforehand (Saunders et al., 2016). Therefore, we prepared carefully by reading the relevant theories related to board of directors and innovation to acquire sufficient knowledge. We also checked our informants' background information by looking at LinkedIn prior to the interviews to be able to ask relevant questions.

Since our informants are located in different parts of Norway, we conducted the interviews online through Microsoft Teams. As mentioned, interviews were 18 in total, and we recorded and transcribed them with both oral and written consents of the informants. The duration of the interviews was approximately 60 minutes. We created an interview guide including a list of key questions, which was reviewed and approved by our thesis supervisor (see Appendix B). After conducting the first interview, the interview guide was modified based on new insights with the approval of our supervisor who also participated in the first two interviews (see appendix C). Most of the questions were asked in an open-ended form to ensure that our informants will not be led in any specific direction or be able to talk freely.

The interviews started by us introducing ourselves, explaining the purpose of the study, and ensuring the informants that the data would be anonymized within the first minutes of the interview. This was done to build trust between informants and interviewers before asking the actual questions. After that, the actual interview started. Since interviews were carried out in

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English online on teams, we were able to record and use the automated transcription function. All informants consented to the recording and automatic transcription. As the interviews were concluding, the participants were given the opportunity to share any additional information that they deemed relevant and important, to ensure that no pertinent issues were overlooked.

### **3.3.4 Secondary Data**

In addition to primary data collected through interviews, a substantial amount of secondary data was also gathered for this study. This data comprised publicly available information such as corporate websites, LinkedIn profiles, and government databases containing information on company histories and individual ownership. According to Yin (2018), caution must be exercised when using secondary data because it is typically created for a different purpose. Therefore, in our study, we utilized secondary data as a supplementary source of information, rather than as the main basis for our conclusions (Saunders et al., 2016).

## **3.4 Data analysis**

Data collected from semi-structured interviews is non-standardized, qualitative, rich, and ambiguous which needs a rigorous analysis (Saunders et al., 2016). In this study, the qualitative data was analyzed abductively, which means that a combination of inductive and deductive approaches are used. We began inductively using the qualitative data analysis guidelines described by Saunders et al. (2016) and Charmaz (2006), which entails staying very close to the informant language. Next, we analyzed the results in relation to existing theories and established connections between the findings and the theory.

This study uses the abductive approach to theory development. This approach combines both deductive and inductive logic and gives the researcher the ability to go back and forth between the two approaches (Suddaby, 2006). An abductive analysis is a qualitative data analysis approach with the aim of constructing novel theoretical insights that reframe empirical findings against existing theories. In this approach, surprising empirical findings will be cultivated against a background of several existing theories. This cultivation will be through systematic methodological analysis. In abduction, the researcher needs to have an in-depth knowledge of what is missing in an area of theoretical contributions. (Timmermans & Tavory, 2012). Since, during the data analysis part, we produced insights using an iterative analysis of data and linking it with existing theories, an abductive approach is well-suited for this master thesis (Orton, 1997).

Furthermore, using abduction, which combines the two approaches, gave us a higher degree of flexibility to overcome the inherent weaknesses of the other two.

The data analysis process involved two main steps: first, the line-by-line coding method (i.e., initial coding) was used, then followed by the focused coding method suggested by Charmaz (2006). This approach was beneficial to understand the significant amount of data collected from the interviews. Before starting the analysis part, the transcripts provided by Microsoft Teams were cleaned by watching the video recordings multiple times to avoid overlooking any important information that would impact our analysis.

### **3.4.1 Initial Coding**

The process of initial coding is exploratory in nature and involves organizing and reorganizing the applied codes until the researcher has identified themes that appear to represent the primary concepts and relationships within the data (Saunders et al., 2016).

After the transcription of the interviews was cleaned, Initial coding process was performed, analyzing the data line-by-line, to create an analytical skeleton as shown in the figure 1. Initial coding is an open approach which enables researchers to identify implicit concerns and explicit statements of the participants (Charmaz, 2006). In the initial coding process, annotations or brief statements were assigned to the text individually in order to summarize and outline the text. This helped us to remain open to all potential theoretical directions that may appear while reading the data as well as seeing nuances in the data (Charmaz, 2006). In line with Charmaz's approach (2006), the initial codes were kept concise and closely connected to the data. Initial coding helped us to examine the data thoroughly, look at the data critically and analytically, and conceptualize the large quantity of information before moving to the second stage of coding.

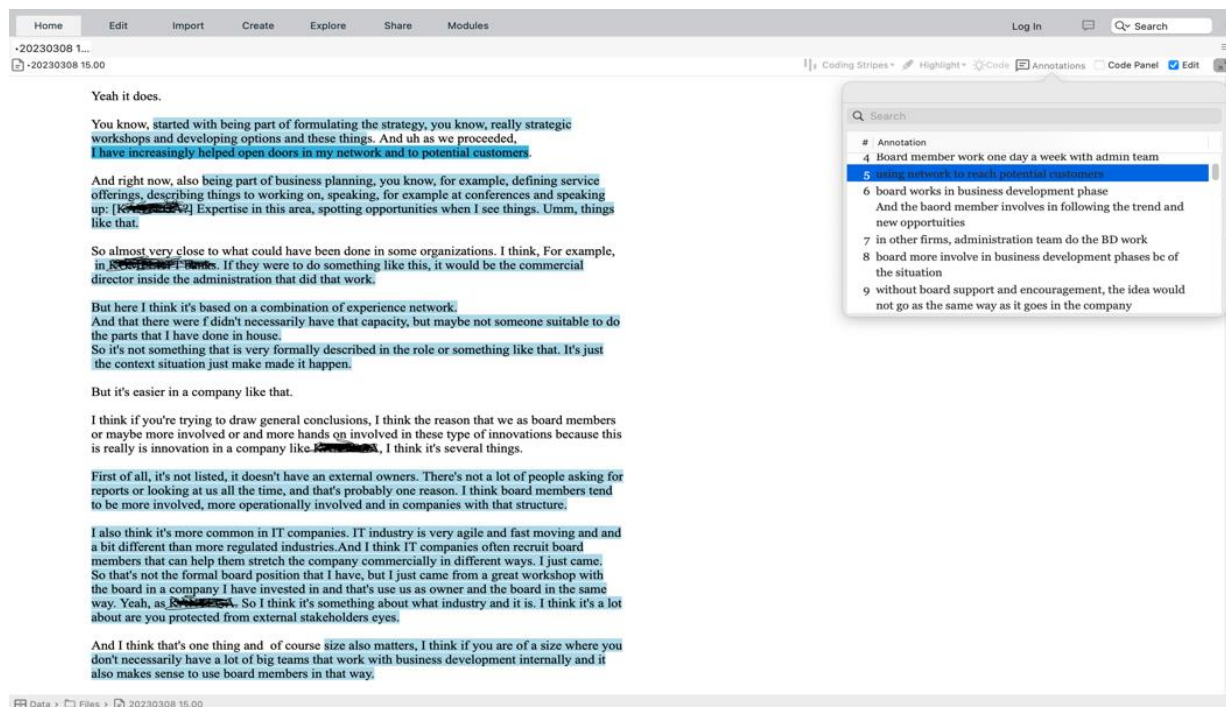


Figure 1: Screenshot showing an example of Initial coding.

### 3.4.2 Focused Coding

Focused coding involves determining which of the initial codes should be used to establish the explanatory and analytical focus of the coded data (Saunders et al., 2016). We started by reading our first codes together since we did the initial coding process individually and decided which one of the initial codes would support answering the research question. After that, the selected initial codes were first color-coded into similar themes, and then the data was regrouped into categories that provided explanatory insights into the research question. After yet another lengthy review of the color-coded and reorganized data, we recognized that the codes could be grouped into the existing categories within the dynamic capability theory. We then moved from the inductive process of analysis to more deductive application where we connected our first order categories to existing theoretical categories.

The codes were thereby regrouped again into three broad categories of dynamic capabilities: *sensing, seizing, and transforming*. The process of focused coding was not straightforward, and we spent a significant amount of time determining which initial codes should be used as focused codes. This resulted in the codes being re-coded multiple times.

We did the coding process digitally using both Nvivo software and Microsoft Excel. Key quotes were transferred from Nvivo to an Excel file and later used in the findings chapter of the thesis to support the findings.

The analysis process was iterative, involving a constant back-and-forth movement between coding and already existing theory. As the interview guide introduced many potentially interesting themes, the direction of the analysis was not initially clear, which aligns with the exploratory approach of the thesis (Saunders et al., 2016). Upon assessing our findings, we discovered similarities between the data and the literature. We also found patterns within the data itself, as participants' responses were somewhat aligned. However, we also identified findings that did not align with or were not covered in the existing literature. Therefore, we searched for new connections that could contribute to the field.

Practices?	Key Ideas of the Finding	Findings from Interview	Opinion/ Proposed code?	What kind of practice
	board taking decision on a high level that need investing cost and align with company vision	case, we started a subsidiary own(?) company for that business area. And that decision was on the board level. <b>Because it has a investing cost. And for decision, we also need to see if that is one of the ideas will be able to fulfill their vision for the company.</b> We saw that could absolutely use more than helping people into work, but also was a good point of the environment.	board roles	
x	the board asked the CEO to make strategic analysis to see if the organization is prepared for innovation practices	For five years ago, they said to the CEO that do our strategic analysis: are we doing the right thing? Do we have good organized? what is the competition? So you did a strategic strategic analysis of the company. <b>Why we did that? to see if are we good enough organized for making innovation in practice.</b>	practice, dynamic capabilities	transforming
	board after the strtaegic analysis decided to merge all of the trustees in Norway for better communication (there was a change in the structure of the company)	For five years ago, or for one years ago, this organization was organized by different trustee (?) in every city in Norway. Bergener own trustees. Oslo area was one and... The difficulties here was to communicate between all the cities in our way. So what we did from the board level, we asked them to see could we be in better organized and what benefit would that give us? And the result of this strategic process was that we... In one month ago we merged all trustees into one organization with one CEO and one board... uh... on the operative level (?)	this is taking decision, not sure if it's considered practice	
	in meeting, board discuss things on agenda based on what it delivered by the TMT but for higher agenda level, board request it  however, board does not usually involve in small initiatives	And on the most of the meetings, <b>the Board are presented different areas and different cases which we need to take a decision.</b> What's on the agenda depends mostly on what the administration deliver to the board, but strategic process (?) was a request from the board.  So for instance, the administration see it's a possibility to buy a new, not the hospital, but a service home. Or the administration sees in this sector we could establish a helping for people there, for necrotic people. And (...) see the possibility to fund it, that would be on the board to take the decision. <b>But smaller initiatives are done by the administration themself.</b>	practice, dynamic capabilities	seizing
x	board worked closely with CEO on strategic changes	And the board was very active, the chairman of the board myself, together with the CEO and the top management, do work with the ownership part.	practice, dynamic capabilities	transforming

Figure 2: Screenshot showing an example of Focused coding.

## 3.5 Research Quality

In this part, the overall quality of the research will be evaluated by assessing the strengths and weaknesses of the methods in order to provide trustworthy results. Criteria to measure the quality of qualitative are credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985; Schwandt et al., 2007), which will be discussed in more detail below.

### 3.5.1 Credibility

Credibility is concerned to the truth of data and whether the researchers are able to represent what the informants intended and their views correctly (Cope, 2014). This master thesis took several measures to ensure that the findings of the research are plausible. First, credibility was enhanced through asking follow-up questions during the interviews to understand the statements of informants correctly and to clarify the meaning of their answers. Additionally, since the interviews were conducted by two researchers, we were able to follow up with important clarifying questions that did not occur to the other researcher, thus increasing credibility further.



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Furthermore, the interviewers recounted the statements of the informants by providing a summarized version of them during the interviews, thereby the informants had the opportunity to clarify or correct the interpretations. Following the interviews, the researchers analyzed the participants' responses and engaged in further reflection to ensure mutual understanding. As two researchers were involved in the study, investigator triangulation was employed. This involved analyzing the interview data separately and then discussing the extent of agreement regarding the findings (Korstjens & Moser, 2018). This strengthened the quality of our research through investigator triangulation which according to Carter et al. (2014) is the participation of two or more researchers in the same study to provide multiple perspectives. This type of triangulation can offer both confirmations of findings and different perspectives, thereby adding breadth to the topic of interest (Denzin, 1978).

Furthermore, all of the informants have diverse experience and backgrounds from different companies in various industries which provided a multitude of perspectives on the topic being studied. The continuous dialogue with the thesis supervisor, including meetings and her involvement in the data collection process, enabled peer debriefing to take place.

