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Building innovation capability in retail

Towards a systematic and sustained approach to innovation in large retail organizations

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Building innovation capability in retail

Towards a systematic and sustained approach to innovation in large retail organizations

KARLA MARIE BATINGAN PAREDES

DEPARTMENT OF DESIGN SCIENCES | FACULTY OF ENGINEERING | LUND UNIVERSITY



Building innovation capability in retail

Innovation is an important concern for retailers as various external forces increasingly disrupt the retail industry. Large, established, traditional retail chains may have previously survived with capabilities for continuous improvement and incremental innovation. However, now that the rules of the retail game are changing, the question is not only about how to *do things in a better way* but also how to *do things differently*. With data collected from 2016 to 2021 with five retailers in Sweden, this doctoral dissertation explores how retail incumbents can develop a systematic and sustained approach to innovation through management practices and mechanisms, and the challenges that they face in this journey of building stronger “innovation muscles.”

KARLA MARIE B. PAREDES is an innovation researcher and educator who enjoys engaging in conversations about retail, food, and packaging. With a background in Food Technology, she came to Europe from the Philippines to pursue a Masters in Food Innovation and Product Design. Her experiences and education led to her interest in looking at innovation from a broader perspective, from developing innovative products to building innovative organizations. She has previously worked in an incubator and science park and a multinational consumer goods company.



This dissertation fulfills the requirements for Karla Marie B. Paredes to be awarded a PhD degree in Innovation Engineering.

Building innovation capability in retail

Towards a systematic and sustained approach to
innovation in large retail organizations

Karla Marie Batingan Paredes



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DOCTORAL DISSERTATION

Doctoral dissertation for the degree of Doctor of Philosophy (PhD) at the Faculty of Engineering at Lund University to be publicly defended on December 1, 2022 at 9:15 am in Stora Hörsalen, Department of Design Sciences, Sölvegatan 26, Lund.

Faculty opponent

Associate Professor Jonathan Reynolds

Saïd Business School, University of Oxford

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Building innovation capability: towards a systematic and sustained approach to innovation in large retail organizations		
<p>Abstract</p> <p>Innovation has received widespread attention in research and in the business world because it plays a crucial role in organization survival and longevity. This especially rings true in the retail industry, as opportunities and challenges confront retailers due to the ongoing disruption of the industry. As retailers face increasing pressure to make innovation a strategic priority, and as major retail players become larger and more complex organizations, retail innovation management becomes a more central concern, and therefore proves to be a promising area for research. The overarching research purpose of this dissertation is to explore how large, traditional retailers can develop innovation capability. Focusing on a firm-level analysis, from the perspective of retail headquarters, using innovation capability and organizational ambidexterity as a theoretical framework, two research questions are raised: What are the challenges faced in developing innovation capability in retail firms? And how can retail firms develop a systematic and sustained approach to innovation through management practices and mechanisms? Using an exploratory approach that is primarily based on qualitative methods (albeit with a quantitative survey in one study), two main studies were conducted, from 2016-2018 (Study 1) and then 2019-2021 (Study 2) involving five major Swedish retail companies of varying characteristics.</p> <p>The dissertation demonstrates that established retailers, in aiming to become more innovative organizations, are challenging existing ways of innovating by adopting a more active management of the innovation process. However, developing innovation capability is a difficult task as these retail actors attempt to pursue explorative innovation in an organizational context characterized by well-established mechanisms for exploitation and incremental development. The thesis highlights various challenges faced in relation to strategic intent, the organizational culture or climate, structure and performance measurement systems. That innovation requires a holistic approach is not a new discovery, but how this could be interpreted in the retail context has not yet been well understood previously, which is where the thesis provides its contribution. Inherent tensions between exploration and exploitation in the retail organizations imply that developing the capability to be innovative requires a balancing act with mainstream retail operational capabilities. That is, the work of innovation must be differentiated from operations, provided that integration is facilitated at different levels. A structured approach towards innovation—whether it is the establishment of innovation structures such as innovation teams, an innovation role or function, projects, innovation hub and “living labs,” for instance, or codification of the process, tools and tasks—ensures that innovation work is enabled and differentiated from the well-established structures, systems, and processes for operations. There is a need to be able to measure, assess and monitor innovation performance not with existing metrics for operations but with alternative indicators that can capture the new ways in which retailers are starting to innovate and create value. Finally, retailers show a positive foundation for an organizational climate for innovation and creativity; however, an appetite for risk-taking, which is more connected to radical than incremental innovation, is a concern that retail incumbents need to work on.</p> <p>The dissertation demonstrates that explorative innovation must not be forced upon existing mechanisms in retail operations which are geared for efficiency and which serve their own purpose in addressing customer needs through incremental, continuous developments. What is needed—and perhaps what separates innovative retailers from the rest—is the commitment to ambidexterity, the delicate balance of safeguarding the space and resources for exploration, learning, and innovation to thrive, while facilitating integration of innovative output to the rest of the organization to truly capture the value of innovation.</p>		
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Karla Marie Batingan Paredes



