

HANNELE HAAPIO

Multidimensional approach to navigating uncertainty



JYU DISSERTATIONS 560

Hannele Haapio

**Multidimensional approach
to navigating uncertainty**

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Editors

Tuomo Takala

University of Jyväskylä School of Business and Economics

Timo Hautala

Open Science Centre, University of Jyväskylä

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*Omistettu lapsilleni Teemulle ja Jannelle,
sekä heidän lapsilleen Einolle, Vilholle, Venlalle ja Ainolle.
Uskomalla itseensä ja kuuntelemalla sydäntään
on elämässä kaikki mahdollista.*

ABSTRACT

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The business landscape is changing faster than ever, causing uncertainty and unpredictability for firms across industries. Recently, uncertainty has been driven by several remarkable external forces, such as, trade barriers, digitalization, and the global pandemic (i.e., COVID-19). Consequently, companies have been under pressure to rapidly adapt their strategies and business models in an evolving business landscape that is characterized by increasing uncertainty. Research has investigated the causes of uncertainty and demonstrated its implications for organizational behavior, business models, and operational processes. Researchers have also offered several theoretical concepts and models that offer guidance for managing uncertainty. However, the vast majority of studies approach this phenomenon from a specific perspective, providing knowledge on what types of resources, capabilities, organizational culture, structure, or processes are needed to address uncertainty. This dissertation takes a multidimensional perspective to provide a more holistic view of how firms successfully address uncertainty. Specifically, by building on the concepts of market orientation, effectuation, and dynamic capabilities, this dissertation investigates the role of strategic orientation, decision-making logic, and capabilities in firms' efforts to navigate uncertainty. The dissertation adopts a qualitative research strategy; the empirical data are based on 40 managerial interviews representing different firm sizes and industries. The main findings of the dissertation show that a quick and agile response to market changes requires a strong market orientation, which is manifested in the active collection, sharing and utilization of market information in decision-making. Effectual decision-making logic, in turn, contributes to an organization's dynamic capability to sense market changes, capture them quickly, and make the necessary changes to an organization's structures and processes. In addition, the company's customer focus became a significant resource in times of uncertainty. The dissertation contributes to the literature by providing a multidimensional framework for managing uncertainty and identifying a number of managerially relevant activities within each dimension that, when combined, can help firms successfully navigate uncertainty.

Keywords: Market Orientation, Dynamic Capabilities, Effectuation, Uncertainty

TIIVISTELMÄ (ABSTRACT IN FINNISH)

Haapio, Hannele

Moniulotteinen tulokulma epävarmuudessa navigointiin

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Liiketoimintaympäristö muuttuu nopeammin kuin koskaan, aiheuttaen epävarmuutta yrityksille eri toimialoilla. Viime aikoina epävarmuutta ovat aiheuttaneet useat merkittävät ulkoiset voimat, kuten erilaiset kaupan esteen, digitalisaatio ja globaali pandemia (eli Covid-19). Tästä johtuen yrityksillä on paineita mukauttaa nopeasti strategiansa ja liiketoimintamallinsa lisääntyvän epävarmuuden leimaamassa liiketoimintaympäristössä. Aiempi tutkimus on tutkinut epävarmuuden syitä ja osoittanut epävarmuuden vaikutukset organisaatiokäyttäytymiseen, liiketoimintamalleihin ja toimintaprosesseihin. Tutkijat ovat myös tuottaneet useita teoreettisia käsitteitä ja malleja kohdistuen epävarmuuden hallintaan. Suurin osa tutkimuksista lähestyy kuitenkin ilmiötä tietystä näkökulmasta tarjoten tietoa siitä, minkä tyyppisiä resursseja, kyvykkyyksiä, organisaatiokulttuuria, organisaatorakennetta tai prosesseja tarvitaan epävarmuuteen sopeutumiseksi. Tässä väitöskirjassa tutkitaan moniulotteista näkökulmaa, jonka tavoitteena on löytää kokonaisvaltaisempi näkemys siitä, kuinka yritykset onnistuvat käsittelemään epävarmuutta. Väitöskirjassa tutkitaan erityisesti markkinasuuntautuneisuuden, yrittäjämäisen päätöksentekologiikan ja dynaamisten kyvykkyyksien roolia yritysten pyrkimyksissä navigoida epävarmuuden keskellä. Väitöskirjan tutkimusstrategia on laadullinen, ja empiirinen aineisto koostuu 40 johtajan haastatteluista, jotka edustavat eri kokoisia yrityksiä eri toimialoilta. Väitöskirjan keskeisimmät löydökset osoittavat, että nopea ja ketterä reagointi markkinamuutoksiin vaatii vahvaa markkinasuuntautuneisuutta, joka ilmenee aktiivisena markkinatiedon keräämisellä, jakamisella ja hyödyntämisellä päätöksenteossa. Yrittäjämäinen päätöksentekologikka edesauttaa puolestaan organisaation dynaamista kykyä aistia markkinamuutoksia, tarttua niihin nopeasti ja tehdä tarvittavat muutokset organisaation rakenteisiin ja prosesseihin. Lisäksi yrityksen asiakaskeskeisyys nousi merkittäväksi voimavaraksi epävarmuuden vallitessa. Väitöskirja täydentää kirjallisuutta tarjoamalla moniulotteisen viitekehyksen epävarmuuden hallintaan ja määrittelemällä kunkin ulottuvuuden sisällä joukon johtamisen kannalta merkityksellisiä aktiviteetteja, jotka yhdessä auttavat yrityksiä navigoimaan onnistuneesti epävarmuudessa.

Avainsanat: Markkinaorientaatio, Dynaamiset kyvykkyydet, Toimeenpano, Päätöksentekologikka, Epävarmuus

Author Hannele Haapio
University of Jyväskylä
School of business and economics
Email haapiohannele@gmail.com
ORCID: 0000-0003-1247-6199

Supervisors Joel Mero
University of Jyväskylä
School of Business and Economics

Heikki Karjaluoto
University of Jyväskylä
School of Business and Economics

Reviewers Hannu Makkonen
University of Vaasa

Maciej Mitreğa
University of Economics in Katowice

Opponent Hannu Makkonen
University of Vaasa

FOREWORD

Jyväskylä 28.9.2022
Hannele Haapio

What a journey the last several years have been. After moments of joy, pleasure, pain, despair, and hard work, I can finally say, this is it. This dissertation has challenged me in many ways; for an experienced business leader, the jump to academic work has not always been easy, but it was definitely worth it. So, here I am, feeling grateful to so many individuals who have helped me along the way.

First, I would like to express my deepest gratitude to both of my supervisors, Assistant Professor Joel Mero and Professor Heikki Karjaluoto. You ensured that I had what was needed to complete this dissertation. I always felt welcome to ask for any guidance, and your support as co-writers of the articles has been both crucial and educational. I am also grateful to Professor Hannu Makkonen and Professor Maciej Mitreęa for taking the time to read my dissertation draft and provide valuable and encouraging comments. I also want to acknowledge the Jenny and Antti Wihuri Foundation, whose financial support helped me to focus on this dissertation work.

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Finally, I am extremely grateful to my whole family who have lived this journey with me: my parents Inkeri and Sakari, my husband Petri, my sons Teemu and Janne, and their spouses Emma and Salla. Each one of you has played an important role during this process. Thank you all for being there. And the biggest gifts one can ever wish for came true during this dissertation process, as my dearest grandchildren Eino, Vilho, Venla, and Aino arrived in this world. Without these little people, the dissertation journey would have been different.

So, this is it, and now new journeys can start.

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ABSTRACT

TIIVISTELMÄ (ABSTRACT IN FINNISH)

FOREWORD

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TABLE 1 Articles and author's contribution

Article	Authors	Publication forum	Author's individual contribution
I Antecedents of market orientation during digital transformation	Haapio, Karjaluoto, Mero	e-Bled	Corresponding author. Responsible for the development of the idea for the article. Principally responsible for data collection and analysis. Main responsibility for writing literature review, findings, methodology, and discussion
II Implications of the COVID-19 pandemic on market orientation in retail banking	Haapio, Mero, Karjaluoto, Shaikh	Journal of Financial Service Marketing	Corresponding author. Responsible for the development of the idea for the article. Principally responsible for data collection and data analysis. Main responsibility for writing literature review, findings, methodology, and discussion
III An effectual approach to executing dynamic capabilities under unexpected uncertainty	Mero, Haapio	Accepted to be published in Industrial Marketing Management	Responsible for development of the idea for the article. Fully responsible for collecting and analyzing the data. Shared responsibility for writing the literature review, findings, methodology, and discussion

1 STUDY BACKGROUND

The business landscape is changing faster than ever before, causing uncertainty and unpredictability in firms across industries (Barreto, 2010; Read, Dew, et al., 2009). Firms have faced uncertainty driven by different causes, such as digitalization, changes in customers' behavior and, recently, the global pandemic. During the past few years – especially before the global pandemic, digitalization was the main driver of uncertainty, causing changes in customer behavior, competitive dynamics, and regulations on a global scale (Kumar, 2018; Overby et al., 2006). However, the uncertainty caused by COVID-19 is unique because of its serious biological consequences and novel global scope (Cortez & Johnston, 2020), causing uncertainty we have never experienced before. With the global pandemic leading to travel restrictions, borders closing, and populations being put on lockdown, the consequences have led to a closure of businesses because of people staying at home for a period of time (e.g., Alvarez et al., 2020).

Crises causing severe uncertainty, for example, the COVID-19 pandemic, can also be utilized to create new opportunities (Nenonen & Storbacka, 2020). Opportunity creation requires rapid market learning, the ability to quickly react to unexpected events (Mort et al., 2010), following flexible and not planned strategies (Morrish, 2011; Morrish et al., 2010), and novel ways of creating value (Morris et al., 2002). As an example, Bhattacharyya and Thakre (2021) show how pandemics could be used to strengthen companies' purpose and build everlasting relationships with employees, partners, and customers by deploying existing capabilities into sensible actions. Accordingly, to increase digital behavior, massive disruptions such as pandemics can serve as an effective catalyst (Haapio et al., 2021) and bring about service innovations (Heinonen & Strandvik, 2020). Klaus (2020) claims that in certain industries, the crisis will lead to decisive adaptation of technology to enhance the customer experience.

The pandemic led to lockdowns, which provided a shock to businesses around the world. Amid the uncertainty, firms tried to effectively respond and draw up strategies to help them survive the turmoil and boost recovery (Bhattacharyya & Thakre, 2021). Hence, the pandemic has pushed firms to oper-

ate in more innovative and agile ways (Verma & Gustafsson, 2020) with managerial attention assessing the impact on customers and employees (Klaus & Manthiou, 2020; Lang et al., 2021; Tuzovic & Kabadayi, 2020). Accordingly, the latest research concerning COVID-19 emphasizes the recognition of collaborative opportunities, reasoning, and understanding changes in the customer context, as well as the agile development of organizational capabilities and partner networks (Heinonen & Strandvik, 2020).

A considerable amount of literature has been published on how uncertainty affects different business situations, for example digitalization (Overby et al., 2006) or how innovations are affected during times of uncertainty (Schoemaker et al., 2018; Teece & Leih, 2016). It is now well established from a variety of studies that no matter what the root cause of uncertainty is, it impacts firms' behavior, organizational models, and processes. Prior studies (e.g., Helfat et al., 2007; Teece & Leih, 2016; Teece et al., 2016; Teece et al., 1997) introduce some theories like dynamic capabilities (DC), which look at the phenomenon from a resource point of view, or effectuation theory, entrepreneurial decision-making logic, (e.g., Chandler et al., 2011; Read, Dew, et al., 2009; Wiltbank et al., 2009), which approaches the phenomenon from a decision-making logic viewpoint. However, far too little attention has been paid to gaining an understanding of the association between the different approaches and theories that help firms navigate through uncertainty. Only a partial explanation can be achieved when we approach the phenomenon through one approach or theory. Hence, the literature is siloed, hence lacking the possibility to gain a holistic understanding of what is needed from firms to successfully navigate through uncertainty. Indeed, there have been several calls for research to explore the relationships between different constructs (e.g., Engel et al., 2017; Perry et al., 2011; Schilke et al., 2018).

Theories like effectuation and DC are especially suitable for uncertain business landscapes. However, effectuation theory is about decision-making, whereas DC theory is about organizational capabilities and processes. Furthermore, to gain a comprehensive approach toward the phenomenon of how firms successfully navigate through uncertainty, it is also needed to understand firms' strategic orientation, which facilitates firm's adaptation to the business landscape and a match between firm's strategy and resources (Mu & Di Benedetto, 2011). Market orientation (MO) is the strategic orientation helping firms navigate turbulent times, focusing on creating value for customers (Kohli & Jaworski, 1990; Kumar et al., 2011; Narver & Slater, 1990). Although a number of studies have been carried out on MO as strategic orientation, effectuation as decision-making logic, and firms' dynamic capabilities, no single study exists that integrates these concepts to provide a fuller picture of how firms overcome uncertainty.

1.1 Research objectives and questions

To fill the above-mentioned research gap, the current dissertation aims to increase the understanding of how firms successfully navigate uncertainty, which

is done by taking a holistic view of exploring MO, effectuation and DC. The current dissertation combines MO, effectuation, and DC into one framework as overarching elements to successfully navigate uncertainty. More explicitly, the present dissertation intends to address questions about what firms should do and how to do it when facing uncertainty. The present dissertation contributes to the MO, effectuation, and DC streams of literature. Following the main research objective, the current dissertation addresses one fundamental question: How can firms successfully navigate uncertainty? This question is further explored in two subquestions, which are answered through the three research papers included in the present dissertation. The research subquestions are as follows:

- 1) How does MO support firms' successful navigation through uncertainty? (Articles 1 and 2)
- 2) How does effectual logic support the execution of DC to navigate uncertainty? (Article 3)

All articles were qualitative studies using semistructured interviews. Data were collected separately for each article. Timewise data were collected for the first article before the pandemic, for the second article after the pandemic, and for the third article partly before and partly after the global pandemic.

To conclude, the current dissertation seeks to shed light on a holistic approach of integrated elements, that is, MO, effectuation and DC, that help firms successfully navigate uncertainty. It intends to provide a positive step toward understanding how firms navigate uncertainty, thus significantly contributing to the MO, effectuation, and DC streams of literature. More explicitly, it suggests a framework that integrates MO as strategic orientation, effectuation as decision-making logic, and the DC needed to successfully navigate uncertainty.

1.2 Positioning of the dissertation

The main objective of the current dissertation is to determine how market orientation, effectuation (entrepreneurial decision-making logic), and dynamic capabilities together help firms navigate the uncertainty caused by severe threats. By doing so, the present dissertation aims to synthesize the theoretically "siloes" literature into a multidimensional framework that moves us toward a more comprehensive understanding of how firms successfully navigate through uncertainty. The current dissertation contributes to the literature on MO, effectuation, and DC. Figure 1 shows how the present dissertation is situated at the intersection of three major streams of the literature.

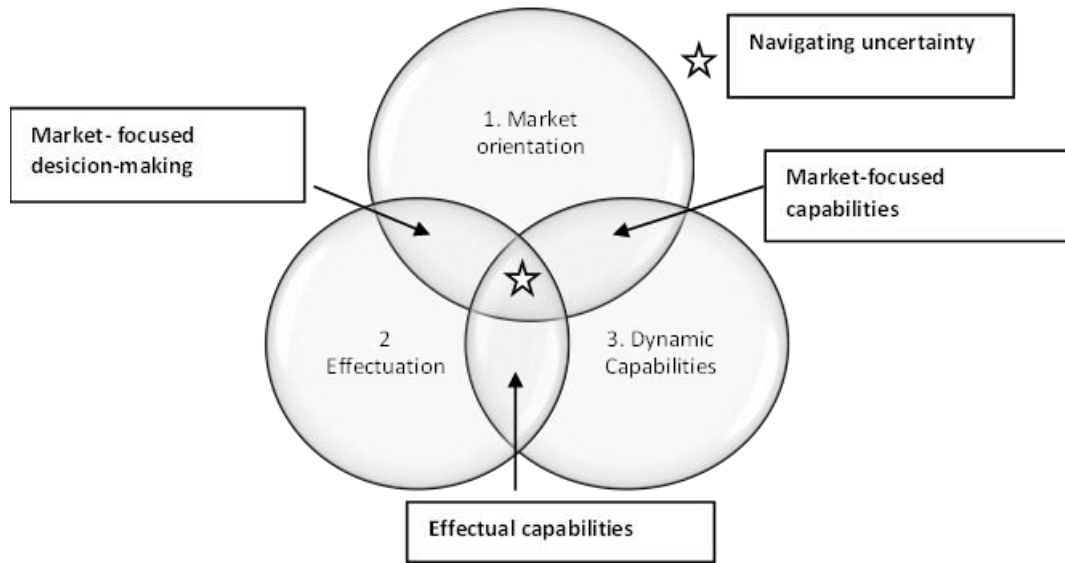


FIGURE 1 Theoretical framework

In terms of the strategic orientation of firms, prior research has focused mainly on MO. Strategic orientation facilitates a firm's adaptation to market conditions and matches a firm's strategy and resources (Mu & Di Benedetto, 2011). Viable strategic orientations include MO (Kohli & Jaworski, 1990; Narver & Slater, 1990), technology orientation (Gatignon & Xuereb, 1997), and selling orientation (Noble, 2002). The main elements of MO show the need for the entire organization to acquire, disseminate, and respond to market intelligence from customers (Kohli & Jaworski, 1990). Accordingly, the creation and maintenance of superior customer value are seen as the highest priority (Narver & Slater, 1990). MO has been studied from a behavioral viewpoint as organizational information processing, for example, generating, disseminating, and responding to market intelligence (Kohli & Jaworski, 1990). On the one hand, MO has been studied as a cultural construct emphasizing organization-wide values and norms in the creation and delivery of superior value to customers (Narver & Slater, 1990). Thus, in general, the formulation and adaptation of a firm's strategic orientation could be affected by market uncertainty (Zhou et al., 2005). For the first article, the aim was to study MO antecedents following Kohli and Jaworski's (1990) theory and empirically investigate whether those antecedents apply during digital transformation. Digitalization has been claimed as being one of the major reasons firms face uncertainty (RQ 1). That article contributes to the MO literature by explaining the relevance of certain MO antecedents like the managerial mindset that is genuinely concerned about customer needs, managerial understanding of data, and technology usage, interdepartmental cooperation, management of external partnerships and low organizational structure to ensure the dissemination of market intelligence throughout the organization, when navigating through uncertainty. Article 2 further answers RQ1 by taking a more comprehensive approach and looking at the antecedents, activities, and consequences of MO during severe uncertainty caused by COVID-19. The first two articles find an MO crucial strategic

orientation when navigating uncertainty; consequently, these articles contribute to the MO literature by strengthening the relevance of MO as a strategic orientation, offering new insights when facing severe uncertainty.

Second, it is important to understand that decision-making under uncertainty is not the same as decision-making under risk. Traditionally, risk management decision-making has been classified into three categories: certainty, risk, and uncertainty (Mousavi & Gigerenzer, 2014). In the category of certainty, each action leads to a certain outcome, and in the category of risk, all outcomes and probabilities are known. In situations of fundamental uncertainty alternatives, the outcomes and probabilities can be unknown, as is the case, for example, with COVID-19, where everything remains unclear and unknown and the future cannot be predicted by using, for example, statistical analyses. In this case, the presence of uncertainty is paramount in a wide range of choices. It is now well established from a variety of studies that effectuation is a superior decision-making logic under uncertainty (e.g., Read, Dew, et al., 2009; Read, Song, et al., 2009; Sarasvathy, 2001; Welter & Kim, 2018). In a world of uncertainty, effectuation views the future as nonpredictive, creates opportunities starting with the available means, sees partnerships and other outsiders positively, and finds surprises as a positive possibility for creating new opportunities (Read, Dew, et al., 2009).

Third, a firm's dynamic capabilities refer to complex clusters of organizations' internal and external skills, resources, functional competences, and increased knowledge, here as exercised through organizational processes that help firms coordinate activities (Day, 1994; Teece & Pisano, 2003). DC theory introduces a resource-based view to help firms succeed in a rapidly changing business environment by effectively reconfiguring capabilities to sense and seize new opportunities (Teece, 2007; Teece et al., 1997). Hence, Teece et al. claim that "capacity to innovate, adapt to change and create change that customers find favorable and competitors unfavorable" (2016, p. 17), defines the DC. The third article answers RQ 2 and explores the decision-making logic and firm capabilities, combining those to show how effectuation manifests the DC capabilities of sensing, seizing, and transforming before and after COVID-19.

1.2.1 Market-focused capabilities

Amid uncertainty surrounding adaptation and change, information on the external environment, for example, the customer base (Helfat, 2000), is required, as ensured by an MO approach. Such information (market intelligence) can be acquired how, focusing on firms' capabilities, which exist at the intersection of MO and DC and is here called *market-focused capabilities*. MO helps firms to sense and respond effectively to customer needs (Abbu & Gopalakrishna, 2021). DC help a firm to exploit various sources of information and to prioritize customers as a priority source to gather information, thereby enhancing market knowledge (Augier & Teece, 2009; Endres et al., 2020; Guercini et al., 2015; Teece, 2012; Teece et al., 2016). Hence, the generation of market intelligence is at the core of MO, with DC providing a tool to empower the organization as a whole to identify and

exploit opportunities in an uncertain market environment (Teece, 2007; Teece & Linden, 2017).

1.2.2 Effectual capabilities

Effectual capabilities refer to the ability of an organization to respond quickly to the market, with optimal use of resources. Effectuation introduces a decision-making logic for DC that ensures quick responses to the market and optimal use of resources. DC refer to the resources and processes to sense, seize, and transform opportunities caused by uncertainty. Entrepreneurial thinking overlaps between effectuation and DC. There is consensus in the research literature that entrepreneurial thinking is typically characterized by innovativeness, defined as the tendency to support new ideas, processes, and experimentation (Morgan et al., 2016; Wiklund & Shepherd, 2003). Entrepreneurial thinking is also characterized by proactiveness, defined as being the first to shape the environment (Zahra & Covin, 1995); and risk taking, defined as willingness to venture into the unknown and to make large resource commitments that might fail (Rauch et al., 2009). Further, the entrepreneurial mindset favoring cooperation with partners (Alqahtani & Uslay, 2018; Morris et al., 2002; Nenonen & Storbacka, 2020; Sadiku-Dushi et al., 2019) and identifying opportunities (Teece & Pisano, 1994; Teece et al., 1997; Teece, 2012; Teece et al., 2016) typically concerns the DC.

1.2.3 Market-focused decision-making

Between MO and effectuation, here called *market-focused decision making*, the main bridge comes from customer centricity, offering effectuation a comprehensive focus on customers and, on the other hand, offering MO a more agile way of generating and disseminating information. Effectuation guides decision making to ensure a quick response to the market, for example, by emphasizing small experiments and the use of informal information (i.e. information obtained directly from customer meetings). In contrast, MO ensures that the organization focuses on creating value for customers.

Figure 1 illustrates the complementary roles of MO, effectuation, and DC approaches and integrates them into a single theoretical framework. Any one of these approaches (MO, effectuation, and DC) can be adopted in times of uncertainty. However, adopting all three approaches can provide firm with a holistic understanding of how to successfully navigate uncertainty. In terms of firm's business strategies, MO describes the antecedents and behaviors of a firm. Effectuation aids decision making, ensuring a quick response to changes when needed. DC refer to the abilities of firms needed to navigate uncertainty. All three approaches help firms to create value for customers. To navigate uncertainty using this proposed framework based on MO, effectuation and DC, requires learning, which takes time. Therefore, the present study included only firms that have been in operation for a number of years and experienced uncertainty and excluded,

for example, start-ups. The findings of the study empirically show that the proposed framework can be utilized to help firms to succeed when faced with severe uncertainty. The present study contributes to the literature on MO, DC, and effectuation.

