

Understanding Organizational Orientations Towards Digitalization: A Sensemaking Approach

A Multiple-Case Study

Susanna Takkunen

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To my three little piglets

Pape, Pepe & Toto

Abstract

The focus of this dissertation is on exploring how organizations in the consumer goods industry interpret the impacts of digitalization, more specifically, how they respond to the question ‘what does digitalization mean for us as an organization’. And, subsequently, this study examines how this interpretation is reflected in the organizations’ orientation towards digitalization. Through this I attempt to shed light on the cognitive microfoundations of digital transformation. I position my dissertation within multi-disciplinary discourses on digitalization and draw on sensemaking theory to construct my research framework, motivate my research questions, and depict my findings.

This dissertation is based on a qualitative case-study in the consumer goods industry. The study includes a data set of eight consumer goods companies and evidence from six sources: e.g., 39 in-depth interviews, one-to-one meetings, attendance in company workshops, strategy documents, and direct participant observation. My 20-years’ experience as a practitioner in the field and serving as a digital transformation adviser for two of the case companies during the entire duration of the research period, further enhanced my ability to interpret the findings. The study took place over an 18-month period during years 2019-2020.

My dissertation depicts consumer centricity as an aspect of an organization’s identity that may promote an organization’s ability to grasp the transformative nature of digitalization and act as an accelerator to business model transformation. This finding is relevant for any leader attempting to drive a digital transformation and business model change. It implies that an organization’s identity can act as a barrier to change, and unless considered, a digital transformation process can, at worse, slow down or fail.

As such, this dissertation contributes to strategic management literature, and multidisciplinary discourses on digitalization. I contribute to sensemaking theory by advancing understanding of the role of identity in the sensemaking process, and by extending the sensemaking process framework to include experimentation as a new phase in the process. I contribute to digital transformation literature by delineating three

distinctive organizational orientations, which describe how organizations within an industry interpret digitalization, and by identifying a gap in the digitalization literature cross-fertilizing the information systems and strategic management views with marketing perspectives. Finally, my study advances discourses on demand-side strategy and business model innovation literature by identifying consumer-centricity as a key construct impacting the ability of an organization to grasp digitalization as a transformative change force.

Keywords: Digitalization, Digital Transformation, Sensemaking, Identity, Consumer Centricity

Statement of Contribution:

This thesis is an original empirical work of the author that builds on preliminary findings published in the following conference paper: Takkunen, S., J. Luoma & T. Falk (2020), “The Importance of Consumer-Centricity in Shaping Digital Transformation: A Sensemaking Perspective,” SMS Paper Series, October 2020, pp. 1-5. In the conference paper, the first author had sole responsibility for most of the data collection and had a leading role in data analysis. The remainder of the conference paper was joint work by the author team. Some parts of the joint work are incorporated in this thesis in original or modified form. The expansion of the preliminary findings into the current form is the sole responsibility of the author of this thesis.

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At my Mother's doctoral celebrations in 1999, I gave a speech, in which I made a commitment that one day I, too, would embark on the same journey. It took me over two decades to fulfill the promise. Today I feel nothing but joy and satisfaction for never giving up the dream.

Anyone who has completed a dissertation knows that the process seems like a long roller coaster ride with its exhilarating ups and gloomy downs. For me it has been the loneliest and most challenging project I have ever undertaken. Sitting inside the empty Aalto-university campus cleared of all students due to the covid-outbreak required perseverance beyond comprehension. Not being physically able to attend courses or seminars, not meeting fellow students, nor attending conferences to connect with a wider academic community made me, at times, feel deserted. But despite the multiple moments of self-doubt, I was determined to stay the course.

The last two years has, both professionally and personally, been a transformational journey for me, a time that has required tenacity like no other. I have learned to cope with discomfort and stretch myself beyond my limits. I have unlearned everything I thought I knew. And then relearned everything again. A more accepting, courteous, and humble me has been born. The journey has been a metamorphosis of a marketer into an academic, and further into a digital transformation and management consultant. As such, I feel an immense amount of gratitude for the help and support of so many people enabling this journey.

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Throughout my dissertation I have received support from my scholarly community at Aalto University. Thank you to all my peers and fellow researchers in the Marketing Department, who have enabled me to understand the nuances of academic research and provided me with valuable insights. You all played an important role in uncovering an academic researcher capability in me which I didn't know existed. A special thank you to Professor Arto Lindblom for supporting my research projects and providing me the opportunity to work full-time as doctoral candidate and researcher within the department. Thank you to Dr Hedon Blakaj, for playing an important role in uncovering the theoretical underpinnings of my research and to Assistant Professor Mikko Hänninen for your expertise and topical discussions. Thank you also to Sami Kajalo for inviting me to your courses as a guest lecturer. Interacting with students boosted my motivation. In addition, I would like to extend my thank you to the faculty at the Department of Industrial Engineering and Management, especially Assistant Professor Lauri Saarinen, for including me in your research projects. It was a pleasure to work with you.

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1. Introduction

1.1 Setting the Scene and Research Questions

Digitalization is one of the most significant forces impacting contemporary organizations. It has been transforming firms since the middle of the 20th century, when it first proved its benefits to the industrial sector (Zott & Amit, 2017; Zuboff, 1985). These benefits included the automatization of production and the acceleration of information availability (Zuboff, 1985, p. 8). In the last two decades, thanks to the unique properties of digital technologies, the speed of change has only accelerated. Books are no longer only consumed in printed formats. Newspapers are being replaced by digital media. Mobile commerce and online marketplaces such as Amazon and E-bay are challenging traditional brick & mortar retailers (Hagberg et al., 2016; Karimi & Walter, 2015; Pousttchi et al., 2015). Consumers are no longer limited by choice, distance, or geographical boundaries. The form of shopping has changed, as have the locations in which to do so (Hagberg et al., 2016). Digital technologies have presented consumers with possibilities to engage and interact with anyone, anytime (Hennig-Thurau et al., 2010; Holt, 2016); not to forget on-demand services such as Netflix, and social media channels such as Instagram and Youtube, which have impacted the effectiveness of mass media-advertising. Brand building has become a perplexing challenge in which the firm no longer calls the shots. In today's world, consumers hold the power (Holt, 2016).

In sum, digitalization has profoundly accelerated the level and speed of innovation (Yoo et al., 2010), presenting new opportunities and removing constraints that existed before (Westerman & Bonnet, 2015). As such, traditional industry processes, structures, and business models (i.e., how to create and capture value), have been disrupted (Jacobides et al., 2006, 2018; Zott et al., 2011). The impact has been particularly severe in industries, such as media, whose assets can be digitized (Parvinen et al., 2020). But the same is happening in more traditional sectors, such as the consumer goods industry, whose value creation (i.e., the process of creating value for

customers) and value capture (i.e., a company's ability to generate revenue and profits) have depended largely on linear supply chain structures and traditional transactional forms of exchange (Jacobides et al., 2006; Leone et al., 2006; Osterwalder, 2013; Parvinen et al., 2020; Rysman, 2009; Zott & Amit, 2017).

For decades, in most consumer goods industries, the retailer has served as the intermediary between firms and their consumers. In the age of digitalization, the changing retail landscape and consequent channel migration of consumers is disrupting this logic. It is no longer self-evident which business model to adopt and how these business models should be managed (Leone et al., 2006, p. 136). A good example of a consumer goods company, who has leveraged the benefits of digitalization and disrupted a linear business model is Nestlé. By selling Nespresso coffee pods to consumers through direct channels, such as online stores, Nestlé transformed a traditional coffee industry, and reduced the dependency of wholesalers and retailers within the value chain (Osterwalder, 2013). At the same time, the speed of growth of online retailers such as Amazon and Alibaba, have disrupted the traditional retailing model, which has manifested in bankruptcies of retail giants such as Toys'R'Us, J Crew, Neiman Marcus, and Brooks Brothers (Verhoef et al., 2021).

These examples illustrate how the traditional value creation-value capture model of consumer goods companies, which has generated steady growth for decades, is losing its fuel (McKinsey, 2020). Currently, the top 50 consumer goods companies globally account for 60% of industry sales, but only 2% of growth in the sector. 80% of CEOs in the consumer goods industry feel that their existing business model is at risk. But they do not know how to change it (McKinsey, 2019).

For many companies, digital transformation and business model change is challenging due to their likelihood to exploit digital technologies merely to extend, revise, or terminate existing operating logics in an evolutionary manner (Warner & Wäger, 2019; pp. 330). A possible explanation for why some companies drive a digital transformation while others attempt to favour strategic choices that they are familiar with, could be an outcome of the cognitive path dependencies held by organizations (Verhoef, 2021; Warner & Wäger, 2019). Senior leaders often fail to shift a company's business model due an "identity trap" that links the organization's central competence to its heritage, habits, values, emotions, routines, politics etc (Basu & Palazzo, 2008; Brickson, 2007; Warner & Wäger, 2019; pp.331).

Recent studies have also indicated that executives in different industries understand and use the term digital transformation inconsistently, which can become problematic for driving a successful digital transformation of incumbent companies (Warner & Wäger, 2019; pp. 344). Research has demonstrated that cognitive microfoundations of organizations (ie., the ability to make sense of the changes in the environment) can explain why some companies are successful at driving a digital transformation while others fail (El Sawy et al., 2016; Fitzgerald, 2013; Verhoef et al., 2021; Warner

& Wäger, 2019). As such, it could be argued that the better companies are at aligning organizational understanding of what digitalization means for their extant business model, and at deploying capabilities to sense the impacts of digitalization, the more likely it is for an organization to drive a successful digital transformation and business model change (Warner & Wäger, 2019; pp. 52).

In my dissertation, I attempt to shed further light on the role of organizational cognitions in relation to digital transformation by exploring how organizations within the consumer goods industry understand and interpret digitalization as a change force. More specifically, my study examines the following two main research questions:

RQ1: How do organizations in the consumer goods industry make sense of digitalization?

RQ2: What explains the differences in interpretations and orientations?

The consumer goods industry represents a particularly rich research context for exploring these two questions due to the rapid changes digitalization is provoking in this industry (Hagberg et al., 2016; Leone et al., 2006), and the difficulties managers are experiencing in changing the extant business model in order to comply with these changes (McKinsey, 2020).

Overall, in my dissertation, I argue that changing the business model of a consumer goods company is dependent on the organization's ability to make sense of digitalization from a consumer-centric perspective. My dissertation depicts retailer centricity as an aspect of an organization's identity that may impede an organization's ability to grasp the transformative nature of digitalization. I argue that a business model transformation is triggered only if this retailer-centric identity is replaced by a consumer-centric identity. I show that such a transformation is dependent on cultural transformation generated by top management sense giving, and on a collective interpretation of digitalization as a force providing the avenue to break away from a retailer-centric business model to a consumer-centric one. Furthermore, I uncover three organizational orientations towards digitalization: transformative orientation, compartmentalized orientation, and ambivalent orientation. These beforementioned insights extend current knowledge on digitalization and organizational sensemaking in various ways, which are outlined next in Section 1.2.

1.2 Research Gaps and Contributions

The focus of this dissertation is the digitalization phenomenon. As such, the scope of the study is not limited to exploring a specific artifact of digitalization (ie. a certain digital technology), but instead, exploring digitalization on a broad level to understand the changes different digital technologies are enabling for industries and organizations (Teece, 2018b). In other words, in this dissertation I attempt to explore digitalization as an empirical and pervasive change force that extends beyond product-

level technological change (eg., Tripsas & Gavetti, 2000). To the best of my knowledge, a literature stream does not exist in studying such an equivalent phenomenon from an organizational sensemaking perspective (Warner & Wäger, 2019, pp. 345). Literature has explored technological change and sensemaking of organizations from a specific digital technology and digital industry perspective (eg., Tripsas & Gavetti, 2000; Kaplan, 2008; Benner & Tripsas, 2012). But apart from a few limited attempts in the academic literature to theorize digitalization beyond technologies or technological change (eg., Verhoef et al., 2021; Warner & Wäger, 2019), research on digitalization is at present discipline-specific, zeroing in on certain aspects of the change force.

Another limitation of existing literature is that it is pre-dominantly dispersed into three different fields: information systems, strategic management, and marketing (Verhoef, 2021; Warner & Wäger, 2019). As such, a common academic definition of digitalization seems to be absent (Verhoef et al., 2021; Vial, 2019). Accordingly, to meet the goals of my study, and to contribute to the literature gap, I attempt to, in an extensive literature review (Chapter 2) explore digitalization from a cross-disciplinary perspective. Recent literature (eg., Verhoef et al., 2021; Warner & Wäger, 2019) has demonstrated that a need for a broad understanding of the digitalization phenomenon, and a cross-fertilization of literature between different fields is called for. The purpose of the cross-disciplinary review in my dissertation is to respond to this need. The goal is to summarize the research of three different fields to attain a broad understanding of digitalization research to date, to depict key concepts, and, finally, by summarizing the dispersed efforts of different literature streams, identify potential research gaps in digitalization research. A comprehensive literature review on digitalization is also imperative as a backdrop for interpreting the key findings of my empirical study.

My dissertation defines digitalization as “a sociotechnical process in which digitizing techniques and digital technologies are applied to broader social and institutional contexts to create services, applications and content together” (Koch & Windsperger, 2017, p. 5; Tilson et al., 2010, p. 749). I conceptually position my dissertation within the abovementioned broad literature stream on digitalization. But draw specifically on sensemaking theory (Weick et al., 2005) to derive my empirical findings.

Based on my literature review (Chapter 2), I identify three distinctive research gaps in current discourses on digitalization. First, even though the scholars studying digitalization often refer to the importance of an organization’s ability to ‘sense, seize, and shape’ new opportunities as the foundation of a successful digital transformation (Björkdahl, 2020; Warner & Wäger, 2019), surprisingly little focus has been placed on the sensemaking process (Verhoef et al., 2021; Warner & Wäger, 2019) that undergirds the ability to seize and shape opportunities (Gavetti, 2012). The role of organizational sensemaking, i.e., the cognitive ability of an organization to understand digitalization and what it means for the firm, has been neglected.

Earlier research on technological change has depicted the ability of an organization to collectively make sense of a shift in its market conditions, or changes in its environment, as a determinant of an organization's survival (Pazzaglia et al., 2018). Yet, a gap seems to exist in our understanding of how organizations make sense of digitalization, a broader phenomenon that involves not only technologies, but changes to market boundaries, and value creation structures, and, as such, has an impact on a firm's strategy, organization, information technology, supply chains and marketing (Verhoef et al., 2021, p. 890). In my dissertation I attempt to address this gap by examining the role of organizational cognitions in relation to digital transformation, and how organizational sensemaking is reflected in the organizations' orientation towards digitalization. Through this I attempt to shed light on the cognitive microfoundations of digital transformation.

Second, as identified above, a gap in literature exists in studying digitalization from a multi-disciplinary perspective. Even though digitalization has intrigued many scholars, surprisingly little focus has been given on exploring digitalization beyond digital technologies and digital innovation (Verhoef et al., 2021). Information systems, and strategic management literature describe digital technologies as inherently disruptive, and most typically the disruption is associated with one of the following types of disruptions: *disrupting technology* (Yoo et al., 2010), *improving efficiencies* (Tilson et al., 2010), *disrupting industry value chains* (Tilson et al., 2010; Yoo et al., 2010), *disrupting the competitive landscape* (Jacobides et al., 2018), and *disrupting the value creation and value capture model of a firm* (Amit & Zott, 2015; Zott et al., 2011). In contrast, in marketing literature, disruption is associated with the disruption of consumer behaviour and customer journeys (De Vries et al., 2017; Hagberg et al., 2016). As such, cross-fertilizing between research fields is merited to advance understanding of digitalization.

Third, a profound limitation of the existing literature is its focus on technology. Understanding the role of changing consumer behaviour on the value creation and value capture models of firms is currently somewhat lacking. Despite value creation and value capture dynamics being at the centre of the business model innovation literature, the role of the consumer, more precisely the role of changing consumer behaviour and its impact on a firm's value capture logic, i.e., 'disrupting consumer behaviour and customer journeys', has not drawn the attention of scholars (Priem et al., 2018; Reger et al., 1994; Warner & Wäger, 2019).

Thus, the purpose of my research is to respond to the abovementioned gaps by exploring how digitalization is interpreted within the consumer goods industry, and how these interpretations are reflected in organizational orientations towards digitalization. In my research I define an organizational orientation as the organization's attitude and pre-disposition towards digitalization, that guides the behavior of the organization (ie., Homburg et al., 2011; Jaakkola et al., 2016; Kohli & Jaworski, 1990).

To this end, my work applies a qualitative case study methodology comprising of 39 interviews. I empirically examine eight established consumer goods businesses at various stages of, and with different

orientations to, digitalization. To depict my findings, I adopt a sensemaking process framework (Weick et al., 2005), and draw conceptually on multi-disciplinary discussions on digitalization.

Addressing the above sketched research gaps is important for three reasons. First, by investigating how organizations make sense of digitalization, the study advances our understanding of an organization's cognitive ability to sense, seize, and shape the opportunities provided by digitalization (Björkdahl, 2020; Warner & Wäger, 2019) in two ways. One, it depicts retailer centricity (eg. Leone et al., 2006) and consumer centricity (eg. Shah et al., 2006) as constructs undergirding an organization's identity (Brickson, 2007). The study finds that a retailer-centric identity restricts organizational sensemaking and provides interpretations for guarding the extant business model. A consumer-centric identity, in contrast, enables an organization to mould interpretations of digitalization as a transformational force and, thus, accelerate the disruption of its existing business model. Two, by uncovering experimentation as a phase in the organizational sensemaking process, which has not been properly explicated in prior studies, the study provides an advancement for explaining organizational sensemaking processes towards large scale technological changes (Weick et al., 2005).

Second, by depicting three distinctive organizational orientations towards digitalization, *transformative, compartmentalized, and ambivalent*, this study contributes to multi-disciplinary discussions on digitalization (Verhoef et al., 2021; Warner & Wäger, 2019). Transformative describes the orientation towards digitalization as a forced, thoroughgoing business transformation and cultural change process. In a compartmentalized orientation digitalization is interpreted as an opportunity to augment and improve the existing business model, and in an organization with an ambivalent orientation, digitalization is interpreted as an insignificant change force. By defining organizational orientations towards digitalization, a deeper understanding is formulated of why some firms are better than others at sensing, seizing, and shaping the opportunities provided by digitalization. Furthermore, the findings show that digital transformation is dependent on a cultural change process and collective meaning making triggered by top management sense giving.

Finally, by providing evidence that consumer centricity (Shah et al., 2006) triggers organizational meaning making towards digitalization as a transformational force, this research identifies an urgent need to bring consumers frontstage into multi-disciplinary digitalization discourses. Understanding the role of consumers within the value creation and value capture logic of firms (Priem et al., 2018), and how consumer centricity as a construct (Shah et al., 2006) impedes or promotes business model innovation, requires cross-fertilization between different research streams: in particular, between marketing and strategic management. The bridging of literature could, in itself, significantly advance understanding of digital transformation (Verhoef et al., 2021).

1.3 Structure of the Thesis

This dissertation is structured as follows. In Part 1 of the literature review (Chapter 2), I conceptualize and define digitalization from a multi-disciplinary perspective. I focus on three different perspectives: the information systems view, the strategic management view, and the marketing view. I complete the chapter by constructing an overview of the foci of the three research fields and attempt to identify potential research gaps.

In Part 2 of the literature review (Chapter 3), I introduce sensemaking as a theoretical framework for examining digitalization. I focus on defining what sensemaking means, and what is known about sensemaking and organizational change. I introduce the sensemaking process framework and explore the role of identity within the sensemaking process. I finish the chapter by summarizing the two literature reviews, digitalization and sensemaking, into a conceptual framework to guide my empirical study.

In Chapter 4, I introduce my empirical study, the research approach, empirical setting, data collection, and analysis. I then present my findings in Chapter 5. Finally, in Chapter 6, I summarize the theoretical contributions and managerial implications of my study and conclude my dissertation by presenting suggestions for future research.

2. Literature Review Part 1: Digitalization

In this chapter, I will attempt to summarize the most relevant academic discourses related to digitalization from the point of view of this study. Multi-disciplinary research on digitalization has been called for by many scholars (cf. Verhoef et al., 2021). Hence, I will adopt a multi-disciplinary perspective, and explore how three different research fields, information systems, strategic management, and marketing, have discussed the topic. The purpose of exploring digitalization in a multi-disciplinary context is to provide as rich and comprehensive as possible an overview of the change force from various angles, and to identify key literature streams and concepts adopted by scholars in different disciplines.

I will begin the literature review by defining the term digitalization (Section 2.1). The purpose is to clarify what digitalization means in my research by adopting the key descriptions deployed by scholars in academic literature. Defining what digitalization means is particularly important because the term currently has many descriptions, and, as such, lacks a common interpretation in academic literature (Verhoef et al., 2021; Vial, 2019). I then move on to explore how digitalization has been discussed in three different research fields: information systems, strategic management, and marketing.

The review continues by summarizing the information systems (IS) perspective (Section 2.2). The roots of digitalization research are grounded in IS research, making it an important backdrop for studying digitalization (Yoo et al., 2012). The information systems perspective is technology focused. The topics that have drawn the attention of IS scholars include explicating the properties of digital technologies and digital products (e.g., Faulkner & Runde, 2019; Yoo et al., 2010), understanding the dynamics and organizing structures related to digital innovation (e.g., Karhu et al., 2018; Yoo et al., 2010), and the alignment of information technology (IT) with business strategies to enhance digital leadership (e.g., Yeow et al., 2018). Accordingly, in my literature review, I have categorized the IS literature into three prevailing research streams: digital technologies and digital

products; digital innovation and platform ecosystems; and digital strategy. I will discuss each of these streams separately.

In strategic management (Section 2.3), the research perspective has been on explicating the implications of digitalization and technological change in organizations. These changes have been explored particularly in terms of dynamic capabilities (Teece, 2014; Warner & Wäger, 2019), behaviour (Aggarwal et al., 2017), and cognitive abilities (Benner & Tripsas, 2012; Tripsas, 2009; Tripsas & Gavetti, 2000) of organizations, as well as how firms are re-organizing themselves within the changing industrial landscape to create and capture value (Jacobides et al., 2018; Teece, 2018b). I have categorized these research focus areas under three research streams: dynamic capabilities, technological change, and business model innovation.

I conclude the literature review by providing a short summary of the marketing perspective (Section 2.4). The perspective of marketing scholars on digitalization is rooted in better understanding to what extent digitalization might affect consumer behaviour. Marketing has studied the impacts of digitalization mostly by understanding how consumers are adapting to new technologies and how they behave on social media (Verhoef et al., 2021). In addition, marketing scholars have been focusing on exploring digital marketing analytics (Wedel & Kannan, 2016), and how digital touchpoints disrupt value creation (Abaidi & Vernet, 2018). The marketing perspective is often overlooked by IS and strategic management scholars, but is particularly relevant for my work, due to the empirical data set consisting solely of consumer-facing companies. Furthermore, it could be argued that including the marketing perspective on digitalization within a multi-disciplinary approach might help in identifying novel insights ignored in the past, and as such advance digitalization research. Especially given that strategic management scholars studying new business models have lately emphasized the importance of understanding the role of the consumer within the value chain as a factor of successful value capture (Priem et al., 2018).

Finally, I complete the chapter (Section 2.5) by constructing a summary of the key discourses. Through this I attempt to demonstrate the complexity that is embedded in understanding digitalization as a phenomenon, both from an academic and a managerial perspective. I position my research within the multi-disciplinary field of digitalization; the purpose for summarizing the dispersed perspectives of different research streams helps to carve a gap in the existing academic literature and motivate my research questions.

In Tables 1, 2, and 3, I outline the key discourses included in my digitalization literature review. The articles are categorized by research field. In each research field, the articles are distributed according to streams of research. In the tables, I have also compiled a summary of the focal area of interest and the key findings of each article. In the next sections, I will elaborate on each of these further.