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To my loved ones.

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I begin my dissertation with the most important (and by far the most satisfying) part: expressing my gratitude and appreciation to the people and organizations that have supported me throughout my PhD journey.

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I would like to express my gratitude to my colleagues, past and present, in Innovation Engineering, Product Development, Packaging Logistics, and Institution of Design Sciences as a whole. I feel very privileged to be working with all of you in this institution. Special thanks to the PhD writing group (Fanny, Satabdee, Silvia, Nanond, John), Lars, Jessica, Erik, Hajni, Anette, Robert, Susanne, the Service Group, and especially to dear Cilla who is always ready to lend a helping hand. Also, I would like to acknowledge the Lund University Center for Retail Research for providing opportunities for knowledge exchange.

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Karla Marie Batingan Paredes

October 2022

Lund, Sweden

Abstract

Innovation has received widespread attention in research and in the business world because it plays a crucial role in organization survival and longevity. This especially rings true in the retail industry. With a myriad of opportunities and challenges confronting retail, not least with increasing technology development and hyper-competition contributing to industry disruption, new demands such as innovative ways of working and thinking are constantly being placed on traditional retail actors.

However, retail innovation management is a subject that is not fully explored in academic research. Knowledge gaps exist regarding innovation management in retail which need to be addressed, especially because mainstream technology and innovation management research has marginalized service sectors such as retailing, thus a lack of nuanced understanding of how innovation is managed in these settings. As retailers face increasing pressure to make innovation a strategic priority, and as major retail players become larger and more complex organizations, enabling innovation in retail organizations becomes a more central concern, and therefore retail innovation management proves to be a promising area for research.

The overarching research purpose of this dissertation is therefore to explore how large, traditional retailers can develop innovation capability. Focusing on a firm-level analysis, from the perspective of retail headquarters, using innovation capability and organizational ambidexterity as theoretical frameworks for the thesis, two research questions are raised: What are the challenges faced in developing innovation capability in retail firms? And how can retail firms develop a systematic and sustained approach to innovation through management practices and mechanisms? Using an exploratory approach that is primarily based on qualitative methods (albeit with a quantitative survey in one study), two main studies were conducted, from 2016-2018 (Study 1) and then 2019-2021 (Study 2) involving five major Swedish retail companies of varying characteristics. Four of the retail companies are large, established retail chains with long traditions on store-based retail, while a newer e-commerce retail player was included as a point of comparison in one study.

Established retailers, in aiming to develop into more innovative organizations, are challenging existing ways of innovating by adopting a more active management of the innovation process. However, developing innovation capability is a daunting task and a never-ending journey as these retail actors attempt to pursue explorative innovation

in an organizational context characterized by established mechanisms for exploitation and incremental developments. The thesis highlights various challenges faced in relation to strategic intent, the organizational culture or climate, structure and performance measurement systems. That innovation requires a holistic approach is not a new discovery, but how this could be interpreted in the retail context has not yet been well understood previously, which is where the thesis provides its contribution.