1.3 Key concepts

The identification of key term definitions is critical for consistency and clarity in understanding the phenomenon under study. The key terms included in the current dissertation are uncertainty, strategic orientation, decision-making logic, and firms' capabilities. Table 2 presents a summary of the definitions of the key terms.

TABLE 2 Key concepts

Key Concept	Description
Uncertainty	"With risk, we do not know what is going to happen, but we know what the probability distribution of possible outcomes looks like. With uncertainty, we not only don't know what is going to happen, but also don't know what the possible distribution of outcomes (or futures) looks like, in part because we do not even know the range of possible outcomes" (Teece & Leih, 2016, p. 7).
Strategic orientation	"The strategic orientation defines the strategic direction implemented by a firm to create proper behaviors and the continuous superior performance of the business" (Gatignon & Xuereb, 1997, p. 78).
Firms' capabilities	"Capabilities are complex bundles of skills and accumulated knowledge, exercised through organizational processes, that enable firms to coordinate activities and make use of their assets" (Day, 1994, p. 38).
Market orientation	Market orientation focuses on customers, competitors, innovation, and profit inducement with the aim of creating satisfied customers and, therefore, is considered an effective strategy for surviving during uncertainty (Kohli & Jaworski, 1990; Kumar et al., 2011; Narver & Slater, 1990).
Effectuation	A nonpredictive decision-making logic that focus on rearranging the problem space and restructuring current realities into new opportunities (Wiltbank et al., 2006).
Dynamic capabilities	The capacity to innovate, adapt to change, and create changes that customers find favorable and competitors unfavorable (Eisenhardt & Martin, 2000; Sunder et al., 2019; Teece et al., 2016).

1.4 Structure of the dissertation

The current dissertation seeks to lay the foundations for firms to navigate uncertainty, offering both conceptual and empirical contributions. The dissertation is divided into two parts, where the first seeks to combine the RQs with a single overarching question: How firms can successfully navigate uncertainty? As such, the first part of the dissertation will introduce the background of the articles and bring the articles together by integrating the findings into a general framework. Part 2 presents the three articles included in the current dissertation. The first part consists of five chapters, starting with a brief discussion about the study background, including a discussion about the research gaps, justifications of the research objectives, and research questions. The scope and positioning of the study, with the definitions of the key terms applied, follows this. The second chapter, the literature review, provides a comprehensive theoretical background of the present dissertation and an overview of the key existing studies. The third chapter explains the selection and justification for choosing critical realism as a research paradigm, which is followed by a description of the abductive research approach. Next, the semistructured interviews, which here serve as the research method, and the data collection are explained in more detail. The fourth chapter summarizes the key results of the articles. The fifth chapter explains the major findings across the three articles and discusses both the theoretical and managerial contributions of the current dissertation in detail. Finally, the limitations are addressed, and suggestions for future research avenues are provided.

2 LITERATURE REVIEW

2.2 Navigating uncertainty

A considerable number of studies has been published about fast-paced environments, where change occurs frequently and with more intensity than ever before, causing severe uncertainty for firms. Different theories exist where no consensus on the exact definition of uncertainty is seen. For example, Kreye (2018) claims that the most widely recognized approach to uncertainty is the differentiation of external, internal, and relational sources relating to an organization. On the one hand, Sniazhko (2019) distinguishes industry uncertainty, including input, demand, completion, and technological uncertainty, and firm uncertainty, including behavioral, R&D, operating, and previous experience of uncertainty. Fundamental uncertainty is omnipresent in today's business environment and is referred to as a black swan event, which shows, for instance, extremely unlikely, unexpected occurrences that have significant consequences (Taleb, 2007).

The COVID-19 global pandemic forced firms to face uncertainty they had never experienced before. Firms have faced severe crises before as well, such as financial crises, but the crisis caused by COVID-19 is unique based because of its biological hazard and unrepresented global scope (Mora Cortez & Johnston, 2020). No matter how exactly the uncertainty or crisis is defined, the primary problem for organizations is determining what to do and how to do the right things (Teece, 2016). To sense and respond to changes is crucial, as we have seen, for example, with the once dominant organizations Kodak and Nokia, who fell victim to their inability to adapt to change (Lucas & Goh, 2009). Further, the latest research emphasizes the understanding of effects on customer experience, especially those caused by COVID-19. Klaus and Manthiou (2020) claim that the importance of customer experience is changing in front of our eyes because of COVID-19's impact on customers. Consequently, these changes cause uncertainty and force firms to rethink their business models, strategic orientation, decision-making, and use of resources.

The current dissertation does not follow any certain definition of uncertainty but instead focuses on uncertainty caused by severe threats. Accordingly, understanding the difference between risk and uncertainty is critical for business success. Risk is a rapid but predictable change that can be quantified, and its probability distribution of possible outcomes is known (Aragon-Correa, 2003; Teece & Leih, 2016). With uncertainty, the unknowns are truly unknown, the distribution of possible outcomes remains unclear, and for managers, the range of options is enormous (Ambrosini & Bowman, 2009; Teece & Leih, 2016). Consequently, when facing severe uncertainty, firms need to find ways to navigate a business landscape where nothing is predictable. The present dissertation finds strategic orientation (MO), decision-making logic (effectuation), and capabilities (DC) as the dimensions required to successfully navigate uncertainty. These dimensions are described in the following chapters.

2.2 Market orientation

In today's constantly changing business environment, it is necessary that business managers identify and understand their strategic orientation, which can enable firms to navigate through uncertainty (Kumar et al., 2011). The strategic direction firms implement to create proper behaviors and continue superior performance is defined by their strategic orientation (Gatignon & Xuereb, 1997). MO might be one of the most cited marketing concepts (Jaworski & Kohli, 2017) when it comes to defining firm's strategic orientation. MO focuses on customers, competitors, innovation, and profit inducement when creating satisfied customers and, therefore, is considered effective strategy for surviving during uncertainty (Kohli & Jaworski, 1990; Kumar et al., 2011; Narver & Slater, 1990). Additionally, the need to become market oriented has been amplified in the increasingly digitalized, globally competitive, and rapidly changing business environment (Guo et al., 2018; Kohli, 2017).

Previous research that has spanned over 30 years has studied MO primarily either as a behavioral or cultural construct. The organizational information process is at the core of the behavioral perspective, here with the activities of generating, disseminating, and responding to market intelligence (Kohli & Jaworski, 1990). The cultural perspective emphasizes values and norms in the whole organization along with the importance of creating and delivering superior value to customers (Narver & Slater, 1990). Homburg and Pflesser (2000) discuss the implementation of MO with a focus on organizational culture and stakeholder theory, whereas Crittenden et al. (2011) claim that organizational values and norms can be defined as part of the DNA of the organization and linked to behavior.

We know that in practice, these two perspectives are not separate but instead integrated, as the latest research (e.g., Abbu & Gopalakrishna, 2021) shows. A number of studies have looked at these perspectives, integrating and enhancing our understanding of MO and, thus, creating conceptual models. One of the

latest research applies implementation and internalization dimensions to a firm's MO practices, besides the integration of Kohli and Jaworski's and Narver and Slater's models. MO implementation helps firms sense and respond effectively to customer needs, where internalization is introduced as a mediator between MO implementation and firm performance relationship (Abbu & Gopalakrishna, 2021). Another approach is the extended MO proposed by Matsuno et al. (2005). Their approach looks at internal and external factors. Matsuno et al. (2005) include cultural and organizational antecedents in internal factors, along with competitive structural antecedents, industry/market characteristics, and legal and regulatory environment as the external factors. Additionally, Matsuno, et al. (2005) extend the scope of market factors to customers, competition, suppliers, regulatory factors, social/cultural trends, and macroeconomic environment. Further, Lafferty and Hult (2007) create a synthesis of five MO perspectives, that is, decision-making (Shapiro, 1988), market intelligence (Kohli & Jaworski, 1990), culturally based behavior (Narver & Slater, 1990), strategic perspective (Ruekert, 1992) and customer orientation (Siguaw et al., 1994), providing synthesis of their components summarized into four general areas of agreements: here, there is an emphasis on customers, importance of information, interfunctional coordination, and taking actions.

Customer focus is clearly embedded in different definitions of MO. Hartline et al.'s claim that MO states, "The set of beliefs that puts the customer's interest first, while not excluding those of all other stakeholders such as owners, managers, and employees, to develop a long-term profitable enterprise" (2000, p. 35), whereas Celuch et al. (2015) emphasize listening to customers and putting their feedback into practice. Ashwin and Hirst (2015) review the literature on MO and propose a multidimensional approach that puts a customer orientation in the middle while looking at other dimensions (behavioral, cultural, and performance orientation) with an impact on customer orientation.

The behavioral approach to MO can be divided into two essential sets of behaviors: responsive and proactive. The responsive MO can satisfy customers' current needs and can be easily imitated, whereas the proactive MO attempts to discover, understand, and satisfy the latent needs of customers (Narver et al., 2004). According to Narver et al. (2004), every business needs to increase its proactive MO. Herhausen (2016) finds that the combination of proactive and responsive MO has a positive effect on performance that goes beyond the combination of those, except for when both are at a low level. Many other researchers (e.g., Ashwin & Hirst, 2015; Foley & Fahy, 2009; Hult et al., 2005; Kirca et al., 2011) have also investigated the relationship between MO and performance. Table 3 presents some of the focus areas of the research on MO and its definitions.

TABLE 3 An overview of market orientation perspectives

Characteristics	Reference
Behavioral perspective: - Generation of, dissemination of, and responsiveness to market intelligence	Kohli & Jaworski (1990); Cadogan & Diamantopoulos (1995); Avlonitis & Gounaris (1997); Narver et al. (2004); Crittenden et al. (2011)
Cultural perspective: - Organizational values and norms	Narver & Slater (1990); Siguaw et al. (1994); Cadogan & Diamantopoulos (1995); Homburg & Pflesser (2000)
Integrate behavioral and cultural perspectives with adds on	Matsuno et al. (2005); Lafferty & Hult (2007); Ashwin & Hirst (2015); Abbu & Gopalakrishna (2021)
Impact on performance and measuring	Kohli & Jaworski (1990); Narver & Slater (1990); Siguaw et al. (1994); Siguaw & Diamantopoulos (1995); Baker & Sinkula (1999); Homburg & Pflesser (2000); Subramanian & Gopalakrishna (2001); Kirca et al. (2005); Matsuno et al. (2005); Foley & Fahy (2009); Kirca et al. (2011); Hult et al. (2005); Ashwin & Hirst, (2015)

2.3 Effectuation

In his seminal work, Sarasvathy (2001) distinguishes two different decision-making logics, that is, effectuation and causation. The difference between these lies in prediction and nonpredictive control. Causality logic focuses on estimates and analyses that help predict the future. In contrast, effectuation focuses on controllable aspects of the unpredictable future (Sarasvathy, 2001). Table 4 highlights the main characteristics for both. Sarasvathy gives four principles that form the core of theory of effectuation in comparison to causation (the predictable approach): “(1) affordable loss rather than expected returns, (2) strategic alliances rather than competitive analyses, (3) exploitation of contingencies rather than exploitation of preexisting knowledge, and (4) controlling an unpredictable future rather than predicting an uncertain one” (2001, p. 252).

In a complex, uncertain situation, forecasting becomes increasingly complex, and predicting remains less accurate and useful (Dew et al., 2009; Read, Song, et al., 2009). In such situations, effectuation offers an approach where control is not needed; it builds on the assumption that when one can control future developments, there is no need to forecast the future (Sarasvathy, 2001). Further, according to effectual logic, the future is shaped by willful agents (Sarasvathy, 2001), which are the result of cocreation with different stakeholders such as investors, partners, and customers (Read, Dew, et al., 2009). Accordingly, Sarasvathy and Dew (2005) claim that the future is cocreated rather than being a continuation of the past. Effectuation is opportunity driven because it welcomes unexpected events as those could be turned to opportunities (Read, Dew, et al., 2009; Sarasvathy & Dew, 2005). Sharing what one has with external partners is at

the core of effectuation (Read, Dew, et al., 2009). In contrast, the causal, predictive approach focuses on predicting the future by exploiting current opportunities in a prearranged problem space; the goal of this is to try to minimize surprises (Read, Dew, et al., 2009; Wiltbank et al., 2006).

Especially in turbulent environments, the ability to sense relevant changes and quickly respond to those has become an important determinant for companies' success (Overby et al., 2006). Because the basis for taking actions starts with the set of means as a given and by focusing on selecting between possible effects that can be created with those (Sarasvathy, 2001), effectuation helps quickly respond. Hence, effectual logic welcomes small, short-term experiments, which makes it possible to use contingencies as they rise and to change goals over time (Sarasvathy, 2001). Further, the view of risk supports short-term, small experiments, while ignoring risk prediction and making decisions based on affordable loss are at the core of effectual logic (Read, Dew, et al., 2009; Sarasvathy, 2001). The effectuation processes are actor dependent, excellent at exploiting contingencies, and include experimentation and flexibility (Sarasvathy, 2001).

TABLE 4 Key principles of effectuation and causation

Effectuation principles	
Principle	Reference
Focus on shaping the future and controllable aspects	Sarasvathy 2001; Read et al. (2009); Maine et al. (2015)
Take actions with means available	Sarasvathy (2001, 2008); Sarasvathy & Dew (2005); Read et al. (2009); Engel et al. (2017)
Focus on affordable loss	Sarasvathy (2001); Read et al. (2009)
Favor small experiments	Sarasvathy (2001); Read, Dew, et al. (2009)
Welcome surprises	Sarasvathy (2001, 2008); Read et al. (2009)
Superior logic in exploiting contingencies	Sarasvathy (2001); Read et al. (2009)
Makes firms adaptive and flexible	Chandler et al. (2011)
Positive attitude toward outsiders; e.g., open collaboration and knowledge sharing with partners and stakeholders, cocreation, and use of joint resources	Sarasvathy (2001); Read et al. (2009)
Causation principles	
Principle	Reference
Actions according to business goals	Sarasvathy (2001, 2008); Sarasvathy & Dew (2005); Read et al. (2009); Engel et al. (2017)
Focus on maximizing returns	Sarasvathy (2001)
Detailed market and competitor analysis	Sarasvathy (2001, 2008); Sarasvathy & Dew (2005a, 2005b); Read et al. (2009), Futterer et al. (2017)
Minimize negative effects, predict, plan, and protect	Read et al. 2009
Promote a predictive view of the future	Read et al. (2009)
Focus on expected return	Read et al. (2009)
Top-down decisions and reconfirmation to follow fixed business plans	Sarasvathy (2001, 2008); Sarasvathy & Dew (2005); Read et al. (2009)
Suitable for low-uncertainty situations with stable markets	Read, Dew, et al. (2009); Futterer et al. (2017)

2.4 Dynamic capabilities

Since the seminal paper of Teece et al. (1997), the DC framework has attracted scholarly interest. The capacity to innovate, adapt to change and create change that customers find favorable and competitors find unfavorable defines DC (Eisenhardt & Martin, 2000; Sunder et al., 2019; Teece et al., 2016). Eisenhardt and Martin (2000) find DCs to be specific and identifiable processes, whereas Zollo and Winter (2002) present DC as a learned and stable pattern of collective activity. DC theory extends the resource-based view (RBV) of a firm (Barney, 1991, 1986). Thus, firms with resources but lacking DC continuously produce and sell the same products on the same scale and to the same customers (Winter, 2003).

The DC framework emphasizes the capabilities that enable firms to anticipate, shape, and adapt to shifting competitive landscapes and uncertainty (Felin & Powell, 2016; Teece, 2016). Per Helfat and Peteraf (2003), DCs are unique capabilities that build, integrate, or reconfigure the existing operational capabilities (Helfat & Peteraf 2003). Additionally, Teece (2014) claims that DCs are flexible and adaptive to changing environments. Further, DCs are path dependent (Teece et al., 1997) and future oriented (Ambrosini & Bowman, 2009). Eisenhardt and Martin's (2000) findings show that the evolution of DC occurs along a unique path and is shaped by well-known learning mechanisms.

The DC framework is agreed to be valuable in rapidly changing environments (Salvato & Rerup, 2011; Teece, 2014; Zahra et al., 2006; Zollo & Winter, 2002), which is further emphasized by recent research. For instance, the importance of organizational sensing, seizing, and reconfiguration capabilities has been the emphasis in the form of tactical responses for surviving the uncertainty caused by COVID-19 (Bhattacharyya & Thakre, 2021). Another example is the research of Alonso et al. (2019), in which the use of DC under uncertainty is studied in the context of Brexit, finding a sequential process where as an antecedent, sensing helps adapt to uncertainty, which is followed by plans and strategies to seize opportunities and further transform. Hence, DCs can be seen as underlying mechanisms under uncertainty in the context of relationship exploration (Zhang et al., 2021). Indeed, it is important to quickly respond to market during uncertainty, and it is claimed that strong sensing capabilities allow firms to detect fundamental changes in the business landscape, thus providing more time to react to external disruptions (Teece & Leih, 2016). Likewise, strong capabilities to seize opportunities and reconfigure organizational resources allow firms to adapt rapidly to environmental turbulence (Teece, 2007; Teece & Leih, 2016).

Further, at times of uncertainty, management's leadership and entrepreneurial skills are required to sustain the use of DC (Teece, 2012). Managerial agility and urgency to understand and conduct changes are challenged because of obsolete business models and service offerings becoming obsolete (Heinonen & Strandvik, 2020). Firms with strong DC are intensely entrepreneurial, at their core having sensing and understanding opportunities, which allows them to figure out the next big opportunity or challenge and how to address it; this helps in

getting things started and finding new and better ways of putting things together (Teece, 2007). These dimensions support the management's entrepreneurial skills when conducting DC.

DC can be divided into three clusters, and it is generally accepted that firms can be successful by undertaking three tasks: (1) sensing, which refers to recognizing opportunity; (2) seizing, which refers to mobilizing resources to address an opportunity and create value when doing so; and (3) transforming, which refers to continued renewal (Baden-Fuller & Teece, 2020; Teece, 2007, 2012). Rapid changes require the rapid creation of new knowledge, which starts by recognizing opportunities. Teece (2007) claims that sensing new opportunities is about scanning, creating, learning, and interpreting activity. It could be either the individual's capabilities and knowledge or organization's knowledge and learning capacities of customer needs to existing and novel solutions that create the ability to recognize opportunities (Teece, 2007). Teece and Linden (2017) claim that sensing the responsibility for the lower levels in an organization can provide information and insights about external developments to middle and top managers. Sensing is about "what's going on in business" (Teece, 2007).

To seize opportunities, managers need to make ongoing adjustments in resource allocation, build new thinking, have good strategizing, and prepare good execution (Eisenhardt & Martin, 2000; Teece, 2012). Rapidly changing environments force companies to align their own internal resources and assess when and how to collaborate with other firms to combine assets to deliver value for customers (Teece, 2012). Further, the successful building and orchestrating of assets in the business ecosystem are necessary to minimize internal conflict and maximize both internal and external complementarities (Teece, 2012). Focus is put on cospecialized assets, where the value is enhanced by the joint use of any overlapping assets (Teece 2007) and cocreation. Managers are required to have the ability to identify, develop, and utilize a combination of (built or bought) assets (Teece, 2007). Here, partnerships and networks enable firms to access more resources and combine these in different and unique ways (Alqahtani & Uslay, 2018; Teece, 2007).

Although sensing and seizing helps firms create, select, and develop new opportunities, the real value comes when properly executing the opportunities, which, in turn, may require organizational transformation (Day & Schoemaker, 2016). A firm in which an agile and entrepreneurial mindset is present and where there is an expansive focus on network building is said to have transforming capability (Day & Schoemaker 2016). Transforming capabilities ensure that organizations stay agile and responsive in a fast-changing business environment by continuously renewing assets and organizational structures (Teece, 2014; Teece & Leih, 2016). It is also important to recognize that transforming is not only the ability to internally redesign an organization, but also to renegotiate the environment and reshape a company's ecosystem (Day & Schoemaker, 2016). Rapid reconfiguring often requires decentralized learning and decision structure (Jantunen et al., 2005; Pablo et al., 2007; Song et al., 2016; Teece et al., 1997). In short,

transforming refers to reconfiguring organizational assets and structures to realize opportunities, which is empirically supported, for example, by Hills et al. (2008), who find that their interviewed companies quickly adapted to the new set of opportunities instead of being constrained by previous strategies. Table 5 summarizes the main characteristics of sensing, seizing, and transforming.

TABLE 5 Main characteristics of sensing, seizing, and transforming

Sensing activities	Reference
Identifying opportunities	Teece et al. (1997); Teece & Pisano (1994); Teece (2012); Teece et al. (2016)
Exploiting various sources to gather information	Augier & Teece (2009); Teece (2012); Teece et al. (2016)
Utilizing customers as prioritized sources of market knowledge	Guercini <i>et al.</i> (2015); Endres <i>et al.</i> (2020)
Empowering all organizational functions to participate in identifying opportunities	Teece (2007); Teece & Linden (2017)
Seizing activities	Reference
Persuading others that the sensed opportunities are worth rapidly pursuing	Baden-Fueller & Teece (2020)
Value delivery to the market	Helfat & Peteraf (2009); Teece (2012, 2016); Teece et al. (2016)
Using shared resources and aligning plans with a partner	Morris et al. (2002); Alqahtani & Uslay (2018); Sadiku-Dushi et al. (2019); Nenonen & Storbacka (2020)
Responding to opportunities quickly and flexibly	Wang & Fang (2012); Guo et al. (2018); Ngo et al. (2019); Teece (2014); Baden-Fuller & Teece (2020)
Using small experiments to ensure speedy market delivery	Day & Schoemaker (2016); Teece et al. (2016)
Transforming activities	Reference
Continuous renewal of assets	Teece (2014); Teece & Leih (2016)
Network building	Morris et al. (2002); Day & Schoemaker (2016); Sadiku-Dushi et al. (2019)
Building of new thinking and preparing good execution	Eisenhardt & Martin (2000); Teece (2012)
Reconfiguring both tangible and intangible assets	Harreld et al. (2007); Teece (2007)

3 METHODOLOGY

The research paradigm that a researcher follows determines the methodological decisions. Beyond selecting data gathering and analysis methods, the research paradigm also guides the choice of competing methods of theories (Sayer, 1992). There are three main dimensions – methodology, ontology, and epistemology – in a research process that the research paradigm connects (Given, 2008). Methodology defines the philosophical position of how researchers understand the way of doing things and how to formulate a strategy or design with the choice of the use of methods to achieve the desired research outcomes (Byrne, 2016). Ontology refers to a stance toward the world that is studied, and it usually answers the researcher’s question of how some phenomenon or thing exists, here referring to the study of being (Scotland, 2012). Epistemology refers to how this world is investigated and how the researcher understands reality and gets knowledge from a phenomenon (Byrne, 2016). The research approach offers a framework that guides the research by providing a structure to guide how to conceive, design, and carry out the research project in a systematic and dynamic formation (Saunders et al., 2019). This chapter explains and justifies the use of critical realism for the purposes of the current study. Furthermore, the description of how abductive logic (Dubois & Gadde, 2002) and methodological choice, including a qualitative approach with semistructured interviews, is given.