Field of Research	Key Research streams		Journal
Multi-disciplinary	Digitalization	Verhoef et al, 2021	Journal of Business Research
Information Systems	Digital Technologies and Digital Products	Faulkner & Runde, 2019 Gunther et al, 2017 Karimi and Walter, 2015 Pousttchi et al, 2015 Chen et al, 2012 Yoo, 2010 Leonardi and Bailey, 2008	MIS Quarterly Journal of Strategic Information systems Journna of Management Information systems International Journal of Electronic Commerce MIS Quarterly MIS Quarterly MIS Quarterly
	Digital Innovation & Platform ecosystems	Cennamo and Santalo, 2020 Karhu and Gustafsson, 2018 Parker and Van Alstyne, 2018 Svahn & Mathiassen, 2017 Eaton et al, 2015 Henfridsson et al, 2014 Ghazawneh and Henfridsson, 2013 Pagani, 2013 Yoo, Boland, Lyytinen, & Majchrzak, 2012 Tilson et al, 2010 Yoo, Henfridsson & Lyytinen, 2010 Boudreau, 2010 Rysman, 2009 Parker and Van Alstyne, 2005	Organization Science (manuscript) Information systems Research Management Science MIS Quarterly MIS Quarterly Journal of Information Technology Information systems Journal Sloan Management Review Organization Science Information Systems Research Information Systems Research Management Science Journal of Economic Perspectives Management Science
	Digital Strategy	Vial, 2019 Yeouw et al, 2018 Dery et al, 2017 El Sawy et al, 2016 Westerman and Bonnet, 2015 Bharadwaj et al, 2013 Fitzgeral et al, 2013 Rivard et al, 2006	Journal of Strategic Information systems Journal of Strategic Information systems MIS Quarterly Executive MIS Quarterly Executive Sloan Management Review MIS Quarterly Sloan Management Review Strategic information systems

Table 1. Digitalization – literature review, information systems

Topic	Key Findings
Digital transformation: a multi-disciplinary reflection	Identification of stages of digital transformation, growth strategies for digital firms, and assets and capabilities and organizational structures required. A research agenda for future research.
<p>How digital technology and the relationship between people should be theorized?</p> <p>How organizations realize value from big data?</p> <p>Digital technologies as sources of disruption and value creation</p> <p>What is known about m-commerce research?</p> <p>What is known about Business Intelligence and analytics?</p> <p>What knowledge transfer problems arise when communication and storage technologies are adopted to accomplish work across time and space?</p>	<p>A theory aimed at capturing the ontological complexity of digital objects, and how their identity and use is bound up with social connections.</p> <p>Two socio-technical features of big data: Portability and interconnectivity</p> <p>The role of first-order dynamic capabilities in responding to digital disruption.</p> <p>M-commerce lacks a strong theoretical foundation</p> <p>Framework that identifies the evolution, applications, and emerging research fields of BI & A.</p> <p>Contribution to theories of knowledge transfer by identifying five new work practices.</p>
<p>How do indirect network effects play out in the strategies of platform providers and complementors?</p> <p>How to exploit and defend open digital platforms?</p> <p>What are the optimal levels of openness and intellectual property duration in a platform ecosystem?</p> <p>How can firms address competing concerns when embracing digital innovation?</p> <p>How boundary resources in a service system evolve?</p> <p>How to manage and innovate products in the digital age?</p> <p>How to balance platform control and external contribution in third-party development?</p> <p>How is value created and captured in digitally enabled networks?</p> <p>Organizing for innovation in a digitized world</p> <p>How are digital infrastructures positioned into IT artifacts?</p> <p>How do firms organize for digital innovation?</p> <p>What is the optimal level of platform openness and their impacts on innovation?</p> <p>What are the economics of two-sided markets?</p> <p>What are the economic logics of network markets?</p>	<p>Conditions that give rise to a trade-off between ecosystem innovativeness and size, when this trade off generates a tension between value co-creation and appropriation, and strategic implications</p> <p>Theorization of the competitive advantage of open digital platforms - platform forking.</p> <p>A model of two-sided network externalities</p> <p>Incumbent companies face four competing concerns - capability, focus, collaboration, and governance.</p> <p>Boundary resources are shaped through distributed tuning.</p> <p>Network -of- patterns architecture to emphasize generalization of ideas into patterns</p> <p>A theoretical model for boundary resources design and use</p> <p>Framing the dynamic cycle of control points in a value network.</p> <p>Organizational traits and identity research opportunities for organizational scholars</p> <p>A missing gap in the IS research agenda</p> <p>A conceptual framework and research agenda for IS research</p> <p>Distinct economic mechanisms result from different levels of openness.</p> <p>Defining the key differences between multi-sided and two-sided markets.</p>
<p>What is the nature and implications of digital transformation?</p> <p>How do firms use dynamic capabilities to align IT and business strategy?</p> <p>How to transform work to create digital workplaces and improve employee experience?</p> <p>How can a firm enhance its capabilities for digital leadership?</p> <p>How to revamp the business through digital transformation?</p> <p>How should IT and business strategy be aligned to improve a firm's performance?</p> <p>How Starbucks has gone digital?</p> <p>How IT contributes to firm performance?</p>	<p>Digital transformation as a process where digital technologies create disruptions triggering strategic responses from organizations that seek to alter their value creation paths while managing structural changes and organizational barriers that affect the outcomes</p> <p>Aligning process for digital transformation</p> <p>Responsive leadership and employee connectedness to drive effectiveness</p> <p>Foundations for enhancing enterprise capabilities for digital leadership</p> <p>Questioning key managerial assumptions</p> <p>The fusion of IT and business strategy into digital business strategy.</p> <p>Embracing Digital Technology from a customer-centered perspective</p> <p>A model comprising competitive strategy and resource-based view perspectives</p>

Field of Research	Key Research streams		Journal
Strategic Management	Dynamic Capabilities	Warner and Wäger, 2019	Long Range Planning
		Schilke et al, 2018	Academy of Management Annals
		Koch and Windsperger, 2017	Journal of Organization Design
		Danneels, 2016	Strategic management Journal
		Teece, 2014	Academy of Management Perspective
	Teece, 2007	Strategic management Journal	
	Technological Change	Benner and Tripsas, 2012	Strategic Management Journal
	Cognitive Abilities	Eggers and Kaplan, 2009	Organization Science
		Tripsas, 2009	Organization Science
		Kaplan, 2008	Organization Science
		Nag et al, 2007	Academy of Management Journal
		Tripsas and Gavetti, 2000	Strategic management Journal
	Behavior	Griffith, 1999	Academy of Management Review
		Khanagha et al, 2017	Long Range Planning
		Aggarwal et al, 2017	Strategic Management Journal
		Lee and Berente, 2012	Organization Science
		Christensen and Bower, 1996	Strategic management Journal
		Bower and Christensen, 1995	Harvard Business Review
		Business Model Innovation	Björkdahl, 2020
Jacobides et al, 2018			Strategic Management Journal
Priem et al, 2018	Long Range Planning		
Teece, 2018	Research Policy		
Zott et al., 2011	Journal of Management		
Zott and Amit, 2008	Strategic Management Journal		
Pisano & al., 2007	California Management Review		
Jacobides et al, 2006	Research Policy		

Table 2. Digitalization – literature review, strategic management

Topic	Key Findings
<p>How do organizations combine operational capabilities with dynamic capabilities to drive a digital transformation?</p> <p>What is known about dynamic capabilities?</p> <p>How can firms achieve competitive advantage through value co-creation?</p> <p>Theoretical refinement of dynamic capabilities</p> <p>Dynamic capabilities as a foundation for enterprise performance</p> <p>What is the nature and microfoundations of sustainable enterprise performance?</p>	<p>A process model comprising of nine microfoundations, recognizing agility as the core mechanism for strategic renewal.</p> <p>A literature review and research agenda</p> <p>Challenging the dynamic capability theory and proposing a network-centric view to explain the competitive environment of firms presented by digital technologies</p> <p>Validation of survey measures for first and second order competences</p> <p>Advancement of the dynamic capability theory as a multidisciplinary framework.</p> <p>Establishment of dynamic capability theory</p>
<p>How firm's conceptualization of products is influenced by prior industry affiliation</p> <p>Incumbent adaptation to technological change</p> <p>How does organizational identity impact technological change</p> <p>How do firms construct strategy in ambiguous situations?</p> <p>How new technological knowledge impacts organizational transformation towards market-orientation of a high-tech firm?</p> <p>How managerial cognition impacts the adaptive level of organizations in technological change?</p> <p>Why is technology implementation in organizations complex?</p> <p>The effects of customer orientation on the effectiveness of organizational responses to major technological changes</p> <p>Why are firms differently effective at adapting to technological change?</p> <p>How do companies structure organizations for digital innovation?</p> <p>Why do some organizations fail in technological disruption?</p> <p>Why do some organizations fail in technological disruption?</p>	<p>Heterogeneity in firm's framing and feature-level entry choices</p> <p>Identity-challenging technologies as a barrier for organizational change</p> <p>A model of framing contests to describe how cognitive frames impact organizational strategy making</p> <p>The relationship between identity and knowledge for a successful transformation</p> <p>The importance of the relationship of managers' understanding of the world and the accumulation of organizational capabilities</p> <p>Technological features as triggers for organizational sensemaking</p> <p>The mediating role of managerial attention and initiatives in an organizations success</p> <p>The importance of the formative period of routine development to technological change - adaptive capacities to different forms of change</p> <p>Digital control systems and two views about the interfirm division of innovative labor</p> <p>A model which charts the process through which customer demands shape the allocation of resources in technological innovation</p> <p>The role of path dependency and existing customer power in impeding success</p>
<p>Strategies for digitalization in manufacturing firms</p> <p>When and why ecosystems merge and what makes them distinct from other governance forms?</p> <p>What are the unique ideas that demand-side strategy and business model research jointly contribute to strategy literature?</p> <p>How do enabling technology providers capture value in the digital economy?</p> <p>What is a business model - definitions and developments.</p> <p>A fit between product market strategy and a firms business model</p> <p>How to capture value from innovation: Shaping intellectual property and industry architecture</p> <p>How innovators benefit from value creation and value appropriation?</p>	<p>Companies are slow to digitalize due to difficulties related to identifying profitable configurations of competencies, assets and data, orchestrating and exploiting them.</p> <p>Towards a theory of ecosystems</p> <p>Merging demand-side perspective and business models to create value for consumers</p> <p>If a technology standard is not treated as an embodiment of significant R&D efforts, rewards most likely will not support future innovation.</p> <p>Scholars do not agree what a business model is, but for key themes emerge.</p> <p>Business models and product-market strategies are complements</p> <p>How modularity and open innovation can benefit value appropriation</p> <p>Integrative guide that explains how firms should manage their position along the value chain to benefit from innovation</p>

Field of Research	Key Research streams		Journal
Marketing	Consumer Behavior	De Vries et al., 2017	Journal of Marketing
		Holt, 2016	Harvard Business Review
		Hagberg et al, 2016	International Journal of Retail and distribution management
		Baxendale et al, 2015	Journal of Retailing
		Belk, 2014	Journal of Marketing Management
		Tirunillai and Tellis, 2014	Journal of Marketing Research
		Quinton, 2013	Journal of Strategic Marketing
		Schau et al., 2009	Journal of Marketing
		Hennig-thurau et al, 2010	Journal of Service Research
		McAlexander et al., 2002 Verhoef et al, 2009	Journal of Marketing Journal of Retailing
	Meuter et al, 2000	Journal of Marketing	
	Marketing & Customer Analytics	Becker & Jaakkola, 2020	Journal of the Academy of Marketing Science
		Abaidi & Vernet, 2018	Journal of Consumer Marketing
		Ordenes et al, 2017	Journal of consumer Research
		Wedel and Kannan, 2016	Journal of Marketing
		Lemon & Verhoef, 2016	Journal of Marketing
		Anderl et al, 2016	International Journal of Research in Marketing
		Gensler et al, 2012	International Journal of Research in Marketing
		Lodish and Mela, 2007	Harvard Business Review
		Leone et al., 2006	Journal of Service Research
	Geyskens et al, 2002	Journal of marketing	

Table 3. Digitalization – literature review, marketing

Topic	Key Findings
<p>Effects of traditional advertising and social media messages on brand building and customer acquisition media on branding</p> <p>The impact of social media on branding</p> <p>How retailing is transformed by digitalization?</p> <p>The impact of Different touchpoints on brand consideration</p> <p>Effects of the use of digital technologies on consumers</p> <p>Mining marketing meaning from online chatter</p> <p>How can digital environment research techniques and research customer-cocreation help in formulating stronger customer relationships in the digital era?</p> <p>Collective value creation in brand communities</p> <p>The impact of new media on customer relationships</p> <p>Building brand community</p> <p>The creation of customer experience from a holistic perspective</p> <p>Customer satisfaction with technology-based service encounters</p>	<p>Orchestrating traditional advertising and social media messages may have an impact on brand building and customer acquisition</p> <p>Crowd culture and cultural branding</p> <p>An exploratory framework and research agenda</p> <p>An approach to understand the relative impact of different customer touchpoints</p> <p>Rethinking the notion of extended self, the body and the relationship between objects and consumers in digital environments</p> <p>Social media analysis framework to track dimensions of consumer satisfaction</p> <p>Social media to be exploited as both the site and the tool for research, creating new knowledge from which to develop strategy</p> <p>How to build and nurture brand communities to create value</p> <p>Framework of new media's impact on customer relationships, and new media phenomena to consider</p> <p>The relationship of the customer in a brand community</p> <p>The determinants of customer experience (environment, self-service technologies, and the store brand) - future research agenda</p> <p>The sources of satisfaction and dissatisfaction in self-service technologies (SSTs)</p>
<p>Customer Experience, the fundamental premises and implications for future research</p> <p>How does digitization impact perceived value for customers?</p> <p>Understanding consumer sentiment expressions from big data</p> <p>A review of marketing analytics and future trends</p> <p>Understanding customer experience throughout the journey</p> <p>Mapping the Customer Journey</p> <p>Impact of online channels on customer revenues</p> <p>Why are brands built in years and managed over quarters</p> <p>Linking brand equity to customer equity</p> <p>Understanding the market valuation of internet channel additions</p>	<p>Identifies four fundamental premises of customer experience that are generalizable across settings and contexts</p> <p>Digitization can destroy consumer value (in the newspaper industry), which can be a result of the tangibility vs intangibility and costs associated with the product</p> <p>An analysis of the implicit and explicit language used by consumers to express sentiment in text and implications</p> <p>Directions for new analytical research methods</p> <p>Identifying what is known about customer journeys and where gaps exist</p> <p>An attribution model for evaluating the degree to which each channel contributes to marketing success</p> <p>Positive effects of online use and self-selection on customer revenues, varying by product portfolio</p> <p>How to review brand metrics and organizational structures</p> <p>Linkage between brand equity and customer equity and an approach to determine the value of the manufacturer to the retailer</p> <p>On average, internet channel investments are positive net-present value investments</p>

2.1 Defining Digitalization

In literature the terms digitization, digitalization, and digital strategy are used in parallel to describe an organizational change process triggered by the impact of digital technologies. Verhoef et al. (2021) argue that this demonstrates how vague the phenomenon still is; a clear academic definition is absent. According to Faulkner and Runde (2019), another problem associated with multi-disciplinary discourses on digitalization is related to digital concepts and their properties, which were initially created for IS research. Without understanding their complex nature, some of their key attributes may be lost when exploring digitalization and digital transformation in other research domains, such as strategic management, and marketing.

Below, I attempt to describe the key terms and concepts that are integral for the purpose of my research. First, I define the term digital technologies, as it is defined by information systems scholars. Digitalization research has its roots in information systems, and therefore I will here use the term adopted in the information systems field. It is important to gain an understanding of what digital technologies are, prior to discussing and studying the change (i.e., digitalization) triggered by these technologies.

Digital technologies are defined as a combination of binary digits, data, electric circuits, and software that enable unique design and use characteristics (Yoo et al., 2010). What this means is that an immense amount of data can be compressed, stored, and transported on small storage devices. The design characteristics of digital technologies differ significantly from those of traditional analogue technologies, in that they enable homogenization of digital data, they are programmable, self-referential, and easy to access (Yoo et al., 2010, 2012). Digital technologies consist of combinations of information, communication, and connectivity technologies. These technologies are profoundly changing traditional business strategy towards “modular, distributed, cross-functional, and global business processes that enable work to be carried out across boundaries of time, distance, and function” (Bharadwaj et al., 2013, p. 472).

Digitization, as defined by information systems scholars, is a technical process (Tilson et al., 2010). In essence, it describes a process of shifting from analogue form to digital form and into binary digits (bits) (Tilson et al., 2010, p. 749). In a business context, it means, for example, converting information from manual and paper-based formats into digital, computer-readable formats through the likes of scanners and such. Digitization improves a company’s technology, but it does not involve changes to organizational processes or structures. Business models are not impacted, and organizations continue to be mutually dependent on the technological developments. The focus remains on concentration of ownership and control (Tilson et al., 2010).

Digitalization is a term used in all research disciplines. Here I use an information systems viewpoint, according to which digitalization is a

sociotechnical process in which digitizing techniques, as described above, are applied to broader social and institutional contexts (Tilson et al., 2010, p. 749). In early digitization practices, digital services were derived from the analogue versions. For example, inventory control processes were first digitized as such, and only through the disruption of organizational and industrial structures were the likes of enterprise resource planning systems created. Hence, digitalization enables individuals, groups, and organizations to create services, applications, and content together. Subsequently, radical new business models and completely new industries emerge (Tilson et al., 2010). The comprehensive use of digital technologies requires the construction of new social relationships and structures (G. G. Parker & Van Alstyne, 2005; Yoo et al., 2012).

Some researchers both in strategic management, and information systems literature, have recently argued that digitalization is not an accurate definition for describing a change process (Björkdahl, 2020; Verhoef et al., 2021). Therefore, the term transformation has been added to the label digital, to emphasize the change that is triggered by digital technologies. In this view, change is described as more comprehensive than merely exploiting the benefits of digital technologies to augment existing businesses. Digital transformation, describes a holistic exploitation of the benefits provided by digital technologies beyond their design and use characteristics (Verhoef et al., 2021). Digital transformation has been defined as “the use of new technologies (mobile, artificial intelligence, cloud, blockchain, and the Internet of Things (IoT) technologies) to enable major business improvements such as enhancing customer experience, streamlining operations, or creating new business models” (Warner & Wäger, 2019). Verhoef et al. (2021, p.121) define digital transformation as “a change in how a firm employs digital technologies to develop a new digital business model that helps to create and appropriate new value for the firm”. Rogers (2016, p.308) argues that “digital transformation is about strategy”, not merely technology, which requires leadership teams to cultivate a capability for exploiting and leveraging new opportunities, innovations, business models, and customer requirements provided by digitalization (Warner & Wäger, 2019).

Digitalization and digital transformation are often used as substitutes to describe a change generated by digital technologies. As such, it is not always evident how extensive the change described actually is: is it a minor change impacting the organization or a full business transformation? Table 4 (below) summarizes these key definitions and their relationships.

Label	Digital Technologies	Digitization	Digitalization	Digital Transformation
Focus	Improving technology	Improving technology and efficiencies	Improvin	Improving technologies, efficiencies, relationships and business models
Definition	A combination of binary digits, data, electric circuits, and software that enable unique design and use characteristics. The design characteristics of digital technologies differ significantly from those of traditional analogue technologies, in that they enable homogenization of digital data, they are programmable, self-referential, and easy to access	A process of shifting from analog form to digital. Digitization improves technology. But it does not involve changes to organizational processes or structures	A sociotechnical process in which digitizing techniques are applied to broader social and institutional contexts. Digitalization enables individuals, groups and organizations to create services, applications and content together. Subsequently, radical new business models and completely new industries emerge.	A holistic exploitation of the benefits provided by digital technologies beyond their design and use characteristics to enable major business improvements such as enhancing customer experience, streamlining operations, or creating new business models
Author	Yoo, 2010 Yoo et al, 2012	Tilson et al., 2010	Koch & Windperger, 2017 Tilson et al., 2010	Verhoef et al., 2021

Table 4. Digitalization – key definitions

In my empirical study, I will use the term digitalization, as derived from the definitions by Tilson et al. (2010, p.749) and Koch & Windsperger (2017, p.5): digitalization is a sociotechnical process in which digitizing techniques and digital technologies are applied to broader social and institutional contexts to create services, applications, and content together. I have chosen to use this term rather than the term digital transformation in order to adopt a more neutral framing of digitalization as a change force. My purpose is to study organizational sensemaking related to digitalization. As such, including the label transformation as a construct in the research, could, in my view, influence the respondents’ predispositions, and prompt the interpretations towards organizational change. Subsequently, this could generate misleading data.

In the next sections, I will explore how scholars in different research fields have studied digital technologies and digitalization, and what key perspectives and findings have emerged. I will start the exploration by constructing an overview of the key discourses in the information systems literature.

2.2 The Information Systems Perspective

The roots of digitalization research have been in the information systems field for over four decades (Yoo et al., 2012). Within information systems, scholars have primarily explored digitalization from a digital technology perspective (Faulkner & Runde, 2019). The origins of the research field

emerged through the need to comprehend how computing power could enhance efficiencies between vertically integrated companies (Yoo et al., 2012). In the last two decades, the emphasis has moved from information technology to exploring digital products (eg. Faulkner & Runde, 2019). Recently, through the explosion of various network hierarchies, the focus has shifted from digital products to understanding digital innovation and new organizational structures, such as the platform ecosystem, emerging through the transformative power of technology (Yoo et al., 2012). In the past couple of years, interest has shifted towards understanding the impact of digital technologies on business strategies and value creation (Vial, 2019; Yeow et al., 2018).

In the following sections, I summarize the key discourses within the IS literature. I first explore the key literature related to digital technologies and digital products (2.2.1). I then move on to digital innovation and platform ecosystems (2.2.2), and a short summary of what IS scholars are saying about digital strategy (2.2.3). I finish the literature review by summarizing the information systems perspective (2.2.4).

2.2.1 Digital Technologies and Digital Products

The information systems literature has placed extensive emphasis on understanding different types of digital technologies (e.g., tools, systems, devices and resources that generate, store or process data) and digital products (any products that you can sell online that does not have a physical form, e.g., e-books and e-newspapers) and their unique properties (eg. Yoo et al., 2010). The focus of IS scholars has been on specific digital technologies, such as mobile phones (Chen et al., 2012), e-mails, chatrooms and other communication technologies, and specific properties of technologies such as their communication or storage abilities (Leonardi & Bailey, 2008). In addition, extensive interest has been placed on applications related to new technologies, such as big data and business analytics (Chen et al., 2012; Günther et al., 2017). However, due to the complex nature of digital technologies and their applications, categorizations of their related concepts have varied from scholar to scholar. Therefore, research on digital products and digital technologies continues to lack a unified theoretical foundation (Pousttchi et al., 2015).

Until recently, digital products and digital technologies have been studied in isolation from business strategy (Bharadwaj et al., 2013) and organizational theory (Faulkner & Runde, 2019; Leonardi & Bailey, 2008). During the last few years, IS scholars have advanced digital technology research to include sociotechnical processes and organizations. This has brought the field closer to strategic management research (Günther et al., 2017). Scholars have drawn, for example, on dynamic capability theory to explain digital technologies as sources of organizational change and value creation (Günther et al., 2017; Karimi & Walter, 2015). New theories, such as

disruptive innovation theory, have emerged to explain why some companies fail and some succeed in responding to digital technologies (Karimi & Walter, 2016).

In a recent paper, Faulkner and Runde (2019) criticize IS scholars for having a tendency to simplify digital objects, which has resulted in an absence of deep understanding of the uniqueness and diversity of digital objects and digital technologies. Improving understanding of digital objects and digital technologies in the IS field could further enhance comprehension of digitalization as both a sociotechnical phenomenon and an organizational change force.

2.2.2 Digital Innovation and Platform Ecosystems

In the information systems literature, digital innovation is defined as the digitization of everyday products, such as books, clothing, home appliances, cars, etc (Warner & Wäger, 2019). The key difference of this from studying technological innovation in the industrial economy is that, in order to fully understand digital innovation, the dynamics of platforms (section 2.2.2) and ecosystems need to be combined (Teece, 2018b). Thus, digital innovation can be summarized as the digitization of everyday products by leveraging the dynamics and organizing structures enabled by digital technologies and digital products (Teece, 2018b; Yoo et al., 2012).

In the early days, scholars concentrated primarily on understanding the nature of digital product innovation by investigating the use and design characteristics of digital products. Digital technologies, due to their pervasive nature enabled modular architectures that generated possibilities for embedding digital components into physical products (Yoo et al., 2010). Yoo et al. (2010) extended this view to a layered modular architecture perspective, which incorporated not only digital products but also devices, networks, services, and content created by digital technology. The layered modular architecture describes how firms are typically organized for digital innovation today. In this view, industrial boundaries are blurred, and firms collaborate in ecosystems to reshape markets (Yoo et al., 2012). These digital infrastructures enable so-called open innovation, in which third party developers innovate products, content, and applications for different companies by utilizing the companies' boundary resources (Eaton et al., 2015; Ghazawneh & Henfridsson, 2013; Yoo et al., 2010). In recent years, studying these modular architectures and infrastructures has become an important research stream for many IS scholars exploring digital innovation.

The layered modular architecture is the ground on which most scholars explore the boundaries and possibilities of digital innovation in digital infrastructures (Pagani, 2013; Tilson et al., 2010). How to balance resources (Ghazawneh & Henfridsson, 2013) in relation to digital innovation; the tensions and logics of co-creation in these open innovation service systems (Pagani, 2013) whose relationships are governed by shared institutional

logics, standards, and digital technology (Eaton et al., 2015); the role of platform boundaries in digital innovation (Karhu et al., 2018); and competing concerns of different parties in open innovation service systems (Svahn & Mathiassen, 2017) have become key areas of interest. The tendency of IS researchers to explore organizational structures in relation to digital innovation (Henfridsson et al., 2014) is, again, blurring the lines between the information systems and strategic management research fields.

In a traditional market structure definition, exchange is defined based on the level of competition. In a perfect competition situation, a large number of companies compete with each other with homogenous products. In a monopolistic situation, a single company commands the market. In a platform economy, the concept of competition is vague, when different actors are dependent on each other's actions (Parker & Van Alstyne, 2005; Parker & Van Alstyne, 2018; Rysman, 2009).

Digital technology is disrupting the way in which markets and industries have previously been defined in literature (Parker & Van Alstyne, 2005; Rysman, 2009; Schmalensee & Evans, 2011). This is a result of new forms of exchange and organizing taking place between organizations and industries. As a consequence, the nature of competition is changing, and what in the past was considered proprietary has now become openly accessible to different players in the market, impacting the success and failures of companies (Parker & Van Alstyne, 2018). This leads to a need for re-interpreting existing definitions of market structures, or at least for reassessing their meanings. From a global economy perspective, this also results in requirements to assess laws and regulations around market structures (Eaton et al., 2015; Ghazawneh & Henfridsson, 2013; Karhu et al., 2018; Parker & Van Alstyne, 2018). Digitalization is not only impacting the exchange between companies but also the way in which companies are organized and how products are innovated (Eaton et al., 2015; Ghazawneh & Henfridsson, 2013; Karhu et al., 2018). These exchanges between companies related to organizing for digital innovation can be referred to as platform ecosystems (Jacobides et al., 2018).

In the information systems literature, platform technologies, inter-connecting ecosystems, and their ability to create and capture value have received significant attention from scholars (e.g., Cennamo & Santalo, 2018). Scholars have explored economic logics related to these multi-sided networks involving several parties, including platform providers and platform complementors (Boudreau, 2010; Parker & Van Alstyne, 2005; Rysman, 2009). Pricing strategies, product design decisions, and competition policy have been important areas of interest (Evans & Schmalensee, 2005; Parker & Van Alstyne, 2005; Rysman, 2009). The optimal levels of openness, distinct economic mechanisms related to openness (Parker & Van Alstyne, 2018), and the correlation between the platform ecosystem size and innovativeness (Cennamo & Santalo, 2018), have merited significant attention. In contrast to a multi-sided network, in a platform ecosystem, platform sponsors cannot recognize all the parties involved in digital innovation (Parker & Van Alstyne, 2018).

The information systems view has for decades ignored the role of the consumer when exploring digital technologies and their implications on organizations, but, through the emerging interest in platform ecosystems, the role of the consumer as a digital innovator within the ecosystem has recently drawn the attention of scholars (e.g., Parker & Van Alstyne, 2018). Studies have shown that some of the key benefits associated with digital platforms are related to the level of innovation (Boudreau, 2010). In a platform ecosystem, digitalization has enabled companies to adopt open strategies where access to a community of developers is substantial compared to a situation in which all innovation is done in-house. This advances the offerings for the end-customer (Rysman, 2009). Consequently, the more involved consumers become in the innovation process as co-creators, the more likely it is that the innovations are successful and long lived.

2.2.3 Digital Strategy

Prior to the possibilities generated by digitalization, the dominant view of IS scholars was that IT strategy was a functional level strategy, subordinate to business strategy (Bharadwaj et al., 2013). The primary objective of IS scholars was to substantiate the role of IT as a contributor to a firm's performance (e.g., Bharadwaj et al., 2013; Rivard et al., 2006). The emergence of platform ecosystems and new models of exchange has blurred the lines between traditional competition, organizational hierarchies, and organizational structures. IT is no longer seen as an isolated function (Pagani, 2013). Focus has shifted from exploring IT and business strategy independently. In contemporary organizations, IT and business strategy have been merged into a digital business strategy, which, as a research focus area, has been drawing scholarly attention during the last decade (Bharadwaj et al., 2013).

Comprehending the role of digital technologies and digitalization as sociotechnical processes impacting organizations has triggered interest in the information systems field (eg. Amit & Zott, 2015). In the last decade, IS scholars have attempted to understand how digital technologies can enable business improvements, and how digitally successful companies have transformed themselves (El Sawy et al., 2016; Fitzgerald, 2013; Westerman & Bonnet, 2015). This includes thinking differently about business strategy and business models (El Sawy et al., 2016), and aligning IT with business strategy into a digital business strategy (Bharadwaj et al., 2013; Yeow et al., 2018). It also includes reviewing enterprise platforms, and organizational mindsets and skillsets (El Sawy et al., 2016). IS scholars have become increasingly interested in understanding how digital technologies are impacting organizations (e.g., El Sawy et al., 2016). Focus has shifted from studying IT as a separate function, to exploring organizational change processes, and value creation in relation to digital technologies and digitalization (Dery et al., 2017; Vial, 2019; Yeow et al., 2018). Furthermore,

as a is being seen as increasingly important (Dery et al., 2017). Furthermore, the focus on understanding the role of organizational capabilities for driving successful digital transformation is increasingly blurring the lines between IS research and strategic management (e.g., Yeow et al., 2018). However, despite an attempt to understand and theorize digital transformation, the IS research perspective continues to be limited to studying the phenomenon from a technology-oriented approach (Vial, 2019).