Inherent tensions between exploration and exploitation in the retail organizations imply that developing the capability to be innovative requires a balancing act with mainstream retail operational capabilities. That is, the work of innovation must be differentiated from operations, provided that integration is facilitated at different levels. A structured approach towards innovation—whether it is the establishment of innovation structures such as innovation teams, an innovation role or function, projects, innovation hub and “living labs,” for instance, or codification of the process, tools and tasks—ensures that innovation work is enabled and differentiated from the well-established structures, systems, and processes for operations. There is a need to be able to measure, assess and monitor innovation performance not with existing metrics for operations but with alternative indicators that can capture the new ways in which retailers are starting to innovate and create value. Finally, retailers show a positive foundation for an organizational climate for innovation and creativity; however, an appetite for risk-taking, which is more connected to radical than incremental innovation, is what retail incumbents need to work on. Values such as risk-taking and freedom need to be fostered in parts of the organization where innovation is desired.

The dissertation demonstrates that explorative innovation must not be forced upon existing mechanisms in retail operations which are geared for efficiency and which serve their own purpose in addressing customer needs through incremental, continuous developments. What is needed—and perhaps what separates innovative retailers from the rest—is the commitment to ambidexterity, the delicate balance of safeguarding the space and resources for exploration, learning, and innovation to thrive, while facilitating integration of innovative output to the rest of the organization to truly capture the value of innovation.

As a whole, this body of research, while explorative in nature, offers several theoretical contributions. By using the concepts of innovation capability and organizational ambidexterity as its theoretical underpinnings, the thesis gives attention to the tensions that emerge when exploration and exploitation are pursued in a single organization and how these can be addressed. The thesis provides an in-depth account of how large, established retailers are attempting to implement mechanisms for innovation, including structures and systems that complement existing organizational climate that already exhibit certain values for innovation. In considering these organizational dimensions altogether, I contribute with a holistic approach of looking at innovation capability building by considering both formal (structure and performance measurement) and

informal control (culture or climate) of innovation, and further emphasize the importance of strategy and leadership as well as the access of retailers to diverse external knowledge bases that can be better integrated into the innovation process. Moreover, it adds evidence to retail innovation management, distinct from general studies of service innovation management and technology innovation management. The highly heterogeneous nature of services warrants a deeper understanding of innovation trajectories across service sectors and service firms, and this thesis contributes in addressing that need by presenting retail-specific insights on innovation management.

Finally, the research conclusions have challenged the notion that retailers have only been engaging in incremental and continuous change, and demonstrates a shift from extant research that has described innovation as not being institutionalized in structure in retail firms. Although this might have been true in the past, the dissertation provides a contemporary understanding of how retail incumbents with long traditions in brick-and-mortar retail are facing the innovation imperative head-on, actively implementing organizational mechanisms that aim to enable more explorative innovation, building a systematic and sustained capability for innovation, while still exploiting existing capabilities on efficiency in adapting to changing customer needs.

Popular science summary

Innovation is increasingly becoming an important concern for retailers as various external forces continue to have remarkable impact on the industry, including market and technological advancements. While retailers have established capabilities for continuous improvement as they incrementally address customers' needs, the rules of the retail game have changed. Thus, for most large, established retailers that are facing the threat of disruption, the question is not about how to “do things in a better way,” but rather, how to “do things differently.”

Our understanding of innovation has traditionally been based on studies of technology and manufacturing, and less on service sectors like retail trade, due to the misconception that services are less innovative. However, there is an increasing acknowledgement of the role that innovation plays in the service sectors. Nonetheless, services are highly heterogeneous, and patterns of innovation (and therefore its management) vary across different service contexts, which necessitates a deeper dive into sector-specific understandings of innovation. However, academic research on innovation in retail organizations remains to be relatively limited and fragmented. It is highly relevant to study innovation and its management in a context where change is swift, competition can be ruthless, and a company can easily go from being an industry leader to shutting down their stores.

This research aims to gain a better understanding of how retailers can become more innovative, especially looking at large, established retail chains with long traditions in brick-and-mortar retailing as these are the companies especially need to adapt to changing times. Retailers in general tend to engage in small improvements that accumulate and prove their worth over time, but the disruption of the industry requires them to build stronger “innovation muscles” so that they can have the ability to innovate not only for today's customers but also have sustainable competitive advantage.