Since we had the opportunity to record the interviews as a video using the Microsoft Team's recording function, we watched the interviews multiple times to have an accurate interpretation of the participants' statements. This thesis also has the strength of including quotes from the informants, as it supplies evidence for the reader (Cope, 2014). To ensure a comprehensive search for explanations, a variety of theories were examined and discussed during the literature review, as recommended by Guba (1981).

### **3.5.2 Transferability**

Transferability focuses on how findings can be applied to other contexts or settings (Polit & Beck, 2012). Since this thesis uses an abductive approach, transferability can be enhanced as the empirical findings are constantly verified by comparing them with the existing theory. Furthermore, our informants cover a range of different companies across industry that can strengthen the transferability of this study. However, it is important to acknowledge that this research was conducted within the specific context of Norway, with interviews conducted exclusively with board members from established Norwegian firms. Consequently, the transferability of this thesis to other regulatory, legal, and institutional contexts may be limited, as board activities can vary across nations.

### **3.5.3 Dependability**

The dependability criterion assesses whether the data collection and analysis methods are consistently and accurately applied, ensuring that the study's findings can be replicated. To ensure dependability, each step of the research process was documented and stored in an accessible form. The dependability of this research was further enhanced through a process of peer audit. Our supervisor and other RaCE participants provided critical feedback on our methodological choices and theoretical interpretations, thereby contributing to the research's dependability (Guba, 1981).

While semi-structured interviews, which make up the primary data for this research, cannot be replicated exactly as each participant's responses will differ, dependability was strengthened through the use of an interview guide. The guide provided an overview of the major themes addressed in the interviews and a list of standard open-ended questions to guide the conversation, as outlined in Appendix C. The interview guide was revised twice with the thesis supervisor to ensure clarity and accuracy while remaining open-ended. To increase accuracy, the interviews were recorded and transcribed, and participants' reactions and body language were included in the transcripts (Bailey, 2008).

### **3.5.4 Confirmability**

Confirmability is about the researchers' ability to present the data objectively without being influenced by their biases while drawing conclusions (Cope, 2014). To reinforce confirmability, this thesis includes extensive Methodology and Findings chapters that thoroughly explain how conclusions were reached. A detailed and transparent research design was followed to reduce subjectivity during the study. Furthermore, our thesis supervisor closely monitored the research methods, ensuring a high level of quality. To improve confirmability in this research, discussions with the supervisor were helpful. The discussions with our supervisor helped us to revise our interview guide in order to remove any leading or unclear questions that would negatively impact our research (Saunders et al., 2016). In addition to our supervisor, other participants of the RaCE program enhanced the confirmability of this study, through the process of peer audit, by providing valuable feedback regarding our methodological choices and our findings (Guba, 1981).

During the interviews, we were aware of the interviewer bias, so we avoided using leading questions (Saunders et al., 2016). To reduce interviewee bias resulting from the concerns about

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lack of confidentiality, the informants were informed about the process and their anonymity before the interviews began. Also, the informants had enough time to read the information regarding this research provided in the consent form which required the signature of the informants.

Furthermore, we used direct quotes from informants in the findings section of the study and provided detailed description of the data analysis process to enhance confirmability since readers will be able to evaluate the researchers' interpretations and conclusions (Gibbs, 2018). Using NVivo as our analytical software, which provides a systematic and transparent way of analyzing qualitative data, can also strengthen confirmability by allowing for audits by external parties (Sinkovics et al., 2008)

### **3.5.5 Ethical Consideration**

Research ethics were taken into consideration and their importance was recognized throughout the research due to their impact on the research quality (Saunders et al., 2016). As other researchers and practitioners may draw learnings from or build upon this research, this study was followed ethical standards and presented in a transparent way.

Limitations were addressed throughout the study. The research design was also planned in a way that informants were not subject to any risk of harm, pain, embarrassment, or disadvantage. Furthermore, the researchers informed the informants about this study and all the research processes prior to the start of the interviews and gave them the option to withdraw at any time. Also, each informant received and signed an Informed Consent Form drafted by RaCE Program, which is available in Appendix A. To protect their privacy, all personal and identifying information such as names, dates, and locations were either removed or replaced with random letters in the English alphabet. To protect the data throughout the study, we deleted the interview videos after cleaning the transcriptions and stored all the data files safely on our password personal computers. Upon the completion of this master's thesis, the data will be deleted from our personal computers and transferred to the RaCE program for safekeeping.

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## 4. Findings

*This section presents the findings derived from our interviews conducted with board members, showcasing their accounts and reflections. The section commences with a summary and models of the findings to help the reader follow the analysis. Thereafter we describe in more detail our findings and use illustrative quotes from our informants to substantiate our interpretations of the collected data.*

### 4.1 Summary

Our analysis of the interviews with board members revealed some interesting differences. We found two distinct levels of involvement in the organization's innovation efforts: while some board members described active involvement, others showed limited involvement.

Active involvement refers to the activities taken by board members to facilitate, enable, and support innovation within the organization. We identified eleven specific activities associated with this level of involvement. Each of these activities appears to contribute to the development of organizational dynamic capabilities (sensing, seizing, and transforming), and thus may ultimately drive organizational innovation.

On the other hand, limited involvement refers to a more hands-off approach, where the board members did not actively engage in innovation activities within the organization. This limited involvement can be attributed to various contextual factors, both external and internal, that hinder the board from taking a more active role in fostering innovation in their organizations.

To present these findings, we have developed two models that illustrates the two levels of involvement and their associated findings. Additionally, throughout this section, illustrative quotes from our informants are provided to substantiate and support the identified findings. The inclusion of informant code for each specific quote offers readers further contextual information.

## 4.2 Model

In this section, we present two models to provide a clear overview of the findings. These models show the key findings and the relationship between key concepts in this thesis. Together, the models show how board members aim to facilitate innovation (and why they may refrain from doing so) within established firms.

The arrows do not indicate causality, but rather direction of influence. Hence our study does not allow us to claim that specific activities will lead to the development of dynamic capabilities. However, we infer that these activities aim (and may) lead to firm-level dynamic capabilities.

The first model (figure 3) explains why boards may choose limited involvement in innovation and points to a number of contextual barriers. The second model (figure 4) illustrates the various activities board members who are actively involved in innovation may engage in and it links these activities to dynamic capabilities.

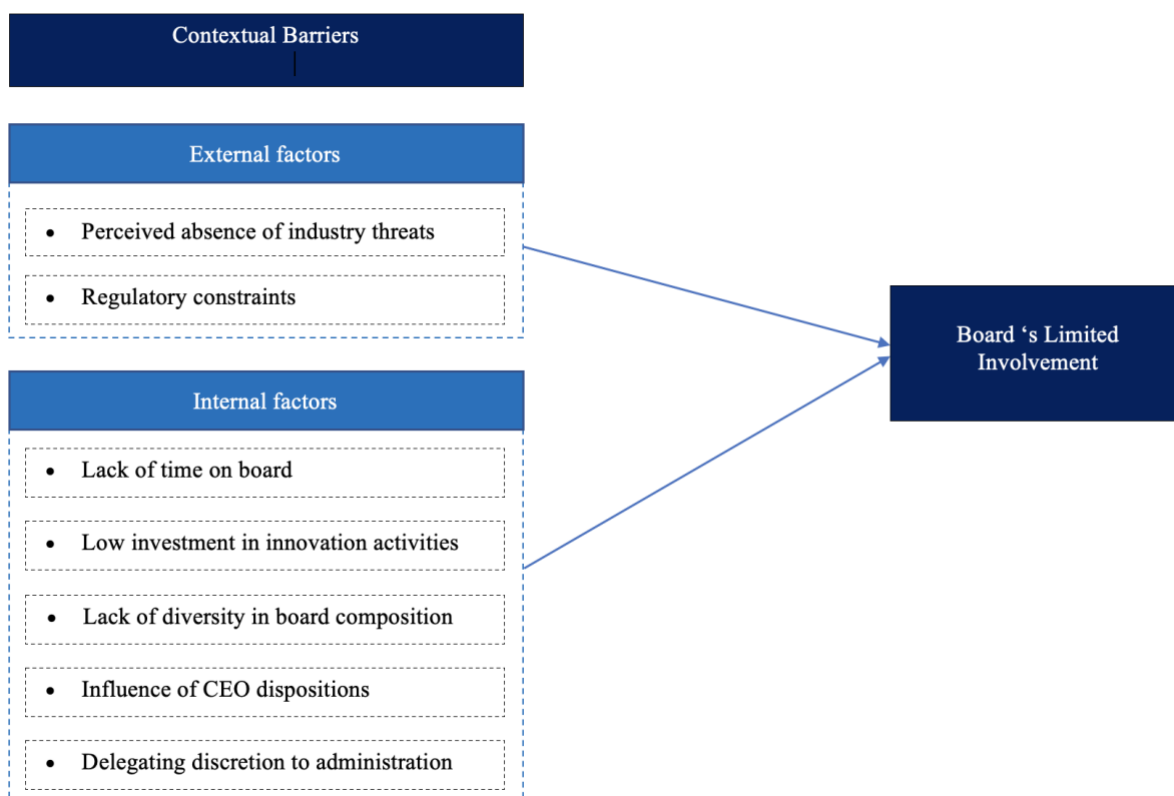


Figure 3: Barriers for board members to involve in innovation

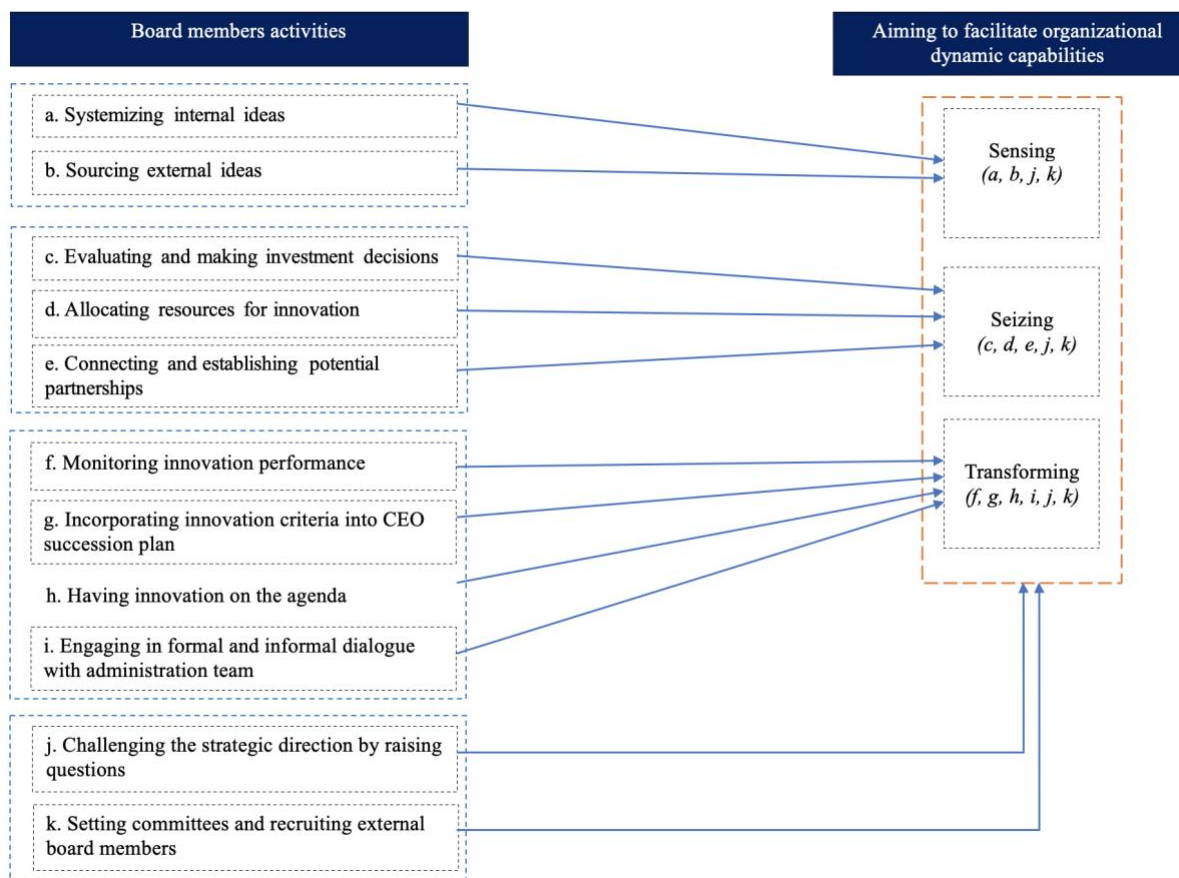


Figure 4: Model of Boards' active involvement to facilitate innovation within established firms

This model incorporates eleven activities that are grouped based on their influence on organizational dynamic capabilities. The findings can be categorized into four groups:

1. Activities that explicitly facilitate “sensing” capabilities: (a), (b).
2. Activities that explicitly facilitate “seizing” capabilities: (c), (d), and (e).
3. Activities that explicitly facilitate “transforming” capabilities: (f), (g), (h), and (i).
4. Activities that facilitate all three clusters of organizational dynamic capabilities: (j), (k).