3.1 Critical realism

Scientific disciplines have a dominant paradigm, which for marketing has traditionally been positivism (Easton, 2010; Welch et al., 2011). Typical for positivists are the ontological and epistemological assumptions that there is one true reality and that empirical observations from events directly represent this reality (Järvensivu & Törnroos, 2010). Recently, marketing researchers have started to question positivism and see it as rather naïve (Easton, 2010; Järvensivu & Törn-

roos, 2010). Consequently, this has started to move marketing as a discipline toward a more realistic paradigm. The assumption that our knowledge of reality is limited is shared by both positivists and critical realists (Easton, 2010). Critical realism can be considered a compromise between positivism and relativism, especially in their extreme forms (Easton, 2010). Considering the scope and goals of the current dissertation, critical realism is adopted as the base of the ontological and epistemological approaches.

Critical realists assume that at least part of the world is ontologically independent of our knowledge (Bhaskar, 1978; Sayer, 1992; Niiniluoto, 1999). Consequently, it is assumed that even the best theories can fail to be true because the truth is not easily accessible but can still be approached (Niiniluoto, 1999). Critical realism is ontologically claimed to be layered and consists of three domains: real, actual, and empirical (Bhaskar, 1978). Together, these layered domains have important epistemological implications. The investigated events occur at the actual level; hence, the observation happens at the empirical level. This means that the events may not be fully observable by researchers. Further, the events are generated by mechanisms of causal powers in the real domain, and the outcome in each setting depends on the ways the causal powers are combined. Additionally, the events are affected by the context in which they occur. In any given situation, it is difficult to isolate multiple causal powers from contextual effects. The observation of causal powers and events is not impossible as such, but because it is possible to capture only what the researcher can observe, the observations are imperfect. Consequently, researchers need to critically analyze their observations when making interpretations and focus on collecting rich, in-depth data that will allow them to make more informed interpretations. In other words, when conducting research, full certainty cannot be reached and should be approached critically with the understanding that there is a material reality but that reality is independent of the human mind (Bhaskar, 1978; Easton, 2010). Additionally, there are great complexities involved when trying to unify these levels, as suggested by Bhaskar (1978), and when choosing a level of analysis, access to other levels may be interlayered (Easton, 2010).

Causal language is used by both positivists and critical realists to describe the world. Critical realists suggest that the aim of research is to increase our understanding of why causal relationships occur, not to demonstrate causal relationships; therefore, critical realists use causal language with thinking (Easton, 2010). The development of causal explanations is based on digging beneath what is readily observable instead of increasing the number of observations (Collier, 1994). Because it is not possible to measure or count the meaning of a phenomenon, interpretation is always needed to complement empirical evidence and understand it (Sayer, 1992).

Accordingly, the need for deductive empirical testing to understand reality is shared by both positivist and critical realists (Järvensivu & Törnroos, 2010). Critical realists abandon the positivists' view that empirical observations are direct reflections of reality, instead considering knowledge as being a search for finding the most valid and comprehensive representation of the real world

(Easton, 2002) . To validate the most acceptable explanation of reality is to empirically test theories (Järvensivu & Törnroos, 2010).

3.2 Abductive logic and semistructured interviews

Systematic combining is one of the cornerstones in the research process, and it is called matching, which, as defined by Dubois and Gadde, is “about going back and forth between framework, data sources and analysis” (2002, p. 556). Purely inductive or deductive reasoning is challenged by critical realism. A balanced approach between inductive and deductive reasoning is commonly referred to as abductive logic (Dubois & Gadde, 2014; Dubois & Gibbert, 2010; Welch et al., 2011). The research process starts with developing the theoretical propositions, which are then tested with empirical data, here referred to as seductive reasoning; on the other hand, inductive reasoning creates theories based on empirical data (Järvensivu & Törnroos, 2010). The abductive process stresses theory development via continuous interaction between theory and data and is positioned between inductive and deductive approaches. In summary, the abductive approach aims at developing or refining theories.

Following abductive logic, theoretical propositions before data collection or the need to collect and analyze data without theory are not needed because the core idea is to deepen the theoretical understanding of the phenomenon alongside empirical observations (Dubois & Gadde, 2002). Additionally, the research stages intertwine as researchers are encouraged to move back and forth from one research stage to another to reach a comprehensive understanding of theory and empirical phenomena (Dubois & Gadde, 2014).

Following the tenets of abductive logic, semistructured interviews were chosen as the study method in the current dissertation. Per Kvale and Brinkman (2008,) qualitative interviews have the goal of obtaining descriptions of the life world of the interviewees to interpret the meaning of the described phenomena. A certain level of previous knowledge of the topic is needed to formulate interview questions for the research (Wengraf, 2001). Additionally, the main topics of the study are covered in the interview guide, offering a focused structure for the discussion during the interview but without the necessity to strictly follow this guidance (Rubin & Rubin, 2005).

3.3 Data collection and analysis

The interview participants are described in Table 6. For the first article, the participants were recruited from three leading banks in Nordic countries. The criteria for selecting the participants were as follows: working in different functional areas (e.g., directly with customers or in the development units), managers from

different hierarchical levels (e.g., from the executive level or middle management), experience of digital transformation, and employed for the bank for at least 10 years. The rationale behind these criteria was to gain understanding holistically, not just, for example, from one function or from one hierarchical level.

For the second article, the participants were recruited from the four largest retail banks in Finland and from units directly in contact with customers. Because we wanted to gain understanding from the managers' and employees' viewpoint, we conducted semistructured interviews with managers and advisors/specialists.

For the third article, the participants were recruited in three phases. For the first phase, the participants were selected from the medium and large firms that had won the "best firm of the year" prize. The criteria for the prize are based on innovativeness, continuous development, growth, financial situation, ability to transform according to the changes, and established business. The rationale was that we wanted to have firms that were and would still be economically viable. For the second phase of the interviews, the same firms that were interviewed in the first phase were asked to participate. Of those firms, four were able to participate. We also wanted to strengthen the findings and obtain a holistic picture of different firm sizes and business fields. Therefore, for the third phase, the participants were recruited from large corporations from different business fields and covering at least two levels of managers. Additionally, based on our understanding, we selected corporations that had experienced the pandemic differently. The actual interviews were conducted in two rounds, as described in Table 6.

TABLE 6 Empirical data collected in the dissertation

Article	Method	Participants	Timeline	Length
1	semistructured, in-depth interviews	Six bank managers from three leading retail banks in Nordic countries, from different hierarchical levels and from different functional areas	April and May 2018	49–61 min
2	semistructured, in-depth interviews	10 interviews with six managers and four advisors/specialists working at the largest retail banks in Finland; working in different managerial positions and hierarchical levels	November and December 2020	40–56 min
3	semistructured, in-depth interviews	20 managers, 24 interviews from 13 firms that represent different business fields and different firm size	1st round: September 2019–December 2019 2nd round; April 2020–November 2020	43–65 min

The transcribed data were analyzed with thematic analysis alongside an inductive coding and analysis process with NVivo software. The analysis was grounded in empirical data expressions, and the analysis unit was a statement articulated by a participant. Both inductive and deductive themes were used. Inductive refers to more personal beliefs of themes and deductive referring to themes of prior theory (Morgan & Nica, 2020). The iterative approach, which is claimed to be a deeply reflexive process with the core in visiting and revisiting the data and connecting them with emerging insights, here with the goal of refining focus and understanding, was meaningful for the process (Srivastava & Hopwood, 2009).

To summarize the research elements of this dissertation and how they are tied together. The bottom layer points to the philosophical stance, the basis for deciding on a suitable research method. In the current dissertation, critical realism led to the choice of an abductive research approach. Accordingly, the data were collected through semistructured interviews via phone and analysis conducted through an iterative approach. Data management and analysis were performed using NVivo software. Together, these choices form a consistent research approach.

4 SUMMARY OF DISSERTATION ARTICLES

4.1 Study 1: Antecedents of market orientation during digital transformation

The starting point for the first article is the increasing pressure for firms to remain relevant and deliver value to their customers during digitalization, which is one of the main factors causing uncertainty. There are three main aspects that affect banks during digitalization. First, customers demand a frictionless experience across various services and digital channels 24/7 (Cao & Li, 2015; Lemon & Verhoef, 2016; Verhoef et al., 2015). Second, regulatory initiatives add challenges. Third, new digital competitors are entering the market, and the competition has become global (Rigby et al., 2018). Evidently, banks are challenged from many aspects; they need to shift their focus from the internal development of processes to create valuable interactions with customers (Holmlund et al. 2017) and further to move from a traditional “inward focus” to more market oriented way of doing business (Kolar, 2006).

That article follows the antecedents categorized in three high level categories; senior management factors, interdepartmental dynamics and organizational systems, by (Kohli & Jaworski, 1990) and finds these are still relevant during digitalization. Additionally, this article finds that in senior management, the focus should be on understanding the data and technology, on communication gaps, and managers’ positive mindset toward customers. To better understand data and technology helps managers avoid Bátiz-Lazo and Wood’s (2003) finding that a lack of understanding of new opportunities might hold back development. Focusing on communication gaps and ensuring understanding throughout the whole organization is crucial, especially when facing uncertainty. Thus, the main

point is to focus on customers, who are naturally embedded in MO but cannot be emphasized too much.

When it comes to interdepartmental dynamics, the focus should be on avoiding silos and creating a culture that supports interdepartmental work. The necessity of cutting silos and working together is emphasized during uncertainty. Digital transformation also allows the use of new tools to strengthen and make it easier to cooperate independently of physical location. An interesting finding is also the emphasis on creating relationships with external partners, for example, with fintech companies, to ensure that they keep pace with technological innovations.

Regarding the organizational systems, the low organizational hierarchy is emphasized to ensure that decision-making happens near customers and that customer intelligence is spread throughout the organization. To summarize, this article focuses on the antecedents of MO during digital transformation, which is claimed to be one of the main reasons behind firms facing uncertainty. The main findings indicate that during digitalization, the MO is manifested as the firm's ability to offer a seamless and valuable customer experience across all service channels. Firms need to focus on a low organizational structure, managerial understanding of data and technology usage, interdepartmental management of external partnerships, and a managerial mindset that is genuinely concerned about customer needs.

4.2 Study 2: Implications of the COVID-19 pandemic on market orientation in retail banking

The second article examines the implications of the COVID-19 pandemic on the implementation of MO in the context of retail banking. This study sheds light on the aspects of MO antecedents highlighted during the pandemic, as well as on the consequences on MO caused by the pandemic. The findings show that MO was significantly reflected in the behaviors of banks upon encountering the COVID-19 situation: banks increased their MO in response to the crisis. Previous research has established that banks are being transformed from risk management to focusing on customers (Nätti & Lähteenmäki, 2016), which has been further strengthened by this study. This ongoing transformation helped the interviewed banks admit to the uncertainty caused by the global pandemic because they did not need to start from scratch. Further, the digital transformation was on quite a high level when the interviewed banks faced the COVID-19, which naturally was helpful when navigating uncertainty. Thus, these findings cannot be compared with banks that are at a very low level when it comes to their digitalization.

Studying the antecedents of MO and especially those concerning the situation of severe uncertainty caused by the pandemic, this study finds emphatic

leadership and employee as being training important factors in management factors. Excellent cooperation between and among different departments and teams is found to be crucial for interdepartmental dynamics. For organizational systems, there is the need for creating value for customers, which here includes technological readiness and capabilities.

Concerning the activities of MO, the study highlights the importance of proactively contacting customers, partners, and other stakeholders to generate market intelligence. On the other hand, to disseminate intelligence, more meetings and interactions with customers were needed to discuss what is going on. To increase responsiveness to market intelligence, new channels, specifically digital channels, for example, remote meetings, played crucial role. There, the maturity of digitalization was noted to be important because these banks had quite good technical readiness and were also ready to boost the new channels.

Additionally, the current article finds both negative and positive consequences when using MO. Interestingly, the connection to business performance was unclear. The volume of customer meetings increased, but the financial outcome did not. It was claimed that customers valued human interaction and face-to-face meetings more, which would have created better financial results. The consequences of MO for employees and customers were mainly positive. Employees felt that their work became more meaningful, and managers were more caring and willing to learn about employees' work and situation than before the pandemic. Hence, customers were satisfied when banks proactively contacted them to learn about their situation and needs, as well as advising them on using remote services. This involvement enabled customers to quickly receive new and relevant services to help them during COVID-19.

It is important to note that Finnish banks are forerunners in digitalization, which helped their situation during COVID-19 because both the employees and customers were prepared for using different channels. However, this article shows that the major driver for taking a big step toward a high level of digitalization was the pandemic. Taken together, the results suggest that the implementation of MO is useful in expanding our understanding of retail bankers' behavior during times of crisis, as well as acting as a launchpad for business beyond the current pandemic and other crises.

4.3 Study 3: An effectual approach to executing dynamic capabilities under unexpected uncertainty

The third article focuses on decision-making logic and capabilities when navigating uncertainty. The participants were interviewed before and after the COVID-19 pandemic, which strengthens the findings concerning severe uncertainty. This article looks at the phenomenon from the approach of DC as capabil-

ities needed and effectuation as decision-making logic. This study integrates effectuation theory and DC theory to generate an in-depth understanding of the reasons and activities firms perform when navigating severe uncertainty based on their capabilities and decision-making logic.

Effectual logic is relevant and widely used in different types of uncertainty. The main findings suggest that when navigating uncertainty, the basis for a business strategy is to shape the market and welcome any unexpected events and surprises to turn those into opportunities. Additionally, firms focus on available means instead of trying to figure out how to get new ones. When considering the goals and profit maximation, this article suggests that during uncertainty, the guiding principles are more based on affordable loss than maximizing profit and that the goals emerge during activities instead of the activities following any strict plan. Open collaboration with partners, especially with customers, was evidently one of the success factors.

An interesting finding was how the role of customers and use of informal, ad-hoc information became important. That was evident before the pandemic, but the pandemic boosted this; in addition, learning from previous times of uncertainty helped firms act with short notice. To sense what was happening on the market, firms simply needed to turn to customers and ask them. This knowledge was then further shared throughout the organization, and as mentioned by the majority of the interviewees, the whole organization suddenly became interested in hearing what the customers were saying. Furthermore, to seize new opportunities, the firms needed to be more agile and get something on the market in a very short period. Before the pandemic, the firms already started to execute small experiments and cocreate services and products with customers and partners, but again, after the pandemic, the intensity to conduct those activities increased. Because customers quickly needed new solutions, the firms were also forced to think about new ways to teach customers how to use them; for example, webinars and YouTube were helpful. In this way, the firms were able to reach almost all customers, making it easy for them to start using new services or products. A DC approach transforming suggests the need to ensure fluent cooperation in the organization, killing silos, and ensuring that employees are empowered to make decisions regarding customers. As the processes were developed, this also led to organic changes in organizational structures.

To summarize, this article shows how firms benefit from or use effectuation as the dominant decision-making logic simultaneously with DC when navigating uncertainty. The findings serve to develop the effectuation and DC streams of the literature by demonstrating the role of effectuation logic in executing DC. To enrich the findings, the study creates an empirical model that highlights the key activities through which firms' sense and seize new opportunities and transform existing business operations via effectuation.

TABLE 7 Summary of the articles

	Article 1	Article 2	Article 3
Title	Antecedents of MO during digital transformation	Implications of the COVID-19 pandemic on MO in retail banking	An effectual approach to executing dynamic capabilities under unexpected uncertainty
Research question	How to ensure a strategical focus on creating valuable interactions with customers during the digital transformation?	Which aspects of MO have been emphasized, and what are the consequences during the COVID-19?	How firms' decision-making logic manifests itself in the execution of dynamic capabilities under uncertainty?
Data	Interviews: Different level managers in retail banks	Interviews: Managers and employees in four retail banks	Interviews: Managers on different level and different business fields
Research findings	<p>MO at the digital age is manifested as the firm's ability to offer seamless and valuable customer experience across all service channels.</p> <p>The identified and emphasized antecedents during digital transformation are as follows:</p> <ul style="list-style-type: none"> • Managerial mindset that is genuinely concerned about customer needs, managerial understanding of data, and technology usage. • Interdepartmental cooperation and management of external partnerships. • Low organizational structure to ensure the dissemination of intelligence throughout the organization. 	<p>The main MO antecedents, activities, and consequences were divided into more granular subcategories.</p> <p>Antecedents:</p> <ul style="list-style-type: none"> • Management factors: emphatic leadership and employee training • Interdepartmental dynamics: Internal cooperation • Organizational systems: Information technology infrastructure <p>Activities:</p> <ul style="list-style-type: none"> • Intelligence generation: Assessment of customers' needs and environmental evaluation • Intelligence dissemination: Formal information sharing, frequent internal meetings, and informal communication with coworkers • Responsiveness: Fast decision-making and Creativeness <p>Consequences:</p> <ul style="list-style-type: none"> • Business performance: Negative: Reduced sales revenue; Positive: Increased operational efficiency • Employee response: Negative: Decreased social connectedness with coworkers; Positive: Increased sense of purpose and Increased learning 	<ul style="list-style-type: none"> • The majority of firms' sensing, seizing, and transforming activities were determined by effectuation logic. • The basis of business strategy focused on creative market shaping and turning unexpected events into business opportunities when facing uncertainty. • The assessment of business opportunities was guided by the available means and affordable losses. • During uncertainty, the business opportunities that created value for customers were prioritized. • Attitude to outsiders, open collaboration with external partners, and willful agents was emphasized. • The significance of the role of customers as key partners increased when navigating uncertainty. <p>Identified three key activities in each dynamic capability category (i.e., sensing, seizing, and transforming) derived from effectual reasoning.</p> <ul style="list-style-type: none"> • Sensing: <ol style="list-style-type: none"> 1. Collection of customer insights via informal discussions and feedback.

		<ul style="list-style-type: none"> Customer response: Negative: Lack of confidence in remote service encounters; Positive: Increased convenience 	<ol style="list-style-type: none"> Active sharing of customer insights throughout the organization. Creative brainstorming of business development ideas based on customer insights <ul style="list-style-type: none"> Seizing: <ol style="list-style-type: none"> Execution of small experiments. Cocreation of products and services with customers and partners. Educating customers about product benefits and their optimal usage. Transforming: <ol style="list-style-type: none"> Making independent decisions that are beneficial to customers. Organic and agile reconfiguration of organizational structures and processes. Cross-functional collaboration for implementing changes.
Research contribution	The MO antecedents should be looked at via the lens of digitalization to emphasize the most relevant ones during digital transformation.	<ul style="list-style-type: none"> Provide deeper insights regarding the critically important key factors when facing severe uncertainty (COVID-19) for the MO literature. Offer new insights concerning the antecedents, activities and consequences during severe uncertainty. 	<ul style="list-style-type: none"> Combines the theories of dynamic capabilities and effectuation to provide a fuller explanation of the activities firms perform when navigating severe uncertainty. Provides an activity-based model for executing dynamic capabilities via effectuation. Highlights the importance of customer centrality in executing dynamic capabilities via effectuation.
(Target) Outlet	e-Bled Conference Proceedings	Journal of Financial Service Marketing	Conference paper in International Marketing Management - Summit 2022 and further developed
Status	Published	Published	Accepted and presented, submitted to be published

5 DISCUSSION

In this chapter, the findings of each article will be integrated to show how they are linked together and how these three articles answer the general purpose of the research. Next, the overall theoretical contributions and managerial implications of the current dissertation are presented, which is followed by a discussion of the limitations and suggestions for future research.

The main research objective was to understand how firms successfully navigate uncertainty, which was explored by taking a holistic view of exploring firms' strategic orientation, decision-making logic, and capabilities. More explicitly, the current dissertation intends to address those questions about what firms should do and how to do it when facing uncertainty, thus contributing to the MO, effectuation, and DC streams of the literature. One main research question and two subquestions were created. This section provides integrated findings in response to the research questions. The main research question was as follows: How firms can successfully navigate uncertainty? This was followed by two subquestions: How does MO as a strategic orientation support firms' successful navigation through uncertainty? How does a firm's decision-logic manifest the execution of dynamic capabilities during uncertainty?

5.1 Theoretical contributions

The present dissertation presents a conceptual framework based on empirical data for firms to successfully navigate uncertainty. The framework integrates MO, effectuation, and DC. The first two articles studied MO during digital transformation and COVID-19, whereas the third article integrated effectuation and DC and studied firms before and after the pandemic. The findings emphasize how integrating MO, effectuation, and DC into one unified framework helps firms successfully navigate uncertainty. In the same vein, Morgan et al. (2018) claim that there has been a shift toward using multiple-theory versus single-theory lenses to solve the increasing complexity in dealing with strategic marketing

problems. MO shows the strategic direction by exploring the antecedents and activities throughout the organization. Effectuation adds the decision-making logic that welcomes surprises and emphasizes cooperation and cocreation with external partners, and DC defines the strong sensing, seizing, and transforming capabilities needed to successfully navigate uncertainty. Consequently, the current dissertation contributes to the MO, effectuation, and DC streams of the literature by using a multidimensional approach.

Second, the present dissertation contributes to the MO literature in two ways: A) The current dissertation proposes that both cultural and behavioral perspectives of MO can be used simultaneously when MO is connected to other theories. This further answers the call of Ashwin and Hirst (2015) to study MO as a multidimensional concept, including both behavioral and cultural components. The current dissertation emphasizes the importance of generating and disseminating customer intelligence utilizing informal information to ensure there is the speed to respond to the market in situations of uncertainty. This further links to the behavioral component of MO (Kohli & Jaworski, 1990). B) This dissertation emphasizes entrepreneurial thinking and learning from the past, meaning the thinking of the past should be looked at to see what directions are needed for the future, which further refers to cultural components (Slater & Narver, 1995). In the same vein, Morgan and Anokhin (2020) claim that especially concerning uncertain business environments and larger companies, firms can benefit from using MO and entrepreneurial orientation simultaneously.

Third, the current dissertation contributes to the effectuation literature by offering an enhanced understanding of the use of the effectual approach simultaneously with sensing, seizing, and transforming capabilities, thereby answering the call of Engel et al. (2017) and Perry et al. (2011) to study the relationship between effectuation and other theories. Effectuation is claimed to be a superior logic during uncertainty, which was further supported in the current dissertation. The literature mainly claims that effectuation, having its roots in entrepreneurship, is suitable for start-ups and entrainers (Cai et al., 2017; Sarasvathy, 2001). However, the present dissertation shows that effectuation is well-suited for medium-sized companies and that the attitude in large corporations is to aim at using effectual decision-making as much as possible, which further supports the findings of Johansson et al. (2012); Mero et al. (2020); and Yang and Gabrielsson, (2017). The current dissertation further supports recent studies by emphasizing a) the speed to react, supporting the findings of Chesbrough (2020) and Lee et al. (2020). It was also evident that effectual logic was predominant because the firms had to carefully consider how to turn surprises into opportunities to survive the crisis. Overall, the outbreak of COVID-19 was found to validate the empirical model presented in the current dissertation and further supports Hongwei and Harris (2020), who found that entrepreneurial agility (effectuation) was needed to compete both during and after the COVID-19 crisis.