From 2016 to 2021, in order to follow the retailers' different journeys as they attempt to become more innovative—whether it's about opening a new type of store, or creating new teams in charge of thinking about the future of retail—I conducted interviews, did a survey, participated in meetings, workshops and site visits in five major Swedish retail companies. The result of this research process shows that these companies, in their pursuit of various types of innovations, are starting to implement major changes in ways

of working as they challenge their own status quo. While retail employees have always been known to be on the creative and entrepreneurial side, a notable difference is that these companies are now also transforming how they work on the innovation process. Innovation in retailing used to be characterized by incremental developments, driven by informal and ad-hoc behaviors, but these established retailers are increasingly pursuing a more active management of the process by creating roles and projects solely for innovation, establishing clearer guidelines on what innovation work actually entails, as well as asking new questions on how the process and its results can be monitored and measured. By taking into consideration all of these different factors, and safeguarding the space for more ambitious and explorative projects to flourish alongside existing operations, large, established retailers can become more explorative, going beyond small improvements in the way they fulfill the retail function of selling goods and services to consumers, to ultimately pursuing innovation of a greater scale, in order to respond to the equally great expectations that are placed on them.

Appended papers

The research presented in this doctoral dissertation comprises four complete papers that are listed below. The full version of each paper is appended at the end of the dissertation.

PAPER I:

Olsson, A., **Paredes, K. M.**, Johansson, U., Olander Roese, M., and Ritzén, S. (2019). Organizational climate for innovation and creativity—a study in Swedish retail organizations. *The International Review of Retail, Distribution and Consumer Research*, 29(3), 243-261.

Earlier version of the manuscript presented at the Nordic Retail and Wholesale Conference (NRWC), 2018, Reykjavik, Iceland (peer-reviewed).

PAPER II:

Paredes, K. M., Olander Roese, M., and Johansson, U., (2022a). Towards retail innovation and ambidexterity: insights from a Swedish retailer.

Status: Under review at the International Journal of Retail & Distribution Management.

PAPER III:

Paredes, K. M., Olander Roese, M., and Johansson, U. (2022b). Towards innovation capability in retail services: managing the tensions of exploration and exploitation.

Status: Under review at the International Journal of Quality and Service Sciences.

PAPER IV:

Paredes, K. M., Olander Roese, M., and Ritzén, S. (2022c). Exploring the role of innovation measurement in retail organisations: a multiple case study.

Status: Under review at the International Review of Retail, Distribution and Consumer Research.

Related papers

Paredes, K. M., Olsson, A., & Olander Roese, M. (2016). Design thinking for innovation in retailing: an exploratory study.

Paper presented at the Nordic Retail and Wholesale Conference (NRWC), 2016, Aarhus, Denmark (awarded best PhD paper).

Paredes, K. M., Olander Roese, M., Olsson, A., Ritzén, S., & Johansson, U. (2018). Retail innovation: perceptions, management, and challenges of a systematic approach.

Paper presented at the International Society for Professional Innovation Management (ISPIM) Innovation Conference, 2018, Stockholm, Sweden.

Contribution in appended papers

A brief description of the author's contribution to each paper is presented below. Using the Contributor Roles Taxonomy (CRediT) as starting point, the specific contribution to the scholarly output is described.

Paper I:

Olsson, A., **Paredes, K. M.**, Johansson, U., Olander Roese, M., and Ritzén, S. (2019). Organizational climate for innovation and creativity—a study in Swedish retail organizations.

Investigation, Formal analysis, Writing (original draft, review and editing), Visualization

Paredes, KM was part of the research and investigation process, in the data collection by participating in some of the interviews. She contributed to the formal analysis of the study data, including statistical analysis of the quantitative survey data and analysis of the qualitative interview data. She wrote the initial draft of the paper, including visualization and data presentation. She edited and revised the draft according to feedback from others in the research group (who are also co-authors) as well as comments from the journal reviewers. As the corresponding author for the paper, she had primary responsibility for the manuscript and correspondence during the publication process.

Paper II:

Paredes, K. M., Olander Roese, M., and Johansson, U. (2022a). Towards retail innovation and ambidexterity: insights from a Swedish retailer.