## 4.3 The board involvement in organizations' innovation

### 4.3.1 Board's active involvement

In this section, we present activities undertaken by board members who are actively involved in facilitating, enabling, and supporting innovation within the organization. These activities can be linked to the organizational dynamic capabilities of sensing, seizing, and transforming. Through our interviews, we have discerned that the board members engage in these activities with an aim to contribute to the development and utilization of these dynamic capabilities.

For each type of activities, we describe what board members do and provide empirical evidence through pertinent quotes.

**a. Activities that facilitate, enable and support sensing capabilities.**

To facilitate, enable and support sensing capabilities, the Boards engaged in two activities: systemizing internal ideas and sourcing external ideas.

- **Systemizing internal ideas to enable sensing capabilities.**

A number of board members in the study highlighted the significance of implementing a systematic approach to stimulate idea generation and facilitate the adoption of ideas within the established firm. Informants L and P agreed that the board's responsibility is to make sure that the organization possesses a structured system for gathering ideas and appropriate processes to manage these collected ideas.

*“I think the board's role should be of making sure that we have institutionalized processes”*  
– Informant P

*“And so that's where the good ideas come from, (...), so [the board should make sure] have a good system to pick up the good ideas”* – Informant L

Notably, one board member described how they actively participated in the development of a systematic approach aiming to capture ideas across the hierarchical levels in the company:

*“As one example, I use a QR code so they [employees] can go into mind mapping, a word exploration thing, and drop their ideas, and I can see how it evolves by random participation from the lowest level in the company, those who practically do the actual stuff and up to management and leadership basically”.* – Informant M

With the establishment of these systems and processes, certain board members expressed the belief that the board should play a role in promoting the adoption of these systems within the organization. This is to encourage the utilization of the system so it can bring back the expected result.

*“I mean, the management is the best part of that working relationship to define and actually design that process. The board's role should be to nurture it and encourage it...”* - Informant P

Also, to enforce the system, a board member also suggested that the board should require the management team to report on the effectiveness of the system.

*“...also, to make sure that the management reports on KPIs that actually show that the innovation rate is high and increasing or if it’s low, that is improving steadily and that they use (...) sufficient efforts in the management team to actually improve innovation.”* – Informant P

This point is proved by another board member who recounted an experience in a company where the informant held a role as a director, in which they felt demotivated because their ideas were not listened to or supported by the board. This experience led the board member to become attentive to the need to listen to those closest to where the innovation takes place.

*“... I’m coming with all these ideas, but no one listened and then that’s very demotivating. So have a good system for it and listen to the people close to the customers because they were here.”* – Informant L

Another board member expressed their support for the company's system by participating in a series of workshops and collaborating with other employees. However, this board member acknowledged that this level of involvement is not commonplace, suggesting that it may be attributed to the specific company’s unique culture and ownership model.

*“There is a strategy process. and it’s very collaborative. The administration gathers ideas from the whole organization. They have a series of workshops. [...] And we as board members we were invited in that process alongside the employees. But again, I think this is not very common. It’s very special for this culture and this ownership model.”* – Informant F

In addition to ensuring a system, board members claimed that delegating decision-making authority to lower organizational levels can empower employees and encourage them to identify new opportunities.

*“Put decision on a lower level. Because the contact with the clients is in different locations locally, you need to have people who are able to take decisions locally”.* – Informant G

- **Sourcing external ideas to support sensing capabilities.**

Our informants provided insights into various approaches for sourcing external ideas and identifying new opportunities within the established organizations. While some board members



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supplied important external perspectives and information, others more actively connected the firm with externals to source ideas or used their own networks to create connections.

Our informants expressed different ways to supply the organization with external perspectives and information, including attending external summits organized by industrial consortia:

*“We were there (the summit) to discuss with the different organizations, the [Consortium Name] and also with the Norwegian European Union delegation.”* – Informant A

or through catching up with their connections:

*“Many of the opportunities I have found have been things that just came up when I was out talking to people about other things.”* – Informant F

or through white papers/market reports:

*“We get markets reports where we see the changes in the market and also reports on what's going on and possibilities.”* – Informant E

Other board members in our interviews actively connected the firm with externals, which may not be in their network, to source ideas. This was done by connecting the firms with similar organizations in the industry as a source of learning:

*“We have reached out to our sister organization in [Country name], for instance. We have visited them to see what they're doing to invent new products and to offer, to strengthen the value offered (...). And we've gotten some really good ideas from them.”* – Informant B

or inviting the right people to the firm:

*“So, I had [a consulting firm] to come to this annual strategy and meet to talk about customer-centric strategies meeting the future demands of the next generation.”* – Informant M

or exerted knowledge and expertise sharing with the management team:

*“I'm sharing reports that I used to follow, for example, industry reports and that I still use to follow as part of my role in F3 and that I still monitor [...]. I share them with the administration.”* – Informant F

Moreover, board members mobilized their own networks to create connections that could support the organizational sensing capabilities:

*“I am a director R&D in Q1, which means that I have a lot of contact and networking both national and internationally and that's what I contribute back into this board... I can see in my area; this is the international and national trends.” – Informant Q*

*“We will make sure that management have the right people, we will connect them with the right people and using our network jointly to make sure that, OK, there's a good idea. This can maybe be helped here and there. So, I think that's the role we are playing as a support to be open for it and to guide”. – Informant N*

With the board's member network, the board connections can play a vital role to enable the sensing capabilities.

*“The innovation project started through connections of the chair of the board.” – Informant A*

## **b. Activities that facilitate, enable and support seizing capabilities**

To facilitate, enable and support seizing capabilities, the Boards actively participated in three key activities: evaluating and making investment decisions, allocating resources for innovation, and connecting and establishing potential partnerships.

- **Evaluating and making investment decisions to support seizing capabilities.**

According to several informants, the board's role often entails making crucial decisions, particularly those pertaining to significant investments.

*“[...] the role of the board is of course to evaluate what the proposals are and allow investments and building a business case [...].” – Informant N*

*“[...] the administration sees in this sector we could establish [new initiative], and see the possibility to fund it, that [large investment project] would be on the board to take the decision. But smaller initiatives are done by the administration themselves”. – Informant G*

Furthermore, they also explained to us why the board declines certain projects. This may occur either due to insufficient financial resources or if the projects are misaligned with the organization's strategic direction. According to the informant, the board assessed different investment opportunities, considering factors such as the organization's vision, their belief in the technology, and knowledge of the market before making investment decisions.

*"And sometimes you have to say no also to ideas. Maybe because the money or maybe we as a board, we don't believe this is the correct direction. [...] So, we are looking at different cases and we are looking at different investments opportunities we look for, do we believe in this technology do we know the market?"* – Informant N

*"And for decision, we also need to see if that is one of the ideas will be able to fulfill their vision for the company"* – Informant G

In line with this, a chairperson underscored the significance of the board's decision-making process, given the inherent uncertainties and risks associated with innovation projects. This chairperson argued that if the board ignores ideas and avoids making a decision due to potential risks, the organization can fall behind. As such, the board needs to balance the need to mitigate risk with also being willing to take and share risk together with senior management.

*"And so maybe if you are more than 50% right, you should take the decision and you should move forward because if you just sit on your board and hope that it will pass and go over, then you can suddenly wake up one day and the world has just moved on [...]. So, I think to be brave enough to dare to do something that you don't know the full consequences of. I think that's also the important thing when you are a board member".* – Informant B

- **Allocating resources for innovation to facilitate seizing capabilities.**

A number of board members mentioned that the board has a crucial role in allocating resources and/or providing clear guidance on resource prioritization for innovation within the company.

*"I think that the most important task for us is to give a signal that this [innovation] is important to work with in addition to all the daily work (...) and to prioritize resources."* – Informant J

Informant E argued that firm executives and managers often had a diverse array of goals on their agendas, making it challenging to determine priorities, particularly in listed companies where short-term financial performance is a significant constraint. Without clear direction from the board, the administration may become overly focused on short-term gains.

*"If not [giving guidance], this [manager focus] usually the next year only [while] larger innovative initiatives span [...] over three to five years [to get profit], and with a lot of*

*hurdles and challenges in between. [...] So, board need to give clear direction on this [innovation project] is what the company need to prioritize” – Informant E*

Another board member collaborated closely with the administration team to allocate human resources, specifically identifying individuals responsible for executing the plan. During the interview, it was observed that this firm operates with a small administration team, which can partly explain the board's deep involvement.

*“And that's also a very important point because when you have [different strategies], [...] we have appointed a responsible role in the administration to kind of own the plan and the initiatives that are connected to that”. – Informant B*

- **Connecting and establishing potential partnerships to facilitate seizing capabilities.**

Several board members mentioned their involvement in establishing potential partnerships for innovation projects. This action is different from making connections to update new trends and sense new opportunities as it entails more commitment and collaboration. Establishing and connecting firms to potential partnerships were mentioned to take place in the phase when the initiatives were deployed or about to deploy, and these partnerships were vital that they complemented or enabled the projects to get started or completed. This action is perceived by the board members as a pro-active and value-added activity to enable the development of seizing capabilities within the established firm.

*“...we guide the administration to some external partner that might be more helpful for the next stages” – Informant E*

*“... not only evaluating from behind but really being there and facilitating connecting people connecting the network that you have it. It's a lot about networking [...] I think that's the value added from the board perspective.” – Informant N*

More specifically, one board member highlighted their efforts in connecting the company with potential customers and partners who can enhance its offerings.

*“For [F1], I have done a lot of that, you know, connecting them with potential customers, but also with partners that can complement their own offerings.” – Informant F*

This activity was expressed by different board members in the board. Another board member also acknowledged the activities of establishing connections and networking conducted particularly by the board chairman.

*“For example, the board chairman. He spends more time in F2 than I do. And because his role is bigger, he has a big network, and he also opens doors to potential partners for the administration.”* – Informant F

### **c. Activities that facilitate, enable and support transforming capabilities**

To facilitate, enable, and support transforming capabilities, the Boards played an active role in four activities: monitoring innovation performance, incorporating innovation criteria into the CEO succession plan, having innovation on the agenda, and engaging in formal and informal dialogues with the administration team.

- **Monitoring innovation performance to facilitate transforming capabilities.**

In order to mitigate the challenges posed by agency issues and maximize the organization's capacity for innovation, several board members emphasized the importance of board oversight through a performance measurement system for innovation initiatives to ensure the right investment choices and effective asset orchestration.

*“So, there is more about governance and following up the investment to make sure that we are doing the right things and we spend the money where its most fruitful and needed.”* – Informant N

*“The board's role should be to nurture it and encourage it and also to make sure that the management reports on KPIs that actually show that the innovation rate is high and increasing. Or if it's low, that is improving steadily and that they use efforts, sufficient efforts in the management team to actually improve innovation”.* – Informant P

Furthermore, according to another board member, monitoring innovation performance also serves as a means to engage the administration teams in firms' initiatives.

*“[The board members] kind of made the mistake because we moved too far too fast in the board room, and we didn't have the buy-in from the administration. So, we kind of had to take a step back and make sure that the administration was involved and then we developed an action plan, KPIs, milestones, and so on for the work that they're doing. And we have budgeted to make sure that we can afford the actions and the projects and the initiatives [...]”* – Informant B

Establishing distinct KPIs for innovation that are separate from the KPIs for the core business was also mentioned by one of the board members because it enables board members to monitor

the progress of innovation separately without losing sight of the performance of the core business.

*“Board needs to encourage and monitor that the core KPIs for the core business not being forgotten, that we need to maintain [...] our weekly [or] monthly track on those to make sure that the core of the business continues to perform. And have different sets of KPIs for the new business or the innovation or the change part of the program.”* – Informant P

- **Incorporating innovation criteria into CEO succession plan to support transforming capabilities.**

Several board members revealed that their organizations lack a CEO succession plan. However, for those who do have such plans incorporated into their boardroom agenda, requirements that facilitate innovations are typically included.

We observed some boards strongly favored candidates with a background in innovation.