Fourth, the present dissertation contributes to the DC literature by answering the call of Schilke et al. (2018) to increase the integration of DC with relevant theories and empirical investigations. Having well-adjusted MO for sensing,

seizing, and transforming capabilities strengthens the implementation of DC, echoing the findings of Randhawa et al. (2021). Additionally, the current dissertation shows how DC integrated with effectuation helps shape the market, thereby answering the call of Schilke et al. (2018) to investigate this underdeveloped area. As its second contribution to the DC literature, this dissertation provides empirical evidence of DC in practice by presenting an activity-based model, empirically showing how activities in sensing, seizing, and transforming work during uncertainty. Key activities were found for firms to perform in the sensing, seizing, and transforming phases when navigating extreme uncertainty. The findings emphasize the importance of prioritizing time to collect customer insights by using information directly from customers as a prioritized source and sharing information throughout the organization; this is further supported by Endres et al.'s (2020) idea that sourcing from customers is indispensable to a firm's sensing capability, as well as Heinonen and Strandvik's (2020) idea that a crisis accentuates customer primacy. The continuous experimentation and cocreation of products and services with customers and other partners, as well as educating customers in ways that improve value in use, were highlighted in the current dissertation. In the same vein, Mora Cortez and Johnston (2020) found that educating customers via, for instance, webinars was crucial during the COVID-19 pandemic. Accordingly, this dissertation supports evidence from Teece's (2016) previous observations claiming that in reality, sensing, seizing, and transforming can overlap.

It is important to note the strong emphasis on understanding how the role of customers changed from passive to active players during uncertainty. This echoes Heinonen and Strandvik, (2018), who refer to the changing role of customers by explaining how firms need to understand how customers prefer to involve companies in their lives instead of thinking about how customers could be involved in the provider's activities. It is evident that without acknowledging customers as important partners, firms have trouble when navigating uncertainty. Heinonen and Strandvik (2018) and Heinonen et al. (2010) have addressed similar findings, claiming that the role of customers has changed to a customer-dominant perspective, which postulates that the customer plays a dominant role in business and orchestrates value formation. As a result, to understand where to focus, firms should better understand customers' ecosystem, what is happening in customers' lives, and customers' intentions and experiences (Heinonen et al., 2010). The empirical data emphasize the shift from trying to be customer-centric to conducting activities that focus on creating value for customers. Similarly Frambach et al. (2016) find that on the dynamic market, customer orientation is crucial and even stronger than a technology orientation. Additionally, Kumar (2018) believes that a customer-focused viewpoint is at the core of transformative marketing. Hence, Verma and Gustafsson, (2020) emphasize the quick reallocation of resources, which the current dissertation supports, showing how to do this as an outcome of combining effectuation and DC.

To summarize, MO as strategic orientation defines firm’s behavior and culture, effectuation guides decision-making, and DC sensing, seizing, and transforming provide the capabilities to navigate uncertainty. Without focusing on these three dimensions, the overall picture of how to navigate through uncertainty remains fragmented.

Figure 2 illustrates the interconnections between MO, DC, and effectuation and empirical findings.

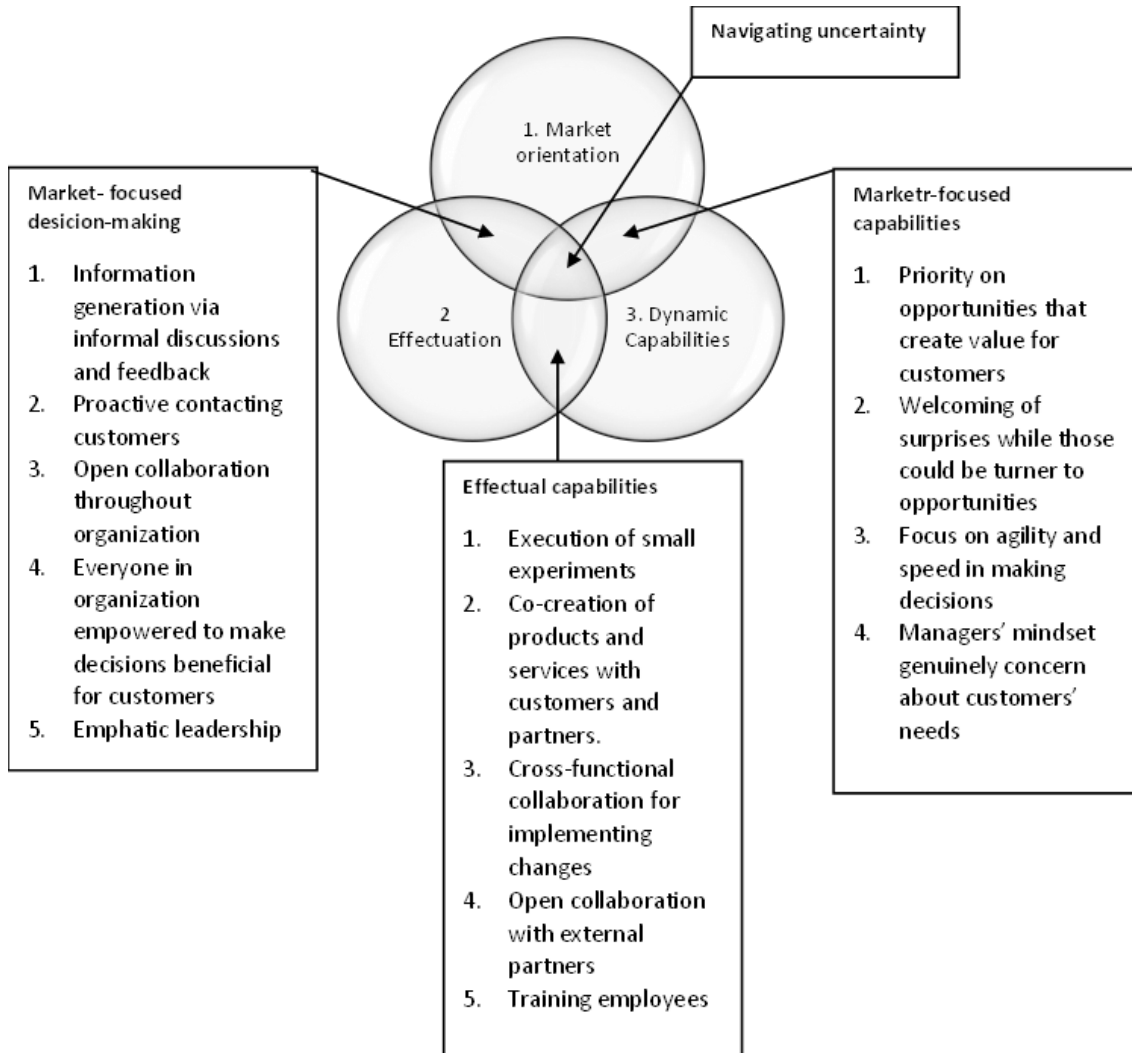


FIGURE 2 Framework to navigate uncertainty

5.2 Managerial implications

Alongside the theoretical contributions, the current study provides valuable implications for practitioners. Recently, every firm in the world has experienced uncertainty because of the global pandemic, which requires managerial attention (Klaus & Manthiou, 2020; Lang et al., 2021; Tuzovic & Kabadayi, 2021). The present dissertation shows one framework that can help firms take some practical actions to face uncertainty and be prepared for the next disruption or challenge. Managers should first set up the MO as strategic orientation and ensure that it is implemented throughout the organization. In the current dissertation, MO, with a very strong focus on customers, is the dominant strategic orientation. Second, the effectual dynamic capabilities guides the decisions and ability to react quickly to surprises and turn those into business opportunities and DC in the form of sensing, seizing, and transforming fulfills the picture by providing activities that help navigate through uncertainty. Table 8 summarizes the managerial implications, which are then further discussed in this chapter.

TABLE 8 Managerial implications

Managerial implications	Practical focus areas
Market orientation as guiding strategic orientation	<ul style="list-style-type: none"> • Focus on emphatic leadership – focusing on employees’ concerns and well-being • Train employees during times of uncertainty • Ensure internal cooperation • Ensure personal technological readiness • Establish a culture that focuses on customers and entrepreneurial thinking
Market- focused capabilities	<ul style="list-style-type: none"> • Allocate time for employees to contact customers to identify customers’ concerns • Use informal information, such as direct feedback from customers to shed light on next steps going forward
Effectual DC	<ul style="list-style-type: none"> • Shape the market instead of following it • Prioritize affordable loss and value for customers • Use small experiments and co-creation to seize opportunities • Empower customer decision making on what sorts of issues are beneficial for them • Reconfigure processes in an agile, organic way
Market- focused decision making	<ul style="list-style-type: none"> • Increase the number of customer encounters • Understand customers’ concerns and what happens in customers’ lives • React quickly to changes when needed

Managers should constantly pay attention to some of the antecedents that are especially valuable when navigating through uncertainty. First, emphatic leadership means that managers show caring for employees' well-being is important. It is crucial to create a culture of caring to ensure a psychologically secure emotional climate (Hodgkinson & Healey, 2011). This also includes employee training. In the first two articles, the context was banking, specifically the digital transformation and later COVID-19. Consequently, it is quite natural that new training is required, which in this case, concern the use of new digital tools but also how to conduct remote customer meetings, as well as internal meetings. Importantly, managers need to understand training requirements and that technical skills are not the only skills that are needed. They should understand that it is more about how to use (e.g., digital devices) to fulfill the needs of customers and employees.

Secondly, managers should focus on concerns about internal cooperation. Managers should go the extra mile to ensure that the whole organization works toward the same goal and understands the firm's priorities. The examples from the current dissertation show that when something extreme happens, as with COVID-19, everyone in the organization suddenly became aware of the need to understand what customers want. For managers, this means to ensure that they work as a team with other departments, units, and management groups to ensure fluent communication and information sharing throughout the organization.

Further, an technological understanding of not only the possible solutions but also the possible consequences for customers and employees is important. COVID-19 demonstrated the need for digital readiness. The present study supports the findings of Kudyba (2020) and Leonardi (2021) by highlighting the increased speed in digital transformation. As shown during the COVID-19 pandemic, when something unexpected happens, the availability of different channels of communication including those that do not require physical closeness, is crucial. In this regard, digital technologies offer a solution. Managers need to be aware of not only the possible benefits of these channels for employees and customers but also their potential negative consequences. In the same vein, Vial (2019) asserted that digital technologies offer a new reality, with huge potential for innovation and performance in organizations while simultaneously challenging firms because they can control fewer elements of their operating environments. Some of the firms included in the present study were further ahead in their digital transformation journey than others. Therefore, they were more ready to face the global pandemic than those who were in the early stages of their journey. However, even when the required digital channels were already in place, there was a clear need for more effective use of these channels. Thus, firms need to ensure that both customers and employees are aware of how to use all available channels and how to exploit all their possible benefits.

The findings of the present study suggest that when faced with severe uncertainty, firms should focus on their customers, generate customer intelligence based on informal information, and disseminate the obtained intelligence throughout the organization. Managers should focus on activities that help them

sense what is happening in the market. This requires time to contact customers to find out what is happening in their lives. Furthermore, the feedback obtained directly from customers needs to be shared within the organization, making everyone aware of it. In the present study, some of the managers reported that after the pandemic struck, everyone in their organizations focused on customer concerns. This avoided silos, as everyone had the same goal (i.e. to determine through direct customer information what to do next).

When facing uncertainty, managers need to focus on shaping the market instead of mimicking competitors. Managers need to make decisions that create value for customers and are based on available means and affordable losses rather than trying to optimize the results. The empirical findings show that managers need to conduct a number of activities to get near customers to better understand what is really happening in customers' lives.

Furthermore, it is important that managers see surprises and challenges as possibilities of business opportunities. Regarding effectual seizing, managers should conduct small experiments to test ideas with customers and cocreate products and services with customers and partners. The current dissertation also recommends that managers ensure that the materials used to educate customers are relevant and available through different channels, which further supports the findings of Mora Cortez and Johnston (2020) that educating customers via, for instance, webinars was crucial during the COVID-19 pandemic.

Accordingly, the attitude toward external and internal partners needs to be positive and come with open collaboration. Managers need to do everything in their power to avoid "silo thinking" in the organization, for example, by ensuring that everyone in the organization is willing and empowered to work toward the success of the firm. Hence, to gain real execution power, managers should focus not only on customers, but also on employees' well-being and that of society by emphasizing that cooperation among all members of the organization should be seamless.

5.3 Evaluation of the dissertation and avenues for the future direction

The key characteristic when evaluating abductive research is to determine the transparency of the interplay between theory, empirical phenomena, and method (Dubois & Gadde, 2014; Dubois & Gibbert, 2010; Järvensivu & Törnroos, 2010). Throughout the current dissertation, significant effort has been made to increase transparency regarding the process in the overall dissertation and individual studies. The intention was full transparency of the research process and context. The ultimate goal was to provide as much evidence as possible to enable readers to evaluate whether the ideas and findings could be utilized in other situations, times, and contexts. What was observed and what interpretations were made by

researchers' observations were emphasized, as is suggested by Easton (2010). Accordingly, numerous direct quotes from interviews were used, along with a clear explanation of the writer's interpretation of each quote.

The philosophical assumption of critical realism, here considering interpretation to be an integral part of the findings, is the paramount issue regarding validity in the current dissertation (Easton, 2010). However, there are several weaknesses related to the validity of the results. First, the validity and generalizability are not guaranteed because for the abductive studies, transparency is considered a primary quality criterion (Järvensivu & Törnroos, 2010). Second, the findings are incomplete; despite careful collection and analysis of the data, it is only possible to record a part of the actual events and the writer's own interpretations of them. Third, the primary data collection method could be seen as a limitation because interviews are generally criticized in the literature (Piekkari et al., 2010). One weakness of interviews is the tendency of informants to provide an ideal behavior rather than to discuss what they actually do (Woodside & Wilson, 2003). Thus, it is claimed that the data collection method is balanced by what data are needed and what are possible to collect (Easton, 2010). Another weakness concerns the voices of the informants in the interviews. Contrary to the recommendation by Järvensivu and Törnroos (20210), the voices of informants are not equally strong, even though some of the interviews were simply richer in information than others. To elaborate, for example, some participants were more experienced in facing uncertainty and, therefore, were more ready to discuss and analyze the situations and activities they had conducted.

To increase the validity of the results, the interviewees were from different firm sizes, hierarchical levels, and business fields. Because the first two articles were from banking, for the third article, the perspective was purposely enhanced to concern different business fields and different firm sizes. Accordingly, each article in the current dissertation went through a blind review process to ensure that the validity of argumentation was carefully evaluated by anonymous reviewers, as suggested by Järvensivu and Törnroos (2010).

To evaluate statistical generalizability, caution must be applied because only a few organizations were investigated. Instead, the analytical generalizability is considered one of the biggest strengths of the present dissertation, here referring to the suggestion by Yin (1999) that analytical generation is separate from statistical generation because the empirical observations to theory guarantee generalization instead of referring to population. Preliminary theoretical frames were created based on a careful review of the literature before data collection to achieve the analytical generalizability of the findings. The data collection was guided by established frameworks to ensure a connection with existing theories. Particular care was taken to ensure that changes based on the empirical findings for the frameworks were justified by theoretical knowledge. Consequently, the practices when facing severe uncertainty vary from context to context, but the developed frameworks will also be shown to account for the phenomenon in other settings. The applicability of the frameworks has not been systematically tested in other contexts; however, the usefulness of frameworks presented are

confirmed by a number of informal discussions with versatile representatives from different firms. To be specific, the writer has often asked practitioners what their most critical activities, issues, and knowledge learned have been when trying to navigate through uncertainty. The answers were supported and topics covered in the framework of the present dissertation. In summary, the findings might have been different if the study had been conducted in a different context, but the framework itself would have remained similar.

Both the limitations and contributions of the current dissertation provide interesting avenues for future research. Given that the goal of the dissertation was to build a multidimensional framework to help firms successfully navigate through uncertainty, the presented empirical model should be validated by more research because it is a first attempt to integrate the three theories and perspectives. It would be interesting to test the model using quantitative methods. Another interesting avenue is to continue with this model to see the possible changes that happen, for example, when the world continues on after COVID-19. The present dissertation has discussed the uncertainty in general, but because COVID-19 happened during the dissertation journey, it had a strong impact on data collection and the findings. The third interesting avenue for the future is the strong emphasis on customers and changing role of customers during uncertainty. It would be interesting to study the changing role of customers by focusing on this. Therefore, these results need to be interpreted with caution, and future research is needed.

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ORIGINAL PAPERS

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ANTECEDENTS OF MARKET ORIENTATION IN THE BANKING SECTOR DURING ITS DIGITAL TRANSFORMATION

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Antecedents of Market Orientation in The Banking Sector During Its Digital Transformation

HANNELE HAAPIO, HEIKKI KARJALUOTO & JOEL MERO

Abstract Firms are under increasing pressure to remain relevant for their customers and need to rethink how to remain market-oriented in the digital age. This is evident in the banking sector where the traditional banks are gradually being challenged by digital native competitors and growing customer demands. Consequently, this study examines what it takes to be market oriented in the banking sector at the age of increasing digitalization. Specifically, we focus on developing the theory on the antecedents of MO and examine how banks can regain market orientation under changing market conditions. Although Market Orientation (MO) has been a widely studied concept that has been applied in numerous different contexts, the role of digitalization as the transformer of MO is not well understood. The main findings of this study indicate market orientation at the digital age is manifested as the firm's ability to offer seamless and valuable customer experience across all service channels. Realizing this ideal necessitates a low organizational structure, managerial understanding of data and technology usage, interdepartmental management of external partnerships, as well as a managerial mindset that is genuinely concerned about customer needs.

Keywords: • Market Orientation • Digital Transformation • Retail Banking • Touchpoints • Banking sector •

CORRESPONDENCE ADDRESS: Hannele Haapio, PhD Candidate, University of Jyväskylä, School of Business and Economics, Marketing, Jyväskylä, Finland, e-mail: hannele.m.haapio@jyu.fi. Heikki Karjaluoto, PhD, Professor, University of Jyväskylä School of Business and Economics, Marketing, Jyväskylä, Finland, e-mail: heikki.karjaluoto@jyu.fi. Joel Mero, PhD, Assistant Professor, LUT School of Business and Management, Marketing, Jyväskylä, Finland, e-mail: joel.mero@lut.fi.

1 Introduction

Digitalization and the emergence of new technologies are rapidly changing the business landscape (Kumar, 2018; Overby, Bharadwaj, & Sambamurthy, 2006). In the banking sector, digitalization is transforming the market dynamics at three main fronts. First, digitalization has empowered customers to demand a frictionless experience across various service and communication channels whenever they want (Cao & Li, 2015; Lemon & Verhoef, 2016; Verhoef, Kannan, & Inman, 2015). Second, digitalization has led to new regulatory initiatives, such as the Revised Payment Service Directive (PSD2) and the General Data Protection Regulation (GDPR) that are challenging traditional banks' business and operating models. Third, digitalization has made competition global, and new digital competitors (fintechs) are entering the markets with new digital solutions (Rigby, Sutherland, & Noble, 2018).

The dominant business models in the banking sector seem to streamline banks' operations and extend their business rather than try to meet customers' needs (Camarero, 2007; Nätti & Lähteenmäki, 2016). However, the new market dynamics require banks to shift their focus from developing internal banking processes to creating valuable interactions with customers (Holmlund, Strandvik, & Lähteenmäki, 2017). In a similar vein, Kolar (2006) suggests that banks should move from a traditional "inward focus" to more market-oriented ways of doing business.

Against this backdrop, we propose that succeeding in the new market reality requires banks to restore focus on market orientation (MO). Although MO has been a widely studied concept that has been applied in numerous different contexts since the seminal paper written by Kohli and Jaworski (1990), the role of digitalization as the transformer of MO is not well understood. The objective of the study is to examine, what it takes to be market oriented in the banking sector during the digital transformation. In particular, we follow the model by Kohli and Jaworski (1990) and examine the antecedents of MO.

This study proceeds as follows. In the next section, we present the theoretical underpinnings and antecedents of MO. After that, we explain and justify the data collection and analysis methods. Finally, we present the study findings and discuss the contributions, limitations, and future research avenues.

2 Antecedents of market orientation

With more than 1000 articles published since 1990, the theory of MO might be one of the most cited concepts in the field of marketing (Jaworski & Kohli, 2017). Kohli and Jaworski (1990) propose that the key elements of MO are intelligence generation, intelligence dissemination and responsiveness, whereas Narver and Slater (1990) propose that MO consists of customer orientation, competitor orientation, and inter-functional coordination. Hartline, Maxham, and McKee's (2000, p. 35) definition suggests that MO manifests itself as a firm's commitment to "put customers' interest first, but not to exclude the interests of stakeholders with the outcome to develop a long-term profitable company". Although different approaches seem to be consistent with that of Kohli and Jaworski (1990), their approach to MO is still the broadest. That is consistent with Kolar (2006) who compared a number of definitions of MO and found that they do not represent substantial improvements to the conceptualizations by Kohli and Jaworski (1990) and Narver and Slater (1990). Thus, this study uses the antecedents of MO adopted from Kohli and Jaworski's (1990) theory.

Kohli and Jaworski (1990) propose three categories of antecedents (senior management factors, interdepartmental dynamics and organizational systems) that affect the implementation of MO (Table 1). The category of senior management factors includes the communication-action gap of top management, suggesting that the actual behavior of senior managers does not always match their words. That is consistent with Harris and Piercy (1999), who argue that the level of MO in an organization is dependent on the abilities and commitment of senior management. Other senior management factors are the risk aversion of senior management, upward mobility and the education of top management, marketing managers' ability to win the trust of non-marketing managers and the senior management's attitude toward change (Kohli & Jaworski, 1990).

The second category of antecedents is the interdepartmental dynamics. Interdepartmental conflict may appear inherently because of different desires of various departments. That is in line with Holmlund et al. (2017) who argue that it is natural for managers to optimize the function for which they are responsible. According to Kohli and Jaworski (1990), interdepartmental conflict inhibits communication across departments, and thus, limits the dissemination of market intelligence and hinders the generation of a holistic understanding of customers'

needs. A low level of concern for the ideas of other departments will result in ineffective processes. However, a positive effect can be achieved by interdepartmental connectedness (i.e., formal and informal contact among employees across departments), which will ensure the dissemination of market intelligence.

Third group of antecedents is organizational systems. Per Kohli and Jaworski (1990), barriers, such as formalization and departmentalization, inhibit an organization's MO. Formalization is the degree to which rules define the roles, communication, authority relations, and procedures of the organization. Departmentalization is a barrier to communication whereas centralization defines authority and participation in decision making. Long-term market-based reward system is another organizational system. Webster, (1988) claim that how managers are evaluated and rewarded is one key dimension for developing a market-oriented and customer-driven organization. Additionally, one barrier is the acceptance of political behavior. Harris and Piercy (1999) argue that political and formalized behavior of senior management is linked to low levels of MO. That idea is consistent with Kohli and Jaworski (1990), who argue that political behavior represents individuals' attempts to promote self-interests and threaten others' interests.

Table 1: Kohli and Jaworski (1990) Antecedents of MO

Senior management factors	Communication-action gap of top management
	Risk aversion of top management
	Upward mobility and education of top management
	Marketing managers' ability to win trust of non-marketing managers
	Top managements' attitude toward change
Interdepartmental dynamics	Interdepartmental conflict
	Concern for ideas of other departments
	Interdepartmental connectedness
Organizational systems	Formalization
	Departmentalization
	Centralization
	Market-based reward system
	Acceptance of political behavior

3 Methodology

Qualitative approach was used as the research strategy of this study. According to Maxwell (1996), qualitative research has the capacity to examine the particular context within which participants act and how the context influences their actions. A qualitative inquiry was considered the most suitable approach because our purpose was to generate in-depth understanding of the phenomenon rather than to provide evidence for causal claims.