Conceptualization, Investigation, Formal analysis, Writing (original draft, review and editing), Visualization

Paredes, KM was part of conceptualizing the research aims of the paper as well as the data collection by participating in some of the interviews, meetings and workshops. She contributed to the formal analysis of the study data, leading the process for coding the qualitative data and collaborating with her co-authors in the iterative process of going back and forth between empirical findings and theoretical concepts. She wrote the

initial draft of the paper, including visualization and data presentation. She edited and revised it according to feedback from her co-authors as well as comments from the journal reviewers. As the corresponding author for the paper, she has primary responsibility for the manuscript and correspondence during the publication process.

Paper III:

Paredes, K. M., Olander Roese, M., and Johansson, U. (2022b). Towards innovation capability in retail services: managing the tensions of exploration and exploitation.

Conceptualization, Methodology, Investigation, Formal analysis, Writing (original draft, review and editing), Visualization, Project administration, Funding acquisition

Paredes, KM was part of conceptualizing the research aims of the paper as well as the development of methodology by creating the interview guides. She was responsible for data collection and conducted all the interviews. She contributed to the formal analysis of the study data, leading the process for coding the qualitative data and the iterative process of going back and forth between empirical findings and theoretical concepts, inviting feedback from her co-authors. She wrote the initial draft of the paper, including visualization and data presentation, and edited it according to feedback from her co-authors. As the corresponding author for the paper, she has primary responsibility for the manuscript and correspondence during the publication process. She also contributed to the work involved in funding acquisition and project administration for the research project where the paper is based on, including coordination responsibility for the research activity planning and execution.

Paper IV:

Paredes, K. M., Olander Roese, M., and Ritzén, S. (2022c). Exploring the use of innovation measurement in retail organisations: a multiple case study.

Conceptualization, Methodology, Investigation, Formal analysis, Writing (original draft, review and editing), Visualization, Project administration, Funding acquisition

Paredes, KM was part of conceptualizing the research aims of the paper as well as the development of methodology by creating the interview guides. She was responsible for data collection and conducted all the interviews. She contributed to the formal analysis of the study data, leading the process for coding the qualitative data and collaborating with her co-authors during the rest of iterative analytical process. She wrote the initial draft of the paper, including visualization and data presentation, and edited it according to feedback from her co-authors. As the corresponding author for the paper, she will have primary responsibility for the manuscript and correspondence during the publication process. She also contributed to the work involved in funding acquisition

and project administration for the research project where the paper is based on, including coordination responsibility for the research activity planning and execution.

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Introduction

Innovation is essential to organizational survival and longevity which is why academics and practitioners alike have long sought to demystify the phenomenon, and how to manage it various settings. Innovation was originally studied by researchers interested in technological change, with a focus on manufacturing industries. However, service innovation research has been steadily increasing due to the growing economic importance of service sectors. Nonetheless, services are highly diverse and approaches of innovation management differ significantly across service sectors.

Retailing and consumer services is an industry that is said to be at a “tipping point” in this era of globalization, technology, and competition (Paul and Rosenbaum, 2020). Today, what we see is an entirely new retail landscape, an industry disrupted such that the very fundamentals of what the act of retailing means are being challenged completely (Treadgold and Reynolds, 2021). Retail is in the midst of an unprecedented period of change, wherein innovation plays an increasingly significant role. Yet, previous research has also shown that innovation in retail trade is “different,” which puts forward distinct challenges to its management – a topic that demands greater investigation in order to advance innovation and retail research.

In the introductory chapter of this doctoral dissertation, as a background to my research I introduce the changes happening in the retail industry and why management of innovation in the retail firm level warrants greater attention in research. The subject is underrepresented in academic studies despite retail practice showing evidence of its increasing need and relevance. I propose a research problem that the dissertation aims to address, clarify the demarcations of my research, and end the chapter with a brief outline to the rest of the text.

Background

Innovation has received widespread attention in research and in the business world. An unrestricted search of academic publications using the keyword “innovation” will produce tens of thousands of articles (Crossan and Apaydin, 2010). There is no shortage of research that originate from manufacturing and process industries where studies on innovation have traditionally been focused (see e.g., Rothwell 1994).