*“In [L3], innovation is definitely one of the criteria (...) because we are on a way that we need to change from how it was eight years ago. And so that's definitely a criterion for the CEO. In L1 it hasn't been that clear because when they were hiring the one CEO that's now, it was really about what competence and what network he had for starting updates. [...] But [...] innovation would be one of the things for the next one”.* – Informant L

*“[The new CEO] could be in part of some innovative project and have some experience (...) to be involved in changes and challenges, that have been a priority.”* – Informant E

In particular, other board members sought a CEO with the right skill set and characteristics that are capable of adapting to change. A chairperson expressed their preference for a CEO who possesses not only operational expertise but also the appropriate skills to effectively manage an agile company. Considering the ongoing transformation within their organization to enhance competitiveness and market relevance, there was a strong aspiration to transition towards a more agile organizational structure, which the new CEO would need to understand and support.

*“We have discussed regularly what qualifications the CEO should have in order to match the organization because we are going from the historical operational administration towards a much more modernized and agile organization. And the skill set that you will need when you are managing competency employees and more creative employees is another skill set than to just to run the business. [...] Things are changing, so that means we have to consider if the profiles we have as a whole in the administrations are the correct*

*ones to bring us into the future. I think the competency we already have is very operationally focused and we will need someone new if we were to change or to replace the CEO [...]*” - Informant B

Others emphasized the importance of suitable characteristics for innovation when considering CEO candidates.

*“Someone who really understands how we need to transform and how technology will change radically, how we approach things both from a customer and a production perspective. Then I know that innovation will become natural in that direction because it's within the soul of the person who directs it.”* – Informant M

*“In every company that I am on a board, there is always a succession plan [...] there's always a #2 and #3 that could potentially go grow into the role. [...] It's not always a criterion, but it has to be an open-minded CEO to new innovations [...] we don't have to expect them to be the innovator [...] but we expect them to nurture the process, to be able to let other innovations would come up, and make ideas happen in the business. And I think that's a quality I'm looking for in a CEO that is open to new ideas that is open to facilitate people and listening and then making decisions and not the other way around [...].”* – Informant N

- **Having innovation on the agenda to enable transforming capabilities.**

Certain board members emphasized the significance of having innovation on the agenda and/or incorporating innovation into the organization's strategy to steer the organization toward a continuous journey of innovation.

*“It's about setting direction so if you want to do something different [...] It starts with direction from the board. [...] the board says we need to move into the [innovative direction]. We need to be prepared for what's coming [...] Then we set direction through the strategy. We tell management we want to go in this direction”.* – Informant N

Sometimes, the request to put innovation on the agenda may come from the external board members.

*“[...] we [two external board members] came in with a clear mandate to actually drive that [innovation] agenda”.* – Informant F

A board member mentioned that their boards even had discussions outside of formal board meetings, allowing for additional dedicated time for innovation.

*“We've been discussing in the borders, of course, to have more set aside time [...] to look at the strategy and look at the innovative capabilities we have and the changes taking place”.* – Informant E

Furthermore, Informant N also expressed that they separated innovation strategies from core business strategies in board meetings so that both can be treated differently and monitored separately, ensuring that the core business is not forgotten while pursuing innovation initiatives.

*“We have split out [innovation and core business] where we treat them kind of separately in the board meetings because what makes the money is [core business] still and the others are initiatives where we don't have a huge income yet. So, it's more like investing and looking for the best opportunities. So, [...] following separately these new initiatives at the same time keeping an eye on what's actually creating value at the moment”.* – Informant N

- **Engaging in formal and informal dialogue with administration team to facilitate transforming capabilities.**

A number of informants claimed that it is important that board members collaborate with the administration team in order to foster innovation. The chairman plays an important role in this collaboration as they serve as an important link between management and the board, and they are more involved in conversations with the CEOs.

*“The CEO and the manager of the board to have these informal discussions, which I think is important”.* – Informant L

One of the board members was, in addition to being a board member, a CEO in a different firm. They communicated every week with the chairman of the board, and they discussed a lot about the company's strategy that the board decided.

*“And the communication between the chairman of the board and the CEO was like every week. So, we used these conversations every week to set the stage and set what kind of capacity we have to take on new ideas now”.* – Informant I

The involvement of the board can also be more informal, such as by supporting the administration team on various occasions. Specific points may be followed up by one or two board members.

*“In between that, it's either specific points that are followed up by one or two board members, [...] might be just informal conversations and help with the adjustment*



*onboarding of new suppliers or something like that. And of course, the chairman has a bit more often contact, especially before and after board meetings as well*". – Informant E

One board member recalled how they worked alongside the CEO in changing the organization from silo-based structure to a more agile one in order to foster innovation.

*"[...] you have to work more agile to be able to foster innovation [...] So that's the main thing and that's we are moving in that direction. But then I have to really work both through but also a bit beside the CEO to get that to happen"*. – Informant F

Informant E believed that since the board is composed of individuals with diverse experience and in-depth knowledge, the management team could benefit from the board's advice.

*"We as a board, of course, need to hear [the administration] them out and understand their position and the need to focus on the daily operations as well. [...] And [...] giving more advice since we're a mix of people that have other kinds of competence and more in-depth knowledge."* – Informant E

There were also examples of how dialogue was organized through board work:

*"We often go out in breakout sessions where the board members and the top management are placed together in groups split up groups and after will have good discussions"*. – Informant K

When engaging in collaboration with the management team, board members acknowledged several aspects that require careful consideration. Firstly, they should avoid doing management jobs and dictate to the management what to do. Rather, the board's role is to focus on motivating a desire for transformation. It's important that the management team can own the solutions so that they want to involve.

*"The board's main responsibility [...] is not to tell the management what to do, but to ask questions. Because again, the management needs to own the decision and own the solution. So, if they see the solution themselves or what they need to do, they're much closer to the problem or the issue that we're discussing. So what's important is that when the board leaves the board room, [...] management [...] need to own the solution and the direction."* – Informant P

*"It's getting them to want to change in a way, not order them to do so"*. – Informant D

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If the board members get too involved in the daily business, there is a risk that board meetings focus on daily business rather than seeing the big picture.

*“I think on most boards the problem will be that you get too occupied in the daily business. Too many details about the daily business, and some boards get too focused on the day-to-day business and they're starting over, sometimes doing management jobs and I've been in boards like that and there's always a hassle because we talked about totally wrong things.”*

– Informant N

Secondly, board members are advised to exercise caution in avoiding the bypassing of management levels and undermining the authority of the administration. Instead, their role is to provide support to the management, without tempting to control or replace them.

*“As a board member, you need to be very careful, you know, not to skip the level. You are there to support the administration and not to degrade them or to involve if they don't want to be involved”.* – Informant F

However, four informants (L, F, M, and B) described that they had more in-depth discussions and involvement with the administration team. From their descriptions, four different reasons behind this close collaboration can be identified: small administration team, lack of capacity in the administration team, having an operational-focused CEO, and the ownership structures of the company.

*“In [L1] we are involved because they're quite a small administration and they have a CEO and the economic director, which also takes care of administration. So, they're quite a small administration. So, they really need to discuss things with us”* – Informant L

*“I have worked one day a week together with people inside the administration. Started with being part of formulating the strategy, strategic workshops and developing options [...]. And that [F1] didn't necessarily have that capacity, but maybe not someone suitable to do the parts that I have done in-house. So, it's not something that is very formally described in the role [...]. It's just the context situation just make it happen”.* – Informant F

*“The CEO is not the typical strategic innovation-focused leader. She's very strong on the administration, the operation, and keeping the wheels spinning tasks. So [innovation] has been one of the areas that we [the board] have been working very closely on [...] to encourage more change and more innovation than the ways things have been done and executed from day-to-day”.* – Informant B

*“I work with management when we're making a list of 15 key points to focus on to navigate through a hard time, I make sure that the innovation bullet points [...] are part of that list”.*

– Informant M

#### **d. Activities that facilitate, enable and support all categories of dynamic capabilities.**

To facilitate, enable, and support all three clusters of organizational capabilities, the Boards actively engaged in two activities: challenging the strategic direction by raising questions and establishing committees and recruiting external board members.

- **Challenging the strategic direction by raising questions to enable dynamic capabilities.**

As once mentioned by board member P, one approach the board members exerted influence and attempted to foster innovation was by challenging the management team and asking pertinent questions, which lead the management to rethink and reflect. This action facilitates the organization's utilization of sensing, seizing, and transforming dynamic capabilities, depending on the specific challenges at hand. This action is also recognized as one of the main roles of the board.

*“A big difference between being in a board position and being in an executive position is that as a board member, we influence by asking questions. It's the questions we ask. And that challenges things by asking the right questions.”* – Informant F

*“I think one of the main roles over the board is to challenge. So yes, we challenge, and we're challenged quite a lot.”* – Informant K

Here, we present several quotes from our interviews that exemplify how board members challenged the strategic direction by posing questions, thereby fostering the application of all three clusters of dynamic capabilities within their organizations.

- **Challenging to enable sensing capabilities.**

By questioning the strategic direction, board members have the potential to empower or compel the management team to uncover and explore novel opportunities that go beyond their usual business routines.

*“We made this form that we wanted all the projects [...] to write up a note with some questions so that we would get the same description from all the different projects. We want the company comes up with the best innovations with the best ideas on behalf of the clients*

*even if the client hasn't asked for anything. It's not an answer to say that we don't have anything to give them because of course we have, we need to have. It makes them reflect. It makes them think*" – Informant K

*"So, I feel that I'm pushing the strategy forward. I'm challenging the company to look at opportunities outside of the current business."* – Informant I

- **Challenging to enable seizing and transforming capabilities.**

The board's involvement is crucial not only in sensing the right opportunity but also in seizing and transforming the organization for continuous renewal. This process necessitates their active engagement in challenging different solutions and offers.

*"I'm very development focused. And I get very eager to move on when people say we can do this next year. My first question will be why can't we do it this year and what's hindering you from taking a small step in the right direction? What do you need to make something happen here and so on?"*. – Informant B

*"So, what we have done is we had some strategic sessions with key members of the administration, CEO and CFO, and marketing director. And get all the input and challenging them on the long term, need of changes and innovation. And from that we have established strategic plan that we have been following up on for the last 1 and ½ years"*. – Informant E

- **Setting committees and recruiting external board members to enable sensing, seizing, and transforming capabilities.**

A number of informants argued that by establishing committees, board members and administration can work together more often. According to them, setting up committees within the board allows for focused attention on specific areas of interest and expertise and serves as a means to bypass the rigid boardroom structure. Depending on the topic discussed with the committees, it can facilitate all three clusters of dynamic capabilities by providing guidance, monitoring progress, facilitating the allocation of resources for innovation projects, etc.

*"We have this XX [Committee name], it's kind of an advisory committee to the CEO, which consists of board members"*. – Informant K

*"So those board members who really want to engage in it [innovation] or have the competence [...] can work directly with management actually engaging in it [innovation]"*

*and then bridge strategy and operations through this task force [committee] that includes both board members and management as one team”.* – Informant M

*“We’re setting up a tech committee and they have regulatory meetings outside the boardroom and outside the management structures. We meet every second week for half an hour or an hour and then we have production meets every second month or something like that. So that’s the one way to bypass the older board, more rigid board members...”* – Informant M

In addition to committee work, the board member also argued that recruiting external board members with specific knowledge and background would be beneficial for their organization's issues.

*“It has a lot to do with ENS and technological issues, environmental natural and social issues and the technology thing. I’ve been pushing really hard to get two new external board members one with a sustainability and customer-centric profile and another one with the CTO Technical Innovation profile.”* – Informant M

This point is supported also by another board member, who explained that their experience and background was the reason they had been selected to the board also why they had a great influence on strategic issues.

*“[The board] wanted someone who understood the market trends in the industries that they operate in, someone who can help drive the innovative spirit in the company and help stretch the company. It was the type of word they actually used when they looked for and ended up being me. So, it was a conscious choice from them. In my experience, they are, to a large extent, influenced by the opinions that that we externals come with very often because it is precisely the external perspective and putting decisions in a larger context and that we actually bring to the table”.* – Informant F

### **4.3.2 Board’s limited involvement**

In addition to the aforementioned facilitative, enabling, and supportive activities that contribute to the development of organizational dynamic capabilities, several informants, in their capacity as board members, expressed a more limited engagement in fostering innovation within the firm. Through our interview process, we have identified various factors that may impede the board's active involvement in innovation. These are important both as explanations for why board involvement may differ, but also as potential conditions necessary for boards to take on an active

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role in fostering innovation within established firms. We have distinguished between external factors and internal factors.

### **a. External factors**

Based on our analysis, we identified two external factors that help explain the limited board involvement in innovation within established firms. These are presented below.