2.2.4 Summary

Based on the literature review, it can be concluded that the information systems perspective on digitalization is predominantly technology focused. A large body of research has concentrated on exploring the properties of digital technologies and digital products (Faulkner & Runde, 2019; Pousttchi et al., 2015), and on understanding their implications on organizational dynamics and on the abilities of firms to create and capture value (Gunther et al., 2017). IS researchers have also attempted to theorize digital innovation processes, and to explore the economics and boundary conditions related to platform ecosystems (Boudreau, 2010; Ghazawneh and Henfridsson, 2013) which have emerged as critical infrastructures for digital innovation. In this line of research, the focus of IS scholars has been on understanding organizational strategies (Evans et al 2005; Parker & Van Alstyne, 2005; Rysman 2009) related to platform ecosystems. Sociotechnical processes, such as the correlation between the platform ecosystem size and innovativeness (Cennamo & Santalo, 2018), and the relationships between platform providers and platform complementors (Parker and Van Alstyne, 2018) has generated interest. In the most recent studies, the ecosystem has been advanced to include not only the platform providers and platform complementors, but also the consumer as a contributing member of the network (Parker and Van Alstyne, 2018). Studying consumers as benefactors within digital transformation brings information systems closer to the demand-side strategy and business model literature (Priem et al., 2018; Reger et al., 1994) in strategic management, and consumer perspectives in marketing (Shah et al., 2006; Verhoef et al., 2021).

The role of IT within business strategy used to draw significant attention among IS scholars (Bharadwaj et al., 2013). The changing role of IT within contemporary businesses, however, has made this line of research redundant. In contemporary organizations, IT and business strategy have merged into a digital business strategy. At the same time, interest amongst IS scholars has emerged to explore the factors explaining digitally successful business. In relation to this, IS scholars have begun to compete with strategic management scholars to theorize and depict frameworks to explain digital transformation. Theories from the strategic management literature, such as dynamic capabilities, have been drawn on to investigate organizational dynamics and leadership in digitally successful organizations (e.g., El

Sawy et al., 2016). This emerging trend has, again, increasingly blurred the line between information systems research and strategic management research in relation to digitalization. In Table 5, I attempt to summarize the information systems perspective.

Research stream	Research focus	Authors	Gaps in existing literature
Digital Technologies & Digital Products	Properties of tools, systems, devices and resources that generate, store or process data (eg. Mobile phones, chatrooms, e-mail) and products sold online that do not have a physical form (eg. e-books) and the implications of these to organizational dynamics and an ability of a firm to create and capture value	<i>Leonard & Bailey, 2008; Yoo, 2010; Chen et al., 2012; Pousttchi et al., 2015; Karimi & Walter, 2015; Gunther et al., 2017; Faulkner & Runde, 2019</i>	Understanding the uniqueness and diversity of digital objects and digital technologies in relation to digital transformation.
Digital Innovation & Platform ecosystems	Dynamics and organizing structures related to digitizing analogue technologies (ie. IOS ecosystem), and the economic logics, boundary conditions and exchange logics of infrastructures and ecosystems required for digital innovation.	<i>Parker & Van Alstyne, 2005; Rysman 2009; Boudreau, 2010; Yoo et al., 2010; Tilson et al., 2010; Yoo et al., 2012; Pagani, 2013; Ghazawneh & Henfridsson, 2013; Henfridsson et al., 2014; Eaton et al, 2015; Svahn & Mathiassen, 2017; Parker & Van Alstyne, 2018; Karhu & Gustafsson, 2018; Cennamo & Santalo, 2020</i>	Considering the role of the consumer in the digital innovation process.
Digital Strategy	How to align organizational capabilities, in particular IT with business strategy, and embrace digital technologies to create value and gain digital leadership	<i>Rivard et al., 2006; Fitzgerald et al., 2013; Bharadwaj et al., 2013; Westerman & Bonnet, 2015; El Sawy et al, 2016; Dery et al., 2017; Yeow et al., 2018; Vial 2019</i>	Understanding digital strategies and digital transformation beyond technologies.

Table 5. Digitalization – the information systems perspective

Based on the literature review, I am tempted to argue that the focus of IS scholars continues to be limited to understanding digitalization and digital transformation from a digital technology and digital innovation perspective (Westerman & Bonnet, 2015; Yeow et al., 2018). This presents a gap in understanding digitalization as a more comprehensive change force impacting other, more traditional manufacturing firms, and how digitalization as a change force is impacting their ability to succeed. In order to advance understanding of digitalization as a phenomenon impacting all industries, cross-fertilization between different research fields is needed.

2.3 The Strategic Management Perspective

2.3.1 Overview

Whereas digitalization research in the information systems field is typically oriented towards describing the properties of digital technologies, and dynamics and infrastructures of digital innovation, strategic management scholars have for decades attempted to explore the impacts of digitalization from the perspectives of organizational capabilities (Warner & Wäger, 2019), behaviour (Aggarwal et al., 2017), and cognitive abilities (Tripsas & Gavetti, 2000). To the best of my knowledge, the focus has been predominantly technology focused, broadly exploring firm success in relation to new technologies and digital innovation. What innovation-based capabilities organizations possess and how these are distributed within the organization have been explored in the dynamic capabilities-literature (e.g., Warner & Wäger, 2019). How organizations understand (i.e., make sense of) and innovate (i.e., shift their behaviours) in relation to digital technologies, have been explored extensively in a line of research labelled technological change. In this research stream, the primary focus of strategic management scholars has been on exploring the role of organizational behaviour (i.e., embedded routines, path dependencies and organizational structures) and cognitive abilities (i.e., sensemaking capabilities) as attributes impacting firm failure and success in relation to digital technologies and digital innovation (Benner & Tripsas, 2012; Christensen & Bower, 1996).

Scholars argue that, in order to theorize digitalization, research needs to move beyond exploring the abilities of organizations to adapt to new technologies as a root cause for a firm's failure or success. Instead, the focus should be on understanding how organizations adapt to the changes in the firm's context, e.g., new industry architectures and business models triggered by digitalization (Björkdahl, 2020; Jacobides, 2007; Vial, 2019). Understanding how organizations interpret the changes within these contextual factors, could have significant implications on firm failure and success and, furthermore, their responses towards digitalization: in particular with respect to strategizing (Jacobides et al., 2018; Verhoef et al., 2021). Comprehending how different organizations leverage digital technologies to create and capture value (Björkdahl, 2020; Priem et al., 2018), and innovate new business models (Jacobides et al., 2018) has, therefore, drawn the interest of many scholars in the last decade.

Scholars in both fields of research, IS and strategic management, have attempted to explore the nuances of digital innovation by drawing on dynamic capability theory (Warner & Wäger, 2019; Yeow et al., 2018). Due to this, I will begin the strategic management literature review by summarizing the key dynamic capability discourses in relation to digital innovation. In this section (2.3.2), I will elaborate on the key studies in the strategic

management literature, while referring to some studies in IS literature (El Sawy et al., 2016; Yeow et al., 2018).

In Section 2.3.3, I will summarize the technological change discourse. In strategic management, technological change is one of the most extensive literature streams related to digital technologies and their impact on organizations. This line of research studies the role of organizational behaviour, such as changing routines (Aggarwal et al., 2017), and the role of organizational cognitive abilities, such as the ability of the organization to make sense of the change (Benner & Tripsas, 2012), as critical artefacts impacting how an organization adapts. In my empirical study, I draw on organizational sensemaking (Weick et al., 2005) as a theoretical framework (Chapter 3) to structure my findings. Therefore, the technological change literature, and in particular the discourses related to an organization's cognitive abilities, serves as an important backdrop for my research.

In Section 2.3.4, I summarize how strategic management scholars discuss the implications of digitalization on organizational strategy and strategizing in a line of literature called business model innovation. In this recent line of research, technological change has been extended beyond digital technologies and digital innovation, to incorporate industrial contexts and industry architectures (Jacobides et al., 2006; Pisano & Teece, 2007). Shifts in value creation and value appropriation have emerged as critical constructs, when exploring the implications of digitalization on intra- and inter-organizational structures (Jacobides et al., 2018; Zott et al., 2011). How an organization makes sense of these changes can have a significant impact on its ability to re-shape its organizational strategy and business model (Björkdahl, 2020). I will draw on this notion in my empirical study (Chapter 5).

2.3.2 Dynamic Capabilities

According to Teece (2007), the organizations who succeed in adapting to changes in their environment, have, compared to others, a superior ability, for sensing and seizing opportunities and shaping them into value-creating propositions. Furthermore, these organizations seem to have a superior ability to collaborate with other enterprises to build new ecosystems for co-creating innovative offerings. In the strategic management literature, the dynamic capabilities framework has become one of the most commonly adopted theories in view of which to interpret these aforementioned capabilities of a firm's success in relation to technological change (Teece, 2014). Dynamic capabilities differ from ordinary, operational capabilities that help to maintain the status quo by being innovation based (Warner & Wäger, 2019). As such, dynamic capabilities define an organization's ability to create, utilize, and protect those intangible assets that enable long-term competitive advantage (Teece, 2007, p. 1319). Dynamic capabilities are the organizational capabilities that adapt to changing environmental

conditions, whereas operational capabilities are viewed as vulnerable to environmental change (Warner & Wäger, 2019).

Even though the dynamic capabilities theory was originally developed by strategic management scholars to explain why some firms are better at adapting to technological change than others, the theory has, over the years, also been drawn on by information systems scholars to construct frameworks to explain successful digital transformation processes (e.g., Yeouw et al., 2018). Orchestrating effective organizational structures and ecosystems is seen as critical for digital innovation (e.g., Yoo et al., 2010), and an organization's ability to align its organizational capabilities to support digital innovation processes has been identified as a critical factor in a firm's success (e.g., Yeouw et al., 2018)

Incumbent firms typically have the will to embrace new digital technologies and digital innovation, but, due to path dependencies, have difficulties in executing a digital transformation (Svahn & Mathiassen, 2017). In the dynamic capabilities literature, a surprisingly limited amount of research exists in relation to this concern. Despite an attempt to explain the dynamic capabilities needed to digitally transform, the literature has not focused on how organizations build new capabilities whilst combining them with existing capabilities. Recently, Warner & Wäger (2019) attempted to respond to this research gap by exploring how incumbent firms built dynamic capabilities for digital transformation. The study discovered strategic agility as the key dynamic capability for seizing digital trends and generating organizational renewal. But, more importantly, the study also uncovered organizational ambiguity related to the term digital transformation as an impediment to successful digital transformation. This finding, in my view, demonstrates the limitation of the dynamic capabilities perspective. If an organization does not understand or share a common interpretation of digitalization, it can become laborious for a firm to align its operational capabilities and dynamic capabilities successfully. Furthermore, it can be argued that, prior to aligning capabilities for digital transformation, a common understanding (i.e., an organization's ability to make sense) of the firm's intended strategy in relation to digitalization, as well as the change process required in order to manifest the strategy, need to be instilled into the organization (Björkdahl, 2020; Warner & Wäger, 2019). This finding, the role of organizational interpretations and alignment as promoters of successful digital transformation, serves as a critical construct for my empirical work.

The dynamic capabilities perspective has been critiqued by many scholars (Schilke et al., 2018). Some argue that dynamic capabilities theory is too ambiguous, presents difficulties of measurement (Danneels, 2016), and lacks empirical support (e.g., Schilke et al., 2018). Koch & Windsperger (2017) also argue that the dynamic capabilities perspective was created to explore digital innovation within existing industrial contexts and organizational set-ups. Due to the environmental turbulence associated with digitalization, it is therefore limited in explaining the new organizational

structures, and their dynamics, which are required for digital innovation (Koch & Windsperger, 2017). As such, it can be argued that, though the dynamic capabilities framework has its merits in explaining firm success and failure in adapting to digitalization, it is limited in its ability to provide an exhaustive response to the question of why some organizations succeed while others do not.

2.3.3 Technological Change

Adapting to changes provoked by digital technologies is particularly complex for established firms, with various examples of firm failure (Bower & Christensen, 1995; Tripsas & Gavetti, 2014). Although organizational change is always difficult, genuine transformation is even more challenging, and the propensity to fail exceedingly high (Nag et al., 2007). Due to this, technological change has drawn the attention of many strategic management scholars during the last decades.

As early as 1985, Zuboff claimed that the emergence of new technologies would trigger complexity in organizations, create limitations for prevalent routines, disrupt existing work processes, create new ways of communicating, and accelerate abstract thinking. Technology would offer various possibilities and learning opportunities but also influence how organizations advance and survive. The technological change literature focuses on these focal concepts, attempting to describe an organization's ability to adapt to new technologies to generate firm success. Technology provides a plethora of options for an organization and its members. It determines the dimensions of different possibilities to choose from, but it cannot distinguish the choices made (Zuboff, 1985). It is the obscurity of these choices which makes technological change a significant challenge for organizations. Why some firms succeed and why others fail has been studied in the strategic management literature from both an organizational behavioural and cognitive ability perspective (Tripsas, 2009).

In studying organizational behaviour, scholars have attempted to explore how successful and unsuccessful companies adapt to technological change (e.g., Bower and Christensen, 1995): more specifically, how organizations orchestrate themselves for digital innovation and which structures impede or promote organizational achievement (eg. Lee & Berente, 2012). Scholars have attempted to explain a firm's success by exploring constructs such as customer power and path dependencies (Bower & Christensen, 1995; Christensen & Bower, 1996); inter-organizational structures and distribution of labour (Lee & Berente, 2012); the role of routines and management intervention (Aggarwal et al., 2017; Khanagha et al., 2017); and the role of an organization's customer-orientation (Khanagha et al., 2017) as impediments and promoters of successful change.

Bower and Christensen (1995) explored the pattern of failure of leading companies in relation to technological change: in particular, the role of

technological innovation as a trigger of firm failure. The research showed that the introduction of new technological innovations failed for some leading companies (e.g., Goodyear, Xerox and Sears) as a result of strong path dependency and, more notably, the proximity of the firm to an existing customer base. This customer power acted as a boundary for sensing opportunities presented by new customer segments and new markets. Many well managed firms seemed to lack the ability to leverage new technologies and develop next-generation innovations due to dependency on mainstream customers. Venturing away from these customers presented risks to the extant organizational processes and structures. New opportunities were ignored, leaving the market opportunities to niche competitors. Later, Christensen & Bower (1996) advanced the view and concluded that customer power can have detrimental effects on an incumbents' ability to succeed during technological change. An established firm's resource dependency for serving existing customers, can significantly impede its ability to innovate and, consequently, result in a firm failure.

In addition to customer power and its role in an organization's ability to change, scholars have attempted to explain organizational differences by exploring inter-organizational structures and distribution of labour in technological innovation. In a study of digital control systems (a digital control system is a system that processes signals from sensors through the help of a computer e.g., a navigator) in the automotive industry, Lee & Berente (2012) concluded that digital innovation is dependent not only on a firm's innovative capabilities, but on how innovative labour is distributed within the entire supply chain. How the firm structures itself within the supply chain for exploiting innovation abilities can have a significant impact on the firm's ability to succeed.

Aggarwal et al. (2017) attempted to explore the role of the different capacities of firms to adapt to technological change. In their study, changing routines of the firm and applying ambidexterity within the organization, were depicted as integral promoters of a successful change process. Routines are typically seen as behaviours so strongly embedded into an organization's culture that shifting them is almost impossible. However, according to their study, routines can be changed with strong managerial intervention and sense giving. The success is dependent on constructing a process in which the organization is presented with a new worldview prior to change taking place. This portrayal of the new world ensures that the organization can sense, seize, and shape the new opportunities, and begin to build new routines early on (Aggarwal et al., 2017; Björkdahl, 2020). The success of an organization can be further advanced by maintaining a flexible structure or by building subunits within the firm to lead the change, while other units continue to operate with existing routines (Aggarwal et al., 2017).

By exploring how different case companies adapt to cloud computing, Khanagha et al., (2017) attempted to explore why some organizations are better at adjusting to emerging new technologies than others. The key contribution of their study is two-fold. Firstly, it highlights the importance

of managerial involvement in directing the organization's attention towards new technologies, without harming the ongoing activities of the organization. And second, it provides evidence that organizations with strong customer-orientation, are better at recognizing change than others, and at adapting their processes and discarding path dependencies. Customer-oriented organizations, according to Khanagha et al. (2017), are better at sensing new opportunities associated with major technological shifts. And have superior capabilities to invent organizational processes and structures to adapt to these changes.

Despite Griffith (1999) noting already two decades ago that the role of organizational cognition in a technological change process merits extensive understanding, it wasn't until a decade later that organizational cognition was portrayed as a significant contributor in the likelihood of a firm to succeed in digital innovation (Griffith, 1999). In a study of Polaroid corporation, Tripsas and Gavetti (2000) depicted the importance of managerial cognition in a firm's ability to overcome path dependencies. Polaroid corporation failed to shift from analogue to digital imaging, not because of the top management's ability to sense, seize, and shape a change, but due to organizational inertia, which prevented the organization from adapting their existing behaviours to this change. This inertia was caused by ambiguity within the organization towards new technologies (i.e., digital imaging) and how moving away from analogue technology would impact their strongly embedded organizational heritage as Polaroid corporation. The study uncovered the importance of managerial cognition in relation to organizational learning dynamics and adaptation, and the importance of managerial sense giving within this process.

Kaplan (2008) argues that a change process is not only a result of an organization's ability to comprehend the change, but the result of how different managers interpret it. The strategic response of an organization in an uncertain situation can be an outcome of different managerial cognitive frames competing with one another. Cognitive frames are the means through which managers make sense of ambiguities (i.e., the implications of digital technologies). These frames become political instruments for influencing an organization's strategic direction. According to Kaplan (2008), these frames can become both resources and constraints in strategy making. But, through top management intervention and sense giving, outcomes of these "framing contests" can be shaped. Eggers and Kaplan (2009) advance the importance of the role of top management in a technological change process. A CEO attending to emerging technologies can trigger faster adaptation of an organization and renewal of the firm's strategic orientation, than if the CEO's focus remains on existing technologies. As such, an organization's response towards technological change is a result of its ability to comprehend the change (Kaplan, 2008) and the role of top management as an organizational sense giver in the change process (Eggers & Kaplan, 2009; Tripsas & Gavetti, 2014).

Another important construct impacting a firm's ability to adapt to change is organizational identity (Section 3.4). Identity includes the internal and external view of what is core about an organization (Tripsas, 2009). The imperfect fit of a new technology with an organization's existing identity can trigger organizational inertia and, as such, impede change (Tripsas, 2009; Tripsas & Gavetti, 2000). Technological innovations can be perceived by the organization as an identity threat and, as such, result in missed new opportunities. Tripsas (2009) argues that managerial understanding of how new technologies challenge existing identities is a critical consideration for managers in a situation of change. Prior industry affiliations can also impact an organization's ability to adapt to technological change. What this means is that an organization attempting to conceptualize new, technological innovations is bound to be restricted in its thinking by its existing industrial experience and competitive environment. Firms from different industrial contexts attempting to innovate from a common worldview are likely to approach the new worldview differently depending on their industry affiliation (e.g., Apple vs Nokia venturing into mobile phones).

To summarize, researchers exploring firms' adaptation to technological change from an organizational cognitive ability perspective have shown that prevailing industry affiliations and path dependencies (Christensen and Bower, 1996) embedded into organizational identities (Tripsas, 2009; Nag et al., 2007) can impact an organization's ability to adapt to digital technologies, as well as its ability to successfully innovate. CEO attention towards new technologies, along with managerial intervention and stewardship, can act as significant attributes in an organizational learning process (Khanagha et al., 2017; Tripsas & Gavetti, 2000). An organization's ability to sense, seize, and shape new opportunities has an impact on how a change is interpreted (Eggers & Kaplan, 2009). Managerial sense giving within this sensemaking process, i.e., in constructing meanings of the change for the organization, has a critical role in a firm's failure or success (Eggers & Kaplan, 2009; Tripsas & Gavetti, 2000). I will elaborate more on the organizational sensemaking process in Part 2 of the literature review (Chapter 3).

2.3.4 Business Model Innovation

Digital technologies have enabled firms to accelerate the rate of innovation. New organizational infrastructures, re-distribution of labour, and capabilities and resources within these infrastructures, have blurred the lines between industries, simultaneously changing the competitive environment, and value creation and value capture processes of firms (Jacobides et al., 2006). During the last two decades, this new model of organizing has attracted the attention of many strategic management scholars. The perspective of strategic management scholars was at first, primarily, focused on technology and digital innovation. New terminology to describe the dynamics related to these was created (Jacobides et al.,

2006; Pisano & Teece, 2007). Industry architecture describes a network within an industry in which labour, resources, and capabilities are divided between different complementary firms to collectively innovate (i.e., the IOS ecosystem of platform owner and complementors). This new model of organizing impacted the traditional linear logics of how firms created value. In the new industry architecture, firms do not own all the resources and capabilities required to build competitive advantage, but rather benefit from allowing other innovators to imitate some of its resources in order to capture value (Jacobides et al., 2006). In a linear business model, value creation can simply be described as a process in which a firm creates an output that is more valuable than the input. In the case of digital innovation, value creation allows different members of the industry architecture (i.e., the set of intra- and inter-organizational roles and relationships that define how labour is divided in an industry and how value is created and captured) to leverage each other's assets, including resources and capabilities, to enhance the level of innovation and, as such, build competitive advantage (Jacobides et al., 2006; Tee & Gawer, 2009). Value capture then describes the ability of a firm to use its intellectual property rights and the industry architecture system to capture the value created, distribute the created value to its customers and shareholders, and generate revenues and profit (Jacobides et al., 2006; Pisano & Teece, 2007; Priem et al., 2018; Teece, 2018b; Zott & Amit, 2017).

The dynamics of value creation and value capture in a digital innovation process has created different challenges to those of the innovation processes of the industrial economy (Teece, 2018b). Exploring these challenges requires an understanding of the core organizing structures related to a modular architecture system: in particular, comprehending the dynamics of platforms and ecosystems (Section 2.2.2). This requirement has blurred the line between different research fields. As such, in the last decade, IS and strategic management scholars have begun to cross-fertilize between the two disciplines to explain a firm's value creation process by combining research findings related to digital technologies, digital innovation, organizational behaviour, cognitive ability, and organizational strategies.

A key research stream in strategic management, exploring the dynamics of firm value creation and value capture, is business model literature. A common description for describing business models does not exist, but one of the most cited ones describes business models as "the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities" (Zott et al., 2011, p. 1024). Business model research became prevalent in the 1990s during the birth of the internet (Priem et al., 2018; Zott et al., 2011). Initially, scholars attempted to study the impact of new value-creating opportunities provided by digital technologies and the Internet, and the role of the firm within new ecosystems related to these new opportunities (Zott et al., 2011). The internet provided possibilities for firms to co-create value directly with its customers and capture this value through digital channels (Priem et

al., 2018). Understanding how these novel value creating opportunities disrupted market structures and traditional operating logics, and enabled the emergence of new firms, intrigued scholars (Priem et al., 2018). The focus was on studying business profitability in digitized environments and exploring why some established businesses were becoming obsolete (Priem et al., 2018). Later, the focus shifted from the digital economy towards explaining how firms create value in other markets as well (Priem et al., 2018; Zott et al., 2011).

Value creation is the key construct associated with business model research (Priem et al., 2018; e.g., Zott & Amit, 2017). The business model literature does not include a linear value creation process moving from the suppliers to the firms, and then towards their customers (Zott & Amit, 2017). Rather, according to the business model literature, value creation happens in a network and is dependent on complex exchanges between multiple players (Zott et al., 2011, p. 1031). This construct is what makes the business model literature an important backdrop in understanding and explaining the impacts of digitalization on organizations and their strategies. Whereas IS scholars have been exploring business models particularly from a digital innovation and platform ecosystem perspective (Jacobides et al., 2018), strategic management scholars have attempted to explore the role of different business models in explaining firm performance (Priem et al., 2018; Zott et al., 2011). Scholars have argued that a business model can act as a source of competitive advantage which differs from a firm's product-market strategy (Zott & Amit, 2017). What this means is that firms operating in the same industry and market with a similar product offering can build competitive advantage through their business models (Zott & Amit, 2008).

Another critical area of business model research is that of the customer. Zott et al. (2011) noted that, while the role of the customer in a firm's value creation process has been consistently absent in mainstream strategy research, in business model research the customer has a key role (Zott et al., 2011). This separates business model research from other strategic management research streams. In business model research, a firm's exchanges for creating and delivering value to its customers are seen as imperative (Priem et al., 2018; Zott et al., 2011). In a recent study, Priem et al. (2018) described how, in demand-side strategy research, the consumer's role in a firm's value creation process is highlighted as exceedingly relevant, and a firm's competitive advantage is strongly dependent on creating value for the consumer. In demand-side strategies, the consideration of consumers, and their latent needs, is seen as a critical construct in explaining a firm's value creation strategies and, ultimately, its success (Priem et al., 2018). The demand-side strategy differs also from other lines of research exploring the impact of digitalization in that it defines the consumer as the key factor for determining the success of digital innovation, and not technology, as favoured by IS scholars (Priem et al., 2018). Priem et al. (2018) argue that, in order to understand a firm's performance in today's digital world, scholars

need to place the consumer back in centre stage. The consumer's role in a firm's value creation process and strategy is critical for firm survival.

As described above, digital technologies have impacted traditional business constellations. Value creation is no longer located in hierarchically managed supply chains but in networks of interacting organizations. These new inter-organizational structures are referred to in the most recent line of strategic management literature as ecosystems. In an ecosystem, a group of interacting firms rely on each other to create value for the end customer (Jacobides et al., 2018). The emergence of ecosystems is drawing more and more attention from scholars in different research fields. Ecosystems are blurring the line between industries, providing consumers an increasing number of choices to choose from, and presenting firms with complex decision environments. The traditional organizational hierarchies and strategies are no longer valid, and creating value requires changes to a firm's strategy. Jacobides et al. (2018) define three different ecosystem types: business ecosystems, innovation ecosystems, and platform ecosystems. A business ecosystem refers to a research stream which focuses on the firm and its environment and views the firm as a community of interacting participants whose actions all affect each other. An innovation ecosystem refers to a collaborative agreement between the ecosystem parties whose main role is to focus on an innovation with a set of components and complements to provide value for customers. The platform ecosystem has been a focal research area in the IS field, as explained in Section 2.2.2, and focuses on the platform sponsor and complementor interdependencies in a digital innovation process. Business models and ecosystems as such are not in the focus of my research but are conceptually important constructs to understand when studying digitalization.