However, calls have been made to address the “innovation gap” (NESTA, 2006) which is the difference between the reality of innovation produced in an economy and what traditional innovation definitions and measurements perceive (Djellal and Gallouj, 2010). With the growth of services in organizations and economy, greater attention has thus been given to innovation in the context of services (Miles, 2005). While service innovation research has been originally neglected in innovation studies, it has evolved substantially in the past 25 years (see e.g., Snyder *et al.*, 2016; Carlborg *et al.*, 2014). However, due to the enormous heterogeneity of innovation in the service industries, the dominant drivers and patterns of innovation management differ across service activities and sectors (Bessant and Davies, 2007). While service innovation studies have seen considerable growth, research on innovation management in retailing trade in particular is nascent and still relatively limited, despite a growing interest in patterns of retail innovation specifically (e.g., Pantano and Vannucci, 2019; Hristov and Reynolds, 2015; Sundström and Radon, 2014). The retail industry has been experiencing, and will continue to experience, revolutionary change that impacts the buying and selling experience (Paul and Rosenbaum, 2020). For these reasons, a deeper understanding is needed on innovation management approaches in the retail industry (Pantano, 2014).

The management of innovation in retail is a complex process (Hristov, 2007). Retailers have been known to “innovate differently:” they can be hybrid innovators, involved in innovation activities characteristic of both production and service sectors, involving product and process innovation, and engage in both technological and non-technological innovation (Sundström and Radon, 2014; Hristov, 2007). Retail success often comes from “capturing the moment” rather than being a product of deliberate design and detailed planning (Reynolds *et al.*, 2007). Moreover, most retailers tend to innovate incrementally rather than radically due to the transparent, “low appropriability” nature of the retail competitive landscape (Sundström and Reynolds, 2014). However, higher demands are being placed on retailers and there is an imperative for retail organizations to implement strategies that would allow them to adapt, innovate, and transform in order to have sustained competitive advantage (Grewal *et al.*, 2021b; Kumar *et al.*, 2017). In the next section I briefly present how retailing is experiencing disruption in order to further emphasize the need for new ways of working with innovation.

The disruption of retail’s status quo

In his influential book “The Innovator’s Dilemma,” Christensen (1997) described the impact of disruption on well-established firms, and how these organizations struggle to adapt to changes in technologies, markets, competition and regulatory environments. As a result of “disruptive technologies,” the way retailers fulfill their essential mission—getting the right product in the right place at the right price at the right time—has

changed significantly (Christensen and Tedlow, 2000). Wessel and Christensen (2012) note how online retailing has devastated traditional brick-and-mortar retailers. Two decades later, the disruption of retail does not seem to be slowing down. As Treadgold and Reynolds (2021) describe, we are only in the early stages of an entirely “new retail landscape,” where the very fundamentals of what retailing means are being challenged and changed.

It can be said that retail has entered a “new technology era” where technology is seen as the main driver of transformation but also the core enabler in building effective retail processes for customers, employees, suppliers, and retailers (Grewal *et al.*, 2021a). Technological advancements continue to be a game changer in retail, simultaneously benefitting customers and retailers alike (Grewal *et al.*, 2017). Emerging technological forces, such as micro-cloud computing, new robotics, fifth generation (5G) telecommunication, the Internet of Things (IoT), virtual reality (VR), augmented reality (AR), and mixed reality (MR), are altering the retail landscape in various ways, with some augmenting current benefits (e.g., Apple Pay) while others have the potential to upend existing systems (e.g., blockchain) (Shankar *et al.*, 2021).

Digitalization impacts many elements of the retail business, not just through e-commerce. (Hagberg *et al.*, 2016). Innovative business models (Bilińska-Reformat *et al.*, 2019; Jocevski, 2020) especially multi-sided marketplaces (Hagiu and Wright, 2015) continue to challenge incumbent retailers as they increase disintermediation in the retail value chain, unite the online and offline to create more sophisticated and personalized customer experiences, growing their share of global e-commerce sales (Hänninen *et al.*, 2019). By disrupting retail’s traditional monopolistic ownership of the customer interface, digitalization is shifting the traditional retail function to new types of competitive actors, making the creation of competitive advantage based on this function increasingly challenging (Reinartz *et al.*, 2019).