- **Perceived absence of industry threats**

Informant H highlighted that the limited threat posed by new innovations in their organization's industry had led to a lack of discussion about innovation within the boardroom. The absence of perceived industry threats diminished the urgency and relevance of innovation discussions.

*“New technology could be a threat, but then it's more like if another Research Institute that's also doing, for instance [Competitor Name], by new technology and will be more efficient, getting better results and thereby writing better applications or being more... That the industry will see, OK, we can get the same results cheaper. Then it can be a threat”. – Informant H*

- **Regulatory constraints**

Some industries are constrained by regulations, and thus not allowed to radically deviate from today's business. One board member mentioned the inherent stability of their business, which is accompanied by a high level of regulation. These regulations place significant constraints on the company's activities, limiting their ability to explore new avenues, and thus, lowered the level of board involvement.

*“This business is quite stable, and it's so highly regulated. So, we don't have a lot. We are not allowed to do very much. Also, we can't take more money in than we are using. So, it's also like why we should innovate too much in this, why don't we focus on the things that we actually can make a profit on” - Informant O*

### **b. Internal factors**

In addition to the two external factors for limited board involvement, we found five internal factors. These are presented below.

- **Lack of time on board**

Several board members expressed that their limited involvement in innovation discussions was due to time constraints resulting from the need to prioritize their engagement in ordinary core business activities. This left them with limited time to dedicate to innovation-related topics.

For instance, one board member ascribed the limited time for innovation to few meeting points:

*“as a board member, you just meet sometimes during the year so you're not able to do more than join in these meetings and discuss”.* – Informant I

Taking an active role in innovation may thus require additional board meetings. During our interviews, when we inquired about potential areas for improvement in their board roles to foster organizational innovation, another board member focused on the time allocated within each meeting and expressed a desire to allocate more time for discussions on innovation.

*“I think that often we don't have enough time, basically because there's so much reporting. [...] you have 100 pages you should read before the board meeting with different reports. You kind of miss maybe the important things. So [...] when you go through all the reporting, just go to what is not right, but all the things that are good, you don't need to use time on that and have time on the good strategic discussion. So I think more time for the good strategic discussions both on innovation and other things definitely things that I would like to work more on”.* – Informant L

- **Low investment in innovation activities**

Another reason provided for limited involvement in innovation at board level was tied to investment decisions. One board member, holding a position on the board of directors of a research center, acknowledged that discussions pertaining to innovation had not been a focal point during their tenure, primarily due to the absence of innovation activities requiring significant investments.

*“No, the board has not been involved in [innovation] discussion during the time I've had been on the board. That was from 2018. So, I think that the board will be involved if they're thinking about commercializing the technology or the results wanting to, for instance, start a company and start-up. Then I think that that will because that will cost money. And then the board will be involved in discussing the possibilities of taking this, for instance, technology further.”* – Informant H

- **Lack of diversity in board composition**

Yet another reason had to do with board diversity. Informant H felt the need for greater diversity in board composition to foster innovation. This board member expressed concerns over the similarities in competencies among board members, particularly in terms of nationality.

*“[Board members] competencies are not different enough, I think. They're too much of the same like...Most boards have only Norwegians, for instance. [...] In all the boards that I've been a member of. It's been only Norwegians. [...] So far, I've learned that we should have broaden different competencies in the boards in order to probably be more innovative [...]”*. – Informant H

- **Influence of CEO dispositions**

When posed with the question of whether boards should explore new ways of involvement within companies beyond their traditional roles of governance and monitoring, Board member F, an individual actively engaged in innovation activities, highlighted the significance of the CEO's personality in shaping the board's level of involvement. This emphasis on the CEO personality may also shed light on differential use of board competencies at a more general level.

*“I think it very much comes down to the personality of the CEO. Some CEOs really want to use the board as an extended advisory group and use them very active in creating ideas. [CEO in F1] is an example of that. Just that type of personality that's probably also an important reason why this happens. And, most Norwegians, or mainly Norwegian, or at least in the IT industry, I've seen more CEO like that, who see the board as a resource and want to involve them and use them as an extended part of the team. Whereas some CEOs don't want that. They want to work with their team because they see it as a distraction or that it's not their style”*. – Informant F

- **Delegating discretion to administration team**

A final internal reason for limited involvement in innovation could be that the board wishes to provide autonomy for the senior management. One of the board members mentioned that the role of the board should be more overarching and less involved in the specific area of innovation. According to the board member's view, board members should grant discretion to the management, allowing them to make decisions related to innovation, while the board focuses on monitoring and controlling the management's actions. Additionally, if the administration requires resources for their initiatives, the board should provide the necessary support.



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*“But I think the board should not engage in certain projects I'm very convinced that it's important for us to have this overall role that we have to create frameworks, we have to create resources. But not to go very deeply into to what this work with on a daily basis. So, we have to put the innovation on the agenda, but we are not the ones who are going to run the innovation processes”.* - Informant J

## **5. Discussion**

*This section discusses our empirical findings in relation to existing literature. We compare and contrast our findings on the contribution of board members to innovation in Norwegian established firms with the insights from previous studies. We also highlight how our empirical analysis aligns with, contradicts, clarifies, or offers novel insights to the existing research in this field.*

### **5.1 How involved should the Board be in innovation?**

Our above analysis identifies specific activities undertaken by board members to influence organizational innovation in established firms, thereby confirming the board's ability to exert influence in this area (Huse, 2007; Wu and Lee, 2007). We argued and showed that board directors exhibit two types of involvement: active involvement and limited involvement. We were most interested in how board members could actively contribute to innovation in established firms, since previous research has shown that innovation in such contexts can be challenging. We offer a systematic approach for analyzing the board's contribution to organizational innovation. To analyze the type of impact board members' activities, have on organizational innovation, we integrated these activities with the dynamic capability framework (Figure 4). This allowed us to explore how board involvement contributes to the organization's ability to sense, seize, and transform. By bridging board member activities with the dynamic capability framework, our study brings a novel contribution to the literature on board of directors showing how board members can facilitate, support, and enable organizational dynamic capabilities.

With the identification of two levels of involvement, the question arises as to whether the Board should pursue active involvement or limited involvement. Our suggestion is that the Board should pursue active involvement, as these activities facilitate, enable and support organizational dynamic capabilities and, consequently, aim to influence company innovation. While some may argue for limited involvement and greater managerial discretion, in line with Ben Rejeb et al.

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(2020) and Faleye et al. (2011), our findings indicate that the board can simultaneously engage in active involvement while granting managers autonomy. More specifically, when examining the activities associated with "Formal and informal dialogue with administration" in the context of active involvement, we found that board members were mindful of avoiding excessive involvement in management responsibilities or dictating specific activities. Instead, they granted managers greater autonomy to take ownership of their plans. This suggests that granting manager discretion can coexist with the active involvement from the board.

However, we acknowledge that there are factors which may hinder the active involvement of the board in facilitating organizational innovation, and these factors need to be taken into consideration when determining the level of board involvement. Therefore, we have identified several factors that contribute to the limited involvement of the Board. It is worth considering whether these factors are objective or if they are merely excuses perceived as reasons for their limited involvement.

In the subsequent sections, we delve into a detailed discussion of both limited involvement and active involvement, aligning them with existing literature.

## **5.2 Board Involvement Discussion**

### **5.2.1 Board's Limited Involvement**

*In this section we discuss our findings pertaining to the topic of granting more discretion to managers, which represents one of the contrasting views in the literature on the involvement of the board in innovation. We delve into the factors that contribute to the limited involvement of the board of directors in the innovation process and compare our findings with the existing literature on this topic.*

Our research reveals that board members who exhibit limited involvement in innovation face challenges stemming from both internal and external factors, which hinder their ability to actively participate in the innovation process. These findings challenge the perspective put forth by Ben Rejeb et al. (2020) by suggesting that limited board involvement in innovation is not solely attributed to the delegation of discretion to management. Instead, the study reveals that board members face various constraints that hinder their active engagement in innovation.

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## **a. External factors**

In terms of external factors, our study identified two factors that are influenced by external forces outside the organization, namely the perceived absence of industry threats and regulatory constraints.

- **Perceived absence of industry threats**

Our study shows that in industries where there is a lack of innovative competitors, the board may not perceive a pressing need to dedicate substantial time to discussing innovation during board meetings. This sentiment was evident in our interviews with board members, as there was a consensus that the Norwegian market is relatively friendly and less competitive compared to other markets. This context provides organizations with more time and a certain level of protection to navigate new changes and foster innovation. As a result, the board may not actively engage or involve themselves in activities that facilitate innovation within the organization.

However, it is important to recognize that in the absence of innovative competitors, there lies a tremendous opportunity for the organization to surpass its rivals and become the first innovator in the market. Merely benchmarking against competitors can lead to the risk of becoming a follower or falling far behind the true innovators. A notable example is when Ford, GM, and Chrysler, who once dominated the American automobile market, primarily looked to each other as their main competitive reference points. This approach left them vulnerable when Toyota entered the market with a new model and swiftly captured a significant market share. Therefore, we argue that even in the absence of industry threats, the Board should still maintain an appropriate level of involvement to facilitate organizational dynamic capabilities, particularly related to sensing, which creates innovation opportunities (Schoemaker et al., 2018).

- **Regulatory constraints**

The presence of extensive regulations in the organization's industry creates significant barriers for both the organization and the board to actively engage in strategic decisions related to innovation and the pursuit of new opportunities. During our interviews, we discovered that the organization is not lacking in ideas; however, executing these ideas becomes more challenging due to specific regulations that impose requirements and approval processes by regulatory bodies. These regulatory constraints make innovation initiatives time-consuming and resource-intensive for companies venturing into such endeavors. The added costs and uncertainties

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introduced by these regulations can stifle innovation within the organization, impacting its ability to explore and invest in new opportunities.

Consequently, these regulatory requirements impede the organization's ability to fully embrace innovation, leading board members to perceive a diminished need for active involvement in innovation-related matters.

## **b. Internal factors**

In addition to external factors, our findings show that internal factors also can hinder board members to actively engage in innovation. Internal factors refer to those factors that are internally driven and originate from within the board or administration team of the organization.

- **Lack of time on board**

Our findings demonstrate that a lack of time among board members, stemming from factors such as a limited number of formal meetings or extensive reporting requirements in the boardroom, can hinder their involvement in strategic decisions of the company, particularly in the context of innovation as examined in this study. This is supported by Ruigrok et al. (2006) who discuss lack of time as a potential constraint for the board of director's involvement in strategic decision-making.

However, it is noteworthy that many board members, who are actively involved in innovation, have mentioned that they regularly hold both formal and informal meetings, indicating their commitment to allocating time for innovation-related discussions beyond the formal requirement. Furthermore, the fact that several active board members mentioned to us that they actually spent more time than expected from their positions during our interviews raises a question regarding the time constraints faced by the board. Can board members take measures to address this issue? It is normally within the authority of board members to determine the frequency of board meetings throughout the year and the extent of time dedicated to strategy and innovation discussions during these meetings. This authority allows board members to prioritize innovation-related topics and allocate appropriate time to delve into strategic discussions. Board members can also assess meeting efficiency, ensuring that time is used effectively. By doing so, board members can identify areas for improvement, eliminate unnecessary or redundant discussions, and ensure that valuable meeting time is dedicated to addressing key strategic issues, including innovation.

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- **Low investment in innovation activities**

The research outcomes reveal that the board of directors refrains from participating in innovation endeavors unless there is a necessity for commercializing the innovations within the market. This is attributed to the fact that the commercialization of innovative activities entails significant investments that amplify associated risks. As a result, the requirement for board involvement becomes more pronounced, as board members are tasked with making crucial decisions when confronted with heightened risks. This finding is consistent with studies that highlight the significant role of boards in risk governance and management (Lipton et al., 2011).

However, we claim that it's important for board members to consider whether the limited investment in innovation activities is due to board members limited involvement. Without full board support, management is unlikely to take the bold actions necessary for innovation (Hill & Davis, 2017). Our findings on board active involvement align with this perspective (see finding in "Allocating resources for innovation"). Thus, the limited investment in innovation activities can possibly be attributed to the board's limited involvement.

- **Lack of diversity in board composition**

Lack of diversity, particularly in terms of nationality, is identified as another factor that prevents boards to involve more. Our findings indicate that a lack of diversity in board composition can result in board members possessing similar competencies, ideas, and perspectives. This homogeneity limits the introduction of fresh insights and novel viewpoints into boardroom discussions.