Finally, in the last two years, some strategic management scholars have attempted to move beyond exploring business models and industry architectures, and have instead, sought to advance digitalization research by focusing on understanding how individual firms create and capture value by leveraging digital technologies. Björkdahl (2020) attempted to theorize digital transformation by studying the digitalization efforts of 26 leading manufacturing firms. The findings demonstrated that it is not the digital technologies that present challenges for organizations, but, rather, the question of how to create and capture value in new ways by exploiting digital technologies and data. Furthermore, how to shift the existing capability base with capabilities to sense, seize, and shape new opportunities to create growth agendas. The study argues that it is this inability of firms to orchestrate new structures and processes to capture the benefits of digitalization within the value creation process that is becoming a critical bottleneck for traditional firms. The study concludes that unless top management moves from driving organizational efficiencies towards constructing growth agendas to create and capture value by leveraging the opportunities provided by digital technologies, firms, inevitably, might face long-term failure.

2.3.5 Summary

Strategic management scholars have explored the impacts of digital technologies and digital innovation on firm success in three separate literature streams: dynamic capabilities (eg., Teece, 2007; Warner & Wäger, 2019), technological change (e.g., Aggarwal et al., 2017; Tripsas and Gavetti, 2000), and business model innovation (e.g., Jacobides et al., 2018; Jacobides et al., 2006; Zott et al., 2011). Scholars have attempted to understand how organizations align their capability base for digital innovation; what behavioural dynamics within firms (e.g., embedded routines and path dependencies) impede change; what dynamics and structures enable organizations to sense, seize, and shape opportunities provided by digitalization; and how new value creation logics are reshaping industry architectures and business models and, as such, impacting organizational strategizing. In Table 6, I summarize the key literature streams and research focus areas of strategic management scholars.

Research stream	Research focus	Authors	Gaps in existing literature
Dynamic Capabilities	The ability of organizations to adapt to changing environmental conditions by aligning its capabilities to support digital innovation processes	<i>Teece, 2007; Teece, 2014; Danneels, 2016; Koch & Windsperger, 2017; Schilke et al., 2018; Warner & Wäger, 2019</i>	Exploring dynamic capabilities within new industrial contexts, structures, and their dynamics, and how to combine existing capabilities with new ones.
Technological Change	Organizational behavior and cognitive abilities as factors impacting an organization's ability to adapt to digital technologies and generate firm success.	<i>Bower & Christensen, 1995; Christensen & Bower, 1996; Lee & Berente, 2012; Aggarwal et al., 2017; Khanagha et al., 2017; Griffith, 1999; Tripsas & Gavetti, 2000; Nag et al., 2007; Kaplan, 2008; Tripsas, 2009; Eggers & Kaplan, 2009; Benner & Tripsas, 2012</i>	Expanding understanding of digitalization beyond industry evolution following major technological changes.
Business Model Innovation	The value creation and value capture dynamics related to new industry architectures, ecosystems and business opportunities triggered by digitalization, and the impact of these on strategizing	<i>Jacobides et al., 2006; Pisano et al., 2007; Zott & Amit, 2008; Zott et al., 2011, Teece, 2018; Priem et al., 2018; Jacobides et al., 2018; Björkdahl, 2020</i>	Exploring business model change beyond digital industries .

Table 6. Digitalization – the strategic management perspective

Despite a dearth of literature existing in relation to digitalization, I am tempted to argue that the existing strategic management perspective is limited in describing digitalization as a comprehensive change force. First, I support the view of Koch and Windsperger (2017) that the dynamic capabilities research stream is unable to fully explain why some firms succeed and others do not. The dynamic capabilities perspective is rooted in

an organization's ability to shift its existing innovation capabilities towards sensing, seizing, and shaping new opportunities, and, as such, excludes the possibility to extend a firm's capability base by leveraging the capabilities industry networks and ecosystems provide for value creation (Jacobides et al., 2006, 2018). It also lacks comprehensive understanding on how to combine existing capabilities with new ones (cf. Warner & Wäger, 2019). Second, I am tempted to critique the technological change literature for exploring digitalization predominantly in relation to industry evolution following major changes in technology (Benner and Tripsas, 2012). In studies to date, the focus has been on describing why some firms succeed while others don't when the industry is faced with major technological changes (cf. Tripsas and Gavetti, 2000). Third, apart from a recent study by Björkdahl (2020) exploring digitalization of manufacturing firms, the focus of the business model innovation literature is skewed towards exploring digital industries; The dynamics of open innovation models of technology platforms and the digital economy are drawing the attention of scholars (Jacobides et al., 2018; Teece, 2018). This presents a gap in the existing literature related to understanding how digitalization is impacting the survival of firms in a more traditional, commoditized industry (e.g., the consumer goods industry). Understanding why companies in a traditional industry are adopting different responses towards digitalization, and how organizational dynamics related to these responses determine the success and failure of companies, could significantly advance discussions on digitalization and digital transformation. Furthermore, digitalization and related new business models are changing the behaviour of not only firms and organizations, but consumers (Verhoef et al., 2021). Consumer behaviours are impacted by innovative digital technologies (e.g., mobile phones), digital products (e.g., e-mail and Whatsapp), and the opportunities provided by emerging business ecosystems, e.g., Amazon (Jacobides et al., 2018; Verhoef et al., 2021). The number of media channels has exploded, and, through social media, consumers have the opportunity to interact with firms and other consumers (Verhoef et al., 2021; Priem et al., 2018). All of these developments are impacting organizations and their ability to make sense of digitalization as a change force. I argue that bringing the consumer centre stage (Priem et al., 2018) is therefore imperative for theorizing digitalization, and, thus, that including the marketing perspective, which strongly promotes a customer-/consumer-centric perspective on digitalization, merits further understanding. I summarize the marketing perspective next in Chapter 2.4.

2.4 The Marketing Perspective

Digitalization research within the marketing field focuses on exploring the impact of digital technologies and digital media (Quinton, 2013; Tirunillai & Tellis, 2014) on consumer behaviour: in particular, on customer journeys

(Verhoef et al., 2009) and branding (Holt, 2016). In this stream, scholars have been exploring how omnichannel environments are shaping customer journeys (Verhoef et al., 2009) and brand consideration (Anderl et al., 2016); and how digital technologies are impacting customer touchpoints and customer relationships (Hennig-Thurau et al., 2010). Research has explored consumer satisfaction in relation to self-service technologies (Meuter et al., 2000), and the impact of digital technologies on a consumers' perceptions of self (Belk, 2014). Research has also explored how social media has changed the ability of consumers to engage with companies (Schau et al., 2009), and with each other (McAlexander et al., 2002; Tirunillai & Tellis, 2014). Attention has also been drawn towards studying the implications of digital technologies on retailing, including the changes in retailing business models and forms of commerce (Hagberg et al., 2016; Hänninen et al., 2019; Hänninen & Smedlund, 2021). This has generated a line of research exploring consumer behaviour within the new retail landscape, including the use of different devices (Hagberg et al., 2016), omnichannel strategies (Baxendale et al., 2015), and mapping the changes in customer journeys (Anderl et al., 2016). Hagberg et al. (2016) argue that, despite the accelerated impact of digitalization on retailing, scholarly attention has been limited to studying explicit aspects of e-commerce, and digital devices for marketing in-store.

The second line of literature focuses on marketing and customer analytics (Ordenes et al., 2017; Wedel & Kannan, 2016). Digitalization has increased the number of different channels and touchpoints, and, as such, data generated to study consumer behaviour has exploded (Lodish & Mela, 2007). Simultaneously, new measures to evaluate marketing efficiency and customer value have been created (Lodish & Mela, 2007). Studies include understanding the impact of channel additions on the firm's net-present value (Geyskens et al., 2002); customer lifetime value (CLV) as a construct to measure marketing efficiency (Lodish and Mela, 2007); customer value perception related to digitization of analogue products (Abaidi & Vernetto, 2018); and mapping the customer journey to understand the impact of different touchpoints on marketing success (Anderl et al., 2016; Becker & Jaakkola, 2020; Lemon & Verhoef, 2016) and brand consideration (Baxendale et al., 2015). In table 7, I summarize the Marketing Perspective.

RESEARCH STREAM	RESEARCH FOCUS	AUTHORS	Gaps in existing literature
Consumer Behavior and Branding	The impact of digital technologies and social media on customer journeys, customer experience, customer relationship and brand consideration	<i>Meuter et al., 2000; Verhoef et al., 2009; McAlexander et al., 2002; Hennig-thurau et al., 2010; Schau et al., 2009; Quinton, 2013; Tirunillai & Tellis, 2014; Belk, 2014; Baxendale et al., 2015; Hagberg et al., 2016; Holt, 2016; De Vries et al., 2017</i>	Exploring the impacts of digitalization on changing business models, value creation and inter-organizational structures in relation to marketing and brand management practices, capabilities, and skillsets.
Marketing & Customer Analytics	Understanding how digital channels are impacting marketing effectiveness and value creation of a firm	<i>Geyskens et al., 2002; Leone et al., 2006; Lolish & Mela., 2007; Gensler et al., 2012; Anderl et al., 2016; Lemon & Verhoef, 2016; Wedel & Kannan, 2016; Ordenes et al., 2017; Abaidi and Vernet, 2018; Becker & Jaakkola, 2020</i>	

Table 7. Digitalization – the marketing perspective

Whereas information systems and strategic management scholars have been studying digital innovation, organizational capabilities, digital infrastructures, ecosystems, business models and value creation as key constructs related to digitalization, to my surprise, the marketing literature almost completely neglects these perspectives as research focus areas. This seems all the more remarkable, considering the magnitude of the changes that digitalization has provoked on consumer behaviour (Anderl et al., 2016), branding (Holt, 2016), and retail ecosystems (Hagberg et al., 2016; Hänninen et al., 2019; Hänninen & Smedlund, 2021), and considering how it has eroded media landscapes (De Vries et al., 2017), and expanded the amount of data available to explain marketing effectiveness (Lodish & Mela, 2007). One might argue that all of these developments are having a tremendous impact on marketing organizations, brand management practices, and marketing service networks (Aaker & Joachimsthaler, 1999; Holt, 2016; Verhoef et al., 2021), and, consequently, impacting marketing capabilities, practices, and skillsets. As such, it could be argued that marketing scholars should take a stronger stance on understanding the role of digitalization on marketing organizations and brand management (Aaker & Joachimsthaler, 1999). Understanding how digitalization shapes marketing and brand management structures, marketing service ecosystems between firms and third parties (e.g., marketing agencies), and, subsequently, marketing capabilities (Aaker & Joachimsthaler, 1999; Holt, 2016; Lodish & Mela, 2007) could advance digitalization research not only from a marketing perspective, but also from a multi-disciplinary perspective.

The importance of advancing understanding of digitalization within the marketing discipline, is significant for exploring the competitive dynamics and performance of traditional consumer goods companies in particularly. The operating model of these firms has, for decades, relied

on a linear business model. In this approach, value is primarily created in a traditional supply chain process and captured by selling branded products to consumers through intermediaries. The retailer, in this model, is the middleman between firms and consumers (Leone et al., 2006). Mass media has traditionally played an important role in generating consumer awareness and brand engagement, and, with the emergence of social media channels, this is changing (De Vries et al., 2017; Holt, 2016). Digitalization has disrupted the value creation and value capture logic of consumer goods manufacturers. Understanding how organizations within the industry respond to these changes, more specifically, how they sense, seize, and shape new opportunities (Holt, 2016) would advance our knowledge on the impacts of digitalization and why some firms fail while others succeed.

2.5 Gaps in Literature

To conclude, I summarize the foci of the three different research fields, information systems, strategic management, and marketing in Figure 1. This figure highlights both the existing focus areas and resulting gaps in current digitalization literature. Based on the summary, I put forward two arguments. First, digitalization research continues to be strongly anchored to digital technology research. Cross-fertilization has taken place between the fields of information systems, and strategic management research for decades, but, as such, continues to be strongly skewed towards understanding the role of digital technologies in organizations, or, alternatively, the role of organizations and their capabilities in the success of digital innovation. Second, apart from a limited number of attempts to explain the impacts of customers on firm success (Bower & Christensen, 1995; Christensen & Bower, 1996; Priem et al., 2018; Zott & Amit, 2008), the consumer as a factor, is absent from information systems, and strategic management literature on digitalization. This gap in existing literature demonstrates the limitations in present digitalization discourses and supports the need for cross-fertilization between different research fields (Verhoef et al., 2021).

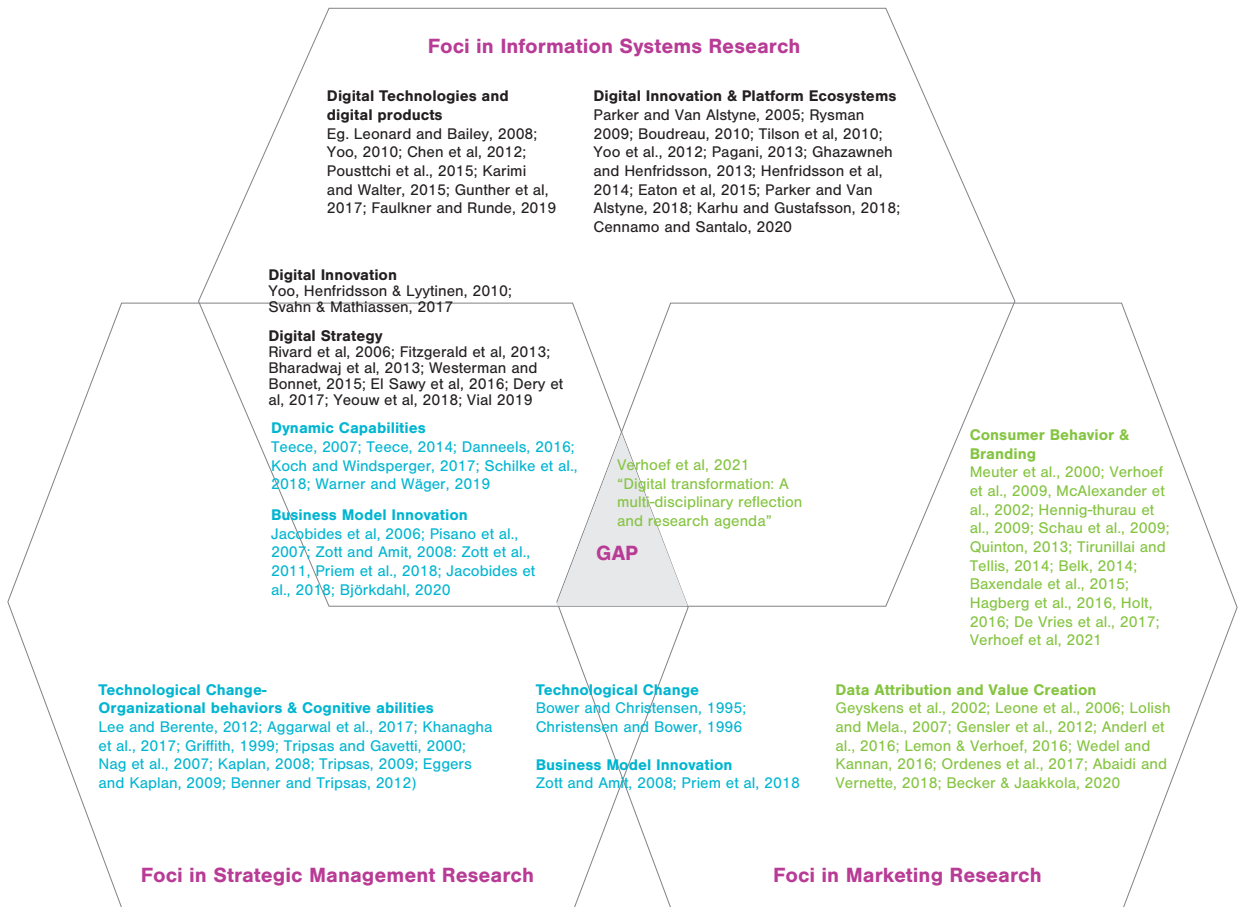


Figure 1. Digitalization literature review – foci and gaps

Digitalization is changing consumer behaviour, disrupting business models and value creation-value capture logics, shifting industry structures, and blurring industrial boundaries. As such, it is requiring firms to adopt new organizational structures, capabilities, behaviours, and cognitive abilities. Understanding these changes has important implications on a firm's ability to sense, seize, and shape opportunities provided by digitalization. Yet, a surprisingly limited focus has been placed on understanding the role of the consumer as a central external factor within the change force, and the implications that it has on an organization's behaviour and cognitive abilities in relation to digitalization. Understanding the role of the consumer in the value creation-value capture process of firms, and an organization's ability to respond to changes in this process, could advance discussions on digitalization. Furthermore, understanding how organizations make sense of digitalization from a value creation-value capture process perspective could bring further insights into why some firms survive and others fail. In Part 2 of the literature review, I will explore the foci of sensemaking literature (eg. Weick et al., 2005) to construct my empirical framework for studying organizational interpretations of digitalization.

3. Literature Review Part 2: Sensemaking

The purpose of this chapter is to introduce sensemaking theory as the theoretical framework and the foundation for my empirical research. The objective of my empirical study is to understand how organizations in the consumer goods industry interpret digitalization as a change force. And how these interpretations impact a firm's orientation towards the phenomenon. Sensemaking theory has been created to explore the processes of organizing interpretations towards responses in a situation of flux (Weick, 1993). It has been drawn upon by many strategic management scholars when attempting to understand organizational meaning making in a situation of change (Schildt et al., 2020; Weick et al., 2005).

In the technological change literature (see Section 2.3.3), sensemaking theory was earlier adopted by scholars exploring organizational responses to technological change (Benner & Tripsas, 2012; Kaplan, 2008; Tripsas, 2009). However, despite the digitalization literature often referring to the importance of an organization's ability to sense, seize, and shape new opportunities as the foundation of a successful digital transformation (Björkdahl, 2020; Warner & Wäger, 2019), surprisingly little focus has been placed on the process that undergirds this ability (Gavetti, 2012; Warner & Wäger, 2019). Thus, to advance discussions on digitalization, I have chosen sensemaking theory, or more precisely, the sensemaking process-framework (Weick et al., 2005), as the foundation for my empirical research.

I will review the sensemaking literature in four separate sections. I first explore the principles of the sensemaking theory and define what sensemaking means (Section 3.1). I move on to summarizing the literature related to sensemaking in an organizational change situation in Section 3.2. I then introduce a sensemaking process framework (Section 3.3), focusing especially on the role of an organization's identity in the sensemaking process (Section 3.4). In the digitalization literature (see Chapter 2), an organization's identity, was identified as a potential barrier for successful change (Tripsas, 2009). In the sensemaking literature, identity has been highlighted as a crucial factor impeding organizational change, which is why I will examine the literature related to this more specifically. Finally,

I conclude the literature review (Section 3.5) by drawing on both the digitalization and sensemaking literature in order to formulate my research framework.

3.1 Defining Sensemaking

Sensemaking, a process in which members of organizations extract cues of a prevailing situation in its external and internal environment in order to interpret it and construct meanings for it, has become an important focus area of organizational research (Maitlis & Christianson, 2014; Weick, 1993; Weick et al., 2005). When these cues signal a change from the ordinary, a managerial sensemaking process is often triggered (Schepker et al., 2018). The more challenging and dynamic the situation is, the more demanding it is for an individual to make sense of it. Sensemaking activities are therefore particularly important in turbulent contexts, where there is a requirement to construct and sustain consistent comprehensions that enable collective action (eg. Weick, 1993).

The established literature defines sensemaking as a continuous and contextual process that includes the construction of a coherent comprehension of a situation by observation, interpretation, and action. It is seen as an enduring cycle of reappearing activities that unfold over time (Maitlis & Christianson, 2014; Strike & Rerup, 2016; Weick et al., 2005). Individuals engage in retrospective and prospective thinking to make sense of a situation, and to develop an interpretation of their reality. In these sensemaking processes, previous experiences are projected on alternative futures (Maitlis & Christianson, 2014; Strike & Rerup, 2016; Weick et al., 2005). These assumptions turn into frames for making sense of the particular phenomenon (Strike & Rerup, 2016). These cognitive frames are used to simplify and classify cues in order to create meanings and construct interpretations for action (Kaplan, 2008; Kaplan & Tripsas, 2008; Strike & Rerup, 2016). Individual frames may differ and result in competing interpretations of situations (Kaplan, 2008). This might impact the comprehension of changing market conditions and limit the ability of organizations to act upon the emerging cues (Pazzaglia et al., 2018). Sometimes, an industry may collapse because the frames through which the world is interpreted are shared among its organizations (Porac, 1989). An example of such behaviour is the Scottish knitwear industry who historically produced knitted outerwear according to long established material choices and traditional, labour-intensive methods. The strategy to secure traditional production methods was based upon common beliefs across a close-knit group of homogenous companies that the demand for Scottish products was unique (Porac, 1989). The industry was forced to revert to more modern equipment and extend their offerings only after accelerated competition internationally, and, plummeting of knitwear prices as a result of the competition, impacted the Scottish knitwear industry as well.

3.2 Sensemaking and Organizational Change

As individuals and organizational groups confront ambiguous situations, they attempt to impose order on them, and consequently these actions generate novel observations that trigger varied interpretations and responses (Schildt et al., 2020). In a situation of change, such as market disruption (Porac, 1989), organizations typically attain and consider information related to the changes in their external environment. This information is translated by individuals within the existing organizational context (Porac, 1989). Typically, sense is made through an effort to comprehend interlinking connections (among people, places, and events) so as to develop resulting trajectories and act accordingly (Maitlis, 2005; Maitlis & Christianson, 2014; Porac, 1989). Some researchers describe sensemaking as an individual, cognitive process, whereas others argue that it is fundamentally a collective and social encounter (Maitlis & Christianson, 2014).

How emerging cues and information are interpreted is dependent on the ability of strategic leaders to act as sense givers towards the organization, and to manage and intervene in the organizational sensemaking process (Daft & Weick, 1984; Maitlis & Lawrence, 2007). The role of these leaders has been described as integral in a change process (Gioia & Chittipeddi, 1991; Maitlis & Lawrence, 2007). By constructing new meanings for an organization, leaders can disrupt old interpretations and trigger a transformation process (Eggers & Kaplan, 2009). Sensemaking processes and their management are particularly important in turbulent situations and in obscure contexts (Maitlis, 2005). A managed sensemaking process, in which leaders control the situation, is likely to reduce information asymmetry, curtail organizational ambiguity and provide collective meaning to a situation (Gavetti, 2012; Schepker et al., 2018). Some researchers critique this view and argue that, occasionally, superiors might control and construct an organization's response merely to justify the attempted actions to external stakeholders. In these situations, superiors are obsessed with the compliance of subordinates, not in their rationalization of the situation (Balogun et al., 2015; Schildt et al., 2020)

Organizational sensemaking tends to be strongly linked with the sensemaking context. Members of organizations can almost always "frame away" any differences to their current belief systems, if they choose to do so (Schildt et al., 2020). The way organizations and management construe perceptions of the environment differs by company (Daft & Weick, 1984). It can be an outcome of external factors influencing the organization, such as its industrial membership (Sutcliffe & Huber, 1998) and competitive environment (Schepker et al., 2018). Differing interpretations can also stem from internal factors such as firm ownership and legacy; the composition of the board of directors; strategic investments on short-term and long-term perspectives (eg. Schepker et al., 2018); the size, complexity, hierarchical structures, extent of decentralization; and the distribution

of labour (Pazzaglia et al., 2018; Rouleau, 2005). The organization's culture, structures, processes, past experiences, capabilities and resource availability also play an important role in its ability to interpret cues (Hahn et al., 2014; Pazzaglia et al., 2018; Sutcliffe & Huber, 1998). As does 'customer power' (Bower and Christensen, 1995). The concept of customer power (Bower & Christensen, 1995) refers to a firm's probability of serving its existing 'mainstream' customer base prior to tailoring innovative offerings to new ones. Consequently, emerging opportunities might provide avenues for market entry for niche firms, and, eventually, result in the failure of an incumbent firm (Christensen & Bower, 1996).

Some organizations lack the ability to interpret and act on obscure opportunities (Gavetti, 2012). This results in a disparity of interpretations of a circumstance (Kaplan, 2008), leading to differing organizational outcomes, e.g., strategic orientations towards it (Daft & Weick, 1984). The interpretation can also vary within an organization, and even among leadership team members (Balogun et al., 2015; Sonenshein & Sonenshein, 2016). According to Maitlis & Sonenshein (2010), a successful strategic change process not only involves adjusting employees' meaning formulation, but also requires incorporating discourses of stability (Maitlis & Sonenshein, 2010).

For top managers, sensemaking processes related to the interpretation of external and internal issues are integral in making the right decisions regarding the organization and potential strategic change (Maitlis, 2005). For other internal stakeholders, a sensemaking process, unless disrupted by managerial intervention, can be constrained by emotions (Heaphy, 2017) or by rational boundaries (Gavetti, 2012; Maitlis, 2005). Interpretations are often formed to sustain status quo (Pazzaglia et al., 2018) or to preserve the organizational identity and image (Corley & Gioia, 2004; Maitlis, 2005). They can also be an outcome of different accountability pressures. Such pressures can be triggered by internalized roles, social conventions, and commonly acknowledged administrative governance (Cornelissen, 2012; Rouleau, 2005).

Research also suggests that sensemaking during organizational change can be affected by organizational power structures (Schildt et al., 2020; Weick et al., 2005). Early interpretations of sensemaking (Weick, 1993) seemed to assume that, in a sensemaking process, power is evenly distributed, and organizations make decisions collectively. More recent studies view power as playing an integral role in sensemaking situations; people who are powerful, rich, and advantaged seem to have privileges which enable them to access positions from which influencing reality is achieved (Weick et al., 2005).

Furthermore, sensemaking can happen at either a conscious or a pre-conscious level (Schildt et al., 2020). At a pre-conscious level, the credibility of a change process can be impacted by how pre-existing heuristics and tacit comprehension interfere with the comprehension of priorities and objectives (Schildt et al., 2020). In a rational sensemaking process,

interpretation depends more on explicit knowledge and discourses (Schildt et al., 2020). Familiarity and predictability are seen to play an enormous role in an individual's sensemaking process (Schildt et al., 2020). Routinization has been extensively noted as a barrier to change and as an impediment to sensemaking (Aggarwal et al., 2017; Schildt et al., 2020; Weick, 1988).

3.3 The Sensemaking Process

According to Weick (1993), the basic principles of a sensemaking process involve turning circumstances into a context that is understood in words, and which serves as a beginning-point for action. When a change occurs, people look for reasons to help them to stay in action (Weick, 1993; Weick et al., 2005). According to Weick (1993), the sensemaking process typically begins with ambiguity, which triggers sensemaking. Sensemaking is impacted by bracketing cues from the environment, and is followed by formulating meanings for these cues (Weick, 1993; Weick et al., 2005). A cue can be characterized as a discrepancy in the ordinary stream of events. In the case of a fire, such a discrepancy can be the sensing of smoke. Or in a business context, a sudden decline in product sales, or brand recognition, could be a cue that triggers sensemaking. Sensing and bracketing cues, and formulating meanings for them, are processes which draw from the past and the future; they rely on previous knowledge and presumptions, and involve interdependence between the parties of the sensemaking process (Weick, 1993; Weick et al., 2005).