Non-directive interviews served as the primary data collection method. These involved unplanned and planned questions and allowed for in-depth exploration of the issues (Gray, 2004). The target group for the interviews was bank managers in three leading Nordic retail banks. Following Eisenhardt and Graebner's (2007) recommendations, we collected data from interviewees who view the phenomena from diverse perspectives, are from different hierarchical levels, and are from different functional areas. We interviewed executives and middle managers, from development units and from units with direct customer interactions. Six interviewees were selected via purposeful sampling (Patton, 2002) meaning that those banking professionals who had experience of undergoing a digital

transformation in their organizations were selected as interviewees (Table 1). The interviews took place between mid-April and mid-May 2018.

Table 2: Interviewed bank managers

Level and role/responsibility	Name	Length of interview
Executive/development unit	Ann	53 min
Executive/leader of units with direct customer interactions	Mary	56 min
Middle management/development units	John	49 min
Middle management/ leader of units with direct customer interactions	Timothy	55 min
Middle management/ leader of units with direct customer interactions	Claire	61 min
Middle management/ leader of units with direct customer interactions	Stuart	58 min

The interviews were conducted partly face-to-face (four interviews) and partly over the phone (two interviews). The average length of the interviews was 55 minutes, and all the interviews were audio recorded with the permission of the interviewees. The interviews focused on the challenges that digitalization causes for banks. We did not ask about either MO or customer experience management directly, although we wanted to understand whether those are top priorities during digital transformation. During the interviews, the elements of MO entered the discussion.

All study data were documented and appropriately stored in a study database. For the analysis, we followed a three-step process, which included data condensation, data display, and drawing conclusions (Miles, Huberman, & Saldaña, 2013). For data condensation, we used descriptive coding to create relevant categories, such as customer focus, organizational behavior, regulatory changes, managerial behavior, customer behavior, technology, perceived risks, etc. During the data display phase, the data were organized by using the guiding framework, and they were grouped according to the context. Finally, the findings

were reviewed and compared with the theoretical model, which led us to propose the changes that are presented in this paper.

4 Findings

Findings for senior management factors are shown in figure 1, where the proposed new factors are marked with an asterisk (*). All interviewees discussed the senior management communication-action gap, which according to Kohli & Jaworski, (1990) occurs, when the actual behavior of senior managers does not match their words. Specifically, it became evident that the senior management talks a lot about customer orientation but the actual decisions are sometimes contradictory. This result mirrors the findings of Felleson (2011), who state that, although companies may believe that they are customer oriented, their actions do not correspond to this belief. In fact, managers' mental models direct what is considered important, what is monitored, and what is done in an organization (Holmlund et al., 2017). It seems that, there is a limited focus on customers as a starting point among retail banking executives; the focus is on developing business and renewing internal banking issues (Holmlund et al., 2017). For example executive level manager (Ann) and middle level manager (Stuart) stated:

"We say that we listen to customers and react on their needs. However, to be honest, that is not what we do, we still rely on traditional customer satisfaction measurements. Those are too slow and don't really tell anything anymore" (Ann)

"Managers say that the customer is the most important, but how important it really is? Do we have one-time deals, or do we have persistent customer work? Managers should understand customers and that does not come from only staring at figures." (Stuart)

The banking industry is rapidly evolving, and this requires that the management's attitude toward change is positive. Five interviewees explicitly mentioned the senior management's attitude toward change as an important antecedent of MO during digital transformation. In line with Nätti and Lähteenmäki (2016) who find that the long period of regulation has made banking managers more risk averse, multiple interviewees of this study considered that the risk aversion is a dominant characteristic among the banking executives. Overall, our data suggested that the senior management in the banking industry is more risk

oriented than market oriented. One interviewee described the lack of customer orientation as follows:

“The whole sector has only taken a few steps from the time when customers came with their ‘hat in hand’ to the bank. That, we have not yet understood; we are too arrogant” (Ann).

All interviewees discussed the managerial need to understand data and technology, which naturally plays a core role in digitalization. Interestingly, all interviewees considered mobile as the prioritized customer interaction channel because it is an entrance to all services. One interviewee summarized,

“We don’t talk about mobile only but mobile first. We say that mobile is a remote control panel for banking business” (Mary).

While the study data implied that the digital transformation in banking emphasizes mobile channels, the consequences do not seem to be clear. Bátiz-Lazo and Wood (2003) find that there is a risk in the prevailing bank management style. They argue that senior management’s lack of understanding of new opportunities and consequences might hold back development or lead to the pursuit of inappropriate growth opportunities. As one interviewed puts it:

“We put a lot of focus on mobile channels, but I’m not sure how well we really understand the consequences” (Timothy).

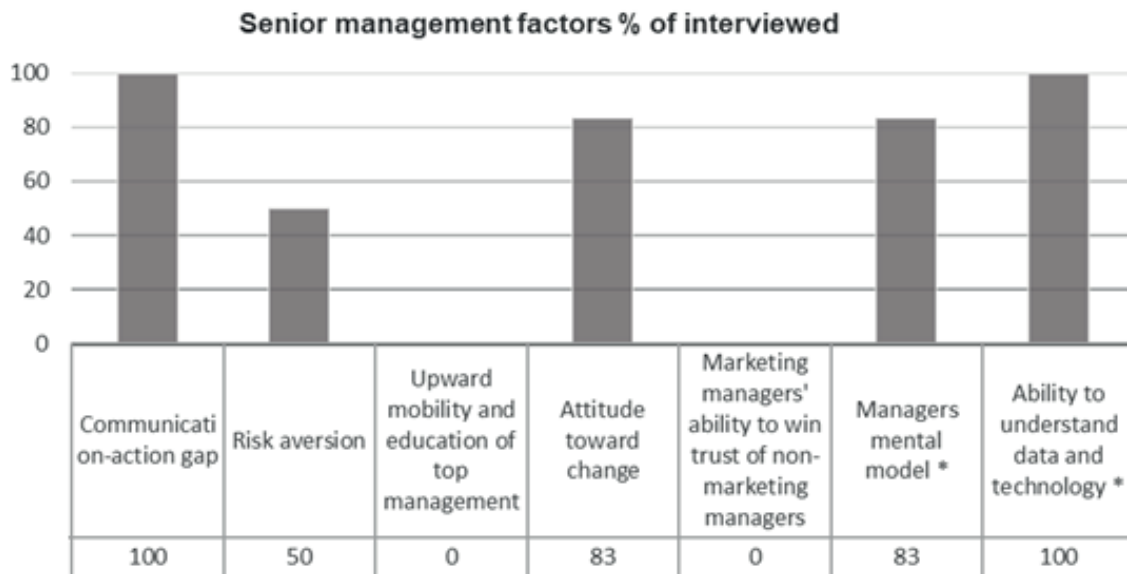


Figure 1: Findings of MO antecedents of senior management factors

Figure 2 illustrates our findings for the second category, the interdepartmental dynamics. The proposed new factors are marked with asterisk (*). This study confirms what (Pantano & Viassone, 2014; Rust & Day, 2006; Verhoef et al., 2015) claim about the need to integrate channels to gain a seamless customer experience. Customers require a consistent, uniform, and integrated experience in all of the channels they use (McLean & Wilson, 2016). In addition customers want to use the channels they prefer, whenever they want to (Cao & Li, 2015; Lemon & Verhoef, 2016; Verhoef et al., 2015). Simultaneously, the natural borders between different channels are disappearing, and the channels are blurring with each other (Verhoef et al., 2015). Further Piotrowicz and Cuthbertson (2014) find that when different channels are managed separately the silo mentality occurs. The cooperation between different channels and departments as well as how organizations still seem to have silos was discussed by all interviewed. These silos inhibit banks from MO and from delivering seamless customer experiences in all channels. One interviewed noted the following:

“We should get out of pipes. The thinking of only channels leads to silos. Channels are managed separately, and we are good at some and poor at some. We are not connected with the experience of our end customer” (Ann).

Additionally, due to regulatory changes, banks need to manage possible silos and ensure connectedness also with external partners. All interviewed brought up one fundamental regulatory change that affects the financial sector’s digital transformation, the recent update of the PSD2 in January 2018, which compelled banks in the European Union to open their APIs to third parties. The financial sector uses the term “open banking” in reference to the use of open data and open source technology. Under the open banking framework, third parties would be able to create new financial products by utilizing banks’ data. These changes require traditional banks to form partnerships, which, at their best, will add to the connectedness of an organization and, at their worst, will further increase the silos. Without these partnerships, there is a risk that banks will become merely account and deposit holders for customers that also provide customer data to third parties. To be successful in this new environment, it is crucial to avoid silos inside an organization while exploiting partnership companies.

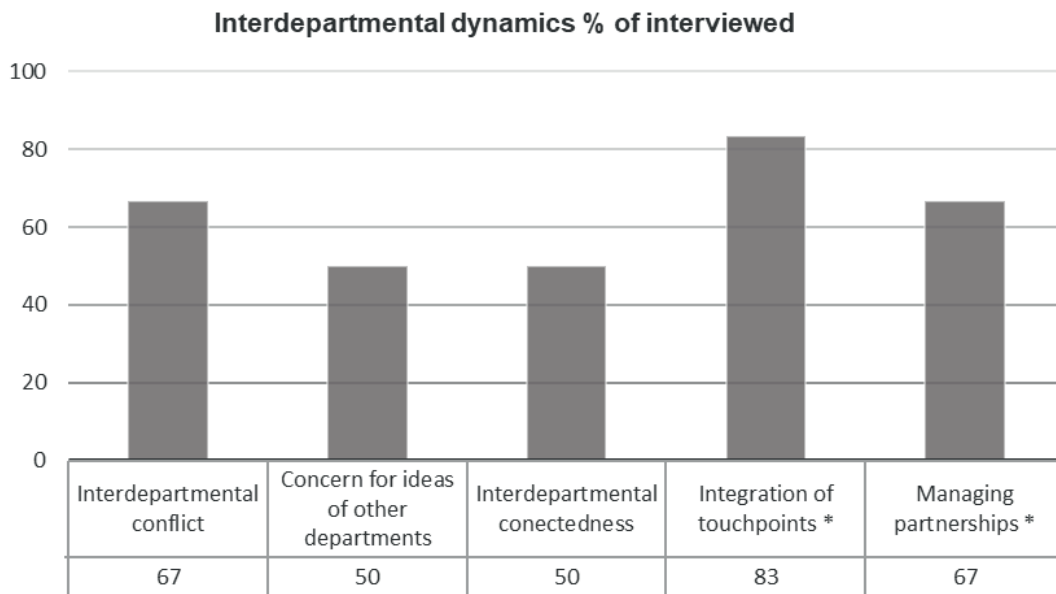


Figure 2: Findings of MO antecedents of interdepartmental dynamics

Findings for organizational systems are shown in figure 3, where the proposed new factors are marked with asterisk (*). Organizational systems, as they are described by Kohli and Jaworski (1990), are relevant in the digital transformation of the banking industry. Banks are large and complex organizations in which a decentralized organization structure with fewer formal procedures seems to be more efficient, which is confirmed by this study. That is also in line with Olson

et al. (1995) who find, that organization with few formal procedures empowers managers and employees in close decision making. In line with that, 67% of interviewed find the centralization to inhibit MO as one interviewed stated,

“Organizations should be very low and very near customers. Solutions should be made near customers” (John).

This study affirms that especially in complex organizations, that are facing substantial changes, all employees in an organization must understand what is expected from them to be market-oriented. Recent research by Dikert, Paasivaara, and Lassenius (2016) claim that marketing doctrine can help ensure that all employees understand the “rules” of MO and are aligned. The likelihood that employees do not rely on personal ideologies or mental models is bigger when companies provide marketing doctrine as guidance for decision making (Challagalla, Murtha, & Jaworski, 2014). One middle manager emphasized:

“First of all, you need to have a clear strategic vision. You need to get 100% commitment on these principles...More solution orientation and responsibility is needed for all” (Timothy).

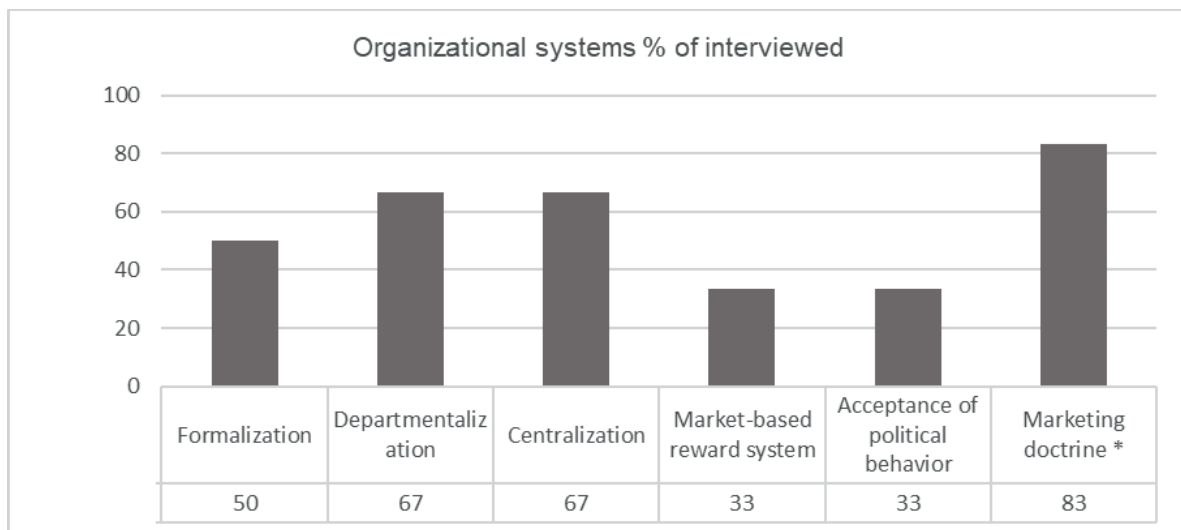


Figure 3: Findings of MO antecedents of organizational systems

This study confirms that many of the antecedents presented by Kohli and Jaworski, (1990) are relevant in MO during a digital transformation. Based on the empirical material, we did not find any support for the senior management

upward mobility and education neither for the marketing managers' ability to win trust of non-marketing managers. Although they could be considered valued antecedents of MO, they are excluded from this model. Additionally we propose five new factors to be added on the antecedents: in senior management factors; managers mental model and the ability to understand data and technology, in interdepartmental dynamics; the integration of all touchpoints and managing partnerships and for organizational systems we propose to add the marketing doctrine. The proposed model for antecedents of MO during digital transformation is shown in table 3. The percentage define the share of interviewed that has reflected on the factor and the proposed new factors are marked with asterisk (*).

Table 3: proposed model for antecedents of MO during digital transformation

Antecedent		%
Senior management factors	Communication-action gap	100
	Risk aversion	50
	Attitude toward change	83
	<i>Managers mental model *</i>	83
	<i>Ability to understand data and technology *</i>	100
Interdepartmental dynamics	Interdepartmental conflict	67
	Concern for ideas of other departments	50
	Interdepartmental connectedness	50
	<i>Integration of touchpoints *</i>	83
	<i>Managing partnerships *</i>	67
Organizational systems	Formalization	50
	Departmentalization	67
	Centralization	67
	Market-based reward system	33
	Acceptance of political behavior	33
	<i>Marketing doctrine *</i>	83

5 Discussion

This study makes a number of theoretical contributions. From a theoretical perspective, we wanted to broaden our understanding of MO antecedents. By examining whether digital transformation affects the model we found that, although the antecedents defined by Kohli and Jaworski (1990), are valid, they need to be viewed via the lens of the digital era.

First, this study identifies that most of the senior management factors are still relevant in the context of banking during its digital transformation. In particular, our study data highlighted that managers' mental models and the understanding of data and technology usage form the senior management factors that affect MO. The key to the market-oriented mental model was found to be the managers' focus on customers. Against this view, the previous studies have shown that the banking managers' focus is on business development and streamlining banks' operations (Camarero, 2007; Holmlund et al., 2017; Nätti & Lähtenmäki, 2016). This contradiction is alarming from the MO perspective. We conclude that banking managers need to adopt a genuinely customer-focused mindset if the bank is to become truly market-oriented. Notably, the understanding of data usage and technology is crucial during digital transformation to avoid Bátiz-Lazo and Wood (2003) finding that the lack of understanding of new opportunities might hold back development.

Second, this study contributes to the literature by arguing that digitalization requires the management of many touchpoints in an integrated manner to prevent organizations from building silos (McLean and Wilson, 2016; Pantano and Viassone, 2014; Rust and Day, 2006; Verhoef et al., 2015). An additional finding was that the changes that are faced by the banking industry are forcing banks to consider forming external partnerships that enable quick reactions to regulatory changes. Companies' messages need to be consistent across all touchpoints. Additionally, organizational structures and routines (e.g., divisional silos) and a power struggles can block the MO. Therefore, it is not only internal silos that banks should address; they should also understand external partnerships and how to work with them.

Our findings offer several contributions to practice. For example, senior management has a crucial role in how market-oriented an organization will be. This calls for managers to understand both the antecedents and the changes that are required to acquire a competitive edge during the digital transformation. This study provides practical information for senior managers to achieve the necessary changes.

Additionally, this study enhances managers' understanding of major changes that are brought by digital disruption in light of MO, including some ideas of how both the PSD2 and Gaffect MO, the importance of understanding technological opportunities, including the use of data, and managers' mental models.

5.1 Limitations and future research

In closing, we recognize that this work has several limitations. One limitation is the Nordic perspective of this study. All interviewees were from banks that have headquarters in Nordic countries (Scandinavia and Finland). Because digital transformation is not dependent on any region, in future studies, the antecedents of MO during digital transformation should include traditional banks that are located outside Nordic countries.

From the managerial perspective, it might be useful to develop measures of MO to better understand the impact of each antecedent on MO. This study does not answer the question of whether some antecedents have more impact on MO than others; that would assist managers in finding the right focus. Further, this study focuses on the antecedents of MO, while the consequences are only briefly mentioned. Future research could explore how the changes in the model are linked to the consequences of MO theory.

On a more general level, we believe that additional research on organizational culture and employees' roles during digital transformation would enhance our knowledge of the antecedents of MO. Furthermore, research on how marketing in financial sector should be organized during a digital disruption to gain the maximum level of MO could produce important knowledge.

This study follows the structure of Kohli and Jaworski's (1990) theory of MO. Future research could compare the organizational culture and setup of, for example, fintech companies or startups to big banks. It would be interesting to understand how Kohli and Jaworski's (1990) theory would apply in smaller and later established companies. Furthermore, more research is needed to investigate the changes that the financial sector is facing during its digital disruption (e.g., the PSD2).

Another interesting possibility for future research is the balance among data, technology, and soft items. Is the balance at the right level, and does that affect the consequences of MO? This question is especially pertinent now, when customers require a seamless omnichannel experience.

Overall, while these limitations do not jeopardize the integrity of the results, they do limit the conclusions that can be drawn.

6 Conclusion

To summarize, this research highlights the importance of considering MO in the banking sector at the age of increasing digitalization. Building on the theory of MO (Kohli and Jaworski, 1990), this paper proposes new elements to the original MO framework by identifying five novel antecedents: managers' mental model, ability to understand data and technology, integration of touchpoints, managing partnerships and marketing doctrine.

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II

IMPLICATIONS OF THE COVID-19 PANDEMIC ON MARKET ORIENTATION IN RETAIL BANKING

by

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Implications of the COVID-19 pandemic on market orientation in retail banking

Hannele Haapio¹ · Joel Mero¹ · Heikki Karjaluo¹ · Aijaz A. Shaikh¹

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Abstract

This qualitative study examines the implications of the COVID-19 pandemic on the implementation of market orientation (MO) in the context of retail banking. The findings show that MO was significantly reflected in the behaviors of banks upon encountering the COVID-19 situation, with the banks increasing their MO in response to the crisis. This study finds sub-categories based on the empirical data that explain the implementation of MO in more detail. Overall, the findings provide valuable conceptual and managerial insights into the modus operandi of banks during a crisis and offer new best practices for the banking industry.

Keywords COVID-19 · Retail banking · Market orientation · Digital banking

Introduction

Market orientation (MO) is a marketing philosophy that perceives marketing as a panorganizational effort to generate market intelligence, disseminate it across the organization, and respond to it in ways that create value for target customers (Kohli and Jaworski 1990). In the context of retail banking, MO necessitates the continuous adaptation of banking services to match customers' evolving banking needs to create optimal value (Komulainen and Makkonen 2018). While the importance of restructuring organizational operations to match the changing market landscape is self-explanatory, the implementation of MO causes challenges for banks. Many banks claim to be market oriented or customer oriented in their mission statements, yet multiple studies show that bank managers focus more on internal business processes than on

external market movement (Camarero 2007; Holmlund et al. 2017; Nätti and Lähteenmäki 2016).

An external crisis offers an opportune time to investigate the implementation of MO because a crisis, by definition, changes the external context of the organization, forcing it to focus on its most critical activities. Accordingly, the COVID-19 pandemic has caused significant changes in retail banking in terms of changing customer needs and internal processes. In particular, COVID-19 has forced retail banks to adopt new digital technologies and boost the use of digital channels for interacting with employees, customers, and other stakeholders. Consequently, the question of how retail banks can remain market oriented in the midst of an unexpected crisis has become vital.

Against this backdrop, this study aimed to explore the implications of COVID-19 regarding the use of MO in retail banking. We followed the seminal MO framework by Kohli and Jaworski (1990) and aimed at generating in-depth insights into the key antecedents, activities, and consequences of MO. Thus, the following three research questions were proposed:

- (1) Which aspects of MO antecedents have been emphasized in retail banking during the COVID-19 crisis?
- (2) Which aspects of MO activities have been emphasized in retail banking during the COVID-19 crisis?
- (3) What are the consequences of COVID-19 for retail banking's performance?

✉ Hannele Haapio
hannele.m.haapio@jyu.fi

Joel Mero
joel.j.mero@jyu.fi

Heikki Karjaluo
heikki.karjaluo@jyu.fi

Aijaz A. Shaikh
aijaz.a.shaikh@jyu.fi

¹ University of Jyväskylä School of Business and Economics,
PO Box 35, 40014 Jyväskylä, Finland



To reach the study objective, we conducted a qualitative inquiry consisting of ten interviews with managers and advisors from four largest retail banks operating in Finland. Finnish retail banks can be considered forerunners in their degree of digital transformation (e.g., Bank of Finland 2018) because they offer digitized services in all retail banking domains, including transactions, payments, investments, signatures, and service encounters. Consequently, we assumed that Finnish banks were exceptionally well prepared for the COVID-19 crisis in terms of digital maturity, allowing them to focus on business activities rather than adopting new technologies. The study context thus provided a meaningful setting in which to investigate the implications of COVID-19 for MO and potential best practices for addressing such a crisis.

The impacts of COVID-19 on market orientation

To differentiate themselves from competitors, firms can use MO's customer-centric business philosophy, which focuses on understanding customer needs and responding to them in ways that create value (Celuch et al. 2015; Jaworski and Kohli 2017). The need to become market oriented has been amplified in the increasingly digitalized, globally competitive, and rapidly changing business environment (Guo et al. 2019; Kohli 2017). In particular, MO has been found to help firms navigate turbulent times (Kumar et al. 2011); therefore, we suggest that MO has provided an important competitive advantage during the COVID-19 pandemic, which has disrupted existing market dynamics.