This finding finds support from prior research highlighting the positive impact of board diversity on organizational innovation (Fernández-Temprano & Tejerina-Gaite, 2020; Tang et al., 2021; Luo et al., 2021). However, the relationship between board diversity and innovation remains contentious, with contradictory results in existing studies (Makkonen, 2022; Khan et al., 2021). Nonetheless, our findings prompt another question: Does the lack of diversity, particularly in terms of nationality, mediate the board's activities and their level of involvement in innovation? Further research is needed to clarify this aspect.

- **Influence of CEO dispositions**

Our findings highlight the important role played by the CEO in influencing board members to become more engaged in innovation which is related to the personality and preferences of the CEO. The CEO can serve as a catalyst for board involvement in innovation by utilizing board

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members as an advisory body and actively seeking their input, ideas, and perspectives. The existing body of research has primarily focused on examining the roles and responsibilities of boards and their relationship with CEOs (Boyd et al., 2011).

- **Delegating discretion to administration team**

One of the identified internal factors limiting board involvement in innovation is the board's preference to refrain from active participation in innovation. This preference arises from their perception of their roles within the organization as being more overarching in nature. As a result, the board may opt to delegate the discretion and responsibility for innovation to the administration team. The reason mentioned aligns with the viewpoint advocated by Ben Rejeb et al. (2020), who argue that when boards become heavily involved in monitoring management, it can lead managers to prioritize short-term gains which negatively affects innovation. The paper suggests that boards should provide more discretion to the management team, enabling them to focus on long-term innovation projects.

However, according to our findings, some board members view their role as not centered around involving in innovation. Therefore, they may believe that the responsibility for developing innovation within the firm lies with the administration or management not themselves. In this case, board members delegate discretion to the administration solely to refrain from having any responsibility in innovation because they do not see fostering innovation within their board roles, rather giving discretion to the management because they want management to focus more on the long-term benefits derived from innovation as stated by Ben Rejeb et al. (2020).

### **c. Summary**

These factors, stemming from both external and internal sources, pose a challenge for board members, including those who are enthusiastic about promoting greater innovation within their companies. However, it is important to consider whether these barriers are objective realities or subjective perceptions held by board members, which can be addressed to encourage active involvement.

For example, concerning industry threats, it is possible that board members have not thoroughly examined the competitive landscape of the company, leading them to mistakenly perceive it as stable. Nevertheless, irrespective of the presence or absence of industry threats, the board's involvement can still bring value to the organization. This active participation can contribute to

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facilitating organizational dynamic capabilities, particularly in "sensing" which generates innovation opportunities (Schoemaker et al., 2018).

Regarding regulatory constraints, it is conceivable that interviewed board members perceive these constraints as excessively burdensome, thereby refraining from actively fostering innovation. However, in reality, the regulations may not be as severe as perceived, and alternative pathways or exemptions may be available to enable firms to innovate.

Similarly, in the case of lack of time on board, as discussed earlier, board members can evaluate their commitments and prioritize their involvement in facilitating organizational innovation.

Therefore, we suggest that board members deliberately assess these barriers to ensure they can adopt an appropriate level of involvement in fostering organizational innovation when possible. To provide a comprehensive view, the remaining discussion section will focus on examining the specific activities employed by board members who demonstrate active involvement in innovation and discuss how these activities can facilitate and support organizational dynamic capabilities using the existing literature.

### **5.2.2 Board's active involvement**

*In this section of the discussion, we discuss how the activities identified during the analysis phase contribute to the development of organizational capabilities using the existing literature. More specifically, we explore their impact on the three key clusters of dynamic capabilities, namely sensing, seizing, and transforming/reconfiguring.*

#### **a. Activities that facilitate, enable and support sensing capabilities.**

- **Systemizing internal ideas to enable sensing capabilities**

The process of sensing (shaping) new opportunities involves activities such as scanning, creation, learning, and interpretation (Teece, 2007). There are several reasons why a system for collecting ideas can facilitate organizational sensing capabilities.

Firstly, based on our research findings, it is apparent that new ideas and initiatives often originate from managers and employees who have direct interactions with customers. Therefore, establishing a systematic mechanism that empowers those managers and employees to share their ideas can encourage ideas generation. This is supported by prior research from Scott & Bruce (1994) and Tierney & Farmer (2004).

Secondly, Teece (2007) stated that as part of sensing capability, when opportunities are first glimpsed, entrepreneurs and managers must figure out how to interpret new events and development. They must assess various aspects of the opportunity in order to interpret the nature of the opportunity. By having a structured mechanism in place to collect ideas, managers gain access to a broader range of perspectives and information. This allows them to have more sufficient information to evaluate potential opportunities from different angles and consider a wider array of possibilities.

Lastly, Paulus et. al (2000) found that groups perform worse than individuals when it comes to idea generation. This implies that organizations would collect more and better ideas by adopting a system that allows individuals to separately generate ideas.

The benefits outlined above support our finding why the board exercised its authority to ensure the establishment of a structured system for gathering ideas and implementing appropriate processes to manage these collected ideas within the organization. Through this activity, the board provides support to the organization in identifying and shaping new opportunities, thereby enhancing the established firms' sensing abilities.

- **Sourcing external ideas to support sensing capabilities.**

Another action undertaken by board members that contribute to the development of the organization's sensing dynamic capability is sourcing external ideas.

According to Teece, (2007), search activities that are relevant to "sensing" include information about what's going on in the business ecosystem. In this regard, sourcing external ideas can be considered a form of "search" that enables the detection of changes and subtle shifts within the external environment. By sourcing external ideas, board members help organization to embrace information from potential collaborators, broaden its perspective beyond internal operations and gain insight from diverse sources about ongoing developments in the business ecosystem. This action plays a role in keeping the organization staying abreast of innovation happening in the market and evolving customer preferences. Therefore, the organization can be more proactive in sensing and shaping opportunities before competitors. As such, we contend that this activity strengthens the organization's sensing capability.

This argument is further supported by the notion of peripheral vision. Peripheral vision is considered crucial for organizations to sense change (Schoemaker et al., 2018). Developing a keen peripheral vision is to be able to anticipate and get ready for future changes and trends



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before they become mainstream or widely recognized by competitors. By sourcing external ideas, the board can help the organization to enhance its peripheral vision, and thus, sensing capability.

## **b. Activities that facilitate, enable and support seizing capabilities**

- **Evaluating and making investment decisions to support seizing capabilities.**

We found that many of our informants as board members were involved in decision-making tied to organizational innovation. Drawing upon our data and coupling it with several theoretical perspectives, we argue that the board's involvement in evaluating and making investment decisions related to innovation can support the organization's seizing capabilities.

Firstly, most boards are composed of members with high experience, expertise, and skills. Organizational seizing capability refers to an organization's ability to not only make timely but also quality decisions (Teece, 2007; Adner & Helfat, 2003). It is the capacity to make high-quality, unbiased but interrelated investment decisions and it requires tactic investment skills (Teece, 2007). Therefore, in theory, when board members exchange and consider all their unique knowledge and information, this collective expertise should enhance the quality of decision-making, resulting in improved decisions at the highest level of organizations.

Secondly, from an agency theory perspective, the board acts as a monitor, overseeing and scrutinizing the actions of the organization's executives to ensure alignment with the organization's objectives. When board members are actively involved in investment decisions, it can help mitigate potential biases within senior management for short-term benefits. This perspective may seem inconsistent with the findings from Fayelet al. (2011), which suggest that boards can lead managers to focus more on routine projects rather than riskier innovation projects with long-term benefits. However, we argue that, actively involving the board, together with the management team, in making innovation decisions can alleviate this issue. This is due to the fact that it provides an additional layer of checks, ensuring that decisions are made in the interest of the organization's long-term success.

Drawing upon these two theoretical perspectives, we contend that board involvement supports organizational seizing capabilities by leveraging the quality of investment decisions. This is in line with Gabrielsson & Politis (2006) research, which claimed that an effective board contributes to value creation by assisting managers in making crucial decisions.

However, empirical evidence regarding the decision quality taken by the board has yielded contradictory conclusions. Judge & Zeithaml (1992) found board involvement to be positively relative to financial performance after controlling for industry and size effects. However, Cofeng et al. (2021) found that board members, as a group, were unable to reach the objectively best decision because they were biased by the initial majority preference. Their findings also suggested that board members can become overconfident, emphasizing the need for caution when relying solely on subjective judgments in decision-making.

Furthermore, in terms of timing, board involvement in investment decision-making can result in longer decision-making processes. This is due to the hierarchical structures and bureaucratic features within organizations, particularly established organizations (Teece, 2007).

To address these issues, our findings suggest granting more discretion to management for smaller-scale investment. Nagji & Tuff (2012) introduced The Innovation Ambition Matrix, which claimed that firms pursue innovation at three levels of ambition: enhancements to core offerings which involves optimizing existing products for existing customers, pursuit of adjacent opportunities which entails expanding from existing business into “new to the company” business, and ventures into transformational territory which refers to developing breakthroughs and invent things for markets that don’t yet exist. In line with this classification, managers can be given autonomy to pursue enhancements to core offerings, as they typically entail lower risks and can be swiftly implemented without extensive bureaucratic decision-making processes that can slow down implementation. Thus, board members are more involved in evaluating and making significant investments related to adjacent and radical opportunities.

In conclusion, our findings confirm that board involvement in evaluating and making investment decisions in innovation contributes to organizational seizing capabilities to some extent. Still, we acknowledge the need for additional research to further investigate the impact of this activity on organizational seizing capabilities and innovation.

- **Allocating resources for innovation to facilitate seizing capabilities.**

When seizing opportunities, enterprises not only need to determine when, where, and how much to invest but also select or create a specific business model that outlines their commercialization strategy and investment priorities. Seizing capability emerges around organizational ability to override certain dysfunctional features of established decision rules and resource allocation processes (Teece, 2007).

Our research indicates that board members can enhance seizing capability by providing clear guidance on resource prioritization for innovation within the organization, which facilitates the resource allocation process. Interestingly, this finding initially appears to contradict the suggestions of Teece (2007) and Teece et al. (2016), who advocate for decentralized structures that grant resource control rights to managers to promote responsiveness. However, our findings complement their work.

By utilizing the framework of the Innovation Ambition Matrix (Nagji & Tuff, 2012), our findings propose that managers, with their expertise in current business operations, are responsible for controlling and orchestrating resource allocation for innovation fall into the core area of the matrix. On the other hand, board members offer guidance and support when innovation ventures into adjacent and transformational areas, ensuring that resource allocation aligns with strategic objectives.

Support for our findings can be found in Wong et al.'s (2017) study, which emphasizes the board's role in preventing the abuse of power by overconfident CEOs in resource allocation for innovation. Additionally, this activity aligns with a central part of a board of directors' role to ensure that the firm's executed strategy, that is, its actual resource allocation decisions, are consistent with the announced strategy (Schmidt & Brauer, 2006).

When we also found that a chairperson involved in the resource allocation process, but they only involved in mobilizing human resource, which is "*appointed a responsible role in the administration to kind of own the plan*". It is worth noting that in their organization has a small administration team, which may imply a limited capacity to handle certain tasks, making support from the board necessary and beneficial.

- **Connecting and establishing potential partnerships to facilitate seizing capabilities.**

Our findings indicate that board members' involvement in connecting and establishing potential partnerships can facilitate the organization's seizing capability. This action differs from sourcing external ideas, as it occurs during the deployment or pre-deployment phase of initiatives, where these partnerships are intended to complement or enable the projects.

Board members use their network to support the administration team in seizing opportunities. According to our analysis, by connecting the organization to its network, board members can support the organization in exploring and identifying complementary services or products,

finding new customers, and establishing new partnerships which help the organization to expand its reach.

Our finding is supported by various research. It aligns with Teece's research (2007, 2009) suggesting that the presence of complementary offerings, products, or services, can significantly enhance the organization's capacity to effectively capture opportunities. Past studies also provided numerous instances where firms form partnerships to efficiently capture new opportunities (Pandit et al., 2018; Alinaghian et al., 2020; Day & Schoemaker, 2016), and mentioned the role of the board in enabling the firm to access external resources for innovation (Chen, 2012; Chen, 2014; Kor, 2006). Leemann & Kanbach (2021) classification of dynamic capabilities includes partnering as a component of seizing capability.

### **c. Activities that facilitate, enable and support transforming capabilities**

- **Monitoring innovation performance to facilitate transforming capabilities.**

According to Teece (2007), the design and creation of mechanisms inside the enterprise to prevent the dissipation of profits by interest groups (both managers and employees) are very relevant to dynamic capability. He stated that the organization's strategic management is not only about how to generate revenue streams but also how to prevent them from being disputed or captured by various entities or groups inside and outside the enterprise. In this essence, we discovered that board members' activity of monitoring innovation performance plays an important role. This activity aligned with the control role of the board, which aims to mitigate agency issues. Moreover, we argue that this activity supports the organizational transforming capability.