Early sensemaking theories were developed by studying unexpected events. These included exploring the sensemaking process of members in situations of drastic change, such as during the Mann Gulch fire disaster in 1949, in which 13 young firefighters lost their lives (Weick, 1993). The study of the Mann Gulch fire disaster was one of the pioneering attempts to theorize sensemaking as a backdrop for studying contemporary organizations. In contemporary organizations, the pressure to deliver results with high stakes in a short time frame was seen as equivalent to a catastrophic situation in which power structures, foul-ups, and internal politics could jeopardize the outcome (Weick, 1993).

The limitation of these early interpretations were the underlying assumptions that sensemaking was always triggered by a sudden event, within a tight group of members (Maitlis, 2005; Maitlis & Christianson, 2014), and that the way that these members transitioned their existing knowledge and prior experiences to tackle the flux determined the outcome of the sensemaking process. The impact of externalities and reciprocal enactment were neglected (Maitlis, 2005). Moreover, the influence of prospective sensemaking, or treating sensemaking as a recurring, continuous process was disregarded (Maitlis & Christianson, 2014; Schildt et al., 2020). Drawing on Weick's (1993) original theory, contemporary literature has extended sensemaking to incorporate endurance, continuity,

and the interplay of retrospective and prospective sensemaking in an organizational evolutionary context (Schildt et al., 2020; Weick et al., 2005).

In Weick et al.'s (2005) conceptualization, the process of organizing begins with ecological change and enactment, which includes sensing discrepancies in existing and future environments. Order is then imposed on the flux and shaped by externalities. The organizing process of enactment includes noticing and bracketing triggered by the differences from, and ambiguity of, existing projects. A shift of circumstances into new structures is initiated. Due to the nature of noticing and bracketing, varied interpretations and meanings of the situation are formed, and these are then reduced in the organizing process of selection. In the selection phase, a concoction of prior knowledge, mental models, and discussions, generate a plausible meaning for the account. The story thus created is justified in the process of retention. In this phase, the role of past experiences and organizational identity impacts the outcome of the sensemaking process.

To summarize, the relationship between enactment, organizing, and sensemaking unfolds in the following sequence. Enactment includes interpreting information and exchanging it between actors to construct order into the flux triggered by ecological change. These exchanges between organizational members form the interpretations that are selected and finally retained (Weick et al., 2005). The endurance of these exchanges is dependent on how plausible the outcome of the sensemaking process is perceived to be, and how this process impacts future enactment and selection (Schildt et al., 2020). This process of enactment, organizing, and sensemaking describes how people organize to make sense of ambiguity, and then collectively translate the sense made into actions to rearrange the world. The process includes updating existing beliefs, extracting cues from the past and from the future, and legitimizing interpretations through the lens of the individual and organizational identity (Weick et al., 2005). Sensemaking tends to happen whenever the world is viewed as different from what it was before (Weick et al., 2005). This process is bound to take place in three different situations: dramatic contexts triggering a loss of sense; more common but problematic situations; and ambiguous contexts in which sensemaking is troublesome (Weick et al., 2005). Organizing in a sensemaking situation is defined as “a sequence of ecological change-enactment-selection-retention” phases (Figure 2) (Weick et al., 2005, p. 414).

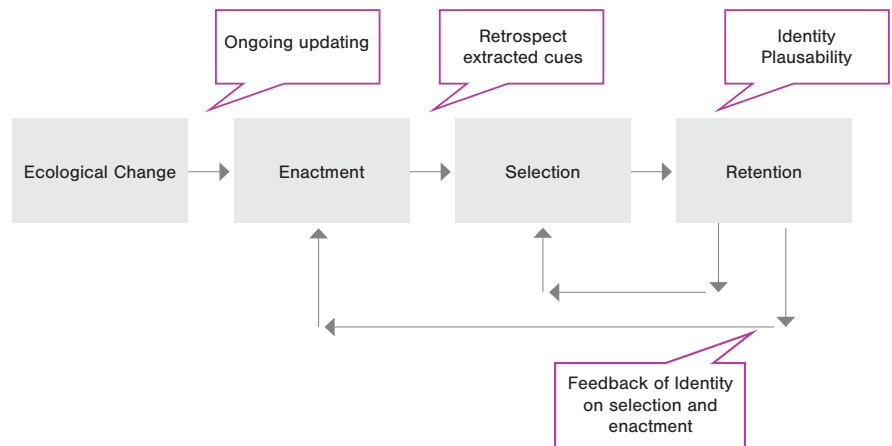


Figure 2. Sensemaking process, redrawn after Weick et al. (2005)

In recent studies, the theory has been extended further. Schildt et al. (2020) identified that organizational power structures not only shape sensemaking, but also have a significant impact on the sensemaking processes by inhibiting or facilitating adaptive sensemaking in an unexpected situation. Building on the concepts of systematic power and episodic power, four distinctive ways in which power influences the sensemaking process were identified: automatic (preconscious and committed), improvisational (preconscious and provisional), algorithmic (conscious and committed), and reflective (conscious and provisional) (Schildt et al., 2020).

In an episodic power situation, collective sensemaking is influenced by the diverse interests of members and stakeholders, turning situations into fields of argumentation and competing political viewpoints (Schildt et al., 2020). Manipulation and influencing others are triggers for sensemaking through which an organization's identity is formed (Nag et al., 2007; Schildt et al., 2020). In contrast, in systematic power structures, organizations indoctrinate their cultures and employee practices towards predictability (Schildt et al., 2020). In these settings, knowledge, its ownership, and how it is used, have a strong connection with the organization's identity (Nag et al., 2007). An identity change in systematic power structures requires strong sense giving in order to not only shift the worldview of the members, but to instil comprehension of how existing knowledge is used in the new world, how it is adjusted in relation to power, and how this impacts the identity of the organization (Nag et al., 2007; Schildt et al., 2020).

3.4 Organizational Identity in a Sensemaking Process

Organizational identity is seen to have a significant impact on the outcome of the sensemaking process and on which interpretations are retained

(Tripsas, 2009; Weick et al., 2005). An organizational identity is defined as a shared, coherent, and enduring set of interrelated features, beliefs, and values that are distinctive to the organization, which bind people together, and which help them to define who they are as an organization, and how they define themselves with it (Basu & Palazzo, 2008; Brickson, 2007; Gioia & Thomas, 1996; Nag et al., 2007; Tripsas, 2009). Identity triggers how the organization interacts internally and externally; its relationships with its stakeholders and customers; the strategies it adopts and the decisions it makes; and how it perceives the world at large (Basu & Palazzo, 2008; Brickson, 2007; Tripsas, 2009).

Identity incorporates the essence, uniqueness and endurance of the organization (Weick et al., 2005). From a sensemaking perspective, the identity of an organization defines who they are, how they perceive themselves, and how they believe others outside of the organization view them (Brickson, 2007; Nag et al., 2007; Tripsas, 2009; Weick et al., 2005). An identity defines how an organization acts, which impacts how the organization is viewed and treated by others (Weick et al., 2005; Nag et al., 2007). This view either stabilizes or disrupts the organization's identity (Brickson, 2007; Gioia & Thomas, 1996; Weick et al., 2005). An identity is not rooted only in an organization's internal belief system but is influenced by the views of the external world (Gioia & Thomas, 1996; Weick et al., 2005). If this view changes, it might destabilize an organization's identity (Gioia & Thomas, 1996; Weick et al., 2005). A term used to describe this dependency is "construed external image" (Gioia & Thomas, 1996).

Sudden events do not necessarily trigger a sensemaking process (Schildt et al., 2020). Sensemaking occurs when the contrast between expectations and experience differ to the extent that it leads to questioning what is going on, and what should now be done. How significant the contrast is depends on multiple factors, including how an anomaly impacts the individual's or organization's identity (Maitlis & Christianson, 2014; Weick et al., 2005). An identity threat is seen as a powerful trigger to sensemaking in order to justify and restore the identity (Weick, 1993). Sensemaking is not only prompted by a negative threat, but also when organizations become hesitant about what their identity is (Corley & Gioia, 2004). In a situation of an identity threat, sensemaking can be a solution for organizational members to gain control and create predictability (Maitlis & Christianson, 2014). Identity has been described as an organizational feature that impedes change because organizational members attempt to preserve existing interpretations of themselves and the organization, and consequently, frame away the significance of the change (Brown & Starkey, 2000; Gioia & Chittipeddi, 1991; Kaplan, 2008; Nag et al., 2007).

Organizational identity has been the focus of many scholars in the past. The original concept which defines identity as unique, long-lasting, and, indeed, as the central feature of an organization, has been debated (Nag et al., 2007). Some researchers argue that the difficulty for an organization to comprehend change is due to the inflexible nature of an organization's

identity (Brickson, 2007). Others argue that a successful organizational transformation requires an identity to change (Gioia & Thomas, 1996; Schildt et al., 2020). In a study of 1 126 individuals in 88 organizations, Brickson (2007) defined three identity orientations of a firm: individualistic, relational, and collectivistic. Identity orientation refers to “the assumed nature of association between an organization and its stakeholders as perceived by its members” (Brickson, 2007; p. 866). It answers the question “Who are we as an organization towards our stakeholders?”. Based on the findings of the study, Brickson (2007) argued that, though an identity change might theoretically be possible, it is more likely that an organization’s identity orientation is a relatively stable feature of an organization’s identity. An organization’s actions may change over time, but the members’ embedded sense of the firm is likely to remain. An identity orientation might also lack consistency among its various stakeholders, but the underlying orientation is persistent. Organizations might adopt even more than one orientation, but the deeply rooted identity orientation is the one which prevails.

These three different identity orientations vary in their interpretation towards reality and are triggered by profoundly rooted perceptions of autonomy and interdependence of different entities (Brickson, 2007). Organizations describing themselves as “best in business” are typically characterized by an individualistic orientation. As a comparison, those who perceive themselves as being partners with their key stakeholders might use definitions such as “we are committed to our customers”. On the other hand, collectivistic organizations perceive themselves as part of a larger entity, and they believe that a bigger cause such as “striving for a sustainable earth” can only be achieved together (Basu & Palazzo, 2008; Brickson, 2007). How managers view themselves and their organizations have an impact on the responses a company adopts towards stakeholders and the world at large (Basu & Palazzo, 2008; Brickson, 2007).

Because organizational identities incorporate the focal beliefs of organization members, these beliefs have an implication for the sensemaking process (Schildt et al., 2020). The threat to identity can stem from both the outside of or from within the organization (Corley & Gioia, 2004; Gioia & Chittipeddi, 1991). An attitude or response on the part of an organization towards these threats, or ambiguous circumstances, is not necessarily a consequence of external demands, but, rather, a result of cognitive and linguistic processes embedded in the organization (Basu & Palazzo, 2008). How the organization makes sense is tightly interlinked with these processes and leads the organization to examine its relationships with stakeholders in a specific manner, subsequently impacting its engagement with them (Basu & Palazzo, 2008). The mental models or frames that impact organizational sensemaking influence how the organization views the world and, accordingly, how it makes decisions (Cornelissen, 2012; Kaplan, 2008; Weick, 1993). The way an organization performs can be a result of its self-perception of the world rather than what the world is in

reality (Eggers & Kaplan, 2009; Kaplan, 2008; Kaplan & Tripsas, 2008). The perceived identity of the organization can impact the members' cognitive interpretations of the external world (Basu & Palazzo, 2008). Destroying this identity perception can therefore become a pre-requisite of successful change (Basu & Palazzo, 2008).

In the next chapter (3.5) I will provide a summary of my literature and theory review. I will encapsulate the foci of the digitalization and sensemaking literature into a conceptual framework as a backdrop for my empirical study and to motivate my research questions.

3.5 Conceptual Framework: Summary of the Literature Review

I demonstrated in Chapter 2 that a large body of research exists in exploring the implications of digitalization on markets, industries, and organizations. However, a gap in the literature seems to remain in studying digitalization from a multi-disciplinary perspective. In particular, cross-fertilizing encounters between marketing perspectives and strategic management, and information systems research are completely absent. Consequently, understanding the role of changing consumer behaviour in value creation-value capture models of firms, and in an organization's ability to sense, seize, and shape these new opportunities, presents a gap in existing literature. The consumer holds a key position within the value creation-value capture model of many firms (Priem et al., 2018; Warner & Wäger, 2019). Yet, this construct has, surprisingly, been neglected when studying the implications of digitalization for organizational behaviours, cognitive abilities, and strategizing.

Therefore, my research attempts to address this gap. For my empirical study, I have chosen the consumer goods industry as the setting. My aim is to explore how eight consumer goods companies interpret digitalization as a change force. By adopting an inductive qualitative case study approach (Eisenhardt, 1989) coupled with grounded theory articulation (Gioia et al., 2013), I attempt to uncover novel insights for understanding how different organizations in the consumer goods industry make sense of digitalization. Digitalization is a complex phenomenon, consisting not only of digital technologies and digital innovation, but also changing market structures, industry architectures, and new business models. Through the introduction of new technologies and new media channels, consumer behaviour towards companies and brands has changed (Holt, 2016), and shopping patterns have shifted (Hagberg et al., 2016; Baxendale et al., 2015). Digitalization has transformed the nature of customer experiences and customer relationships (Verhoef et al., 2009). Consumers can engage directly with firms and each other (De Vries et al., 2017). For consumer goods companies, these developments entail new value creation and value capture opportunities. How an organization adapts to these opportunities is

a result of its ability to make sense of the change (Weick et al., 2005). In my study, I attempt to understand the sensemaking process, and the subsequent orientations of consumer goods companies, towards digitalization.

Figure 3 summarizes the foci of the digitalization literature and sensemaking theory as a conceptual framework for my empirical study. It demonstrates that digitalization is a comprehensive change force impacting a firm's external and internal environments. An organization's ability to make sense of change is undergirded by its embedded beliefs and behaviours. These beliefs and behaviours impact how an organization senses, seizes, and shapes opportunities provided by digitalization and, consequently, how it shifts its value creation and value capture logics.

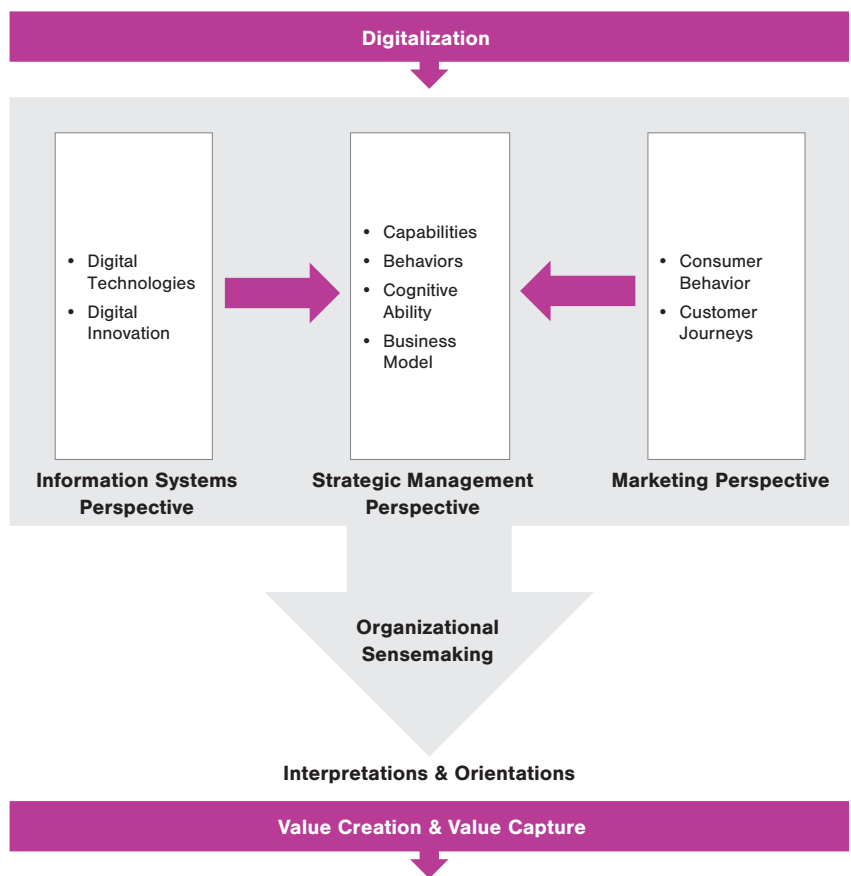


Figure 3. Digitalization and organizational sensemaking: summary of literature and theory

The technological change literature has shown that organizational transformation is consistently difficult, and ambiguity related to what changes mean can become an obstacle for a successful transformation process (e.g., Tripsas and Gavetti, 2000). To understand how eight consumer goods companies interpret digitalization, I draw on the sensemaking

process framework introduced by Weick et al. (2005). Through my analysis, my aim is to recognize how organizations interpret ecological change, i.e., digitalization as a neoteric organizational change force. In other words: “what does digitalization and the changes it is provoking mean for us as an organization?”. By addressing this question, I attempt to answer RQ1: How do consumer goods companies make sense of digitalization?

Consequently, my aim is to understand how different interpretations of digitalization impact organizational orientations towards digitalization. I focus particularly on exploring how respondents talk about their business model (i.e., the value creation-value capture logic) and key stakeholders, namely the retailer and the consumer. By addressing not only the question “who we are as an organization?” but also “what we do as an organization in relation to our stakeholders”, I attempt to delineate a response to RQ2: What explains the differences in interpretations and orientations?

Through my empirical approach, I attempt to uncover novel findings for comprehending how organizations make sense of digitalization, and how these interpretations impact organizational orientations towards the change force. Furthermore, my study attempts to shed new light on what crucial factors impact the sensemaking process and result in varied interpretations between companies operating in the same industrial context, to advance our knowledge on why firms respond differently to digitalization.

4. Methodology

To address the research questions, I chose a qualitative research design coupling an inductive case-study approach (Eisenhardt, 1989) with grounded theory articulation (Gioia et al., 2013; p. 15-31). The qualitative case-study approach was selected in particular due to its suitability for investigating novel phenomena (Eisenhardt, 1989). Qualitative studies are also ideal for exploring organizations (Yin, 2018) and mechanisms between complex constructs (Eisenhardt, 1989). However, due to the limitations of the traditional case study approach, in which the focus is on construct development and measurement (Gioia et al., 2013; p. 16), I coupled the inductive case-study approach with grounded theory articulation (Gioia et al., 2013). This approach enabled me to give voice to the respondents, provide them with the ability to express their interpretations as freely as possible, and as such capture qualities of the research phenomenon without posing prior constructs on the respondents (Gioia et al., 2013). This process enabled me to adequately report each interviewees experiences, and subsequently, begin to develop concepts prior to composing the concepts into constructs in order to contribute to theory. Furthermore, to explore my research questions, I adopted a multiple-case study approach.¹

4.1 A Multiple-Case Study Design

Constructing theory from case studies is a research design in which one or more cases are used to develop insights, theoretical constructs, and propositions from empirical evidence (Eisenhardt, 2007). There are two types of case studies: a single-case study approach and a multiple case-study approach (Yin, 2018). The strength of case study research is its ability to explore contemporary phenomena in a real-life context (Yin, 2018) and

1 My empirical study draws on parts of the data set and methodological underpinnings adopted for reporting preliminary findings in *Takkunen, Luoma & Falk (2020). The importance of Consumer centricity in Shaping Digital Transformation: A sensemaking Perspective. SMS Paper Series, October 2020, pp 1-5*.

build rich, empirical descriptions of a phenomenon using multiple data sources (Eisenhardt & Graebner, 2007).

A single-case study approach is typically used to richly describe a situation or to investigate certain past events (Yin, 2018). In my research, I use a multiple-case study design. In a multiple-case study setting, findings are depicted from a group of cases (Yin, 2018). A multiple-case study approach is suitable when a phenomenon exists across several instances. The strength of a multiple-case study is the ability to build assumptions and confirm the results through replication of the study in various settings (Eisenhardt, 1989) in order to provide a more solid foundation for theory development (Yin, 2018). According to Yin (2018), a multiple-case study allows for a more accurate, generalizable, and more strongly grounded theory formulation. The challenge of a multiple-case study approach is that each case must be conducted individually with the same rigor (Yin, 2018), such that each simultaneously possesses the ability to stand distinctively on its own (Eisenhardt & Graebner, 2007).

In a multiple-case study design, cases are used to construct theory inductively (Eisenhardt & Graebner, 2007). What this means is that, through analysing each case distinctively, emerging patterns can be validated by recursive cycling within and across cases (Eisenhardt & Graebner, 2007; Yin 2018). A central notion to a successful multiple-case study research is case selection and ensuring that the chosen cases are representative examples for testing the relationship and logic amongst research constructs (Eisenhardt, 1989)

4.2 Empirical Setting

To build a profound understanding of how firms make sense of digitalization, I conducted a multiple-case study in eight consumer goods companies. Initially, I chose the consumer goods industry as the research setting due to it being the industry in which I have worked within for over a decade. As such, I have, first-hand, experienced the significant change digitalization has provoked on the incumbents' traditional value creation-value capture model. The consumer goods industry has also been noted as being slow in adapting to the impacts of digitalization and driving digital transformation (McKinsey, 2020).

By the consumer goods industry, I refer to a category of companies who predominantly manufactures and sells branded products through retailers to consumers (Leone et al., 2006). This sector can be broken down across several different industries, but it typically includes companies involved with food production, packaged goods, clothing, beverages, automobiles, and electronics. The performance of a company in the consumer goods sector is impacted significantly by consumer behaviour (eg. Abaidi & Vernetto, 2018; Lemon & Verhoef, 2016). Therefore, these companies have traditionally

relied heavily on marketing, advertising, and brand differentiation as a means to impact consumer engagement and shopping patterns (Holt, 2016; Lodish & Mela, 2007).

4.3 Data Collection and Interviews

My study follows the principles of data collection as defined by Eisenhardt (1989), and includes evidence from six sources (Yin 2018; p. 110): face-to-face interviews, one-to-one meetings with key informants, attendance in company workshops, working as an advisor to the executive team for one case company, strategy documents, and direct observation (Table 8).

Source of Evidence	Data source	Purpose
Face-to-Face Interviews	39 in-depth interviews	<ul style="list-style-type: none"> Understand responses to research questions
One-to-One meetings	4 meetings, including presentations and field notes	<ul style="list-style-type: none"> Understand executive responses to preliminary research findings Understand how a leading company has re-structured its operating model to respond to digitalization Short meetings with participants to understand bottlenecks within one case company
Workshops	3 within company and 2 across company workshops	<ul style="list-style-type: none"> Discussing research topic with members of case companies
Adviser role	1 workshop, 13 short interviews with fieldnotes, several meetings with executive team members	<ul style="list-style-type: none"> Facilitated the development of a digital upskilling program for one case company to deepen understanding of the research phenomenon
Strategy documents	4 strategy presentations	<ul style="list-style-type: none"> Understand digital strategies of case organizations
Participant Observation	Field notes	<ul style="list-style-type: none"> In workshops monitoring participant questions and responses towards research topic

Table 8. Multiple-case study data sources

The data was collected during an 18-month period starting in May 2019 and finishing in December 2020. The data collection started with face-to-face interviews and was supported with other encounters with participants from different case companies throughout the research period. This enabled continuous iteration and validation of research findings (Table 9).

Source of Evidence	Data collection
Face-to-Face Interviews	May-October 2019
One-to-One meetings	<ul style="list-style-type: none"> • Company A: July 2019 • Company E: October 2019 • Company G: November 2019 • Company F: December 2019
Workshops	<ul style="list-style-type: none"> • Company A: June 2019, October 2019 • Company G: February 2020 • Across-Company A, C, G: November 2019, January 2020
Adviser role	<ul style="list-style-type: none"> • October 2019-December 2020
Strategy documents	<ul style="list-style-type: none"> • Corporate strategies 2019
Participant Observation	<ul style="list-style-type: none"> • June 2019-December 2020

Table 9. Multiple-case study data collection

The primary data set consists of 39 interviews within 15 companies: eight consumer goods companies, four business to business companies, and three start-ups. Although the business-to-business companies and start-ups are not in the final sample, they helped me to interpret the findings. The final analysis is based on eight consumer goods companies and 31 interviews. The core sample included six Finnish, one American, and one French company. All are well known, producing and distributing branded products primarily through wholesale retailers. Three of the companies are in the food industry, two are in the beauty/fashion industry, one is in the pharmaceuticals industry, and one is in the home appliances industry. The research sample includes small, mid-sized, and large multi-national corporations (Table 10).

Participant Title	Industry	Company Size	
Marketing Director	Food	Sales: € 354 million	Employees: 650
Sales Director	Food	Sales: € 354 million	Employees: 650
Human Resources Director	Food	Sales: € 354 million	Employees: 650
Marketing Manager	Food	Sales: € 354 million	Employees: 650
Customer Marketing Manager	Food	Sales: € 354 million	Employees: 650
Head of Digital	Food	Sales: € 354 million	Employees: 650
Digital Channel Director, Business-to-Business	Food	Sales: € 354 million	Employees: 650
Head of Digital Transformation	Food	Sales: € 1600 million	Employees: 15000
EVP, People and transformation	Food	Sales: € 1600 million	Employees: 15001
Marketing Director	Food	Sales: € 230 million	Employees: 300
Sales Director	Food	Sales: € 230 million	Employees: 300
Head of Insight	Food	Sales: € 230 million	Employees: 300
Head of digital	Food	Sales: € 230 million	Employees: 300
Marketing Manager	Food	Sales: € 230 million	Employees: 300
Head of data	Food	Sales: € 230 million	Employees: 300
Head of Information Technology (IT)	Food	Sales: € 230 million	Employees: 300
Business unit Director, Business to Business	Food	Sales: € 230 million	Employees: 300
Chief Executive Officer	Food	Sales: € 1700 million	Employees: 4000
Vice President, Business Unit	Beauty & Fashion	Sales: € 27 000 million	Employees: 60000
Chief Executive Officer	Beauty & Fashion	Sales: € 100 million	Employees: 180
Chief Customer Experience Officer	Beauty & Fashion	Sales: € 100 million	Employees: 180
Chief Digital Business Officer	Beauty & Fashion	Sales: € 100 million	Employees: 180
Chief Marketing Officer	Home appliances	Sales: € 62 million	Employees: 400
Technical Director	Home appliances	Sales: € 62 million	Employees: 400
Export Director	Home appliances	Sales: € 62 million	Employees: 400
Finance Manager	Home appliances	Sales: € 62 million	Employees: 400
Sales Director	Home appliances	Sales: € 62 million	Employees: 400
Chief Financial Officer	Home appliances	Sales: € 62 million	Employees: 400
Production Director	Home appliances	Sales: € 62 million	Employees: 400
Technical specialist	Home appliances	Sales: € 62 million	Employees: 400
Product Group Manager	Home appliances	Sales: € 62 million	Employees: 400
VP, Product and Portfolio Management Lead	Pharmaceuticals	Sales: € 60 000 million	Employees: 90000

Table 10. Qualitative study sample

The empirical material consists mainly of interviews with representatives of the organizations. 31 interviews from different levels of the organization form the core of this empirical material: 17 top managers, 10 middle managers, and 4 operating personnel (Table 11).