In addition to adapting retail banking to reflect changes in the market environment, research has demonstrated that a high level of MO in the banking context is positively related to employees' job attitudes (Gounaris 2003) and customer service quality (Camarero 2007). Thus, although the basic premise of MO is to serve customers via improved offerings based on customer needs, it also improves the commitment of service personnel to providing high-quality customer experiences in service encounters (Edo et al. 2015). Despite the reported advantages of MO and persistent calls for banks to move from a traditional "inward focus" to more market-oriented ways of doing business (see e.g., Kolar 2006), MO implementation has progressed slowly in retail banks. Banks have gradually shifted their attention from firm-oriented risk management to MO (Nätti and Lähteenmäki 2016), yet research shows that bank managers remain largely focused on internal business development and streamlining existing operations (Camarero 2007; Holmlund et al. 2017; Nätti and Lähteenmäki 2016).

Research has also discussed the prerequisites of implementing MO in the banking context. Opoku and Essien (2011) stated that MO requires a bank to involve both managers and employees in implementing an organization-wide focus on customers. Haapio et al. (2019) studied the antecedents of MO in the context of a bank that was undergoing a digital transformation and concluded that the key success factors in leveraging MO stemmed from the manager's mental model, which genuinely focused on customer needs, and the ability to improve interdepartmental dynamics by removing organizational silos and power games between functions. However, research has provided few insights into the implications of a crisis situation regarding the implementation of MO. Therefore, COVID-19 offered a fruitful opportunity to fill this research gap.

Following Kohli and Jaworski (1990), our research framework (Fig. 1) comprises the key antecedents, activities, and consequences of MO. The antecedents are factors that either enhance or impede the implementation of MO. These factors are divided into management factors, interdepartmental dynamics, and organizational systems. MO activities comprise three categories: (1) intelligence generation (i.e., the formal and informal collection of information on market needs and the forces that influence them); (2) intelligence dissemination (i.e., sharing market information within the organization, both vertically across organizational hierarchies and laterally across different functions); and (3) responsiveness to market intelligence (i.e., reconfiguring organizational processes to match changing customer and market needs). The consequences of MO are divided into business performance and employee and customer responses.

The research framework adapted from Kohli and Jaworski (1990) provided a starting point for investigating the implications of COVID-19 regarding the use of MO in retail banking. Three propositions guided our empirical investigation. First, we proposed that increased remote work due to COVID-19 would strengthen the relationship between MO antecedents and MO activities because it becomes increasingly difficult to be market oriented when working remotely without effective managerial practices, close interdepartmental collaboration, and feasible organizational systems. This proposition resonates with studies showing that increased remote work affects interdepartmental dynamics, creates new challenges for management, and challenges existing organizational systems (Bartsch et al. 2020; Carnevale and Hatak 2020).

Second, because the pandemic enforced quick changes to firms' operations and activities (Finsterwalder and Kupelwieser 2020; Kabadayi et al. 2020), we proposed that COVID-19 would alter the means through which banks generate market intelligence, disseminate it throughout their organization, and respond to it. Specifically, we suggested



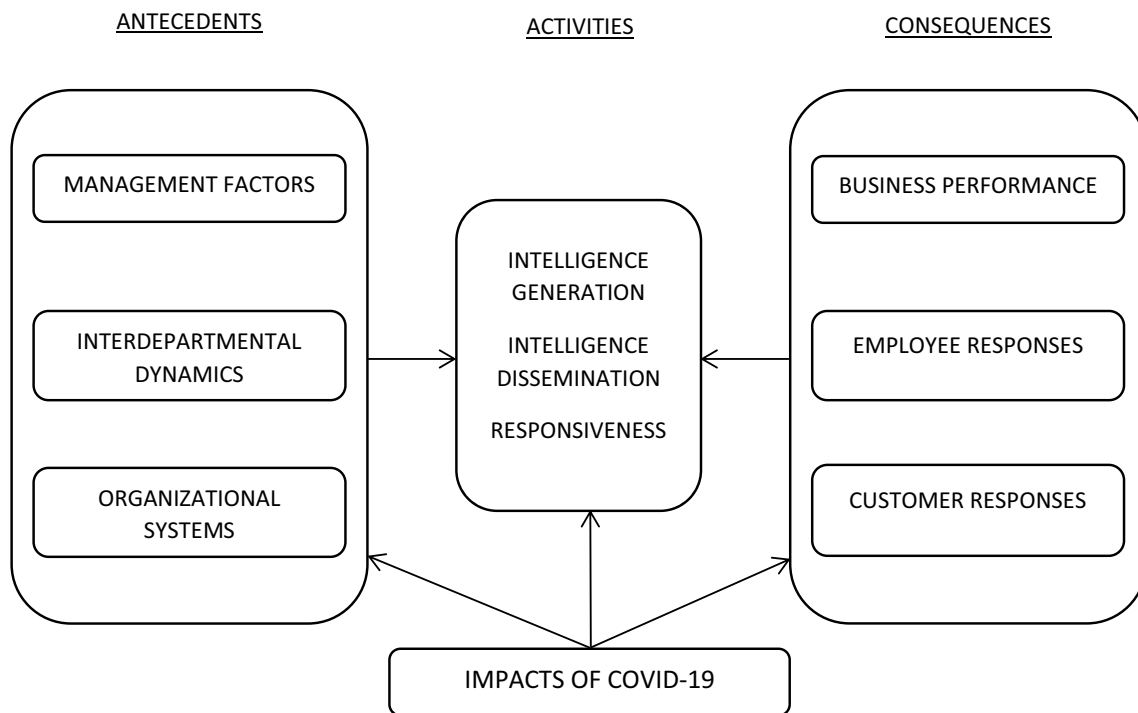


Fig. 1 Research framework (Adapted from Kohli and Jaworski 1990)

that MO activities seen during COVID-19 would lean toward informal information collection and sharing practices to make sense of the rapidly changing environment and quicken responses to market needs.

Third, we proposed that the consequences of COVID-19 on business performance and employee and customer responses would include both positive and negative aspects. In particular, we expected that greater use of digital tools due to COVID-19 would increase operational efficiency but decrease the effectiveness of customer encounters. This proposition aligns with Huhtala et al. (2014), who found that during a downturn, the performance impact of MO increases, but the role of customer orientation decreases.

Methodology

This study used qualitative, semi-structured, in-depth interviews to examine the implications of COVID-19 for MO. In planning our sample, we sought diversity among the respondents to achieve a holistic picture of the phenomenon. Purposeful sampling (Patton 2002) was used to select the study participants based on three criteria: working at the largest retail banks in Finland; working in different managerial positions and hierarchical levels; and interacting or dealing with retail consumers and/or business customers. In total, six managers and four advisors from different

hierarchical levels who work with corporate and/or private customers were selected and interviewed. No new information appeared in the data after the ten interviews; thus, data saturation was achieved (Namey et al. 2016).

The interview guide comprised topics related to our study framework (Fig. 1), following MO's antecedents, activities, and consequences. Each section started with a general question, followed by more focused questions to extract details. Open-ended questions allowed the interviewees to raise any issues they considered relevant to the topic. Notably, the interviewees were not aware of our study's theoretical aim, which increased the internal validity of their responses. The interviews were conducted in November and December 2020, lasted 40–56 min each, and were audio-recorded and transcribed verbatim before being coded and analyzed with NVivo. Data analysis followed a two-step thematization process: (1) open coding and (2) evaluation of fit with the theoretical framework. First, we analyzed the verbatim transcripts and created codes to highlight the key issues mentioned by each interviewee. These open codes formed the basis of the coding scheme, which was assessed by multiple authors to ensure internal consistency. This process led to some refinements of the labels and definitions. Second, the theoretical codes identified from the study framework created the basic framework for our empirical findings, where the relevant codes from step 1 were grouped under each of the themes with quotations based on each individual



(Table 1). Consequently, our final empirical model presents the key antecedents, activities, and consequences of MO during the COVID-19 pandemic (Table 1).

Study findings

Overall, the findings of this study confirmed the relevance of the research framework (Fig. 1) in the context of retail banking, implying that the MO theory covered the key behaviors performed by retail banks when facing the COVID-19 crisis. Specifically, we found that the antecedents (i.e., management factors, interdepartmental dynamics, and organizational systems), activities (i.e., intelligence generation, dissemination, and responsiveness), and consequences (i.e., business performance and employee and customer responses) of MO played important roles in retail banks' efforts to manage the COVID-19 situation. Furthermore, our qualitative data allowed us to divide the main MO antecedents, activities, and consequences into more granular sub-categories, which provided deeper insights regarding the key factors that were perceived as critically important when facing COVID-19. The sub-categories, their descriptions, and example quotes can be found in Table 1.

Antecedents of MO

In terms of *management factors*, the interviewees perceived that COVID-19 had significantly increased the importance of empathetic leadership and employee training. It was clear that managers had become more empathetic toward their employees and understood that they were experiencing a new and difficult situation. Therefore, the managers focused on ensuring their employees' well-being, which was considered to ultimately be reflected in service encounters. The managerial focus on employees' well-being was heavily emphasized by the managers but also supported by multiple advisors who appreciated the change in their managers' attitudes during COVID-19.

The role of employee training also gained importance during COVID-19. As remote work increased, the employees could not be supervised and guided in real time. Thus, employees had to possess the necessary competencies and knowledge to take initiative and make independent decisions. Notably, training employees to take initiative is a long process, making it difficult to react to a crisis situation via training. Regular training of employees is needed to be prepared for a crisis.

The effects of COVID-19 on *interdepartmental dynamics* were perceived differently between advisors and managers. The advisors reported that the focus on avoiding silos has been an ongoing issue and has nothing to do with COVID-19, while the managers found it a remarkable improvement

concerning cooperation between different organizational departments and units. Furthermore, all the respondents considered effective *organizational systems* a vital prerequisite for implementing MO during COVID-19. Specifically, the information technology infrastructure supported the shift to remote work, and its absence would have led to serious problems in service delivery and other operational tasks. However, it was also mentioned that the situation revealed minor technical shortcomings.

MO activities

The key activities based on the framework were highlighted by all respondents with the following emphasis on COVID-19. Regarding *intelligence generation*, banks were quite proactive in making sense of the crisis (i.e., they tried to respond to an unexpected development by noticing and bracketing it, establishing a shared understanding of it, and attempting to create a more ordered environment to draw further cues). To do this, banks proactively contacted customers, partners, regulators, and other stakeholders as well as followed what their competitors were doing.

COVID-19 also affected *intelligence dissemination* by increasing the frequency of internal meetings at different levels of the organization. In particular, the managers reported having significantly more frequent meetings with their supervisors and colleagues to share insights on market events and the concerns of customers and other stakeholders. Frequent meetings at the senior management level enabled managers to disseminate information further to their employees and prepare them for customer encounters. However, some advisors reported that the lack of informal meetings posed a challenge, stating that they missed informal knowledge sharing with coworkers, which highlights the critical role of information dissemination during COVID-19.

Our findings revealed that COVID-19 has had significant implications for *responsiveness to market intelligence*. All the interviewed banks had attempted to accelerate their decision-making processes, particularly in terms of responding to customer concerns. This move was supported by swift reconfiguration of internal processes and adaptations to new practices. In particular, employees and customers adapted to the use of remote channels quickly. Every interviewee reported that the move to "remote mode" was rapid, both internally and externally. Furthermore, some respondents mentioned that they started to use innovative thinking to quickly create new ways to respond to the situation (e.g., using interactive webinars instead of customer events or forming small customer groups to test and discuss needed services virtually).



Table 1 Market orientation's main factors, sub-categories, their descriptions, and example quotes

Main MO factors (based on theory)	Sub-categories for MO factors (based on study data)	Description of sub-categories	Number of respondents	Example quote
Antecedents				
Management factors	1) Empathetic leadership	Caring for employees' well-being	10	<p>"My first priority is to ensure that all my team members are doing well. It [also] affects customers. When [employees'] well-being is taken care of, they have [the] strength to support customers" (Manager E).</p> <p>"Management is now more human. This time period is more human. Managers ask a lot about how I am doing and if everything [is] ok. They do not just stare at results, but also pay attention to more human issues" (Advisor A).</p> <p>"The role of leadership has become more important during COVID-19, but first and foremost, the way [that] the managers had prepared their teams to encounter a crisis situation has been the key issue. If you were leading a team that was not self-guided but needed instructions every morning on what they should do, the corona situation would have been a complete disaster" (Manager F).</p> <p>"We were all together in front of a strange threat, and there was no one to blame. Those situations are always fruitful because then you somehow forget everything that is not necessary and focus on things that can drive [you] forward. We forgot the barriers and had the same goal. We were able to show what we are capable of doing together" (Manager E).</p> <p>"There are some technical issues that do not completely support the remote way of working. However, we now have quick solutions for these, such as recording all meetings" (Advisor A)</p>
	2) Employee training	Training employees to take initiative	5	
Interdepartmental dynamic	Internal cooperation	Attitudes and willingness to work as a team with other departments and units and management groups	6	
	Information technology infrastructure	The constant presence of a reliable and strong digital infrastructure	10	
Activities				
Intelligence generation	1) Assessment of customer needs and environmental evaluation	Contacting customers and regulators to discuss their needs in the situation; following competitors	8	<p>"My first reaction was to figure out how we could help our customers through this. I contacted the most important authorities and partners and arranged [for] our people [to] start actively contacting customers" (Manager A).</p>
			10	





Table 1 (continued)

Main MO factors (based on theory)	Sub-categories for MO factors (based on study data)	Description of sub-categories	Number of respondents	Example quote
Intelligence dissemination	1) Formal information sharing	Departmental level	4	“The extended information about [the] situation was created on [the] bank level and then distributed to the organization” (Manager F).
	2) Frequent internal meetings	Departmental/team level	5	“We have [a] meeting every morning with our team. That is important for me” (Advisor D).
	3) Informal communication with coworkers	Individual level	9	“You need [to] be pretty creative not to lose contact with your coworkers. We, for instance, keep the Teams (software) open and have lunch together” (Advisor C).
Responsiveness	1) Fast decision making	Approach: more collaborative and less bureaucratic	5	“Before, we would have nit-picking of tiny details and internal processes. Now, we simply have to act. Normally, for example, creating the customer service sheet on our webpages could have taken a year, and now we made it in few days” (Manager B).
	2) Creativeness	Using innovative thinking and novel methods	3	“The pandemic has forced us to create webinars and [their] content. We have found new tools and methods to [inform] our customers” (Manager D).
Consequences				
Business performance	Negative: Reduced sales revenue	Customers’ unwillingness to make bigger deals (e.g., invest larger amounts of money)	4	“It has affected the customers’ willingness to make decisions. For us, it means that it is harder to get bigger deals when there are fewer face-to-face meetings” (Advisor B)
	Positive: Increased operational efficiency	More customer encounters	6	“The job is now much more efficient. I have more time to meet customers. I have at least doubled the amount of customer meetings when doing those remotely” (Advisor A).
	Negative: Decreased social connectedness with coworkers	Lack of interactions with other employees and ad hoc discussions	9	“It is a really big disadvantage that you cannot meet [with] your team members [in person] and exchange ideas” (Advisor C)
Employee response	Positive: 1) Increased sense of purpose	Work connected to society and customers’ lives	4	“It feels [like] we now do a purposeful job because we see how our work really helps customers and also [has a] larger connection to society” (Advisor B)
	Positive: 2) Increased learning	Forced to change behavior and learn quickly	8	“We were able to show what we are capable [of]. All barriers were broken down, and we had a common goal. Together, as a team, we were thinking [of] how to handle this situation” (Manager E).

Table 1 (continued)

Main MO factors (based on theory)	Sub-categories for MO factors (based on study data)	Description of sub-categories	Number of respondents	Example quote
Customer response Negative	Negative: Lack of confidence in remote service encounters	Not seeing facial expressions caused uncertainty	4	“Well, certain kinds of personal contact with customers [are] lacking, even though you know the customer well” (Advisor A).
	Positive: Increased convenience	Electronic services are always available and easy to use	6	“Customers adapted to changes very well. Now, we get negative feedback if they need to come and meet us physically, which they claim is difficult” (Manager C).

Consequences of MO

Overall, the increased MO as a result of COVID-19 led to positive business consequences. However, the crisis also induced negative effects that could not be overcome with increased MO. In the following, we discuss the consequences for business performance, employee responses, and customer responses.

The most commonly mentioned positive effect on *business performance* was the increased efficiency of service delivery. Most managers and advisors agreed that they now have more customer encounters than before because the remote meetings are more efficient compared to physical meetings. Two of the banks’ respondents claimed that they had attracted many new customers during the crisis. One negative aspect noted was that many customers were not ready to make decisions concerning larger investments remotely. Instead, these customers wanted to wait until the pandemic waned to allow face-to-face discussion (offline). This might be partially (yet not totally) explained by a lack of trust; this challenge was even reported for customers who already had a long-term relationship with their advisor. Such a challenge will naturally affect a bank’s business results.

The findings related to *employee responses* were largely positive. Specifically, most respondents felt more motivated toward their work and realized its importance to society.

Another positive employee response was learning and self-improvement. For managers, learning how connectedness and commitment helped them overcome challenges was especially significant. Negative comments concerned the lack of social contact. While some employees had done remote work before, it was a novel way of working for others. However, most interviewees reported that they missed social contact with colleagues, especially ad hoc discussions, making them feel quite lonely at times.

In terms of *customer responses*, most interviewees reported that customers had given positive feedback, especially regarding the convenience of using electronic services and general satisfaction. Reasons for such positive feedback included customers’ willingness to use electronic services, bank employees’ attitudes, and the increased number of contacts. The negative customer responses were related to the lack of facial expression in remote meetings. Video meetings partly solved this problem, but not all customers wanted to use video. This may be partly explained by all the advisors stating that they also found it harder to build trust with customers in remote meetings due to the inability to see faces and gestures.



Discussion and conclusion

The present study was designed to determine the effects of COVID-19 on the implementation of MO antecedents, activities, and consequences in retail banking. This study contributes to marketing theory from the MO perspective by discussing the implications of COVID-19 in the retail banking industry. We found that during a crisis, such as COVID-19, MO is a relevant approach. As mentioned in the literature review, banks are shifting from risk management to focusing on customers (Nätti and Lähteenmäki 2016), which this study broadly supports and is evident in the highlighted antecedents and activities. Empathetic leadership, employee training, excellent cooperation between and among different departments and teams, and technological readiness and capability are seen as necessities for creating value for customers.

MO activities, such as understanding the situation by increasing interactions and discussions with customers and partners and by reviewing the strategies of competitors and regulators, clearly focus on creating customer value.

Hence, our results emphasize the importance of both formal and informal communication and the need for social connectedness to focus on customers' needs and wants. Another interesting finding was that the activities show connections to entrepreneurial orientation (EO), especially regarding the promptness, flexibility, and use of ad hoc information. This finding is consistent with that of Morgan and Anokhin (2020), who claimed that large firms, especially when experiencing environmental turbulence, could benefit from implementing EO and MO simultaneously.

Our study shows both negative and positive consequences of implementing MO, as proposed. The main finding regarding the former was that the connection to business performance is unclear. While the volume of customer meetings increased, there were negative comments in terms of the results of those remote meetings. This finding aligns with the results of several earlier studies (e.g., Gerrard et al. 2006; Levy and Hino 2016), proving that customers value human interaction. Regarding the latter, the consequences for employees and customers were mainly positive. Employees felt that their work became more meaningful, and managers were more caring and willing to learn about employees' work and situation than before. Hence, customers were satisfied when banks proactively contacted them to learn about their situation and needs and advised them on using remote services. This involvement enabled customers to quickly receive new and relevant services that were developed to help them during COVID-19.

In general, our study shows that COVID-19 has become a major driver of digital transformation in retail banks.

This aligns with Baicu et al. (2020), who found a strong increase in the consumption of mobile and Internet banking during the pandemic. As mentioned in introduction, Finnish banks can be seen as forerunners in digitalization and adjusting delivery channels, which prepared employees and customers in the Finnish banking sector for the change and helped them easily adapt to remote services. Our results align with those of Tiirinki et al. (2020), who stated that the consequences of the pandemic will be drastic in Finland yet perhaps less dramatic and extensive than in other Western industrial countries.

Taken together, these results suggest that the implementation of MO is useful in expanding our understanding of retail bankers' behavior during times of crisis as well as acting as a launchpad for business beyond the current pandemic and other crises.

Managerial implications

This study provides several implications for practice. For example, banks must stay connected with their customers and other stakeholders. Maintaining regular contact with customers during the new normal is based on simple logic: provide comfort and peace of mind, gain an understanding of what is happening in their lives, and determine what actions would most help them through a crisis. Thus, the capacity building of employees during a crisis should be at the core of this strategy to ensure uninterrupted delivery of services. This study also highlights the importance of managers staying connected to their employees and being absolutely present. Our results show that the pandemic has strongly affected management and employee mindsets. A joint strategy involving employees working in different units and teams could perhaps offset challenges and crises effectively and efficiently.

Limitations and future research directions

As with any qualitative study that is conducted in a specific context, this study is not without limitations. The study explored the effects of COVID-19 in the context of retail banking in Finland, focusing on the implementation of MO. Thus, the findings highlight views and prerequisites in retail banking only and cannot be generalized to other services in other contexts. However, the participants represent a heterogeneous group of people with diverse experiences in retail banking services, which ensured extensive and versatile data with plausible outcomes related to the studied phenomenon. In addition, the research was conducted, while the pandemic was ongoing. Thus, future studies could assess the long-term effects. Further research is required to determine whether the studied behavior represents a permanent change and, if so, how the consequences evolved.



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Hannele Haapio is a PhD Candidate at University of Jyväskylä School of Business and Economics. Her research interests lie in the areas of decision-making logic under uncertainty, customer-relationship marketing and customer/market orientation. Besides research, her practical expertise contains change management and leadership skills, customer centric strategies and tactical marketing, and extensive knowledge of financial-sector business.

Joel (Järvinen) Mero is an Assistant Professor of Marketing at University of Jyväskylä School of Business and Economics. His research interests focus on the use of data and new technologies in marketing management. His previous research has been published in *Industrial Marketing Management*, *Electronic Markets*, and *Marketing Management Journal*.



Dr. Heikki Karjaluoto is a Professor of Marketing at the University of Jyväskylä School of Business and Economics, Finland. His research interests include digital marketing, customer relationship management, and retail banking. His previous publications have appeared in *European Journal of Marketing*, *Industrial Marketing Management*, *International Journal of Bank Marketing*, and *Journal of Financial Services Marketing*, among others.

Aijaz A. Shaikh holds PhD (in Marketing) from the Jyväskylä University School of Business and Economics, Finland. His academic speciality lies in the broader areas of digital marketing, consumer behaviour,

mobile financial services, and shared economy. His previous research has been published in the *Journal of Retailing and Consumer Services*, *International Journal of Information Management*, *Computers in Human Behavior*, *Telematics & Informatics*, *International Journal of Bank Marketing*, among others.





III

AN EFFECTUAL APPROACH TO EXECUTING DYNAMIC CAPABILITIES UNDER UNEXPECTED UNCERTAINTY

by

Mero, J. & Haapio, H. 2022

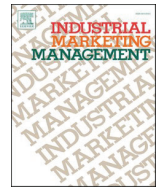
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An effectual approach to executing dynamic capabilities under unexpected uncertainty

Joel Mero^{*}, Hannele Haapio

University of Jyväskylä, School of Business and Economics, PO Box 35, FIN-40014 University of Jyväskylä, Finland

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ABSTRACT

This study investigates how business-to-business (B2B) firms navigate contexts of unexpected uncertainty. Building on the theories of effectuation and dynamic capabilities, the study develops a model that highlights how effectual decision-making logic is manifested in the activities B2B firms employ to sense and seize new opportunities and threats and transform existing business operations. The qualitative data were collected in two phases (before and after the COVID-19 outbreak) and consisted of 24 interviews with 13 B2B firms. The findings demonstrate a strong reliance on managers' effectual decision-making in situations of unexpected uncertainty and provide a set of key activities that help managers to respond to such situations in a rapid and agile manner.