To support the organizational transforming capabilities, researchers have advocated for the implementation of decentralized structures. This allows for greater responsiveness and flexibility, bringing top management closer to emerging technologies (Teece, 2007, 2012; Teece et al., 2016). Consequently, continuous adjustments (transforming) to product offerings, business models, enterprise boundaries, and organizational structures are facilitated.

According to Hales (1999), decentralized organizations place greater autonomy on decision-makers (managers in this study), allowing them to decide how and when they should use organizational rules and procedures in the case of contingencies. However, managers of these types of organizations should not have unconditional freedom to act as they wish (Hempel et al., 2012), and formal control should be implemented (Mintzberg, 1979) as decisions made by

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autonomous managers can be inconsistent and pose the risk of inefficient use of resources (Foss et al., 2015). These arguments support our findings that boards can diminish the risks associated with decentralization through monitoring. O’Grady (2019) further showed that in highly decentralized organizations, there should be transparent systems that ensure a good flow of information within the organization. Therefore, it can be argued that board members in these kinds of organizations may need to ensure the existence of such systems. In this way, it supports both seizing and transforming capabilities.

- **Incorporating innovation criteria into CEO succession plan to support transforming capabilities.**

We found that incorporating “innovation-related” criteria in the CEO succession plan to enable the organization to identify and recruit potential CEOs can support the organization’s transforming capability.

According to Teece (2016), transformation is more challenging in established organizations compared to start-ups. It requires breaking away from conventional modes of thinking and continuously renewing the organization, and the CEO plays a crucial role in articulating the need and direction for change. Previous studies by Adner & Helfat (2003) and Helfat et al. (2007) also highlight that top management team, particularly the CEO, play an important role in establishing and developing dynamic capabilities within the organization and in undertaking substantial reconfiguration.

Teece (2007) suggests that the organization is likely to benefit from the participation at the board level by individuals who can calibrate whether the CEO is sufficiently “dynamic”. The replacement of the CEO, if they demonstrate weak sensing, seizing, and reconfiguration capabilities is important to effectuate. This suggestion is supported by our findings as the board’s establishment of specific criteria in the CEO succession plan helps identify and nurture individuals with the necessary skills, knowledge, and leadership qualities to drive organizational renewal and enhance transforming capability.

- **Having innovation on the agenda to enable transforming capabilities.**

Our research findings indicate that board members play a role in driving continuous renewal and change within organizations. By prioritizing innovation and actively including it on the agenda, board members send a clear signal to the administration that innovation is a strategic imperative.

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This directive from the board influences the organization's mindset and encourages a greater focus on pursuing innovation.

In the context of established firms, where existing assets, knowledge, and structures may hinder investment in innovations (Teece, 2007), having a clear innovation direction from the board can lead the organization to pursue innovative opportunities. By prioritizing innovation, the board provides guidance to the organization, encouraging it to reshape itself and adapt to focus on innovation. Teece (2007) describes transforming dynamic capability as a process of continuous renewal that involves activities such as asset alignment, co-alignment, realignment, and redeployment. We contend that organizations that prioritize innovation and have it on their agenda are more likely to develop and enhance this transforming capability. By actively engaging in asset alignment, co-alignment, realignment, and redeployment, organizations can better position themselves to identify and seize opportunities in the market and fulfill the continuous need to modify product offerings, business models, enterprise boundaries, and organizational structures.

- **Engaging in formal and informal dialogue with administration team to facilitate transforming capabilities.**

Formal and informal dialogues between board members and the administration can contribute to enhancing organizational dynamic capability across all three clusters, contingent upon the context of these conversations.

We found that board members provided advice to the management throughout the organization's journey to identify and shape new market opportunities, thereby supporting the "sensing" aspect of dynamic capability. Additionally, board members offered guidance and support during organizational changes, such as the onboarding of new suppliers, thereby facilitating the "seizing" and "transforming" aspects. Furthermore, they assisted the administration in reshaping and restructuring the company, promoting adaptability and agility to keep pace with evolving market dynamics.

Our findings confirm Manso's (2011) assertion that the board should engage in comprehensive discussions with the management throughout the innovation process, providing timely feedback on strategies for subsequent developmental stages. Furthermore, our research aligns with Cortes and Herrmann's (2021) view that both board members and the top management team leverage their authority and positions to guide ideas throughout the innovation stages. They actively

contribute novel product ideas, select preferred innovation alternatives, and bring essential expertise to lead successful innovation efforts.

We also found that the chairman of the board holds a particularly significant role when engaging in conversations with the management. In fact, their role can be more prominent compared to other board members, as they tend to have a higher level of involvement in discussions with the administration. This observation is in line with several past literature (for example: Kakabadse et al., 2006, 2007) and underscores the crucial role of the chairman in facilitating and enhancing organizational dynamic capability through formal and informal dialogues with the administration.

Another noteworthy point arising from our findings is that board members, during these dialogues with managers, were conscious of not encroaching upon management responsibilities or dictating specific activities. Instead, they provided managers with greater autonomy to take ownership of their plans. This emphasizes that such dialogues should serve as a tool for complementing and offering feedback, rather than imposing mandates. This aligns with the viewpoint expressed by Ben Rejeb et al. (2020).

#### **d. Activities that facilitate, enable and support all categories of dynamic capabilities.**

##### **d. Challenging the strategic direction by raising questions to enable dynamic capabilities.**

Our research has revealed that the act of challenging the administration team through raising questions by board members plays an important role in fostering the development of all three clusters of dynamic capabilities.

According to our findings, when board members challenge the administration team, it prompts them to reconsider their perspectives and encourages a process of critical thinking and reflection. This finding suggests that this activity enables the administration team to adopt innovative approaches and think in new ways, thus enhancing the sensing capability. This is confirmed by Schoemaker et al. (2018), who suggest that the sensing capability can be strengthened when managers engage in reframing conventional thinking and adopt a broader perspective. We believe that through the act of challenging by board members, the administration team is encouraged to question existing assumptions and consider alternative viewpoints, thus fostering innovative approaches.

Moreover, our analysis reveals that this action not only contributes to the development of the sensing capability but also fosters the seizing and transforming capabilities of the organization. Our finding indicates that when board members challenge the administration to take proactive steps and move forward with strategic initiatives (see informant B), it aligns with the seizing capability of capturing opportunities in a timely manner (Schoemaker et al., 2018). By urging the administration to avoid unnecessary delays and seize opportunities promptly, the board members promote a sense of urgency, thereby enhancing the organization's ability to capitalize on favorable circumstances. Additionally, this action also supports the transforming capability as it encourages the administration to embrace change and adopt new strategies, allowing the organization to renew itself and redesign its routines in response to dynamic market conditions (Teece, 2007).

**e. Setting committees and recruiting external board members to enable sensing, seizing, and transforming capabilities.**

According to our study, establishing committees and recruiting external board members can contribute to enhancing the three clusters of dynamic capability within the organization. The formation of committees provides a platform for board members and the management team to collaborate more frequently and extensively, going beyond the limited number of formal board meetings held throughout the year. Our findings indicate that during committee work, board members have the opportunity to actively support the administration by giving input and guidance which help the administration to recognize and identify opportunities. Moreover, they can assist in resource allocation more effectively, ensuring that the organization allocates its resources strategically to capture identified opportunities. Finally, continuous monitoring of the organization is also an aspect of committee work. Board members can assess whether the organization is adequately prepared to undertake specific initiatives, keeping a close eye on the organization's progress and readiness for change. The finding is supported in many papers about the role of the committee, particularly the innovation committee (e.g: Robeson & O'Connor, 2013).

In addition, we found that recruiting external board members can serve as a catalyst for organizational dynamic capability across its three types. Particularly, when organizations recruit external board members who possess specific knowledge or experience in areas of focus, such as innovation, it can benefit the organization. The findings reveal that external board members brought fresh insights and perspectives to the company which can help the organization to think



more broadly. By having a diverse background, external board members helped the organization identify signals and trends in the external environment earlier than competitors. This early detection enhances the organization's ability to sense emerging opportunities and threats. Moreover, these external board members used their prior connections and networks to facilitate the organization's effective and timely capture of identified opportunities. This finding aligns with the detailed discussion in sections 5.1 b and 5.1 e of our study.

Additionally, our findings affirm that these external board members exerted considerable influence over the organization's strategic direction. They steered the company towards embracing change and fostering innovation, thereby enhancing the organization's transforming capability to adapt in line with the set direction. This finding is in line with the work of Garcia Osma (2008), which demonstrates that independent directors are likely to question managerial decisions and effectively prevent short-sighted R&D cuts.

## 6. Final Remarks

*This chapter provides a concise summary of the study's main findings and contributions to theory and implications for practitioners before discussing its limitations. Additionally, it suggests intriguing areas for future research.*

### 6.1 Conclusion

The objective of this study was to explore “*through what activities board members aim to facilitate innovation within established firms*”. To answer this question, we conducted an interview study with 18 key informants who work both as board members in different established firms in Norway and in other roles which work closely with boards. These interviews allowed us to gain an in-depth understanding of the activities that board members who are actively involved in promoting innovation within the company as well as the reasons behind the low level of involvement of the board of directors in innovation. The existing literature on organizational dynamic capabilities was used as the theoretical frame for our analysis, allowing us to show how different activities can be linked to these capabilities within the established firm.

The study's findings reveal two types of board of directors' involvement in the context of innovation. The first type is active involvement, where board members engage in various activities that can facilitate innovation within their organizations. The study identified eleven specific activities undertaken by these board members aiming to support and drive innovation. These activities are identified to facilitate, support, and enable organizational dynamic

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capabilities, including sensing, seizing, and transforming. The second type of board of directors' involvement in innovation is characterized as limited involvement. This type of involvement implies that certain board members are less engaged or active in driving innovation within the organization. The study found several factors, both internal and external, that contribute to this limited involvement and thus, shed light on why these board members may exhibit less engagement in fostering innovation.

## **6.2 Contribution to theory**

These findings have provided valuable insights in several domains. Firstly, the study contributes to the research on the role of the board of directors in innovation by offering a systematic approach to analyze the board involvement in organization's innovation. our study suggests that through active involvement, the board of directors can enhance organizational innovation by facilitating dynamic capabilities, which are crucial competencies that enable firms to not only invent but also innovate profitably (Teece, 1986, 2006).

This leads us to our second contribution. Our study complements the research on organizational dynamic capabilities. Prior studies predominantly focused on the role of managers in driving organization dynamic capabilities, overlooking the potential contribution of boards. We offer novel insights into the previously underexplored influence of board members on organizational dynamic capabilities.

Thirdly, the study offers additional insights into the ongoing tension in the literature regarding the appropriate level of board involvement in innovation. It reveals that the board can simultaneously engage in active involvement while granting discretion to managers. This indicates that granting discretion to managers does not restrict the board to a mere monitoring and approving role. Additionally, the study offers plausible explanations for the limited involvement of board members in firm innovation, shedding light on the factors that may impede their active participation.

## **6.3 Implication for practitioners**

This study offers several practical implications and value for board members in established firms. Firstly, it emphasizes the influence of the board in innovation within organizations by providing insights into the specific activities they can take to facilitate innovation. As a result, it offers valuable guidance and direction for board members of established firms who aim to drive and promote innovation within their organizations. By identifying specific activities that can

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foster innovation through facilitating dynamic capabilities, the study encourages and motivates board members to actively engage in the innovation process.

Furthermore, our research reveals the presence of two types of boards: those involved in fostering innovation and those facing challenges in engaging in innovation due to various internal and external factors. The activities and examples provided by board members who are involved in innovation can serve as valuable insights and guidance for those struggling to participate in innovation due to internal and external barriers.

## **6.4 Limitations and future research**

This study has several limitations that need to be acknowledged.

First, an important limitation is that the research participants exclusively consisted of board members from Norwegian established firms. While the use of theoretical sampling allowed for a heterogenous sample that can provide data and insights relevant to the research objectives and theoretical framework, it is essential to recognize that the majority of the informants were from this specific context. The cultural factors inherent in Norway, such as societal values, norms, and business practices, may influence the activities of board members in fostering innovation. Therefore, the transferability of this thesis to other regulatory, legal, and institutional contexts may be limited, as board activities can vary across nations. Similar future studies would benefit strongly from using a sample consisting of board members from different markets and countries.