Interviews in Case Organization										
Organization	Industry								Total	
	Consumer Goods				Fashion/Beauty		Home appliances	Pharmaceuticals		
	A	B	F	D	E	C	G	H		
Interviewees (N)	7	2	8	1	1	3	9	1		31
Top Managers	3		3	1	1	3	5	1		17
Middle Managers	4	1	3				2			10
Operating Personnel			2				2			4

Table 11. Interviews in case organizations

The sample is appealing theoretically because, instead of analysing a single-case study, which is the prominent research design featured in the sensemaking literature, I base my findings on multiple cases. This provides the opportunity to observe differences in managers’ interpretations, compare emerging patterns across contexts, and elaborate existing theory (Maitlis & Christianson, 2014). Moreover, I noticed that factors such as the industrial context (Porac, 1989), the architecture of the value chain (Tee & Gawer, 2009), structure of the organization (Jacobides, 2007), past performance (Kuusela et al., 2017), and legacy business effects (Danneels, 2011; Tripsas & Gavetti, 2014) could not fully explain the diversity of managerial beliefs and attitudes. Thus, my empirical analysis seeks to uncover new findings on what crucial factors impact the sensemaking process and result in different interpretations between companies operating in the same industrial context.

The interviews followed a semi-structured outline (Gioia et al., 2013; p.19). This means that there is a standard discussion guide for each interview, but the objective is to let the interviewee describe, as freely as possible, their views on how the organization has adopted digitalization and its attitudes and practices towards it. The discussion guide was used to ensure that all of the key topics were covered during the interview. Examples of questions in the outline included the following:

- Tell me a little bit about your company and its culture? What is your vision, strategy and key objectives? Organizational structure? Main strengths and challenges? How has the company evolved since you have been here?
- How would you define digitalization?
- If you think of your company, how is your interpretation of digitalization currently reflected in its strategy and orientation?
- How has your company organized itself regarding digitalization?
- What do you feel are the strengths of the company during change? What are the barriers for change?

The interviews lasted on average one and a half hours, apart from a few exceptions which were shorter. Most of the interviews were conducted one-to-one, but in some cases, the interview included 2 to 3 respondents participating simultaneously. The interviews were recorded with the approval of the interviewees in all but one, in which the interviewer took notes during the interview. The data was immediately transcribed verbatim after each interview, and the interview guide revised accordingly to deepen the level of knowledge gained from each consecutive interview. The interview language was Finnish in all but three interviews, which were in English. Field notes were made throughout the research.

I used interviews as my primary data collection method, supplemented with one-to-one discussions, workshop attendance, strategy documents, and participant observation. The one-to-one meetings with executives from selected case companies complemented with strategy documents enabled me to deepen my understanding, as a researcher, of digitalization as an organizational phenomenon. It also enabled me to gain a more thorough comprehension of how different firms were adopting digital technologies and driving digital transformation in their organizations, which helped me to interpret the interview data. Furthermore, the ability to present my preliminary findings in one-to-one meetings to selected executives and discuss them in two joint-workshops between four of the case companies, enabled me to iterate and validate my research findings. My 20 years' experience as a practitioner in the field and serving as a digital transformation adviser for two of the case companies during the entire duration of the research period, further enhanced my ability to interpret the findings.

4.4. Data Analysis

To interpret how the case organizations in question defined digitalization as a change force within the organization, I adopted an approach which coupled an exploratory inductive case study approach (Eisenhardt, 1989; Yin, 2009) with grounded, interpretive, theory articulation (Gioia et al., 2013, pp. 15–31). I used this approach for the purpose of explorative richness, as limited theoretical precedent is available for deductive examination in this domain (Maitlis & Christianson, 2014). An interpretive approach gives voice to the people experiencing events and interpreting them. An individual's point of view is an important constituent of the analysis (Van Maanen, 2013). Interpretive work affords an important role to the voices of respondents; the researchers assume the task of further interpreting and structuring the interpretations of the respondents as related to both contextual factors and prior theorizing (Strauss & Corbin, 2008) in order to depict the emerging findings.

First, I engaged in inductive coding of the interviews to identify recurring sensemaking patterns. I initiated the analysis by coding all of the 31

interviews to structure the data into first-order concepts. The purpose of this was to form an overview of how the interviewees interpreted digitalization, to construe an intra-organizational synopsis of each company, to understand emerging inter-organizational similarities and differences, and to depict preliminary themes surfacing from the data. Based on the exploratory analysis, four of the preceding categories were identified as describing the orientations of the case companies: radical transformation; compartmentalization; ambiguity and skepticism. I then endeavored to embed one of the overarching themes to each company, supplemented by defining quotes.

In the second phase, I reverted to the data to validate the themes. I recoded at least two interviews from each case company to verify my preliminary findings. If the interpretation remained ambiguous, more interviews were added to the analysis. A total of 22 interviews were re-coded during the second phase.

I continued with the analysis by adopting an inter-organizational investigation approach. I identified six key categories under which I attempted to place the first order codes. These categories were: making sense of digitalization; organizational manifestation; organizational challenges; promoting change; impeding change; and future outlook. This enabled me to deepen my understanding of the organization's attitude towards digitalization and to permit the comparison of organizations with each other. After re-coding the interviews, the four preliminary orientations were decreased to three, which were labelled: transformative orientation, compartmentalized orientation and ambivalent orientation (Section 5.1.4).

I concluded the inter-organizational investigation by writing a memorandum of each case company, which detailed organization-level patterns of sensemaking and responses towards digitalization. These stages involved extensive iteration between theory and evidence until a saturation point was reached. I validated the memorandums with two external objective academic reviewers who agreed with my interpretations (Gioia et al., 2013; p.19). Finally, prior to concluding the findings, I presented them to five participating case companies, who each expressed agreement with the conclusions.

5. Findings

The findings of my research are organized into two sections. The first section (5.1) aims to answer the research question ‘how do organizations make sense of digitalization?’ To answer this question, I will draw on the sensemaking process framework by Weick et al. (2005) to identify the key findings.

The second section (5.2) attempts to answer the research question ‘what explains the differences in organizational sensemaking?’. This Section seeks to analyse why the outcome of the sensemaking process differs between the case companies and provide explanations for the discrepancies in these interpretations.

5.1 How do organizations make sense of digitalization?

5.1.1 The sensemaking process

The sensemaking process typically follows a four-step approach (Weick et al., 2005): ecological change, enactment, selection, and retention. This process is dynamic in nature, alternating between different phases. How an organization adapts to abnormal circumstances is an outcome of its ability to comprehend what is going on and impose order on the flux. The outcome is dependent on the collective sensemaking process of the organization, in which an organization first senses a disruption in its environment (ecological change), attempts to attach meanings to it through noticing and bracketing (enactment), and, finally, imposes orderliness into the situation by choosing the most plausible interpretations of what is going on (selection). These interpretations are strengthened further into organizational orientations towards the phenomenon (retention). The retained orientation is dependent on how the interpretation of the change force relates to past experiences and to the existing organizational identity.

What interpretations are retained, and how these preserve or reform the worldview of the organization, is an outcome of senior management guidance in the organizational sensemaking process.

Because the initial focus of this study is to interpret how organizations make sense of digitalization, I first depict a summary of the sensemaking process of the case companies, in relation to digitalization. I will then work backwards to describe each phase of the process and the relationship of different phases to depict three alternative organizational orientations towards digitalization.

Early in the research it became clear that, prior to interpreting what digitalization means, experimentation of digital technologies had taken place in all case companies. These experimentations included adopting new technologies, crafting digital initiatives, and testing organizational structures. Due to its ambiguous nature, the benefits or challenges related to digitalization were difficult to comprehend without trialling. In the sensemaking framework of Weick et al. (2005), the process flows from enactment to retention. In my study, I extend Weick et al.'s (2005) framework to include one additional phase prior to enactment. I describe this phase as experimentation. During experimentation, organizations attempt to make sense of an anomaly, in this case digital technologies, by testing them tangibly in practice. Based on my analysis, the sensemaking process was properly triggered only after experimentation had taken place. It could, undoubtedly be argued that the experimentation phase is an outcome of a separate sensemaking process. But to simplify my analysis, in this study, I add it as the first crucial phase in the sensemaking process framework, to interpret findings related to sensemaking of digitalization. In Figure 4, I have summarized the framework.

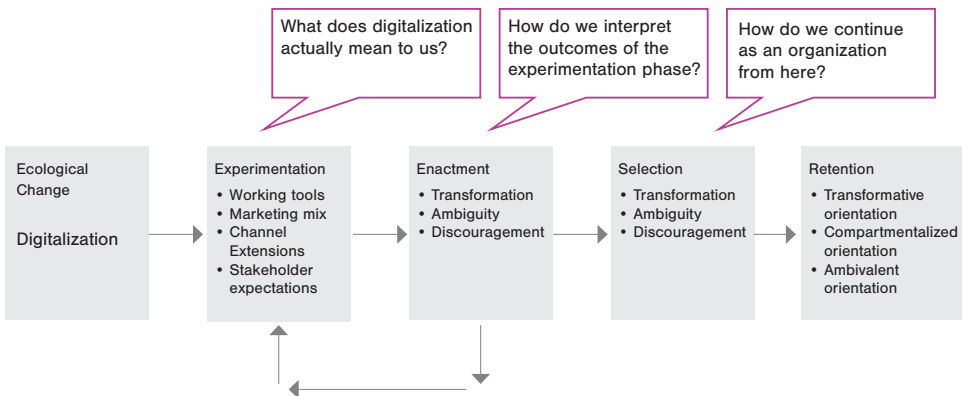


Figure 4. An organizational sensemaking process of digitalization

The sensemaking process begins by experimenting with digital technologies and artefacts related to them. Experimentation is categorized by reacting to the needs of the external world, i.e., different stakeholders. The experimentation phase generates flux in the organizations: what

does digitalization actually mean to us as a company? Through individual and collective enactment, organizations attempt to impose order into the ambiguity by bracketing and labelling meanings related to the change force: how do we interpret the outcomes of the experimentation phase? These meanings are substantiated within the organization through narratives and discussions. The organization attempts to understand what is required to generate a collective interpretation to the question: how do we continue as an organization from here? The selected interpretation is substantiated, through past experiences, and by connecting it to the organization's identity. The organization's final orientation towards digitalization is dependent on the flow of the sensemaking process, and on whether the organization is able to collectively interpret a significant change force impacting established ways of thinking, or whether it is framed away (i.e., regarded as not important to the current business model), due to e.g., path dependencies and the existing identity constraints. In Section 5.1.2 I have described each sensemaking phase in detail.

5.1.2 The Phases of Sensemaking

Phase 1. Experimentation

In this study, experimentation is defined as the phase in the sensemaking process in which companies were found to attempt to test different digital technologies and digital initiatives to make sense of them. In the experimentation phase, organizations' responses were observed to be motivated by reactivity to stakeholder requirements and expectations, and by curiosity towards digital technologies. The experimentation phase included, for example, updating frontend working tools and improving organizational ways of working. It also involved testing digital marketing initiatives, which is a result of the central role of marketing within the organizational structures of the case companies. These digital marketing initiatives were observed to include, for example, launching webpages, establishing digital campaigns, and constructing social media strategies.

In some case companies, experimentation included launching e-commerce channels. A typical approach was to launch a company branded website or a direct-to-consumer webstore for existing product assortments. Subsequently, a realization was triggered that a standalone e-commerce channel required a completely different strategy to succeed than the extant business model:

“Selling on marketplaces is similar to selling online. It is technical. You need to know how to optimize the channels, you have to have suitable product pages and adequate logistics systems.(...) if you have a traditional sales rep who visits wholesalers with product samples in his suitcase,

it is very different to when you have to think about how to sell through (digital) channels in which product data has to be correct, so that it can be optimized.” Chief Digital Business Officer, Company C.

Digital channels also required adjustments to products and product assortments (including product descriptions, ingredients, pack sizes, designs):

“I have come to a conclusion that (to succeed) we need to differentiate our products. We have something in our direct-to-consumer online store that consumers cannot get from anywhere else. We also need to develop relevant services to facilitate the life of consumers (...). (...) now we have generated more user data (from digital channels) which we can leverage in our digital channels. We can offer the right product at the right time.” Chief Digital Business Officer, Company C.

Digital channels were also noted to require improvements to data management systems, backend architectures, and operations: “Many manufacturer websites fail because the logic is the same as with brick and mortar” Sales Director, Company F. Organizational processes and routines had to change. Investments in new skillsets and IT solutions were required:

“We first thought that it has to do with ecommerce – and suddenly we noticed that there is no e-commerce without backend operation adjustments.” CEO, Company C

Retail partners were also launching their respective e-commerce channels and building data strategies to understand and exploit consumer shopping behaviour patterns. In order to meet retailer demands and construct stronger partnerships, further adjustments to organizational structures and operations were required.

During the experimentation phase, companies began to understand that digitalization was impacting every part of the value chain. Digital capabilities were becoming a bottleneck, and many began to acquire external talent to improve their knowledge base. The expectations towards these newly hired digital experts was high. As an HR director explained: “We have now hired a digital expert to help us so that the rest of us can continue with our normal jobs.” In reality, most experts joined companies that had not defined the role of digitalization, and meeting their expectations was laborious. A Chief Digital Officer said “I realized after being in the company for a year that they really had no idea why they had recruited me. They had recruited someone to drive production efficiencies. Not really digitalization.”

The Digital Manager at Company A supported this view: “I thought that I was going to enter a much more mature setting, but quickly realized that no-one knew what the big picture was”.

In some companies, this generated a recognition that a digital agenda was needed in order to redefine the role of digitalization within existing business strategies and organizational set-ups. As the CEO at company C explained:

“During one Christmas holiday, I was sitting at home thinking that, my goodness, I need to understand what I am trying to manage here. I started to meet people, read, and listen. I then recruited our Head of Digital. And together we built a digital strategy for the company. (...) It actually took a year to put together.”

The experimentation phase can be summarized as a stage in which these organizations attempted to trial different digital technologies and make sense of what was going on. What characterized this phase was the endeavour to leverage digital technologies to support the existing business strategy by a) improving working tools; b) improving the marketing mix; c) extending to new channels; and d) building new capabilities towards stakeholders (e.g., retailers) (see Table 5). As a result, a realization was triggered that digitalization was not only about “leveraging digital technologies”. Companies attempted to adjust organizational set-ups and hire new people to make sense of what was going on: what does digitalization actually mean to us as a company?

Phase 2. Enactment

Enactment is defined as the phase in sensemaking which includes exchanges between the actors of the sensemaking process and their environments. During enactment, organizations sense anomalies, and, by using prior knowledge, attempt to mould existing beliefs, meanings, and actions in order to adapt to the perceived changes in the existing surroundings. The organizing process of enactment includes noticing and bracketing, through which organizations attempt to impose orderliness onto the ambivalent situation (Weick et al., 2005). In this study, enactment followed the experimentation phase. Digital technologies had been trialed to understand what was going on, and the results of these experimentations determined how the organizations attempted to create order. Organizational comprehension and attitudes towards digitalization began to form. Depending on the outcomes, organizational members attempted to independently make sense of digitalization and develop interpretations related to it.

In some organizations, the experimentation phase triggered a collective realization that digitalization was not only about digital technologies. It was interpreted as a transformative change force which required a disruption of existing mental models and path dependencies. Digitalization provided an opportunity to rethink the business:

“68 years the company had operated with the same logic. Now we had to stab into the DNA and begin to rebuild it. (...) It is chaotic, because it disrupts the old way of doing things”

CEO, Company C.

In some organizations, experimentation with digital technologies generated ambiguity and uncertainty about what digitalization actually is, and what it means for the organization. Different members of the organization formed differing opinions depending on their role and function. For some, digitalization was not an imminent issue; for some, it was about cultural transformation and for others about efficiencies. This resulted in frustration and tension amongst members:

“And as to our company, this thinking [about what digitalization is] does not at all happen yet. It is a big challenge. The ones who have thought about it most make sense of digitalization from the perspective of ways of working and cultural change. And those who have not really thought about it, even if they are very knowledgeable, see it more from a technology, IOT, and AI perspective. Discussions between these two sets of thinking clash. Both discussions are very important. But it is difficult to combine them”

EVP People and Transformation, Company B

And, in some organizations, failed experiments provoked a sense of discouragement. Disappointment was reflected in the organization’s attempt to frame away the change force and bracket digitalization as something that was not significant for the company’s survival in the long run:

“We had a webstore. It was supposed to revolutionize everything. It was a big initiative. It was supposed to surpass the trade and generate double profits. It failed. We decided to end the project. (...) Now we have taken a step down – from our own initiatives to co-operate with the trade. (...). The team is no longer here. It was not profitable to keep the store up and running. (...) Many manufacturer websites fail because the logic is the same as with brick and mortar. (...) Many have tried. Don’t know any who have succeeded. (...) When digitalization was a buzzword, there were masses of consultants coming in and talking about the same stuff. Everyone got bored.”

Sales Director, Company F

I categorize the observed outcomes of the enactment phase into three brackets: transformation (“we need to change”), ambiguity (“we do not understand what is going on”), and discouragement (“it didn’t work for us”). These interpretations are influenced by an organization’s ability to collectively enact and make sense of digitalization to stabilize the streaming of experiences (Weick et al., 2005). Bracketing is impacted

by the organizations' collective understanding of what digitalization means to the external world and how this influences them as a company, its existing business model, position in relation to its key stakeholders, and competitiveness in relation to others. This thinking is influenced by various social factors (e.g., employee demographics, attitudes, habits, hierarchical structures), externalities (e.g., stakeholder relationships, competition) and past knowledge. Each interpretation is based on the results of the experimentation phase, together with individual and collective sensemaking. Interpretations depend on how the question "how do we interpret the outcome of the experimentation phase?" is answered by the organization.

Enactment can lead to an organization bracketing digitalization as a change force. However, in some cases, failed experiments triggered disappointment and discouragement. In these organizations, digitalization was framed away and bracketed as insignificant to the business. Enactment also triggered further sensemaking, and, in one case company, the organization reverted back to the experimentation phase to figure out what digitalization actually meant to them:

"There is a disruption going on here. We had a smart data team in marketing and sales. We could not make anything out of it. Now we have moved it into the production team (...)"

CEO, Company D

The enactment phase can be summarized as the phase in which the organization attempted to understand the importance of digitalization for their company. Past experiences (i.e., the results of the experimentation phase), and the organization's ability to interpret these experiences with existing knowledge, determined how the organization adapted to change, and what meanings the change was given. In the selection phase, the number of these meanings gets reduced (Weick et al., 2005).

Phase 3. Selection

Weick et al. (2005) define selection as the phase during which possible meanings of a new situation are reduced to form a plausible story. In this research, selection is defined as the phase in which the case organizations attempted to collectively choose the interpretation for digitalization. This interpretation depended on its suitability with the existing identity of the organization. The organization attempted to formulate an interpretation to the question "how do we continue as an organization from here?"

In case companies where enactment provoked a realization that digitalization was a "change force", transformation processes were initiated. New conceptual thinking, vocabulary and ways of speaking were instilled into the organization as explained by Vice President at Company E:

“It’s important that our company is going to make the whole big transformation into digital, so he (the CEO) really made it like an objective of the company, and he started a process really to change the big ship around, to change the course of the big ship around into digital. (...) You could call it an objective, you could call it a culture framework, but that’s what the transformation project is. (...) So, he really used that concept as a culture changer. So, it’s also important at some point he saw that light and from the top, he decided that we would have to make this change into a digital company.”

Vice President, Company E

“So, they (the company) realized that finally this is a chance to really look at the consumer as a whole. Every meeting, every discussion now goes about journeys, it’s all about (consumer) journeys.”

Vice President, Company E.

In companies where the enactment phase generated multiple meanings, the change force was bracketed as ambiguous. In these companies, the attempt to construct a plausible story triggered a need to reduce the selected interpretations. As members of these organizations explained, an imminent need to align emerged. In this context, alignment refers to the need to construct a collective organizational view of what digitalization means for the company:

“The definition of what is and is not part of digitalization is also not clear in the company. (...) Often digital is perceived as webpages and social media marketing (...) One of the challenges we have had is that digital is here and there in the organization. And each business unit has their own digital agenda. (...) (We need to understand) how to organize digital in the organization from a RACI (=Responsibility, Accountability, Consulted, Informed) matrix perspective. (...) We have had a “Digital Me” initiative – everyone should learn the basics, middle management a professional level, and the executive team a more visionary level”

CDO, Company B.

In Company F, where experimentation of an e-commerce channel had failed, the organization bracketed digitalization as an insignificant force. Digitalization was not seen as imperative for their business strategy. The importance of digitalization was framed away, and the organization chose to continue “business as usual”:

“We had a webstore. It was supposed to revolutionize everything. It was a big initiative. (...) It failed. We decided to end the project. (...) Now the buzzwords (from digitalization) have changed. We should find a new angle to it. To re-educate oneself and the organization.”

Sales Director, Company F

To summarize, in the selection phase organizations attempted to form plausible interpretations of digitalization in order to solidify and guide further action. The typical organizational interpretations during the selection phase can be categorized as “We need to change”, “we need to align”, and “we need to continue as usual”.

Stage 4. Retention

Retention is the organizing process in which the selected interpretation is reinforced by past experiences and significant organizational identities (Weick et al., 2005). Identity is something that is at the core of the organization, influencing how organizational members think and act. It encompasses what is essential and unique about the organization, how members view themselves, and how they believe others perceive them as an organization (Weick et al., 2005; Brickson, 2007). Identity construction is seen to be at the root of the sensemaking process, influencing how the organization makes sense of different circumstances (Weick et al., 2005).

As described in the previous phases, the sensemaking process is not linear. Sensemaking occurs in each phase, is a dynamic process, and includes moving back and forth between the phases. The outcomes of each phase disrupt the sensemaking process, and how the process flows within the organization determines which interpretations are retained. Sensemaking is a result of the organization’s experiences and ability to act on these experiences, whilst concurrently infusing multiple external cues (e.g., how stakeholders are reacting) and internal cues (e.g., how top management is reacting) into the sensemaking process. This dynamic process determines how sense is made, and how order is manifested in organizational knowledge and structure. An organization’s identity is perceived to be one of the main factors impacting which interpretations are retained, and which are discarded (Weick et al., 2005). What is core, distinctive, and enduring about the organization determines how the organization acts and responds. Interpretations can also be significantly influenced by the top management team’s involvement in the sensemaking process (Maitlis & Lawrence, 2007).

In this study, I use the term orientation to describe the interpretations that the case companies retained as a result of the process of making sense of digitalization. These orientations are defined as: transformative orientation, compartmentalized orientation, and ambivalent orientation.

Below, I first summarize the sensemaking process of Company E, which adopted a transformative orientation towards digitalization. I elaborate on this case example to demonstrate how I have developed my key findings (Figure 5). I then describe the three different orientations towards digitalization.

5.1.3 Case Example: A Sensemaking Process from Company E

The Vice President at Company E described how the sensemaking process started by attempting to experiment with digital technologies. The introduction of digital technologies at first created more complexity into the organization, and consequently triggered a realization that the organizational thinking needs to change:

“Eight years or so ago, our company started to realize two things: that first, this whole situation with all different (technology) systems and all different solutions in all the countries, that was, like, you cannot handle that in the end, it’s totally unmanageable.

During organizational enactment, the organization bracketed digitalization as a more transformative change force than had initially been thought. Digital technologies provided the possibility for the organization to engage with consumers directly, to improve understanding of consumer behaviour, to acquire data, to improve targeting, to develop new service offerings, and to sell directly. What this meant was that digitalization presented an opportunity to shift the business model from a retailer-dependent one towards consumers:

“(…) So, it changed everything. Basically, it means that on one hand, it means that you start to do things with computers, smartphone, with those kinds of communication channels instead of conventional communication channels. (...) But in reality, what it means—no, so that would be what it means, only the effects of it, like the whole change of the consumer journey and how they learn about things and how they totally put everything upside down, I mean that’s the real impact of it, but to a point, it’s an effect of it.”

The company decided to change. A new worldview for the company was selected. In this worldview, the retailer was replaced with the consumer. This new worldview was called ‘consumer centricity’. Consumer centricity meant viewing the world through the eyes of a consumer. Placing the consumer centre-stage and organizing the company according to the new logic. Different digital touchpoints connected the consumer to the company. This enabled the company to improve understanding of the consumer: their actions and behaviour. The company was no longer dependent on external sources (e.g., media and market research agencies) to access consumer data and insight. Nor was the company dependent on intermediaries to provide a place to sell. In the new worldview, the consumer journey consisted of multiple touchpoints which were connected directly to the company through digital technologies and digitalization. In the extant business model, the consumer shopped at a brick-and-mortar retailer, and the purchase decisions were impacted by mass media prior to purchase or prompted

in-store. Digitalization had disrupted this business model, providing new opportunities for the company. Consumer centricity was bracketed as the core narrative for disrupting conventional cognitions and behaviours and shifting the organizational identity from a retailer-centric company driven by “selling-in” to a consumer-centric company driven by “selling-out”:

“(…) one approach has been very much to put the consumer back into the middle and organize digital[ization] from there. From there back into Company E, if you want. So, in other words, a consumer-focused approach. What does today the consumer want? Historically, Company A, was very much a sell-in company and we were always struggling to change it into sell-out. So, this whole approach with the digital change helped us also to put—helped us to go to the consumer, to really put the consumer in the centre, and not the retail client or whatever other retailer. Because of course one of the key things is that everyone realizes now that the customer journey of the consumer is totally smartphone and digital focused. So, when you start to talk about a digital approach, automatically you start with the consumer and not with the retailer.”

To retain this new worldview, to solidify of the plausible story, and to connect it with the existing identity of the (beauty) company, top management branded the change initiative “Allure & Tech”. The purpose was to disrupt old habits and mental models anchored into the organization’s identity. Combining the word ‘technology’ with ‘allure’ strengthened the organization’s existing identity as a beauty company (=allure) while restructuring the identity towards digitalization “Allure & Tech”. The company was still a beauty company, but the new business logic was dependent on shifting thinking from mass media and retailer-dependency towards consumer centricity. Digitalization provided the opportunity to manifest this logic. Hence, the company’s identity was re-constructed: “We are now a beauty and technology company”. As the Vice President at Company E concludes:

“Then now, the last couple of years, the CEO launched a big project, which is called ‘Allure and Tech’. (…) Culturally it’s an important thing, by the way. So, at some point he said, a couple of years ago, like it’s important that the company is going to make the whole big transformation into digital, so he really made it like an objective of the company, and he started a process really to change the big ship around, to change the course of the big ship around into digital. Of course, we were already going into digital, but he made it like a main objective to become a digital company. And that you could call it a project, you could call it an objective, you could call it a culture framework, but that’s what ‘Allure and Tech’ is.

Figure 5 summarizes the sensemaking process of company E.

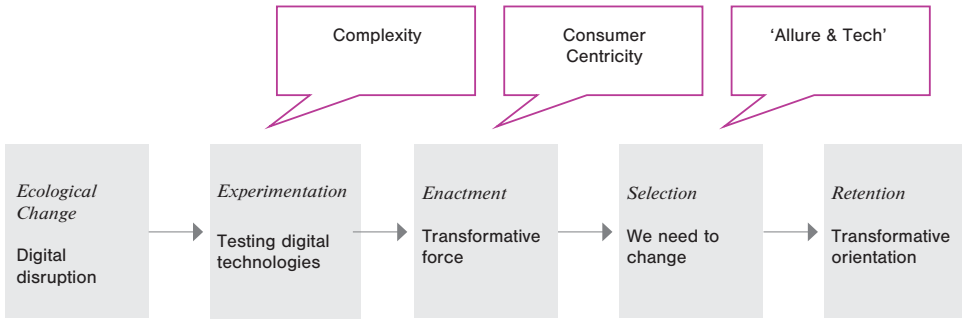


Figure 5. Example of a sensemaking process, taken from Company E

The case companies retained different orientations towards digitalization as an outcome of the organizational sensemaking process. Companies C, E, and H adopted a transformative orientation; companies A, B, and D adopted a compartmentalized orientation; and companies F and G adopted an ambivalent orientation towards digitalization. The sensemaking processes and retained orientations of each case company are summarized in Table 12.