Developing innovation capability in retail

With the myriad of opportunities and challenges confronting retail, new demands such as innovative ways of working and thinking are constantly being placed on traditional retail actors. While online retailing has enabled companies to overcome geographic barriers and operational inefficiencies, offline retailers have struggled to compete with them, which has led many retailers to operate both online and physical channels. There will always be a need for retail, as providers of goods and services to end consumers—but solutions come and go, especially in a dynamic industry like this which has proven to be a fertile environment for disruptive and innovative platforms.

Retail is a diverse sector with different types of actors. This thesis puts the spotlight on large, retail firms with long traditions of brick-and-mortar retailing (e.g., food retailing, home furnishings retailing). Large retail chains possess numerous competitive advantages including bargaining power and cost efficiencies due to their large volume, cooperative marketing efforts and well-known brands. For these retail actors, however, long term competitive advantage also now requires going beyond pursuing continuous improvement. How can these retail incumbents manage innovation in a more systematic way in order to deliver innovations beyond incremental change? The focus of the research is not on the disruption of institutional retailing per se (e.g., theories of retail evolution), nor on what innovation outputs (e.g., product, service, process, etc.) are created or adopted in specific retail business areas. Rather, I am interested in exploring how established, traditional retail firms can adapt to external disruption in a more sustained and systematic way and the innovation management activities and mechanisms involved.

It was in my licentiate thesis (Paredes, 2018) where I first explored the topic of innovation management in retail companies. I was interested in how Swedish retailers perceived the concept of “innovation” inside their organizations, and what, if any, were the innovation practices that existed. The licentiate thesis concluded that despite not always labeling innovation and development-related activities as “innovation” per se, established retailers are clearly engaging in innovative behaviors. For one, certain dimensions of an innovative climate exists (to some degree) in the retailers I studied. However, in line with extant research, the traditional retail organizations I followed had the tendency to innovate in an opportunistic, incremental way, and with fragmented practices throughout the organization, without an overall strategic nor systematic approach.

I then proposed that there was a need to investigate how established retail chains can innovate beyond incremental developments and how innovation could play a more prominent role in retail strategy and management. I concluded by presenting topics that warrant further investigation based on my initial findings, including to investigating how established retailers can better organize for innovation and exploring the “dualities” or tensions in retail innovation (e.g., exploration vs exploitation). This doctoral dissertation therefore came as a logical next step to address these issues raised. The research direction felt even more relevant as I was witnessing internal changes in the retailers that we followed, in the sense that they were also eventually facing similar questions on how to have a better understanding and control of the innovation process.

Given that my doctoral dissertation serves as a continuation of the research topic that I started to explore in the licentiate thesis, some of the foundational ideas from that text (Paredes, 2018) have been retained as they form the basis of the overall research journey. Continuing the direction I started, I use organizational innovation and retail as starting points; however, I provide a greater development of certain aspects in order to

strengthen my research's theoretical and practical contributions. There have been limited studies that use a capability perspective in retail, specifically in investigating how a sustained capability for innovation can be developed in the context of the large retail firm. Lawson and Samson (2001) propose that dynamic capabilities is well suited to study organizational innovation since there is no focus on technology or R&D; innovation process can be about new product development but also new processes, systems and business models. Thus, subscribing to this theory facilitates a holistic approach to innovation. According to them, innovation capability highlights the actions and mechanisms that managers can take which most affect innovation success, and is composed of reinforcing practices and processes within the firm. It has thus been described not as a separately identifiable construct, but rather consisting of "elements that exist, to some degree, within innovative firms" (Lawson and Samson, 2001) or "determinants influencing an organization's capability to manage innovation" (Saunila *et al.*, 2013). Thus, adopting this holistic approach to sustained innovation in the organization, this thesis looks at retail innovation from a firm-level, as an overarching capability regardless of application area (e.g., customer-related, support-related, or organization-related retail innovations).

As a continued investigation of the work that has been started in my licentiate thesis, the doctoral dissertation takes a step forward in several ways. First, the theoretical framework is refined by using the organizational capabilities perspective; specifically, using the theoretical constructs of innovation capability and organizational ambidexterity, which are elaborated in the next chapter. Second, the empirical material was expanded significantly through a second study using multiple case methodology. For clarification purposes, excerpts of text that were retained from my licentiate thesis and are included in this dissertation will be cited accordingly. For instance, since Study 1 was a part of the work that contributed to the licentiate thesis, a reproduction of its study methods can be found in this thesis (see Methodology chapter). Consequently, Paper I represents a revised (and published) version of a conference paper which was included in my licentiate thesis. Finally, the dissertation stands on its own and provides distinct theoretical contributions and unique research questions, proposed in the next section.