Secondly, while this master's thesis has identified several activities adopted by board members that contribute to fostering innovation within established firms, it is important to acknowledge that these activities are not exhaustive. The analysis of each activity in a silo-based manner provides valuable insights into the specific activities that board members can undertake to drive innovation. However, it is crucial to recognize that these activities do not exist in isolation and are often interconnected and interdependent. Future research could explore the synergistic effects of combining multiple activities in driving innovation.

Another limitation is the reliance on self-reported data from the informants, which introduces the possibility of response bias. The informants' responses may be influenced by factors such as a desire to conform to societal expectations or wishful thinking, i.e., what they wish were the case. Despite efforts to ensure confidentiality and encourage honest responses, there may be variations in how informants interpret and recall their involvement in innovation-related activities. Nevertheless, we compared quotes from different informants used to verify the

narratives, which revealed high congruence among the narratives of various informants, suggests that this limitation is not profound. Still, future research in this topic incorporating multiple data collection techniques would be valuable.

Finally, given the increasing significance of sustainability, it would be intriguing for future research to explore how the identified activities can be adapted or modified to align with the sustainability goals and requirements of established firms. This would involve investigating how the board of directors can effectively incorporate activities to foster sustainable innovation within the organization.

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## 8. Appendix

### 8.1 Appendix A: Consent Form

#### Informed consent form – Participation in RaCE research program

##### NHH Norwegian School of Economics

#### Background and aim

This research is a part of the RaCE project at SNF and NHH Norwegian School of Economics. The goal is to examine how established firms respond to and manage radical technology-driven change. We are targeting individuals within established firms that have information on and experience with organizational changes.

#### What participation in the study entails

We invite you to participate in an interview lasting 01 hour. If you permit, the interview will be recorded and later transcribed. The audio file will be deleted after transcription and the transcribed version will be anonymized.

#### How is information about you handled?

Personal information will be treated confidentially. Any information that could identify individuals will be removed (e.g., your name). Transcriptions will be allocated a code instead. Name and contact information, including this form, will be kept separate from any interview data. Only persons participating in the RaCE project at NHH/SNF will have access to the anonymized interviews.

Your firm/organization will be anonymized.

The project will be completed in June 2023.

#### Voluntary participation

Participating in the project is voluntary. You can withdraw at any time without any further explanation. If you chose to withdraw, all information about you and your interview will be deleted.

Should you have questions regarding the research project, please contact Pegah Parsapour email: [Pegah.Parsapour@student.nhh.no](mailto:Pegah.Parsapour@student.nhh.no) or Minh Anh Le email: [anh.le@student.nhh.no](mailto:anh.le@student.nhh.no) or Inger Stensaker [Phone number], email: [inger.stensaker@nhh.no](mailto:inger.stensaker@nhh.no). Should you have other questions please contact: [personvernombud@nhh.no](mailto:personvernombud@nhh.no)

On behalf of SNF/NHH, the Norwegian NSD has approved the procedures followed by the RaCE research project are in accordance with current rules and regulations for handling data.

#### Your rights

As long as you can be identified in the data material, you have the right to:

- Access in which personal information is registered in your name
- To correct personal information about you
- To have personal information about you deleted

- 
- To receive a copy of your personal information (data portability)
  - To file a complaint to personvernombudet or Datatilsynet regarding use of personal information on you

**What gives us the right to use personal information about you?**

By signing this form, you consent to participate in the study.

Informed consent form:

I have received written information and I am willing to participate in this study.

Signature ..... Date.....

Printed name.....

## 8.2 Appendix B: Initial Interview Guide

### 1. Introduction (3 mins)

- a. Thanking the informant for taking the time to participate.
- b. Presenting ourselves and the research topic.
- c. Informing about anonymity.
- d. Gaining approval on recording the meeting and transcribing.

### 2. Informant (5 mins)

*In this section, we gather the informants' background to understand their positions and responsibilities as board members.*

- a. What is your current Board role in the company? E.g. Are you an internal board member or external? Board director or board member? How many years have you worked as a board member in this company?
- b. Have you worked as a board member in other companies? If so, briefly describe previous experience (type of companies, years of experience)
- c. What is your background (education, previous business experience)?
- d. Do you have any experience in innovation? Could you please elaborate on your experience?

### 3. Company background (5 mins):

*Here, we gather the background information of the company to categorize the Board practices collected in the next steps. We will do research about the company beforehand and ask questions regarding the information we couldn't find.*

- a. Briefly describe the company background (*i.e.*: industry, company size, number of employees, public or private, ownerships, and shareholders, general governance system, established firm or start-up)
- b. How much does the company engage in innovation activities? Whether see itself as an innovative player in its field?

### 4. Setting Innovation Strategy (15 mins)

*Here, we want to explore which actions/practices taken by the Board to drive/ steer/ influence the company's innovation strategy and innovation portfolio (if any).*

- a. Does the company have a clear innovation strategy? If so, please briefly describe it.
- b. What do you see as the board's responsibility and role in innovation?
- c. Does the Board influence the company's innovation strategy? How?
- d. Does the Board govern/monitor/drive the innovation strategy? How?
- e. Where do the innovative ideas come from? How does the company sense new opportunities?
- f. To what extent and how does the Board collaborate with CEO & top management team to foster innovation?

### 5. Board Practices for Innovation (20 mins)

*In this part, we want to explore about practices/activities taken by the Board of Director to foster innovation within the company.*

- a. What kinds of innovation-related activities does the Board engage in (beyond those described above)
- b. CEO succession
  - Do you have a CEO succession plan?
  - How does innovation influence the CEO succession plan and hiring processes?
  - Are innovation experience and background important criteria in the process of hiring a CEO?
  - Is the current CEO hired internally or externally?
- c. Board meeting
  - How often does the board meet generally?
  - How much time does the board spend on innovation topics in the Board meetings?
  - Is there a separate committee or meeting (e.g. strategy seminar) focusing specifically on innovation in the company?
    - If they have a separate committee: Is the informant a member of the committee? What is the relationship between the committee and the board? How does the committee communicate with the board?
    - If they have a separate meeting: Which positions are part of these meetings? How often and for how long are these meetings taken place?
- d. Exerting Influence through Discussion
  - Can you provide some concrete examples of innovation discussions the Board was involved in?
  - How does the Board influence decision-making and action through the discussions in the Board room? Do you have any concrete examples?
  - What does the board do to ensure that they (the company as a whole or the board members) are continuously pushing for innovation? (we can suggest some answers)
- e. Exerting Influence through Resource Provision
  - Does the company have a specific internal resource allocation for innovation? How do they prioritize the innovation ideas for resource provision purposes? How do they find the external resource for the innovation?
  - Is the Board involved in resource provision?
- f. CEO and board relationship (we need more literature about it)
  - CEO background (tenure, who hired CEO, qualification, how active the CEO is in innovation, their responsibilities in the innovation process,) (on their website info)
  - How does the board monitor and motivate the CEO not to focus on short-term benefits rather than long-term investments in innovation?
- g. Creating an innovative culture
  - How can the board influence the innovation as well as sustainability-orientated culture in the company? Do you have any examples?
  - How can the board and management team work together to create this environment?
  - Does the board review the culture of the company to see whether it is pushing for innovation? if so, how?
  - How will you as a board member create an environment in the organization where managers will keep sensing and seizing new innovative opportunities?

**6. Sustainability (7 mins)**

*In this part, we want to explore the sustainability initiatives of the company related to innovation activities.*

- a. Does the Board consider the sustainability side of the innovation strategy? How much and how does sustainability influence the innovation strategy?
- b. Do you (and the Board) think sustainability is important in innovation strategy beyond the reporting purpose? Why/how so?

**7. Key Learnings and Thinking Ahead (5mins)**

- a. Is there anything you would like to see done differently in your own Board when it comes to fostering innovation and renewal?
- b. Based on your experience, how can the Board best support (and push) a company to innovate and renew itself? What advice would you give to others serving on Boards of established firms?



## 8.3 Appendix C: Final Interview Guide

### 1. Introduction (3 mins)

- a. Thanking the informant for taking the time to participate.
- b. Presenting ourselves and the research topic.
- c. Informing about anonymity.
- d. Gaining approval on recording the meeting and transcribing.

### 2. Informant and company innovation-related information (5 mins)

*In this section, we gather the informants' general information to understand their positions and responsibilities as board members and their companies.*

- a. What current Board role(s) do you have? E.g., Are you an internal board member or external? Board director or board member? How many years have you worked as a board member in this (or these) company(ies)?
- b. Briefly describe the company background where you are or was on its board (i.e: *industry, company size, number of employees, public or private, ownerships, and shareholders, general governance system, established firm or start-up*)
- c. Is the company engaging in any innovation activities? If yes, how many innovative projects that the company is pursuing at the moment? Do you think that these innovations are radical? Whether the company sees itself as an innovative player in its field?

### 3. Board Practices for Innovation (25 mins)

*In this part, we want to explore about practices/activities taken by the Board of Directors to foster innovation within the company.*

- a. **Exerting Influence through Discussion and Interaction with the top management team**
  - How is the Board involved in supporting (or pushing) innovation?
  - Describe your activities as a board member in the process of setting an innovation strategy. (also, if the company doesn't have an innovation strategy but incorporates it in general strategy)
  - How often do you join innovation strategy discussion at the top management level? Describe your activities when attending those discussions.
  - How often do you challenge the management team with the innovation strategy? Could you provide an example when you challenged your management team with the innovation strategy?
  - Based on your experience, could you provide concrete examples of actions taken by the Board to *influence/drive* the company's innovation strategy?
  - Based on your experience, could you provide concrete examples of actions taken by the Board to *govern/monitor* the company's innovation performance?
  - Is there a separate committee focusing specifically on innovation in the company?
    - Is the informant a member of the committee? What is the relationship between the committee and the board?
    - How does the committee get influenced by the board?

**b. Innovation Discussions in the Board Room**

- How often does the board meet generally?
- Does the board have a separate agenda or separate point on the agenda to talk about innovation? And how much time does the board often spend on innovation topics in the Board meetings?
- What type of innovation-related discussions are discussed in the board room? Can you provide some concrete examples of innovation discussions the Board was involved in?
- Who is the key decision-makers in the boardroom when it comes to innovation discussions?
- What steps does the boardroom take to ensure that innovation discussions are aligned with the company's overall vision and mission?

**c. Exerting Influence through Resource Provision**

- How does the company allocate resources for innovation?
- Which actions does the Board take in resource provision? (From the resources searching step until resource approval?)
- Because innovation activities often associated with risk, what actions does the Board take in terms of risk assessments?

**d. CEO succession and CEO - board relationship**

- Does the company have a CEO succession plan?
- How does innovation influence the CEO succession plan and hiring processes?
- Is innovation experience (i.e: experience in an innovative company) and background (like R&D) important criteria in the process of hiring a CEO?
- Is the current CEO hired internally or externally?
- CEO background (tenure, who hired CEO, qualification, how active the CEO is in innovation, their responsibilities in the innovation process)
- How does the board monitor and motivate the CEO not to focus on short-term benefits rather than long-term investments in innovation?

**e. Creating innovative culture**

- Do you think that the company is having an innovative culture? Rationale your answer?
- What actions does the board take to influence the innovation as well as sustainability orientated culture in the company? Please provide a concrete example.
- How can the board members contribute to creating an environment in the organization where managers will keep sensing and seizing new innovative opportunities?

**4. Company and informant background (5 mins):**

*Here, we gather the background information of the company to categorize the Board practices collected in the next steps. We will do research about the company beforehand and ask questions regarding the information we couldn't find.*

- Briefly describe the company background (i.e: industry, company size, number of employees, public or private, ownerships, and shareholders, general governance system, established firm or start-up)
- Have you worked as a board member in other companies? If so, briefly describe previous experience (type of companies, years of experience)
- What is your background (education, previous business experience)?

- 
- d. Do you have any experience in innovation? Could you please elaborate on your experience?

**5. Sustainability (7 mins)**

*In this part, we want to explore the sustainability initiatives of the company related to the innovation activities.*

- a. Is your company innovation portfolio sustainable? Rationale your answer.  
b. How does sustainability influence the innovation strategy? And to which extent?  
c. Does the Board consider the sustainability side of the innovation strategy? Do you (and the Board) think sustainability is important in innovation strategy beyond the reporting purpose? Why/how so?

**6. Key Learnings and Thinking Ahead (5mins)**

- a. Is there anything you would like to see done differently in your own Board when it comes to fostering innovation and renewal?  
b. Based on your experience, how can the Board best support (and push) a company to innovate and renew itself? What advice would you give to others serving on Boards of established firms?

**If we have time:**

- How does the Board influence decision-making and action through the discussions in the Board room? Do you have any concrete examples?
- What does the board do to ensure that they (the company as a whole or the board members) are continuously pushing for innovation?)