	Experimentation				Enactment	Selection	Retention
	Working tools	Marketing Mix	Channel extension	Stakeholder compatibility			
Company A	x	x		x	Ambiguity	We need to align	Compartmentalized orientation
Company B	x	x	x	x	Ambiguity	We need to align	Compartmentalized orientation
Company C	x	x	x	x	Transformation	We need to change	Transformative orientation
Company D	x	x		x	Ambiguity	We need to align	Compartmentalized orientation
Company E	x	x	x	x	Transformation	We need to change	Transformative orientation
Company F	x	x	x	x	Discouragement	We need to continue as usual	Ambivalent orientation
Company G	x	x		x	Discouragement	We need to continue as usual	Ambivalent orientation
Company H	x	x		x	Transformation	We need to change	Transformative orientation

Table 12. Sensemaking processes and orientations towards digitalization

In the next section (5.1.4), I will describe each of these orientations in detail.

5.1.4 Three Organizational Orientations Towards Digitalization

Based on the above sensemaking analysis, I identify three distinct organizational orientations towards digitalization: transformative orientation, compartmentalized orientation, and ambivalent orientation.

First, a transformative orientation describes digitalization as a forced, thoroughgoing business transformation and cultural change process. The outlook of transformative organizations is future oriented and not restrained by their long-established business models or ways of thinking and working. They commonly describe digitalization as a “cultural game changer” or as a “disruptive force” which makes one rethink the business logic. The language of organizational members reflects a shift in thinking from the established business model and potential barriers related to organizational path dependencies, towards the new opportunities provided by digitalization:

“(When constructing our digital strategy) we did not start with operating or information systems, but the user experience in every channel and what it needs to be in the future. (...). I think the world and industry was in such a place that people internally understood that change is important. (...) Everyone understood that the world is changing and were committed to change as well. The company has a history in a different kind of business, which is wholesale and not consumer centric. We have had challenges in focus areas, and maybe in internal politics. But I believe that we have overcome those issues, and we are now focusing on the user (=consumer), customer experience and the value we create. (...) So, this is not about opinions, or someone’s personal agenda. The bottom line is that we develop better services and a better company for our end-customer (=consumer).”

Chief Customer Officer, Company C

Here, change is conceived to be pervasive, impacting every part of the organization and its value chain. What characterizes this pervasiveness is the shift from the long-standing value creation-value capture logic to new ones. In the traditional “linear” business model, retailers play a significant role as intermediaries providing the point-of-sale channel for manufacturers. Organizational structures and processes to support this business model are deeply embedded into the industry’s DNA and organizations’ identities. The transformative orientation reflects a shift in thinking from the linear business model to one in which the retailer is substituted by the consumer; with the ability to interact with the consumer directly: from an indirect-selling approach to direct-sales. What this means is that the primary objective for a company is to find a way to better serve its end-customer, i.e., the consumer, and digitalization provides multiple avenues for it to oblige. Retailers are considered as equal to any other channel offerings. Paramount is to understand the different customer

(i.e., consumer) journeys, and how multiple touchpoints impact purchase decisions. Understanding customer journeys is integral in constructing new business strategies, and digitalization provides a means to manifest the strategies. Digitalization provides the opportunity to acquire direct consumer data and turn that data into meaningful insights to enhance value capture. This new thinking transforms the traditional value creation-value capture logic, as well as organizational processes and structures. As Vice President at Company E explained:

“It is about turning the purchase funnel upside down and placing the consumer at the top. (...) And today, we have been building a CRM ecosystem where we have every consumer that buys something of our products, that clicks on something of our products, that mentions something of our products, that does a review, so we get that through Bazaarvoice, (...) if there’s a click on our ads or something, so through Google, we get that information back. So, if you would live here in the US, we have you in our CRM system and we try to get all the information whether [it’s] where you buy something, whether you do a review, whether you click on something that has to do with our industry or with us—so the whole change to the consumer totally went to consumer now. Which, culturally, is an enormous change. And yes, we build all our [IT] systems based on that.”

The second orientation, a compartmentalized orientation, describes digitalization as an opportunity to augment the current business. It is seen as a way to increase product sales, improve marketing efficiencies, and acquire data in the short term.

“Our strategy is too loose, and we are not focusing. We have a lot of short-term initiatives. Maybe that is a reason why the future impact of digitalization is not getting enough attention.”

Sales Director, Company A

In compartmentalized organizations, digitalization is mainly associated as the responsibility of certain functions (e.g., marketing and IT), or certain teams; and different digital initiatives are dispersed into different parts of the organization. Sometimes, a separate digital team is created to lead and manage digitalization efforts within the company. A big picture of what digitalization means for the company is absent, and members of the organization attempt to construct unilateral interpretations of digitalization.

“Our digital business has its own department. One might ask if that is the correct way. If you talk about omnichannel marketing, shouldn’t digital be part of everyone’s strategy?”

Sales Director, Company A

Existing industrial boundaries, particularly according to the retailer-dependent value creation-value capture model, constrain the organization's ability to comprehend the opportunities provided by digitalization. The prevailing business model acts as a barrier to organizational sensemaking.

“You can't easily change the way you do things in the company because of the dependency on the trade. This makes it difficult for us.” —Chief Digital Officer, Company B

In fact, guarding the long-established relationships with the retailers is considered paramount for the long-term survival of the firm. But, simultaneously, the role of the retailers, due to their direct relationships with consumers within the value capture process, is considered a threat. Companies are eager to explore ways to improve their own value capture opportunities and as such, to strengthen their position within the value chain. Leveraging the advancements provided by digitalization is seen as a potential avenue. Subsequently, digital agendas exist in dedicated functions and under the responsibility of certain departments, albeit, primarily to support the existing business model until clarity is achieved. As an outcome, digitalization is interpreted differently by each member of the organization, and a common worldview is missing. This oscillation is reflected in organizational frustration. A desire to align and form common views is emerging.

The third orientation, an ambivalent orientation, describes digitalization as an insignificant change force for the business. It is not seen as imminent for the organization. A key characteristic of this orientation is that digitalization is regarded primarily as an efficiency driver, and as a responsibility of each function independently. A corporate level digital strategy is missing. And digitalization is not referred to in any organizational speeches or discussions. The organization is incapable of interpreting how digitalization could benefit its existing business model: in particular, because previous attempts have failed. The contrasting difference from a compartmentalized orientation is the tendency of the organization to use past failures to frame away the phenomenon, or to question its importance: “We had an e-commerce channel. It was supposed to revolutionize everything. It failed. We ended the project” —Data Manager, Company F. Such organizations adopt a risk-averse approach and are reluctant to disrupt the status quo.

“Even though we have done things around digitalization, the topic has reached inflation. First, nothing happened. And, then, when it did, talking was bigger than the doing”

Sales Director, Company F.

Companies who frame away the phenomenon (i.e., perceive it as insignificant for the existing business model) find it challenging to change the worldview:

“Our target group is so mature that there is no point for us to shift away from mass media. Digital media has no impact”

Marketing Manager, Company F.

“There is no understanding in our leadership team [of] what to do and how to get there. In our leadership team meetings, we are talking about basics such as do we need an IT manager. That is as far as our understanding goes. We are really far behind in understanding what digitalization could really be about. It’s a level of understanding that does not exist here. To invest money in “air” – in something that is not concrete. There will not be a building or a tower or a machine to evaluate the return on investment. Very difficult to comprehend.”

Export Director, Company G

Table 13 summarizes the key findings supported by illustrative quotes for each orientation

Orientation to digitalization	Label	Cases	Illustrative quotes
Transformative	A 'forced', thorough transformation	C, E, H	"We first thought that it has to do with ecommerce – and suddenly we noticed that there is no ecommerce without backend operation adjustments. 68 years the company had operated with the same logic. Now we had to stab into the DNA and begin to rebuild it. It is chaotic, because it disrupts the old way of doing things" CEO, Company C
			"Then now, the last couple of years, they launched a big project, it is called "Allure & technology" like it's important that the company is going to make the whole big transformation into digital, so the CEO really made it like an objective of the company and he started a process really to change the big ship around, to change the course of the big ship around into digital. So, he really used that concept as a culture changer. So, it's also important to point out that at some point he saw that light and from the top, he decided that we would have to make this change into a digital company." Vice President, Company E
			"The whole value creation model is disrupted – How do you as a company interact with customers and patients? How does the ecosystem change? The value creation needs to be recreated. Our CEO has taken this as one of the strategic imperatives and recruited a global CDO to help enforce the change." Vice President, Company H
Compartmentalized	An opportunity to augment and improve	A, B, D	"There is a disruption going on here. We had a smart data team in marketing and sales. We could not make anything out of it. Now we have moved it into the production team and named it the center of excellence. I see that digitalization will start from production and move to other areas of the business from there." CEO, Company D
			"In the last 6 months we have improved all of our technology (website). They were all ancient. We have done a lot. Technically all the enablers are in place. But now it's up to other stuff to take us to the next level. But are we performing like a great ecommerce company – far from it. But we have hired new people to take things forward. Now we have many functions testing and trying out stuff but is it taking us as an organization somewhere, that I am not sure of." Marketing Director, Company A
			"I realized after being in the company for a year that they really had no idea why they had recruited me. They had recruited someone to drive production efficiencies. Not really digitalization. The issues arise because people are focused on their own priorities - For one it is production efficiencies, For another it is data driven management, For a third one it is how to build a consumer community, For another person it can be the digital tools" CDO, Company B
Ambivalent	Insignificant for the current business	F, G	"Even though we have done things around digitalization, the topic has reached inflation. Big promises. First nothing happened. And then when it did the talking was bigger than the doing. When digitalization was a buzzword, there were masses of consultants coming in and talking about the same stuff. Everyone got bored." Sales Director, Company F
			"There has been hype about digital marketing, but to be honest, we don't see any impact on sales if we only do digital marketing. Whereas with tv, there is an impact. Digital is becoming bigger than it is. Some people seem to think that traditional media is no longer important. Even the big digi/ tech companies use tv. Which shows that digital does not necessarily make you happy. Our brands are mass brands. We optimize reach over anything else. From a media efficiency perspective digital is not as important as other channels. Money is better spent in other channels. The trade does not believe in your launch if it is supported with only digital media." Marketing Manager, Company F
			"There is no understanding in our leadership team what to do and how to get there. In our Leadership team meeting we are talking about basics such as do we need an IT manager. That is as far as our understanding goes. We are really far behind in understanding what digitalization could really be about. It's the level of understanding that does not exist here. To invest money on "air" – on something that is not concrete. There will not be a building or a tower or a machine. Very difficult to comprehend." Export Director, Company G

Table 13. Organizational orientations towards digitalization

What I find most fascinating about these findings is how the orientations towards digitalization of eight consumer goods companies, operating in the same industrial context and environment, differ significantly from each another. Each of the case companies has been faced with equivalent struggles throughout the sensemaking process. Each has attempted to experiment with digital technologies and, based on the outcomes, shape an understanding of how digitalization could best benefit their organizations. All the companies mention the power struggles between them and the retailers. But, for some organizations, this constraint has become an obstacle for making sense of digitalization as a transformational force. For example, Company A sensed that the value creation-value capture logic was being disrupted as an outcome of digitalization, but determined that it was the power of the local retail industry that was preventing them from transforming their business model:

“The trade is actually an unnecessary part of the value chain between the manufacturer and consumer if you think about it. Someone will find a way to tackle this. But, will it be us? I am not sure (...) The barrier preventing us from changing our behaviour is related to the trade structure (in Finland). It is the reality.”

Sales Director, Company A

In contrast, Company C adopted a transformative orientation towards digitalization despite the significant importance of the retailer partnership:

“So, of course, the whole e-commerce subject would be an important subject. Because, historically, the company has been very respectful with its resellers and retailers. And, if you build your own website for e-commerce, then all of a sudden you would be selling direct, which created very big debates and problems in the company, and still a little bit.”

Vice President, Company C

The data implies that, in organizations where digitalization was interpreted as a transformative force, the organizations had been able to shift their thinking from long-established conventions related to their value creation-value capture logic towards new ones. As demonstrated in the case example of Company E, old habits, path dependencies, and mental models anchored into the organization's identity as a retailer-centric business model, where “everything was about selling-in” as claimed by the Vice President, were disrupted. Through new vocabulary (e.g., consumer centricity) and by launching a change program “Allure & Tech”, the identity of the company was re-constructed from a beauty company to a beauty and technology company, which enabled the organization to change its worldview from a retailer-centric business model to a consumer-centric one.

The data also implies that, in organizations where a transformative orientation was adopted, the CEO adopted an integral role as sense giver of the intended change for the company. The CEO provided a vision for the new worldview and helped in altering the organization's predispositions (Section 5.2.2). In the next section (5.2), I attempt to elaborate more extensively on the reasons for differences in organizational interpretations, and to explain why companies might have adopted contrasting orientations towards digitalization. In particular, I focus on two areas: 1) the role of identity (i.e., from retailer-centric identity to consumer-centric identity); and 2) the role of the CEO (as sense giver) in the sensemaking process.

5.2 What Explains the Differences in Interpretations?

After spending months observing the case companies and having multiple discussions with organizational members, it became obvious to me that a firm's orientation towards digitalization was predominantly dependent on two factors: 1) the organization's ability to re-construct its identity from a retailer-centric business model to a consumer-centric one; and 2) the role of the CEO as sense giver in the sensemaking process.

5.2.1 From Retail-Centric to Consumer-Centric Identity

It was fairly evident that, in organizations that adopted a transformative orientation the retailer-centric, longstanding, "linear" business model was not prohibiting the organizations' ability to think beyond extant value creation-value capture logics. In these companies, retailers were considered as intermediaries, and as partners, but not as barriers to change. Digitalization had been identified as a change force that impacted the way consumers searched and shopped for products through digital devices, consequently triggering changes in media consumption and purchase behaviour. To comply, and to secure value capture in the long run, a complete business transformation was needed. These organizations collectively adopted a new worldview in which the retailer was replaced by the consumer as a central factor within the value creation-value capture process. The retailer was re-positioned from being the primary place of purchase to being one potential step in the customer (i.e., consumer) journey. Consequently, to reflect this worldview, new narratives and concepts to guide the organization were developed. As explained by the Vice President at company E "the consumer was placed at the top of the funnel" or "at the centre of the value chain". It can be argued that this statement reflects how strongly rooted retailer centricity is within the business models of consumer goods companies.

In Company E, retailer-centricity was strongly rooted in the organization's business model, but the organization was able to re-construct its business model from being retailer-centric to consumer-centric. This business model change was enabled by digitalization. By understanding that digitalization presented an opportunity for the company to change its position in the value chain from being submissive to the retailers, to having a direct relationship with the consumers through the possibilities provided by digitalization, the organization began to make sense of digitalization as a transformational change force. Digitalization became an enabler for changing the existing business model and value creation-value capture logics from retailer-centricity to consumer-centricity:

“So, you would be working with retailer x on the selling of your products, and, of course, you would have almost, like, the will or maybe even the arrogance to say, no, I'm looking at the sell-out and we were all trying to talk about sell-out, but, in reality, we were just doing, like, merchandising, how to put the products pretty in retailer x's negotiating space, and the end goal was that they would buy a lot at the end of the month. I mean, that was what we were doing in those days. (...), so they [the CEO] realized that, finally, this is the chance to really look at the consumer as a whole, (...) so again, it's so interesting because of this change of digitalization, finally the consumer starts to be in the core focus of our approach. And the whole marketing department is now more worried to see why consumer is buying—or why consumer a is clicking on, and why she's not buying it. So, it helps the organization enormously to become consumer centred and not distribution or retail centred.”

Vice President, Company E

In firms where digitalization was recognized as a disruptive change force, it was determined that superior future performance required a shift in thinking; and this thinking was linked strongly to considering the consumers as the focal business partners and the determinants of the firms' long-term ability to capture value. Digitalization was distinguished as a disruptive force impacting the firm's competitiveness and longevity. Complying with the extant retailer-centric business model was seen as detrimental to the future success of the firm. A complete change in organizational thinking and business logic, i.e., re-construction of the business model, was considered to be imperative. Figure 6 visualizes this shift in thinking.

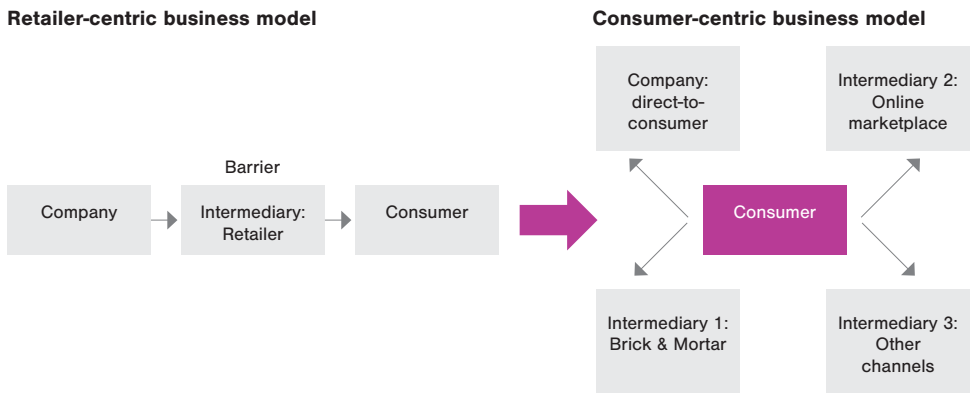


Figure 6. From retailer centrality to consumer centrality

As a contrast, in organizations where retailers were seen as the imperative business partners and, as such, commanding an integral role in the value chain, securing a retailer-centric business model was seen as imperative for the long-term survival of the firm. Retailer centrality constrained the ability and motivation of the organization to make sense of digitalization as an enabler for a long-term, thoroughgoing organizational transformation. Retailer centrality converted into a barrier inhibiting thinking when attempting to make sense of digitalization. Opportunities that digitalization presented were shaped by short-term goals and short-term value capture possibilities, and organizational structures were guarded to support the ongoing survival of the existing business model. Interpretations of digitalization were defined accordingly, and consequent responses formed into supportive actions that augmented the existing retailer-centric business model and complied with adjacent organizational structures and set-ups.

A possible explanation for the difference in the interpretations could be rooted in the identity construction of a firm (Brickson, 2007; Nag et al., 2007). An organization's identity has been identified as being at the core of sensemaking, influencing the outcome and different phases of the sensemaking process (Weick et al., 2005). In the sensemaking context, "who we as an organization think we are", influences how the organization interprets changes in the environment and acts on them. These interpretations are reflected in the organization's thinking and actions, which echo how the external world and key stakeholders perceive and treat the organization. Based on my findings, I am tempted to argue that, in some case companies, the perception of being a retailer-centric business model was so strongly rooted into the identity of the organization, that it was challenging for members to imagine a world in which this construct would no longer exist. The organizations' concern for how the retailers would react if the organization attempted to change its business model generated anxiety. It was easier to sustain the existing business model undergirded by a retailer-centric identity than to transform it. The below quote reflects this thinking:

“Trade is centralized. Direct-to-consumer retail is not in a focal position in our industry. That is why we need to live in sync with trade. But at the same time, try to understand what our operations in the future will be. And how does that all impact our production and the logistics process? And how strong a vision do we actually have about what the market looks like in 5 years? I believe that our understanding has improved that we need to change, but it has not resulted in action beyond speeches or Powerpoints. And are we ready to invest in changes? And in direct-to-consumer initiatives? Someone will crack the direct-to-consumer business model in the food category one day, but will it be us, I am not sure. (...) The barrier for us preventing changing our behaviour is related to the trade structure (...) The trade is actually an unnecessary part of the value chain between the supplier and consumer if you think about it. Someone will find a way to tackle this. But will it be us, I am not sure? (...) There is a strange juxtaposition between the manufacturers and the trade. It’s always about who can gains more. (...) And even though I said that the retail is an unnecessary warehouse in the middle, it is not really true. We do need them. (...) The other question then is whose projects do we prioritize when it comes to ecommerce – our own or the retailers? (...) I sometimes wonder whether we are looking at this change from a wrong perspective.”

Sales Director, Company A

In contrast, in Company C, digitalization was seen as the way to transform the business model from retailer centricity towards consumers. Due to opportunities provided by digitalization, retailers were perceived as an unnecessary factor in the value chain. Changing the business model required a disruption of the organization’s existing retailer-centric identity. As the CEO of Company C explained, the identity of the company had to be re-constructed. The company had to shift its business model from being wholesale dependent towards becoming consumer-centric:

“We have changed the entire process from warehouses towards direct-to-consumer. It was mandatory. We foresaw that wholesale (as an industry) will collapse. (...) 68 years the company had operated with the same logic. It was written on the walls and people knew how we operated. Now we had to dig into the DNA and begin to rebuild it.”

CEO, Company C

Table 14 provides exemplary quotes of consumer-centric and retailer-centric identity constructions.

Company	IDENTITY	EXEMPLARY QUOTE	ORIENTATION TOWARDS DIGITALIZATION
C	CONSUMER-CENTRIC	"A consumer goods company has nothing but it's position. And we need to revise everything in it. And then what products come out of the factory are a result of how we've reinvented the proposition and the touchpoints from a consumer centric point of view." CEO	Transformative
E	CONSUMER-CENTRIC	"So they realized that finally this is the chance to really look at the consumer as a whole. it's so interesting because of this change of digitalization, finally the consumer starts to be in the core focus of our approach. And the whole marketing department is now more worried to see why the consumer is buying (...) So, it helps the organization enormously to become consumer centered and not distribution or retail centered." Vice President	Transformative
H	CONSUMER-CENTRIC	"The whole value creation model is disrupted – How do you as a company interact with existing customers? What about consumers? How does the ecosystem change?" Vice President	Transformative
A	RETAILER-CENTRIC	"The trade is centralized. Direct-to-consumer retail is not in a focal position in our industry. That is why we need to live in sync with the trade. But try to understand what our operating in the future will be (...) The trade is actually an unnecessary part of the value chain between the supplier and consumer if you think about it. Someone will find a way to tackle this. But will it be us, I am not sure?" Sales Director	Compartmentalized
B	RETAILER-CENTRIC	You can't easily change the way you do things in the company because of the dependency on the trade. This makes it difficult for us." CDO	Compartmentalized
D	RETAILER-CENTRIC	"I feel that what has changed is that before brands and marketing were seen as more important. And it was felt that anyone can sell. Nowadays it is different. Selling is becoming more important. (...) There is a shift between what consumers consider as the brand. In the case of LIDL, LIDL is the brand. Not the products sold at LIDL. " CEO	Compartmentalized
F	RETAILER-CENTRIC	"Now we have taken a step down – from our own initiatives to co-operate with the trade." Sales Director	Ambivalent
G	RETAILER-CENTRIC	"Retailers are far ahead of us on the digital front. Therefore we have kicked off the Product information management projects, so that we can have presence in their digital channels." Marketing Director	Ambivalent

Table 14. Exemplary quotes of retailer-centric and consumer-centric identity

Organizations that make sense of digitalization through a consumer-centric identity typically adopt a transformative orientation. The outlook of these organizations is future-focused:

“Without concentrating on digital, you can survive in the short term. Even in the medium term. But to stay relevant, you must begin to consider digital investments as preparing for the future. You need to prepare for the future.” —Vice President, company H

Organizations with a retailer-centric identity either adopt a compartmentalized orientation, in which digitalization is perceived as a means to augment the existing business model, or an ambivalent orientation, in which the status quo is sustained. These organizations focus on a short-term perspective: “And we are still missing the person who can see beyond the proximate and has a vision and can justify changes.” —Finance Manager, Company G.

Next, in Section 5.2.2, I will elaborate on the role of the CEO in driving this identity change process: more importantly, demonstrating the imperative role of the CEO as sense giver in the organizational sensemaking process.

5.2.2 The Role of the CEO as Sense Giver in the Sensemaking Process

The sensemaking process of companies who adopted a transformative orientation was characterized by the strong involvement of the CEO in the sensemaking process. In these companies, the CEOs adopted an integral role in influencing and guiding the sensemaking process to redirect and reconstruct the organization’s view of a preferred world (Maitlis & Lawrence, 2007). The CEOs attempted to destruct the retailer-centric identity rooted in the organization’s belief system, in order to anchor it in consumer-centricity (Gioia & Thomas, 1996; Weick et al., 2005). The CEO acted as a sense giver in the process, enabling the organization to collectively construct meanings and interpretations of the organizational reality. In organizations with a compartmentalized or ambivalent orientation, sensemaking was left as the responsibility of individual members. Meaning making was not collectively guided, which resulted in multiple interpretations and ambiguity.

According to the CEO at company C, the company’s transformative orientation towards digitalization was triggered from a collective realization that the industry and market dynamics were being disrupted. Through a sensemaking process, the organization attempted to determine how these changes would impact the company’s business model and ability to compete in the long run. Her role as the CEO was to comprehend what was going on in order to mould the extant business model to comply with the ongoing disruption, guide the organization, and provide meanings to collectively understand the changes that digitalization was provoking. After making the decision to shift from a traditional retail-centric business model to a consumer-centric one (i.e., online), a new comprehension was triggered; digitalization was considered to be a more significant disruptive force than

had initially been thought, and it was now understood that a holistic cultural transformation of the organization was required, including destabilization of the organization's retailer-centric identity: "It meant digging into the DNA", as stated by the CEO. After recognizing that digitalization required organizational transformation, the CEO constructed a new worldview, created a long-term future vision for the company, and took ownership of the change initiative:

"During one Christmas holiday, I was sitting at home thinking that, my goodness, I need to understand what I am trying to lead here. Online is [now] our home base. What does it mean? I started to meet people, read, and listen. I then recruited a digital expert to help me. We developed a digital strategy for the company. I used a lot of external experts. (...) I had to gain the board buy-in. You need buy-in to make a transformation happen. Then I had leadership team members. Middle Management and young digital natives. In different groups we discussed what digitalization means to the company, and what its role is. (...) We used our own sensemaking. We had to understand what digital means to the consumer, what it means for our partners. We needed a clear vision. (...) It [the transformation journey] has to start from the top management. It has to be led by the CEO. Otherwise, nothing will come out of it. (...) The process is slow, and it takes a long time to get things done. But you need to take the bull by the horns and follow the direction you have set. Top management needs to believe in it. And for years it [digital transformation of the company] was CEO-dependent."

The CEO attempted to make sense of digitalization. After it was clear to her what was going on, she developed a vision, and then aligned the organization and its key stakeholders with the vision. As she explained, "I took the bull by the horns". She helped the organization to re-imagine a new world by acting as sense giver in the process. To guide the organization's sensemaking process, she provided conceptual tools to help with meaning construction:

"I revised this entire customer touchpoint map during the summer holidays, when I was trying to think of how to explain our future set-up to the team. It's the customer journey that connects every part of the organization together."