1. Introduction

Uncertainty is ubiquitous in today's business markets, characterized by rapid technological change and the increasing interconnectedness of economies (Finn, Mysore, & Usher, 2020; Nauck, Pancaldi, Poppensieker, & White, 2021; Teece, Peteratd, & Leih, 2016). In times of unprecedented uncertainty, the winners are first-mover and fast-follower firms that can rapidly adapt to environmental changes (Bughin, Catlin, Hirt, & Willmott, 2018) and turn the negative effects of uncertainty into new business opportunities (Nenonen & Storbacka, 2020). In more academic terms, firms need to be equipped with dynamic capabilities that enable them to reconfigure organizational processes and competences to address the uncertainty caused by the rapidly changing environment (Teece, 2007; Teece, Pisano, & Shuen, 1997). However, despite extensive research on dynamic capabilities over the last two decades, the majority of firms remain slow to respond to new and unexpected market opportunities and threats (Bughin et al., 2018; Silvia, Vinit, & Joakim, 2018). One key reason for slow responses is that firms rely on causal reasoning that promotes careful strategic analysis and planning before formulating responses (Read, Dew, Sarasvathy, Song, & Wiltbank, 2009; Sarasvathy, 2001). In a similar vein, Finn et al. (2020) state that firms are accustomed to following the annual planning cycle in making decisions on strategic movements, budgets, and operational plans. In this study, we propose that a rapid response to *unexpected uncertainty* requires firms to combine dynamic capabilities with effectual reasoning that welcomes market surprises and emphasizes the exploitation of

market contingencies in implementing fast-paced and agile changes to business models and operations (Read et al., 2009; Sarasvathy, 2001).

Although uncertainty has always been a central concept in the theory of dynamic capabilities (Teece, 2007; Teece et al., 1997), we perceive that extant theorization provides insufficient means to address *unexpected uncertainty*. To elaborate, the theory emphasizes that uncertainty is caused by an unpredictable business environment (e.g., rapid technological change) and its effects on organizations (Schilke, Hu, & Helfat, 2018; Teece, 2007; Teece et al., 1997). Recent work on dynamic capabilities has specifically drawn upon Knightian uncertainty (Knight, 1921; see also Kano, 2021) and developed the concept of *deep uncertainty* (Teece, 2016; Teece et al., 2016), which refers to "contexts that involve too much complexity to model or forecast any useful level of confidence" (Teece, 2016, p. 204). To navigate deep uncertainty, managers can use their skills and knowledge to make informed conjectures about the possible paths ahead and proactively prepare the organization for change by reconfiguring organizational capabilities and processes (Teece, 2016). Thus, although deep uncertainty cannot be quantified, the underlying assumption is that managers are able to foresee, or at least imagine, the potential changes that may occur. The question is how to prepare for situations of uncertainty that are not recognized until they suddenly occur. Such situations of unexpected uncertainty are evinced by the outbreak of COVID-19, but may stem from any other surprising event in the market environment that requires a quick organizational response.

By using Milliken's (1987) typology of uncertainty, the theory of

^{*} Corresponding author.

E-mail addresses: joel.j.mero@jyu.fi (J. Mero), hannele.m.haapio@jyu.fi (H. Haapio).

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dynamic capabilities guides an organization to prepare itself for *state uncertainty* (i.e., unpredictable organizational environment) and *effect uncertainty* (i.e., unpredictable impacts of environmental changes on a given organization), but it largely ignores *response uncertainty*, which refers to a lack of knowledge of response options and inability to predict the consequences of those responses. The key difference between these three types of uncertainty is that state and effect uncertainty can be addressed by making careful strategic analyses of environmental threats and opportunities and preparing for alternative effects on the organization, while response uncertainty occurs in the context of a need to formulate a quick response to an immediate change in the environment (Milliken, 1987). To address response uncertainty, recent research in the context of COVID-19 outbreak demonstrates the importance of combining dynamic capabilities with organizational agility to ensure rapid adaptation to unanticipated market changes (Bhattacharyya & Thakre, 2021; El Idrissi, El Manzani, Ahl Maatalah, & Lissaneddine, 2022). Since effectual reasoning emphasizes quick and agile responses to market surprises and contingencies (Sarasvathy, 2001), we suggest that combining dynamic capabilities with effectual logic is ideally suited for navigating unexpected uncertainty.

Against this backdrop, the goal of this study is to increase our understanding of how organizations can rapidly adapt themselves when facing situations of unexpected uncertainty. By unexpected uncertainty, we refer to surprising and immediate changes in the market environment that require a firm's rapid response. To reach this goal, we build upon the theories of effectuation and dynamic capabilities and investigate 13 business-to-business (B2B) companies that have undergone adaptations to renew themselves due to events of unexpected uncertainty (e.g., demand-based crisis, competitive or technological disruption, or a global pandemic). The study data consist of 24 interviews with 20 managers representing 13 companies based in Finland and representing a variety of industries.

The findings of this study make three important contributions to the theory. First, this is the first study to integrate the theories of dynamic capabilities and effectuation to provide a better explanation of how companies can adapt to market changes caused by unexpected uncertainty, which complements the dynamic capability literature that has previously focused on navigating deep uncertainty (Teece, 2016; Teece et al., 2016). Second, the study goes beyond theorizing the phenomenon by identifying nine effectual sensing, seizing, and transforming activities that facilitate an organization in formulating prompt and agile responses to situations of unexpected uncertainty. Third, the study uncovers the interlinks and complementarities between effectuation and dynamic capabilities theories that explain why these two constructs are ideal counterparts in responding to unexpected uncertainty. From a managerial point of view, the findings have important implications for how to prepare for different types of uncertainty and how to balance organizational agility and efficiency over time.

The remainder of the article is organized as follows. We begin by reviewing the literature on effectuation and dynamic capabilities and present the study framework. We then describe and justify the methodological approach used in this study. Next, we present the findings and discuss their theoretical and managerial implications. Finally, we discuss the limitations of the study and directions for future research.

2. Literature review

2.1. Effectuation and causation

The theory of effectuation divides managerial decision-making into causation (i.e., causal reasoning) and effectuation (i.e., effectual reasoning) (Sarasvathy, 2001). The characteristics of effectual reasoning can be classified into five categories. First, the future is considered unpredictable; therefore, effectual decision-makers concern themselves with shaping the future by focusing on controllable aspects rather than on building elaborate forecasts of uncontrollable aspects (Maine, Soh, &

Dos Santos, 2015; Read et al., 2009; Sarasvathy, 2001). Second, the basis for taking action begins with a set of available means (e.g., knowledge, skills, and willful agents) rather than business goals; the business goals emerge when imagining courses of action with available means (Engel, Kaandorp, & Elfring, 2017; Read et al., 2009; Sarasvathy, 2001, 2008; Sarasvathy & Dew, 2005a). Third, effectuation is focused on affordable loss rather than expected returns (Sarasvathy, 2001). Consequently, an effectual decision-maker avoids investments that risk more than stakeholders can afford to lose and instead prefers small and versatile experiments (Read et al., 2009; Sarasvathy, 2001). Fourth, open collaboration and knowledge-sharing with partners play a central role in effectuation (Sarasvathy, 2001). These relationships shape the trajectory of opportunities and help to reduce uncertainty (Sarasvathy, 2001). Fifth, effectuation welcomes surprises, as unexpected events may provide new opportunities (Read et al., 2009). Indeed, a key strength of the effectual approach stems from exploiting contingencies that can be transformed into business assets through experimentation (Sarasvathy, 2001). In contrast, causation logic perceives the future as a predictable continuation of the past (Sarasvathy, 2001). Causal firms are goal-oriented, focus on expected returns and upside business potential, and minimize the negative effects of unexpected events by predicting, planning, and protecting their assets and resources (Read et al., 2009). Accordingly, causation logic relies on detailed market and competitor analyses and emphasizes formal models in making strategic decisions (Futterer, Schmidt, & Heidenreich, 2017; Read et al., 2009; Sarasvathy, 2001, 2008; Sarasvathy & Dew, 2005a, 2005b).

Research shows that effectuation has a positive effect on the performance of new ventures (Cai, Guo, Fei, & Liu, 2017) and SMEs (Roach, Ryman, & Makani, 2016). Although effectuation has been emphasized in startups and new ventures (Perry, Chandler, & Markova, 2011; Sarasvathy, 2001), recent evidence shows that even established and large-sized B2B firms are adopting effectual reasoning to manage their business operations (e.g., Johansson, Ellonen, & Jantunen, 2012; Mero, Tarkiainen, & Tobon, 2020; Yang & Gabrielsson, 2017). Presumably, the increasing reliance on effectual reasoning stems from the higher levels of uncertainty in the rapidly changing environment, which increases the difficulty of causal planning. Indeed, research findings indicate that effectuation is a superior logic when levels of uncertainty are relatively high and the firm seeks growth, whereas causation suits situations in which levels of uncertainty are relatively low and when a business is mature and stable (Futterer et al., 2017; Read et al., 2009). Similarly, Silvia et al.'s (2018) findings support the use of effectuation in risky environments. Other studies have shown the complementary roles that effectuation and causation play in specific B2B marketing decision-making situations (Yang & Gabrielsson, 2017), different stages of the business lifecycle (Gabrielsson & Gabrielsson, 2013), and various stages of technology implementation (Mero et al., 2020). To benefit from effectual decision-making, we suggest that a firm needs to be equipped with dynamic capabilities that allow it to actualize decisions through the agile renewal of business processes. Particularly in turbulent environments, the ability to sense relevant changes and respond quickly to them has become an important determinant of a company's success (Ngo, Bucic, Sinha, & Lu, 2019; Teece, 2014).

2.2. Effectual and causal execution of dynamic capabilities

Dynamic capabilities have attracted notable scholarly interest since Teece et al.'s (1997) seminal study. Generally, dynamic capabilities are understood as referring to the organizational ability to anticipate, shape, and adapt to changes in the firm's competitive landscape (Felin & Powell, 2016; Teece, 2016). Due to their focus on change, dynamic capabilities are suited to situations of uncertainty (Eisenhardt & Martin, 2000; Sunder, Ganesh, & Marathe, 2019; Teece et al., 2016) and are more valuable in rapidly changing environments than in stable ones (Salvato & Rerup, 2011; Teece, 2014; Zahra, Sapienza, & Davidsson, 2006; Zollo & Winter, 2002). Specifically, dynamic capabilities can be

classified as either sensing, seizing, or transforming capabilities (Baden-Fuller & Teece, 2020; Teece, 2007, 2012). In the following, we present these capabilities and discuss how effectual and causal logic may influence their execution.

2.2.1. Sensing capability

Sensing capability refers to the organizational ability to identify and assess market opportunities and threats (Teece, 2012; Teece et al., 2016), which becomes particularly crucial when the market is undergoing radical changes (Protogerou, Caloghirou, & Lioukas, 2012; Teece, 2007; Yang & Gan, 2020). In practice, sensing takes many forms as it may occur at the individual or organizational level (Teece, 2007; Teece & Linden, 2017) and deploy a variety of information sources (Augier & Teece, 2009; Teece, 2012; Teece et al., 2016). Accordingly, we propose that the execution of sensing activities depends on the firm’s decision-making logic. To elaborate, effectuation promotes the collection of informal market information, exploitation of contingencies, and experimentation with creative ideas at all organizational levels, whereas causation promotes systematic collection and analysis of market information that is used to make predictions of future developments (Read et al., 2009; Sarasvathy, 2001). Thus, the firm’s sensing activities can be divided into causal and effectual modes (see Table 1). Although effectual sensing has not been explicitly investigated, research show several elements of effectual sensing activities. For example, Guo et al. (2018) highlight that B2B firms need quick and flexible means to capture market information in situations of uncertainty. Specifically, the B2B research emphasizes the importance of absorbing market knowledge from customers rather than benchmarking competitors (Endres, Helm, & Dowling, 2020). According to Guercini, La Rocca, Runfola, and Snehota (2015), it is important to use first-hand information from B2B customers to be able to respond to market changes in ways that meet their needs. Yli-Renko and Janakiraman (2008) elaborate that a focus on customer

information nurtures “outside-the-box” thinking that enables firms to avoid path-dependent development of firm-centric processes.

2.2.2. Seizing capability

Seizing capability refers to making strategic choices between recognized opportunities and mobilizing resources to address those opportunities (Helfat & Peteraf, 2009; Teece, 2012; Teece & Leih, 2016). Particularly in turbulent environments, the ability to respond quickly and flexibly to recognized opportunities has become an important determinant of a company’s success (Guo et al., 2018; Ngo et al., 2019; Teece, 2014), which requires continuous adjustments to resource allocation and rapid implementation of new ideas (Eisenhardt & Martin, 2000; Teece, 2012). In accordance with effectuation theory (Read et al., 2009; Sarasvathy, 2001), causal logic with respect to seizing would guide a firm to select those opportunities that are best aligned with its strategic objectives and predicted to produce the highest return on investment. In turn, effectual logic would guide a firm to select those opportunities that the firm can afford to lose, can best address with available means and resources, and can co-create with partners. Effectual logic in seizing is supported by research that highlights the importance of speed in seizing opportunities under uncertainty with existing resources that can be supplemented by those of partners (Baden-Fuller & Teece, 2020). Some studies stress the creation of cospecialized assets that rely on the joint use of resources with partners, providing each firm with an expanded pool of resources that can be combined in unique ways (Alqahtani & Uslay, 2020; Sadiku-Dushi, Dana, & Ramadani, 2019; Teece, 2007). Additionally, executing small and well-designed experiments speeds up the process of bringing new offerings to market (Day & Schoemaker, 2016). In a similar vein, Teece et al. (2016) propose that firms should build a minimum viable product, launch it, then learn, adjust, and improve it to ensure rapid implementation.

2.2.3. Transforming capability

Transforming refers to the renewal of organizational assets, structure, and culture to adapt to market changes (Teece, 2014; Teece & Leih, 2016), which requires organization-wide reconfiguration (Day & Schoemaker, 2016). Transforming capabilities entailing the continuous renewal of assets and organizational structure ensure that organizations stay supple and responsive in fast-changing business environments (Teece, 2014; Teece & Leih, 2016). In practice, managers play a key role when reconfiguring organizations during adaptation to new circumstances (e.g., Adner & Helfat, 2003; Eisenhardt & Martin, 2000; Helfat et al., 2009). Indeed, managers need to be able to reconfigure both tangible and intangible assets to meet new challenges (Harrell, O’Reilly III, & Tushman, 2007). Consequently, we propose that the execution of transforming activities depends on the firm’s decision-making logic. To elaborate, an effectual approach stresses organic and agile changes to existing processes and structures, which are associated with a bottom-up approach to decision-making, whereas the causal approach is formal and goal-oriented and emphasizes top-down decisions and reconfigurations that follow fixed business plans (Read et al., 2009; Sarasvathy, 2001, 2008; Sarasvathy & Dew, 2005a). Thus, the firm’s transforming activities can be divided into causal and effectual modes. Effectual transforming is bolstered by research on using dynamic capabilities under uncertainty, which favors effectual transforming activities. For example, an agile and entrepreneurial mindset combined with an expansive perspective on network-building is at the core of the transforming capability (Day & Schoemaker, 2016). Transforming capabilities become particularly important in the context of radical market changes, when responding to these requires large-scale changes to the firm’s operations (Gabrielsson & Gabrielsson, 2013; Hills, Hultman, & Miles, 2008; Jantunen, Tarkiainen, Chari, & Oghazi, 2018). Table 1 summarizes the effectual and causal execution of dynamic capabilities.

Table 1
Effectuation and causation as alternative perspectives on executing dynamic capabilities.

Dynamic capability	Effectual execution	Causal execution
Sensing	Informal collection of market information	Systematic collection of market information (i.e., market research)
	Imaginative rethinking of how unexpected events can be turned into new opportunities	Competitive analysis of market opportunities
	Experimentation with creative ideas by empowering employees at all organizational levels	Predictions and scenarios of future developments
Seizing	Selection of opportunities based on available means	Selection of opportunities that are in line with strategic goals and business plans
	Seizing opportunities without investing more resources than partners can afford to lose	Seizing opportunities that are predicted to offer the highest return
	Addressing opportunities that can be co-created with partners and stakeholders (shared resources)	Acquisition of resources that are needed to seize selected opportunities
Transforming	Bottom-up approach: employees are empowered to make changes	Top-down approach: managers design and implement changes
	Organic reconfiguration of organizational structures and processes	Formal reconfiguration of organizational structures and processes
	Decentralized organization and cross-functional teams focus on networking	Hierarchical organization and independent departments

3. Methodology

3.1. Data collection

We adopted a qualitative approach to collecting and analyzing data to generate in-depth understanding of B2B firms' efforts to execute dynamic capabilities under situations of unexpected uncertainty. The data collection consisted of two rounds that used slightly different criteria in key informant selection. The first data collection round was performed between September–December 2019. The sample criteria for the first data collection round were defined at a firm and key informant level. At the firm level, we approached small and medium-sized enterprises (SMEs) that represented different B2B industries. We focused on SMEs because they are more likely to rely on effectual reasoning (e.g., Roach et al., 2016), and therefore, it increased the likelihood of capturing effectual elements in executing dynamic capabilities. Different industries were preferred to get diverse aspects to the topic, leading to richer empirical findings (Patton, 2014; Yin, 2003). Since the pool of potential companies was large, we searched extensively for publicly available news stories and articles to identify B2B firms that had navigated situations of unexpected uncertainty (e.g., due to technological or market disruption) by renewing their business models, strategies, or operations. This approach was considered to increase the fit of the target firms to our research goal. At the key informant level, we approached for the individual with highest authority within the firm to obtain the most profound knowledge of the firm's overall response to uncertainty. Before contacting, we ensured that the individual had a long history with the firm to be able to reflect how the firm encountered and navigated the situations of uncertainty. As a result, we conducted interviews with the chief executive officer or chairman of the board (former chief executive officer) of nine firms from different industries. The situations of uncertainty that the participating companies were facing ranged from demand-based crises and regulatory changes to competitive and technological disruptions. The common denominator was that all these events were unexpected, and the firms had very limited time to formulate a response.

While analyzing the data from the first data collection round, COVID-19 emerged as a global concern, causing a major disruption in the global marketplace. This unfortunate event provided an exceptional opportunity to examine timely managerial perceptions of and responses to an event of unexpected uncertainty. Thus, we decided to organize another data collection round to increase the internal validity of our findings by mitigating the potential memory biases that were likely to affect the first data collection round, which focused on past events. Accordingly, the second data collection round was conducted after the outbreak of COVID-19 (April–November 2020). For this round, we approached the same nine key informants but were able to recruit only four of them for an additional interview. To complement our data, we decided to recruit key informants from other B2B firms. Since our preliminary analysis had demonstrated a strong reliance on effectual reasoning in executing dynamic capabilities in the context of SMEs, we decided to target large-sized companies in order to enrich the findings and increase their external validity. Due to the larger size of these companies, we recruited multiple key informants from each company to obtain a holistic view of their execution of dynamic capabilities.

In total, our sample consists of 24 interviews with 20 managers representing 13 companies that are based in Finland. Each company represented a different industry, and the firm size ranged from under 250 employees to over 30,000. Each interview lasted 43–65 min. The characteristics of our interview data are presented in Table 2. In the first interview round, the key informants were asked to describe the situations of uncertainty that they had encountered as a firm and explain how they navigated these situations. Besides the descriptions, we asked specific questions on sensing, seizing, and transforming activities, in accordance with our analytical framework (see Table 1). The interview questions were open-ended in nature, and we encouraged the

Table 2
Key informants.

Firm	Field of business	Type of uncertainty	Title of key informant(s)	Length (min)	Length (min)
				1st round	2nd round
1	Health	Competitive disruption & COVID-19	Chief Executive Officer	43	48
2	Event production	Demand-based crisis & COVID-19	Chief Executive Officer	53	55
3	Software design	Demand-based crisis & COVID-19	Chief Executive Officer	54	44
4	Beverages	Regulatory change & COVID-19	Chief Executive Officer	60	47
5	Sports technology	Technological disruption	Chief Executive Officer	58	
6	Food	Demand-based crisis	Chairman of the Board	62	
7	Legal consultancy	Technological disruption	Chief Executive Officer	60	
8	IT services	Technological disruption	Chief Executive Officer	53	
9	IT applications	Demand-based crisis	Chief Executive Officer	55	
10	Energy	COVID-19	Senior Vice President Sales and Customer Service		62
			Head of Customer Service		61
11	Travel	COVID-19	Chief Commercial Officer		55
			Vice President Customer Service		58
12	Finance	COVID-19	Executive Vice President		62
			Head of Business Unit 1		56
			Head of Business Unit 2		65
			Head of Business Unit 3		54
			Head of Business Unit 4		50
13	Insurance	COVID-19	Senior Vice President of Client Service		61
			Head of Business Customers		49

Notes: Firms 1–9 represent B2B SMEs; Firms 10–13 represent large-sized B2B firms.

informants to share any insights that they considered relevant. Furthermore, we used probing questions to follow up on interviewee responses to encourage elaboration. Notably, the interviewees were not aware of our study's theoretical aim, which increased the internal validity of their responses. The second interview round followed a similar structure, but the key informants were asked to focus specifically on COVID-19 as a situation of uncertainty. All interviews were audio-recorded and transcribed to allow detailed analysis.

3.2. Data analysis

Our analysis logic balanced between inductive theory generation and deductive theory verification by contrasting theory with empirical insights (Orton, 1997). To elaborate, we followed a pre-designed analytical framework (Table 1) that was allowed to evolve on the basis of empirical insights (Dubois & Gadde, 2002). In other words, our analytical framework formed the basis for analysis, but we enriched and refined it by matching the framework with the empirical data. This process led to the final empirical framework. Next, we describe the analytical process in more detail.

The preliminary data analysis occurred in parallel with data collection as the interview transcripts were read carefully by both researchers throughout the data collection periods, which were followed by discussions of key insights. Once the whole dataset was collected, the transcripts were further reviewed multiple times before the formal analysis process began. We used a three-step thematization procedure involving data condensation, data display, and conclusion drawing (Miles, Huberman, & Saldana, 2014). In the data condensation phase, we identified activities that companies performed under uncertainty and labeled them with descriptive codes (e.g., collaboration with partners, co-creation with customers, market research, and learning by doing) by using NVivo© 12 software. Furthermore, we eliminated data that was clearly out of the scope of this study. In the data display phase, we aggregated the descriptive codes under broader categories that, in accordance with our analytical framework, reflected the effectual and causal sensing, seizing, and transforming activities. When drawing conclusions, we compared similarities and differences between different companies and key informants and determined the underlying decision-making principles that were manifested in the activities that companies performed. Consequently, we developed our analytical framework into an empirically enriched framework that suited our data. In the following, we present the empirical framework in detail.

4. Findings

The study data provided strong support for B2B firms' effectual decision-making in executing dynamic capabilities under unexpected uncertainty. Indeed, the vast majority of firms' sensing, seizing, and transforming activities were determined by effectuation logic. The causal elements that we found were related to conducting formal market research to support informal market sensing, which was particularly evident among large-sized B2B firms. Furthermore, the firms were found to place more emphasis on planning and prediction in stable environments, but in situations of uncertainty, the value of causal planning was considered limited. Even the key informants from large companies reported that the COVID-19 pandemic had forced them to rethink the role of planning and shift toward faster and more agile decision-making.