At Company E, the transformative orientation towards digitalization was triggered by the realization that conventional organizational set-ups were no longer sufficient to comply with the changing digital world. In order to align with the ongoing disruption, de-centralized leadership structures needed to be reverted back to a more centralized model. After beginning to re-centralize organizational leadership and infrastructures, the company realized that digitalization was an even more extensive force and would

require a full business transformation. The CEO acted as the primary sense maker and sense giver for this objective. To guide organizational sensemaking and re-construct the organization's worldview and identity from a retailer-centric business model to a consumer-centric one, the CEO branded the change project as "Allure & Tech" to provide a vocabulary for collective meaning making:

"Then, now, the last couple of years, they [top management] launched a big project, which will be an important thing. So, at some point he [the CEO] said, a couple of years ago, like it's important that the company is going to make the whole big transformation into digital, so he really made it like an objective of the company, and he started a process really to change the big ship around, to change the course of the big ship around into digital. (...) Of course, we were already going into digital, but he [the CEO] made it like a main objective to become a digital company. (...) He called it "Project Allure & Tech". (...) And that, you could call it a project, you could call it an objective, you could call it a culture framework, but that's what "Project Allure & Tech" is. (...) Everyone in the company knows what it is about. Yeah. So, he really used that concept as a culture changer. So, it's also important at some point he saw that light and from the top, he decided that we would have to make this change into a digital company."

Vice President, Company E

In both above case companies, the role of the CEO as organizational sense giver was imperative in the sensemaking process. What characterized the CEOs was their determination to engage in re-building the identity constructs from retailer-centric thinking towards a new worldview in which the retailer was replaced by consumer centrality. In this new reality, the consumer was placed at the core. Digitalization had provoked the realization that the organizations no longer required intermediaries to distribute and sell products. Digital technologies provided the opportunity and avenues to engage with consumers directly. This required the organization to view the world differently and change existing beliefs and actions: to shift its retailer-centric identity to consumer centrality. As Vice President at Company E explained:

"Historically Company A was very much a sell-in company and we were always struggling to change it into sell-out. So, this whole approach with the digital change helped us also to put-- helped us to go to the consumer, to really put the consumer in the center, and not the retail client or whatever other retailer."

To guide collective meaning making, the CEOs used multiple sense giving tactics. These tactics included holding meetings "to espouse their vision"; taking ownership of the change agenda; hiring external talent to

disrupt conventional thinking and to accelerate cultural transformation; creating digital strategies and launching change management programs; gaining organizational buy-in and providing new labels to re-construct the organizational identity (e.g., “Allure and Tech”, Company E) and narratives to tell stories of success (e.g., “we needed quick wins” CEO, Company C). Finally, what was common to the CEOs of transformative organizations was their commitment to a long-term perspective:

“The process is slow, and it takes a long time to get things done. But you need to take the bull by the horns and follow the direction you have set.”

CEO, company C

Below, I have summarized the key sense giving tactics adopted by the CEOs of Companies C and E to change the business model and disrupt the organizations’ identity from retailer centricity to consumer centricity. These tactics are supported by exemplary quotes (Table 15).

CEO sensegiving tactics	Company C, Exemplary Quotes	Company E, Exemplary Quotes
Espousing a vision	<i>"During one Christmas holiday I was sitting at home thinking that my goodness, I need to understand what I am trying to lead here. I started to meet people, read and listen. (...) We had to understand what digital means to the consumer, what it means for our partners. We needed a clear vision" CEO</i>	<i>"So at some point he said (...) like its important that the company makes the whole big transformation into digital, so he really made it like an objective of the company (...) and you could call it a project, you could call it an objective, you could call it a cultural framework. (...). So its also important at some point he saw the light from the top, he decided that we would make this change into a digital company" Vice President</i>
Taking ownership	<i>"A Marketing Director cannot determine that a company will become digital. It has to start from the top management. It has to be led by the CEO. Otherwise, nothing will come out of it. (...) Top management needs to believe in it. And for years it (digitalization of the company) was CEO-dependent" CEO</i>	<i>"So, at some point he (the CEO) said, a couple of years ago, like it's important that the company is going to make the whole big transformation into digital" Vice President</i>
Hiring external talent	<i>"And to do so, we had to hire external talent. And integrate the new knowledge with the company's legacy (...) I then recruited a digital expert to help me" CEO</i>	<i>"So, another thing that happened a couple of years ago (...) they actually nominated a new CIO, a new Chief Informations Officer. And they did that with the clear objective to make a change, so historically the Company would have CIOs that were coming from within, (...) people that were very much grown inside the Company, inside the Company culture. So, they broke with, the CEO broke with that history and he found an external person that had experience in other companies." Vice President</i>
Launching a digital strategy/ Change Management Program	<i>"We developed a digital strategy for the company. (...) It (digitalization) is not the responsibility of a Marketing Director. It has to be the objective of the entire company. It is an integral part of the corporate strategy. (...) This (digitalization) is about change management" CEO</i>	<i>"He called It "Project Allure & Tech". (...) And that you could call it a project, you could call it an objective, you could call it a culture framework, but that's what "Project Allure & Tech" is." Vice President</i>
Organization buy-in/ Cultural change	<i>"I had to gain the board buy-in. You need buy-in to make a transformation happen. Then I had leadership team members. Middle Management and young digital natives. In different groups we discussed what digitalization means to the company, and what its role is." CEO</i>	<i>"Everyone in the company knows what it is about. Yeah. So, he really used that concept "Allure & Tech" as a culture changer" Vice President</i>
Labelling	<i>"I revised this entire customer touchpoint map during the summer holidays, when I was trying to think how to explain our future set-up to the team. It's the customer journey that connects every part of the organization together. (...) And we named the target customer "Björn". He sits on top of the organization chart." CEO</i>	<i>"He called It "Project Allure & Tech". (...) And that you could call it a project, you could call it an objective, you could call it a culture framework, but that's what "Project Allure and tech" is." Vice President</i>
Long-term thinking	<i>"The process is slow, and it takes a long time to get things done. But you need to take the bull by the horns and follow the direction you have set." CEO</i>	<i>"So he started a process really to change the big ship around, to change the course of the big ship around into digital." Vice President</i>

Table 15. CEO sense giving tactics

6. Discussion and Conclusions

6.1. Theoretical Contributions

As described throughout my dissertation, digitalization is a contemporary and complex phenomenon, shifting market structures, blurring industrial boundaries, and disrupting the value creation and value-capture logics of firms (Hänninen & Smedlund, 2021; Jacobides et al., 2006, 2018; Teece, 2018b; Verhoef et al., 2021; Zott & Amit, 2017). But digitalization is not only about technology. Through the introduction of new technologies and new media channels, consumer behaviour towards companies and brands has changed, and shopping patterns have shifted (De Vries et al., 2017; Hagberg et al., 2016; Holt, 2016). With the advancements provided by digital innovation, consumers can engage directly with firms and with each other (McAlexander et al., 2002; Schau et al., 2009; Tirunillai & Tellis, 2014). Digitalization has transformed the nature of customer experiences and customer relationships (Hennig-Thurau et al., 2010). As such, digitalization is requiring traditional firms to re-invent their business models and to adopt new organizational structures, capabilities, and behaviours to sense, seize, and shape opportunities provided by digitalization (Björkdahl, 2020; Warner & Wäger, 2019).

In the last two decades, understanding digitalization as a contemporary phenomenon impacting value creation-value capture models, and firms' organizational structures and strategies, has drawn significant attention among information systems and strategic management scholars. However, a profound limitation of the existing literature is its focus on exploring value creation and value capture logics from a digital innovation perspective (Jacobides et al., 2018; Priem et al., 2018; Zott et al., 2011; Westerman & Bonnet, 2015; Vial, 2019; Parker & Van alstyne, 2018, Svahn et al., 2017; Cennamo & Santalo, 2020). Furthermore, most of the research studying business model alterations attempts to explore it from a strategizing perspective (Jacobides et al., 2006; Teece et al., 2007; Zott & Amit, 2008; Priem et al., 2018; Björkdahl, 2020). As such, the underpinnings for how

business model transformation in an organization is triggered, and what impedes or promotes change to a business model, seems to be absent. The literature often refers to the importance of an organization's ability to "sense, seize, and shape" new opportunities as the foundation of a successful organizational change (Aggarwal et al., 2017; Björkdahl, 2020; Gavetti, 2012). But, understanding this logic beyond digital technologies and digital innovation (e.g., Aggarwal et al., 2016; Benner & Tripsas, 2012; Lee & Berente, 2012) has not attracted sufficient attention from scholars. The cognitive ability of an organization to make sense of (Weick et al., 2005) what digitalization means for an organization's value creation-value capture logic, and, consequently, for its business model, seems to be missing from existing discourses (Verhoef et al., 2021; Warner & Wäger, 2019). Furthermore, understanding the cognitive microfoundations of organizations impeding and promoting the ability of an organization to make sense of this change has not been systematically explored. Through my qualitative case study in the consumer goods industry, my dissertation attempts to fill this research gap. As such, it provides several contributions to both theory and managerial practice.

First, my study advances sensemaking discourses (Weick et al., 2005) in two ways. The study adds to sensemaking theory by contributing to our understanding of the role of organizational identity within the sensemaking process of an organization. An organization's identity has been described in the literature as one of the key determinants undergirding an organization's ability to make sense of change (Basu & Palazzo, 2008; Corley & Gioia, 2004; Nag et al., 2007; Schildt et al., 2020; Weick et al., 2005). The identity construct has also been highlighted in previous literature as one of the key factors impeding organizational change when faced with technological disruption (e.g., Tripsas, 2009; Nag et al., 2007). My study adds to this literature by showing the importance of an organization's orientation towards its stakeholders (Brickson, 2007) as a construct within an organization's identity, impeding or promoting an organization's ability to make sense of digitalization. My study determines that a 'relational identity' (Brickson, 2007) within an organization acts as a catalyst for interpreting digitalization as a change force. A relational identity refers to the embedded customer orientation of a firm. In my case study of eight consumer goods companies, a firm's interpretation of digitalization depended on whether organizational members defined the retailers or the consumers as their primary customer group. Some organizations explained their relationship with retailers (which they typically referred to as their customers) as essential to the survival of the firm; jeopardizing this relationship was seen as detrimental to the longevity of the business. In contrast, some case organizations portrayed the consumer (i.e., the end user of the firm's products) as the integral stakeholder group for the firm's longevity.

Strategic management scholars have infrequently explored the role of customers: in particular, the role of consumers to an organization's ability to make sense of a change (cf. Bower & Christensen, 1995). My study fills

this gap by outlining retailer centricity and consumer centricity as integral constructs impacting the sensemaking process. In my study, a consumer-centric identity enabled an organization to make sense of digitalization as a substantial change force, impacting the value creation-value capture logic and, subsequently, triggered a reinvention of its business model. A retailer-centric identity, in contrast, impeded the sensemaking process. These organizations adopted a compartmentalized or ambivalent orientation towards digitalization to either augment the existing business model or to frame away the significance of the change force to maintain status quo. By introducing the constructs of consumer centricity and retailer centricity, my study advances the discourses of sensemaking, identity, and organizational change (Brickson, 2007; Tripsas, 2009; Weick et al., 2005). Based on my findings, I argue that shifting from a retailer-centric to a consumer-centric identity influenced the sensemaking of digitalization as a transformational force in the case organizations. In companies where digitalization was recognized as a change force impacting consumer behaviour, the organizations identified that superior future performance required a shift from a retailer-centric business model to a consumer-centric one. This finding opens up a range of new research avenues for extending previous views on the role of identity in the sensemaking process (Weick et al., 2005): in particular, the role of customers as an aspect of an organization's identity (Brickson, 2007) impacting the sensemaking process. It also demonstrates an imminent need to include customer perspectives into strategic management research.

By elaborating on the sensemaking process of eight consumer goods companies in relation to digitalization, the study also delineates 'experimentation' as a phase preceding 'enactment' in the sensemaking process framework (c.f. Weick et al., 2005). According to my findings, a sensemaking process for interpreting what digitalization means for an organization was properly triggered only after organizations had attempted to trial and leverage various digital technologies and their derivatives. This experimentation phase included, for example, launching webpages, establishing digital campaigns, and constructing social media strategies. The experimentation phase was characterized by reactivity to external expectations, such as the changing stakeholder-group requirements. Unsatisfactory outcomes of the experimentation phase triggered flux in the organization, generating a collective attempt to understand "what does digitalization actually mean to us as a company?".

This finding is in-line with prior digitalization research, in which digitalization has been reported to provide organizations a source for experimentation (Westerman & Bonnet, 2015). Experimentation has been identified as a typical activity within organizations attempting to interpret what digitalization means for them, and, subsequently, as a crucial success factor for triggering a digital transformation and business model innovation process (Verhoef et al., 2021; Warner & Wäger, 2019). Experimentation is seen as an activity enabling quick learnings and, as such, an avenue for

constructing a better comprehension of digitalization as a change force. Experimentation can provide a means to build capabilities for seizing unexpected opportunities, and for addressing threats to the existing business model (Verhoef et al., 2021; Warner & Wäger, 2019).

As such, I argue that the existing sensemaking literature is somewhat limited in describing the sensemaking process for the digitalization phenomenon, which involves several simultaneous internal and external changes. Prior literature describes the sensemaking process as dynamic (e.g., Weick et al., 2015), but typically assumes that enactment is triggered instantly after a change occurs (cf. Schildt et al., 2020). The sensemaking process flow between different sensemaking phases (Weick et al., 2005) is probably accurate in a situation of a sudden drastic change (e.g., the Mann Gulch fire disaster), but does not fully describe how sense is made in an organization during an extensive, dynamic and gradual ecological change force such as digitalization (Schildt et al., 2020). My study found that, in all the case companies, the organizational sensemaking process for digitalization was triggered over a long period of time by multiple attempts to explore and experiment digital technologies within existing operational and organizational boundaries. Unsatisfactory outcomes generated ambiguity and a collective realization that “digitalization is not understood”. Collective meaning making resulted in an urgency to comprehend “what digitalization means to us as a company and organization”. Thus, experimentation with digital technologies triggered organizational enactment.

Literature has described that experimentation needs to occur for companies to seize opportunities provided by digitalization (Warner & Wäger, 2019, p. 332). Typical experimentation attempts include, for example, rapid prototyping, and real options logic to balance risk and reward (Warner & Wäger, 2019). Literature refers to digital experimentation typically as agility, which is seen as a key dynamic capability of an organization attempting to break out of habits, routines, and any other underlying non-microfoundations undergirding organizational path dependencies constraining digital transformation and business model change (Verhoef et al., 2021; Warner & Wäger, 2019). This further stresses the need to consider the role of experimentation as the first phase in the sensemaking process preceding the enactment, selection, and retention phases.

Second, by identifying three distinctive organizational orientations to describe how organizations within an industry interpret digitalization and its impact for their firm, my study also advances multi-disciplinary discourses on digitalization and digital transformation (Verhoef et al., 2021; Warner & Wäger, 2019). I define these orientations as *transformative orientation*, *compartmentalized orientation*, and *ambivalent orientation*. First, a *transformative orientation* describes digitalization as a forced, thoroughgoing business transformation and cultural change process. The change is expressed to be pervasive and impacting every part of the organization and its value chain. What characterizes this pervasiveness is the shift in thinking from the existing value creation-value capture logics to

new ones. The new thinking reflects a shift from a retailer-centric business model to a consumer-centric one. The primary objective for a company is to find a way to better engage with its end-customer, ie. the consumer, to create and capture value. Second, a *compartmentalized orientation* describes digitalization as an opportunity to augment the current business. It is seen as a way to increase product sales, improve marketing efficiencies, and acquire data in the short term. In compartmentalized organizations digitalization is mainly associated as the responsibility of certain functions (e.g., marketing and IT), or certain teams. Existing industrial boundaries, particularly the retailer-centric value creation-value capture model constrains the organization's ability to comprehend the opportunities provided by digitalization for the company beyond its current business model. Third, an *ambivalent orientation* describes digitalization as an insignificant change force for the business. It is not seen as imminent for the organization. A key characteristic of this orientation is that digitalization is regarded primarily as an efficiency driver, and as a responsibility of each function independently. A corporate level digital strategy is missing; and digitalization is not referred to in any organizational speeches or discussions. The organization is incapable to interpret how digitalization could impact its existing business model, in particularly because previous attempts have failed. The contrasting difference to a compartmentalized orientation is the tendency of the organization to use past failures to frame away the phenomenon, or to doubt its importance.

By defining organizational orientations towards digitalization, a deeper understanding is portrayed for why some firms are better at sensing, seizing, and shaping the opportunities provided by digitalization than others. The depiction of these organizational orientations contributes to literature of digital transformation by supporting the views of Warner & Wäger (2019) and Verhoef et al. (2021) that digitalization is not consistently understood and used by leaders within an industry context, and, thus, it has implications on how an organization adapts to digitalization. Furthermore, I argue that the scope of a digital transformation in an organization is dependent on the organization's collaborative approach and culture (Warner & Wäger, 2019), but can only result in business model transformation if 1) the organization possesses the cognitive ability to interpret the impacts of digitalization beyond its existing business model; and 2) strategic leaders act as sense givers towards the organization in the process.

Additionally, by bridging the foci of the digitalization literature of three research fields, I identified an opportunity to cross-fertilize the information systems and strategic management views with marketing perspectives. My dissertation responds to this opportunity by drawing on the strategic management literature, and sensemaking theory to study organizational interpretations of digitalization in the consumer goods industry. I uncover consumer centrality as an integral concept, and cognitive microfoundation, facilitating organizational sensemaking of digitalization as a transformational force, and, as such, as an accelerator for business model

innovation. Hence, I argue that cross-fertilizing between the marketing and strategic management literature is required to advance our understanding of changing consumer behaviour as a factor impacting digital transformation of organizations; as well as of how changing consumer behaviour impacts a firm's ability to compete with its existing value creation-value capture logics, and existing organizational capabilities and structures. My research hints that an organization's ability to understand the changing role of the consumer within the value chain, and as such as a trigger for business model innovation, can either impede or promote digital transformation of a firm.

Finally, my study contributes to the emerging line of literature (Priem et al., 2018; Reger et al., 1994) consolidating the views of business model research and demand-side strategy. Apart from a limited number of attempts to explain the role of the consumers in a firm's success (Bower & Christensen, 1995; Christensen & Bower, 1996; Priem et al., 2018; Reger et al., 1994; Zott & Amit, 2008), the consumer is completely absent as a factor in business model research. My study develops consumer centrality as an integral construct impacting the level and scope of digital transformation and business model innovation of firms. As such, I argue that consumers must be brought to the fore in the strategic management literature to advance understanding of value creation-value capture logics (Priem et al., 2018), business model innovation, and digital transformation.

6.2 Managerial Implications

Driving a digital transformation and business model change is not easy. Nevertheless, some organizations succeed while others fail. Based on my qualitative case study sample I identified five characteristics that define transformative organizations. My study involved eight companies from the consumer goods industry, but the characteristics outlined below are somewhat generalizable to any organization attempting to drive a digital transformation and business model change.

First, transformative companies were characterized by the organizations' attempts to comprehend how digitalization was impacting their existing business model and value creation-value capture logic in the long term. As a consequence, a realization was triggered that retailers were an unnecessary part of the value chain and, as such, to secure long-term value creation, the retailer-centric business model thinking was replaced by a consumer-centric one. In the new worldview consumers were seen as the most integral factor in the value capture process. Subsequently, retailer-centricity, which was strongly rooted in the companies' identities, was replaced by consumer-centricity. As Vice President at Company E stated:

“So, they (the company) realized that finally this is the chance to really look at the consumer as a whole. Every meeting, every discussion now goes about journeys, it's all about (consumer) journeys.”

Second, the CEOs of the transformative companies assumed the leadership role of digital transformation. They were the stewards who “took the bull by the horns” and seized ownership. They provided a vision for the company and constructed a strategy to communicate the vision:

“A Marketing Director cannot determine that a company will become digital. It has to start from the top management. It has to be led by the CEO. Otherwise, nothing will come out of it. (...) Top management needs to believe in it. And for years it (digitalization of the company) was CEO-dependent.” CEO at Company C

Third, to drive a transformation, the CEO’s “dug into the existing DNA” and triggered a cultural change process. The CEO’s destabilized the organization’s existing retailer-centric identity, which typically generated path-dependent behaviours and organizational attempts to frame away any changes that might disrupt a status quo. By using tactics such as 1) branding the change initiative, and 2) creating new vocabulary and narrative to communicate the intended change, CEOs instilled a common understanding into the organization of what digitalization for the company encompassed:

“Now, in the last couple of years, the CEO launched a big project, which is called ‘Allure and Tech’. (...) Culturally it’s an important thing. (...) And he started a process really to change the big ship around, to change the course of the big ship around into digital. (...) We were already going into digital, but he made it like a main objective to become a digital company.” Vice President at Company E

Fourth, transformative organizations exploited external knowledge. They hired new talent, listened to experts, and launched advisory boards. Capability gaps did not become bottlenecks. Transformational organizations studied, learned and listened to others:

“Then I had leadership team members, middle management and young digital natives. In different groups we discussed what digitalization means to the company, and what its role is.” CEO, Company C

Fifth, the CEOs of transformative organizations constructed long-term plans, with clear agendas and milestones. Short-term victories were important, but with the undergirding notion that digital transformation will take years, or even a decade. Transformative organizations accepted that change is slow:

“Without concentrating on digital, you can survive in the short term. Even in the medium term. But to stay relevant, you must begin to consider digital investments as preparing for the future. You need to prepare for the future.” Vice President, Company H

To conclude, digital transformation and business model change is strongly dependent on instilling an understanding within the organization of what the changes that digitalization is provoking on the industry structure, consumer behaviour, and firms' value creation-value capture logics means for the organization. It is dependent on creating organizational alignment. In order to rebuild the organizational structures, processes, and capabilities to reflect these changes, a common understanding in the organization needs to exist. Furthermore, organizations are eager to maintain things as they are, and as an outcome, changes are almost impossible to implement without the engagement of strong leadership and the forceful involvement of the CEO.

Last, but not least, my study hints that a firm's identity can become a crucial barrier for change. I examined eight organizations operating in the same industry. And yet, the interpretations and orientations towards the implications of digitalization differed between companies. It was evident that all of the organizations considered the effects of digitalization on their existing business model, but, yet only a few organizations had attempted to innovate the extant value creation-value capture logics from a retailer-centric value chain structure towards consumers. The explanation to why only some of the organizations were able to envision and leverage the benefits and opportunities digitalization presented, could be merited to the strong embeddedness of retailer centricity as an aspect of the identity of consumer goods companies. My data implies that the ability of an organization in the consumer goods industry to drive a business model change, is dependent on how strongly retailer centricity is rooted into an organization's identity. Whether organizational leaders are able to envision a change from a retailer-centric value creation structure towards consumer centricity, and, consequently, disrupt the role of retailer centricity as a fundamental aspect of an organization's identity could impact the ability of an organization to grasp digitalization as a transformative force. This finding is relevant for any leader attempting to drive a digital transformation and business model change within their organizations. It implies that unless the identity of the organization is destabilized, and consequently reconstructed with new aspects that are in accordance with the new worldview (i.e., in my study replacing a retailer-centric identity with a consumer-centric identity), a digital transformation process can, at worse, slow down or fail.

6.3 Limitations

Owing to a multiple-case study approach, a limited number of respondents, and an inductive data analysis method, my findings are indicative, and, as such, are not empirically generalizable. And though they are, as such, analytically transferrable, they should not be directly theorized into a broader context. The study should therefore be regarded as an exploratory attempt to extend understanding of digitalization as an organizational change force, and, furthermore, as an attempt to advance understanding

of sensemaking in relation to technological change. Novel theoretical observations, such as 'consumer-centric' and 'retailer-centric' identity, as constructs impacting sensemaking, could provide new contributions to theory, if examined further.

Another limitation of my findings is that they apply to the consumer goods sector, and, as such, the application to other industry contexts should be made with caution. In my case setting, 'customer centricity' (consumer centricity and retailer centricity) was identified as an aspect of an organization's identity that impacted the sensemaking of consumer goods companies. By extending the study into other industries, the generalizability of this finding could be further validated.

A limitation also exists in the research methodology. Sensemaking within an organization is typically explored either from a single case study perspective (eg. Weick, 1993), analysing past events to theorize how a sensemaking process unfolded, or from a longitudinal perspective to monitor organizational responses during an enduring timeframe (Schildt et al., 2020; Weick et al., 2005). These methodologies provide profound richness to interpretations. My study is based on individual interviews of members from several firms within an abbreviated period-of-time. For some organizations, the analysis and interpretation have been formulated merely based on one or two interviews, which limits the transferability of the results. The merit of my research approach, however, is in its ability to acquire and compare data from several organizations, which provided an unusual way to study organizational sensemaking and to generate novel contributions to existing theory. To further explore and understand the significance of the findings, the study should be repeated longitudinally by extending the number of respondents from each case company.

6.4 Directions for Future Research

In my study, I have chosen to study organizations as the unit of sensemaking. The reason why I attempt to understand organizational sensemaking, instead of studying sensemaking of executives, or sensemaking of teams, is due to the extent of digitalization as a sociotechnical phenomenon and change force. As such, studying organizations as the unit of sensemaking, in my view, can provide a more profound understanding of the long-term, strategic-level implications of digitalization within the firm. Subsequently, it presents an avenue to better compare and comprehend differences in interpretations across multiple cases. Nevertheless, exploring sensemaking of executives or teams could cater different perspectives and, as such, further extend our understanding of the phenomenon.

Additionally, in my study I explore eight companies operating in the consumer goods industry. Future research could extend the analysis further by exploring specific sectors of the consumer goods industry based on product types (eg. food, clothing), product price points (ie. mass market

vs luxury), product characteristics (eg. commodities, impulse products), product life cycles (eg. novelties vs staples) etc. Or alternatively, extend the analysis to completely different industries.

Moreover, in my research I study digitalization as a phenomenon, and therefore have framed my study in relation to the broad literature on digitalization in three research fields. Future research could zero in on digitalization in a more focused manner. An approach could be, for example, to narrow the perspective and explore organizational sensemaking of digitalization by framing the empirical context in relation to general purpose technology (GPT) literature (eg., Teece, 2018a) within IS, strategic management, and marketing.

In this research focus has been on cognitive microfoundations of organizations, ie. organizational identity and sensemaking, as undergirding factors impacting organizational orientations towards digitalization. The role of noncognitive microfoundations (eg., Teece, 2007), such as habits, routines, politics, and emotions have not been considered. Future research could extend understanding of these non-cognitive microfoundations in relation to organizational interpretations and orientations towards digitalization.

Finally, my research introduces experimentation as a novel phase in the sensemaking process. As such, the limitation is the specific focus on elaborating the role of the experimentation phase within the sensemaking process, but not considering whether the commonly applied consecutive phases, enactment, selection and retention, remain constant (Weick et al., 2005). Subsequently, future research could extend the findings further by elaborating on the role of each of the phases in the sensemaking process in relation to digitalization.

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