Since the role of causation was found to be minor in situations of uncertainty, we focused on the effectual sensing, seizing, and transforming activities in reporting our findings. Overall, the role of effectuation was manifested in distinctive decision-making principles applied by the companies. First, the *basis of business strategy* was focused on creative market-shaping and turning unexpected events into business opportunities when facing uncertainty. These opportunities were identified primarily through an in-depth understanding of customers' goals and challenges in their professional lives and business ecosystems. Second, the *assessment of business opportunities* was guided by the available means (e.g., resources, knowledge, and skills) and affordable losses rather than strategic goals and profit maximization. In particular, the interviewees systematically emphasized that unexpected business opportunities that created value for customers were prioritized. Third, with respect to *attitude to outsiders*, open collaboration with external partners and willful agents was emphasized. In this regard, customers were perceived as key partners in developing and co-creating business offerings and processes. In all cases, the participants reported that the

significance of the role of customers as key partners increased when navigating uncertainty.

The data analysis enabled us to explicate how effectual logic was applied in the key activities through which the interviewees executed dynamic capabilities under unexpected uncertainty. To elaborate, we identified three key activities in each dynamic capability category (i.e., sensing, seizing, and transforming) that derived from effectual reasoning. These activities are discussed in detail in the following subsections. presents our empirical model, distinguishing the decision-making logic and key activities involved in executing dynamic capabilities Fig. 1.

4.1. Sensing activities

We identified three effectual sensing activities that the participating B2B firms frequently performed when facing unexpected uncertainty. First, the companies highlighted that *the collection of customer insights via informal discussions and feedback* was the most crucial means of sensing the implications of unexpected events. The interviewees stated that it was vital to interact with customers continuously to garner insights into customers' business problems and goals in uncertain circumstances, as well as their individual thoughts and feelings regarding market changes. Based on these discussions, the case companies were able to realize novel trends in customer needs and *weak signals* of new opportunities for exploiting contingencies and shaping existing markets. In addition to informal interactions, one firm (Event production) used focus group sessions to collect ideas from key customers, which were used as raw material in creating new processes and offerings. Notably, in the second round of interviews (i.e., after COVID-19), the emphasis on collecting input from customers became even more intense. The firms stated that the most important action at the outbreak of COVID-19 was to obtain information about customers' situations and determine ways to help them through the crisis.

[Under uncertainty], it is important for us to stay in connection with customers. We do not fly around the world, but we skype with them and keep up the good relationship. We ask how they are doing. It is more than just to buy products from us. That way, we get a lot of timely information of their needs. (Chief Executive officer, Health).

After the pandemic began, we really started to listen to our customers. In our discussions with customers, we tried to find the issues that would help them. We really raised our ambition level on understanding what's best for customers and what's happening in their lives. For that, we found the best way was to directly speak with customers. (Senior Vice President of Client Service, Insurance)

The second activity concerned *active sharing of customer insights throughout the organization*, which was considered critical in capitalizing on customer insights generated by different members of the organization. Several participants argued that in events of unexpected uncertainty, the need to share customer insights on all levels and functions increased. A common view among the participants interviewed after the COVID-19 outbreak was that previous uncertainty situations had taught the organizations to focus on customer insights and the importance of disseminating information throughout the organization, but the COVID-19 pandemic had remarkably intensified the dissemination practices.

We use a lot of time to collect feedback from customers, their experiences of our services and insights, and to share the information throughout the organization. For example, we use external facilitators to help us organize and go through the feedback in workshops, where everyone in the organization participates. (Chief Executive Officer, Event production).

The pandemic tightened us in the organization very quickly. Suddenly, we simply started to look at things together. Everyone wants to know what customers are saying and what we can do next. It's now our responsibility to make sure that the feedback we get from customers is available for

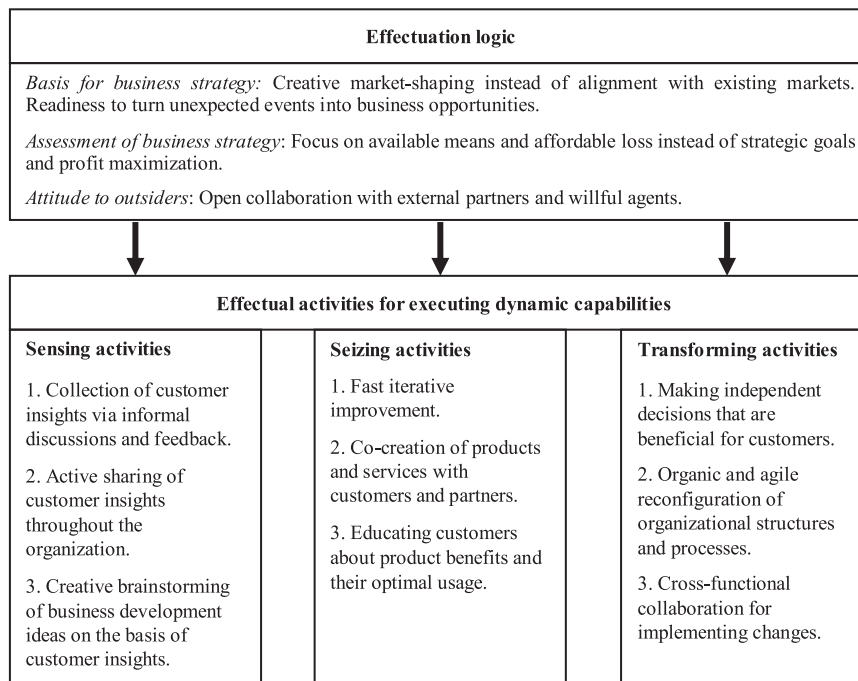


Fig. 1. Executing dynamic capabilities under uncertainty.

different parts in the organization. It became natural to look at things together. (Head of Business Customers, Insurance).

The third activity was the *creative brainstorming of business development ideas on the basis of customer insights*. This activity was vital in refining various customer inputs into actionable business opportunities because customers often could not express the exact solution that they needed to overcome specific business problems. It was noted by several participants that when facing unexpected uncertainty, they were forced to brainstorm quickly on customer feedback. It was important that the companies turned these insights into actionable business ideas that had the potential to meet customer needs.

In our own meetings, we started to do things much quicker. Customers' feedback forced us to take actions. We are extremely good at planning long processes as well as ventilating about whether to do it this way or that. Now, the situation forced us to act. We took steps forward, tested new things, and then, along the way, made things better. First, we made things good for customers and then had discussions internally to make them even better. (Head of Business Unit 2, Finance).

Quite often, a customer does not understand what he or she needs. That is when we need to start resolving it. Often even we do not know what is specifically needed, but we see that customers have certain kinds of challenges or could benefit from certain kinds of issues. We then start brainstorming and quite often come up with a totally new solution. (Chief Executive Officer, Sports technology).

4.2. Seizing activities

When something extremely unexpected happens, firms need to select their courses of action quickly. In this respect, the first effectual seizing activity, *fast iterative improvement*, plays an important role and forms a logical continuum with the business development ideas generated in the sensing phase. The interviewees perceived fast iterations as a means to decrease the risk of failure because they allow firms to test novel ideas quickly and without investing heavily in them before reaching a proof-of-concept. While fast iterations were considered important in all types

of unexpected events, the COVID-19 pandemic had created a need to be even quicker and more agile to obtain ideas for testing.

In practice, we do a light version of a service, describe it verbally, and interview 5 to 10 customers. We want to have a good picture of it before we start any coding. We test already in the [product] concept phase. Testing the final product is extremely expensive. So, we do it cyclically. We do one version, test it, improve it; we do a second version, and so on. The goal of every phase is that the next version is better and more near the customer value we want... When something big, such as the COVID-19 pandemic, happens, then we bring the acute initiatives customers are asking [for] directly for testing, even though those would not have been in plans before. (Chief Executive Officer, Software Design).

[In situations of unexpected uncertainty] I encourage our people to just do it. I prefer a quick analysis followed by testing, further analysis, further testing and so on. (Head of Business Unit 1, Finance).

The second activity focused on the *co-creation of products and services with customers and partners*. While iterative testing of novel ideas with customers could be considered a form of co-creation, the interviewees highlighted that during unexpected uncertainty, the collaboration went beyond testing early-stage ideas and formed a culture in which customers or other partners participated in the continuous improvement of product and service offerings. Because unexpected uncertainty forces companies to make quick adaptations, the firms focused on the available means and proceeded with trial-and-error approach. It became evident that successful co-creation required a balanced approach that matched a firm's expertise and the needs of its customers.

A good example of innovative cooperation with existing partners during the pandemic is what we did with one partner. We had in one function employees that were needed but not full-time anymore. Then, they (the partner) started to innovate possibilities of how those people could be used. There were ideas coming from different units and from different partners, and then we just compiled those and found this new innovative product. The agility, culture of small experiments, and that no big investments were needed helped us. (Vice President, Travel).

In the beginning, we developed [offerings] without asking anyone, and it was a disaster. Second, we were totally based on customer ideas and wants without know-how from us, and it was a disaster. Finally, we started to work together with a number of customers and partners, and that was sound activity and led to success. (Chief executive officer, IT services).

Third, *educating customers about product benefits and their optimal usage* was another key activity identified in the data analysis. While co-creation enabled the companies to match their offerings with customer needs, it was equally important to inform customers about how the offering could be used in specific cases and business problems. The key method used to educate customers was sharing informational content (e. g., whitepapers, videos, podcasts, webinars, and user guides) via various digital channels. Previous situations of unexpected uncertainty had taught the importance of this activity, though after the COVID-19 outbreak, its speed was at a new level. The participants explained that there was suddenly an urgent need to tell customers how firms could help them.

During recent years, we have done a lot to teach customers, but the pandemic increased the speed. Now everyone in [the] organization is asking for a possibility to arrange [a] webinar to get a possibility to show customers how to use the service. We are now really on a new level when it comes to the customer education. (Head of Business Unit 4, Finance).

COVID-19 changed the customers' situation overnight. We tried to help customers by being proactive and telling them about alternative solutions that we can offer. We tried to produce content that would immediately support customers... We decided to invest in digital coaching sessions. It was like an academy that was really helpful from the COVID-19 perspective, and the customers were very thankful. The ideas for coaching sessions were based on what customers want. For example, they provided themes for podcasts. Then we checked if there is a broader need for the topic and made them with a low threshold. (Head of Business Customers, Insurance).

4.3. Transforming activities

Transforming was realized in three core activities. The first activity highlighted *making independent decisions that are beneficial for customers*. All interviewees specified that employees must be empowered and capable of making independent decisions in interacting with customers and solving their acute problems in situations of unexpected uncertainty. This bottom-up approach gives employees the power to tailor offerings and processes to customer needs, which often leads to changes in existing organizational routines and workflows. Although independent decision-making decreases management's ability to control operations, it is vital in resolving customers' concerns quickly, which serves to gain their trust and loyalty during uncertainty. The managerial challenge was to provide employees with clear guidelines for exercising power appropriately.

Now, we talk much more than before with employees and supervisors who are near customers. In practice, they are then able to independently put the ideas in action, and we [management] just follow (Chief Executive Officer, Beverages).

In a crisis situation, everyone is empowered to take the responsibility and take things forward. Everyone is allowed to make mistakes. (Head of Business Unit 1, Finance).

Our model is absolutely bottom-up. To tell the truth, it is not always easy. Our employees have a lot of power, but it is dependent on a person how much they use it. They can make decisions while talking with customers; they do not need to ask anyone. (Chief Executive Officer, Health).

Second, the findings showed that independent decision-making could not lead to real transformation unless the organization

supported an *organic and agile reconfiguration of organizational structures and processes*. Several interviewees mentioned that processes and structures directly affecting customers were changed organically by individual members and teams in the organization. Such organic reconfigurations are critical in ensuring good customer experiences. In situations of unexpected uncertainty, the changes became more intense.

We changed [the business model] very quickly. In a few months, we changed the whole viewpoint on our operations. Our success comes from the fact that we've been able to make quick changes without banging our heads against a wall for a long time. (Chief Executive Officer, IT Services).

We need to be able to react to changes and change the organization organically. Most structural changes have started from the willingness to change things based on customer feedback. We want to be agile. (Head of Business Unit 3, Finance).

The third activity concerned *cross-functional collaboration in implementing changes*. In practice, collaboration is actualized via cross-functional teams whose capabilities are sufficient to meet customer needs. Collaboration supports independent decision-making as employees do not have to rely on other functions to change organizational processes, which was highlighted as critical in situations of unexpected uncertainty; each team has the skills, resources, and authority to implement changes that create value for customers. Cross-functional teams flatten and decentralize the organization's structure, which further supports the agile and organic reconfiguration of both structures and processes. The interviewees highlighted that cross-functional teams must function autonomously to be able to address customer needs, especially in situations of unexpected uncertainty.

We aim to keep the organization very flat. The power and responsibility should be as close to customers as possible. Teams have an entrepreneurial responsibility where they are empowered to do the job as a single team. (Chief Executive Officer, Beverages).

There is practically no issue that our teams cannot take care of, because each team consists of all types of competencies. This is how we ensure smooth reaction to all kinds of issues and events. Everything can be managed in the frontline. (Head of Business Unit 4, Finance).

5. Discussion

5.1. Theoretical contributions

This study makes three important contributions to theory. First, this is the first study to integrate the theories of dynamic capabilities and effectuation into a unified model to provide a better explanation of how companies can adapt to market changes caused by unexpected uncertainty. In so doing, we complement the dynamic capability literature that has previously focused on navigating *deep uncertainty* characterized by unpredictable but recognizable environmental changes (Teece, 2016; Teece et al., 2016). When the source of uncertainty is recognized (e.g., technological development), organizations can proactively use scenario planning or draw conjectures about the effects of potential environmental changes on the organization and subsequently prepare themselves for possible futures by reconfiguring organizational capabilities and processes (Teece, 2007; Warner & Wäger, 2019). However, in situations of unexpected uncertainty, an organization has limited time to formulate a response, which shifts the focus from proactive to reactive measures. Since effectuation focuses on exploiting contingencies that result from surprising events in the marketplace (Sarasvathy, 2001), it is ideally suited to situations of unexpected uncertainty as it enables an organization to formulate prompt and agile responses.

As its second contribution, this study provides an activity-based model for executing dynamic capabilities via effectuation. In this regard, the study goes beyond descriptive manifestations of effectuation

logic in executing dynamic capabilities by identifying the effectual sensing, seizing, and transforming activities that facilitate an organization in formulating prompt and agile responses to situations of unexpected uncertainty. Many identified activities resonate with Teece et al. (2016), who discuss the necessary role of organizational agility in the use of dynamic capabilities to address deep uncertainty. For example, they suggest that the agile use of seizing and transforming capabilities benefits from the absence of organizational hierarchy, elements of self-organization, open innovation methodologies, and iterative product development processes. Nevertheless, Teece et al. (2016) start with the assumption that companies must proactively sense environmental trends and their implications for the marketplace and make hypotheses about the future to ensure sufficient time to prepare for alternative scenarios. Consequently, their sensing activities emphasize the use of scenario planning, whereas the identified sensing activities in this study focus on informal means to collect and share customer insights to ensure rapid response to situations of unexpected uncertainty. Thus, our activities complement the agile use of dynamic capabilities by showing that events of unexpected uncertainty require a different set of sensing activities.

As its third contribution, the study findings enrich effectuation and dynamic capabilities theories by uncovering the interlinks and complementarities between the two, responding to calls for exploring their relationship to other theoretical constructs (Engel et al., 2017; Perry et al., 2011; Schilke et al., 2018). By drawing upon the interlinks between dynamic capabilities and effectuation theories, we identify several reasons why they are ideal counterparts in responding to unexpected uncertainty. First, both theories are suited to uncertain and rapidly changing rather than predictable and stable environments. However, dynamic capabilities emphasize state and effect uncertainty (i. e., unpredictable environmental change and its effects on firms; Teece et al., 1997), whereas effectuation emphasizes response uncertainty (i. e., unpredictable consequences of response options to an unanticipated event; Sarasvathy, 2001). In this respect, our study findings imply that effectual logic speeds up the formulation of response options to an event of unexpected uncertainty and allows their iterative improvement. However, dynamic capabilities are needed to complement effectuation because they provide the means to actualize effectual responses through the renewal of extant processes. Second, both theories criticize the conventional strategic paradigm to protect one's competitive position (see e.g., Porter, 1980), and instead build on the resource-based perspective (Barney, 1991; Rumelt, 1984), promoting the focus on controllable rather than predictable aspects of the business. However, dynamic capabilities place particular emphasis on strategic renewal and reconfiguration of the firm's extant resource base (Helfat & Winter, 2011; Schilke et al., 2018; Teece, 2007), while effectuation takes the firm's extant resource base as given and focuses on the short-term effects that can be created with them (Sarasvathy, 2001). Our findings imply that in the events of unexpected uncertainty, effectual logic enables a firm to create quick effects but creating them requires dynamic configuration of the firm's extant resource base. Third, both theories promote entrepreneurial management as the key aspect of navigating uncertainty, although dynamic capabilities rely more on one or a few entrepreneurial managers' cognitive abilities, knowledge, and skills (e.g., Teece, 2012), while effectuation fosters a more participatory culture in decision-making that often involves external partners (Sarasvathy, 2001). The findings of this study support a balanced approach where entrepreneurial managers have a key role in responding to unanticipated events but benefit from involving and empowering other stakeholders. In particular, the findings of this study highlight the importance of involving customers in formulating responses to events of unexpected uncertainty. To elaborate, sensing activities relied primarily on customers' insights, and seizing activities included strong collaboration and co-creation with customers to develop effective responses. This result further supports Endres et al.'s (2020) idea that sourcing from B2B customers is indispensable to a firm's sensing capability, as well as

Heinonen and Strandvik's (2021) idea that a crisis accentuates customer primacy.

5.2. Managerial implications

The findings of this study have important implications for how to prepare for navigating uncertainty and how to deal with events of unexpected uncertainty. When preparing for navigating uncertainty, it is important to recognize the difference between recognizable and unexpected events of uncertainty that require different courses of action. By recognizable events, we refer to situations that are unpredictable but at least partially foreseeable, such as technological trends or the threat of an upcoming recession. By unexpected events, we refer to events that managers are simply unable to foresee but require quick responses. Such events are not limited to so-called *black swans* or rapidly evolving macro-level events that are almost impossible to foresee (e.g., COVID-19) but can be much more mundane. For example, a key customer account can terminate a relationship, or a competitor may shape markets with a new offering or business model. A skillful manager may be able to foresee some of them, but since human beings are fallible, unexpected events occur despite organizational efforts to sense them.

The distinction between recognizable and unexpected events is important because they must be addressed with different means. Recognizable events and trends usually unfold over time and therefore can be proactively sensed by following Teece's (e.g., 2016) ideas of using scenario planning and making conjectures of possible futures. Consequently, managers can take preemptive steps by, for example, developing new capabilities or stockpiling resources. Instead, events of unexpected uncertainty require fast and reactive responses. The key findings of the study imply that when a firm faces an unexpected situation of uncertainty, the managers should 1) involve organizational members to make sense of the situation by contacting customers and other stakeholders and foster effective means to disseminate the insights across the organization to speed up the process of formulating an effective solution; 2) start with a minimum viable solution and iteratively improve it by involving key customers to ensure the market fit; and 3) empower employees to make autonomous decisions for tailoring the solution and reorganizing structures and processes to facilitate cross-functional collaboration. Since these activities assume a higher degree of autonomy for employees, it is vital that the managers foster a participatory culture so that the employees are not afraid of taking the initiative.

While this study focused on events of uncertainty, it is important to highlight the longitudinal aspects of navigating uncertainty and the drawbacks of agile processes. In most cases, environmental uncertainty is not a fixed state, but its level fluctuates over time. At stable times, agile processes for navigating uncertainty may easily backfire. For example, informal customer feedback is more subjective and biased than formal market research, which may guide the firm to act upon misleading insights or devoting resources to develop solutions that have little market demand. The independent decision-making and agile reconfiguration of organizational structures and processes decrease managerial control, which may blur the strategic direction of the company. Similarly, a higher degree of employee empowerment to make autonomous decisions can be a significant job stressor and have negative effects on employees' well-being, which is a highly important aspect of using dynamic capabilities. Especially during severe uncertainty, it is crucial to create a culture of caring to ensure a psychologically secure emotional climate (Hodgkinson & Healey, 2011). As Teece et al. (2016) put it, organizational agility should not be treated as an immutable quality because it comes with a cost, as an organization must always balance agility and efficiency. Thus, at stable times, companies are likely to waste resources to ensure agility and should instead maximize efficiency, while at turbulent times, companies should focus on agility at the cost of decreased efficiency to ensure speedy responses to market uncertainty. It follows that managers should be able to change the mode of

executing dynamic capabilities between agility (or effectuation) and efficiency (or causation). The question of how to switch this mode is beyond the focus of this study, but we assume that SMEs are in an advantageous position in this regard. Regardless of company size, we recommend that managers design steps that would allow improved agility when facing increasing uncertainty or an event of unexpected uncertainty. Indeed, switching the mode between efficient and agile processes may, in fact, be the true meaning of organizational agility.

5.3. Limitations and future research

Like many qualitative studies, this study is limited by its lack of statistical generalizability (Dubois & Gibbert, 2010; Yin, 2003). This study investigated the decision logic used by 13 B2B firms based in Finland to execute dynamic capabilities in the context of unexpected uncertainty. In general, the sample of 13 firms does not allow us to claim that the results can be generalized beyond the sample. Instead of seeking statistical generalizability, qualitative studies aim to achieve analytical generalizability, which refers to the extent to which empirical observations are generalizable to a theory rather than to a population (Yin, 2003). Accordingly, the findings of this study are designed to be generalizable to theory. However, because this study is one of the first attempts to examine how an effectual approach affects dynamic capabilities, further studies need to be conducted to improve the external validity of the results. Specifically, we assume that the same combination of effectuation and dynamic capabilities may apply across different countries and industry sectors (including B2C). However, the exact set of sensing, seizing, and transforming activities and their implementation may vary in different contexts. For example, the *co-creation of products and services with customers and partners* may be favorable in B2B contexts, which are often associated with fewer but closer buyer-seller relationships (Hutt & Speh, 2021). In turn, *active sharing of customer insights throughout the organization and making independent decisions that are beneficial for customers* may be easier to implement in cultures that feature consensual (vs. top-down) attitudes toward decision making and egalitarian (vs. hierarchical) attitudes toward authority, which are often found in Scandinavia and Northern Europe (Meyer, 2017). Besides national culture, the existing organizational culture is likely to play an important role in how effectively the effectual activities are implemented. While in some organizations the higher degrees of employee autonomy may encourage employees to take the initiative, in other organizations it may lead to inertia (Tece, 2012).

Finally, recent studies have highlighted the importance of investigating different factors and situations of uncertainty (e.g., Crick & Crick, 2020; Sharma, Leung, Kingshott, Davcik, & Cardinali, 2020). Our study specifically focused on contexts of unexpected uncertainty, leaving very little room for careful analysis and planning that is characteristic of causal decision-making because the firms are forced to respond rapidly. This may be why we found very little evidence of causal reasoning in our study. Consequently, it would be relevant to study the role of effectual and causal reasoning in situations that entail moderate levels of uncertainty where the mode of reasoning may be more balanced. In particular, longitudinal research on the use of dynamic capabilities over time could reveal the dynamics between effectual and causal reasoning, as market turbulence fluctuates. The framework developed in this study could be used as a foundation, but it may need to be adjusted to such contexts.

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Data availability

The data that has been used is confidential.

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