Research purpose and questions

Given the context of the problem and the aforementioned gaps in industry practices and academic knowledge, the overarching aim of this dissertation is to contribute to the understanding of innovation management in retail firms. The overall research purpose is to explore how innovation capability can be developed in the context of large, established retail organizations (incumbents). This is to be addressed by the

following research questions, which focuses on retail incumbents that are attempting to become more innovative in order to adapt to external disruption.

- RQ 1: What are the challenges faced in developing innovation capability in retail firms?
- RQ 2: How can retail firms develop a systematic and sustained approach to innovation through management practices and mechanisms?

Innovation management in retail is not a clearly established research stream and is where the dissertation aims to present a unique contribution. As retailers face increasing pressure to make innovation a strategic priority, and as major retail players become larger and more complex organizations, organizing for innovation becomes a more central concern, and therefore retail innovation management proves to be a relevant area for research (Olsson and Johansson, 2016; Pantano, 2014).

Research focus and demarcations

In line with my licentiate thesis, the dissertation continues to lie in the intersection of innovation management and retailing, and thus the following excerpt of text is developed from the licentiate thesis.

Innovation management and retailing are research domains that are relevant and robust although can be argued to lack dominant theoretical traditions in themselves as they also lie in the intersections of other more established academic fields such as economics, entrepreneurship, and management. Nevertheless, I attempt to work within a multidisciplinary approach, as I believe the research problem calls for it. These fields are not lacking in research developments; on the contrary, they are characterized by a diversity of perspectives. The corpus of innovation management research, for instance, encompasses the complex phenomenon of innovation which can be approached from different perspectives and levels. This dissertation considers a level of analysis of innovation from a micro perspective, i.e., focusing on innovation management at the level of the retail firm. Thus, it excludes discussion of innovation studies on a meso and macro level, e.g., broader sectoral and institutional contexts. Specifically, innovation management is approached from the corporate management level (i.e., “headquarters”). It excludes the perspective from individual store operations, and entry-level or mid-level retail employees, for instance. While innovation efforts and behaviors certainly exist in various levels of an organization, not least in the retail stores themselves, focus is placed on the corporate level because in line with the research purpose of the dissertation, I explore innovation using an organizational capability perspective which often considers practices and mechanisms initiated by management.

The choice of retailers chosen for the different studies is another limitation of the dissertation that has a significant impact the generalizability of the findings. Four out of five of the case companies were purposefully selected for their representation of traditional retailers evolving into multi-channel retailing—selling primarily through physical channels but have in recent years introduced digital channels—in specific retail formats, e.g., conventional supermarkets, convenience stores, or category specialist (furniture). In addition, in the first study, a newer, purely e-commerce retailer was included as a reference object in order to explore and if possible identify contrasts with the more established retailers. That being said, the research remains focused on large, established retail companies that were originally (and to a large extent still) store-based retailers, and not new entrants and/or pure e-retailers. While it would be valuable to look at innovation management in retail SMEs and/or e-retailers, this is beyond the scope of my dissertation. Large, established retailers especially need to build innovation capabilities and challenge their current paradigms so as to avoid “incumbent inertia” (Lieberman and Montgomery, 1988) in the face of disruption of the retail landscape.

It should be noted that this thesis does not aim to investigate into the complexities of all the individual functional areas of retail business (e.g., channels, pricing and promotion, merchandising, branding, etc.), although these make up the applications of innovation activity in retailing. Rather, as mentioned above, the chosen approach is to look upon innovation management of the retail firm as a whole, from a corporate management standpoint. It is relevant to look at innovation from the perspective of management because this is where priorities are established, strategies are devised, resources are allocated, and where performance is controlled or managed (Storey, 2000).

Finally, it should be noted that all of data collection was performed in Sweden. Swedish retail can be considered as an interesting context for research, given the challenges and opportunities that retailers are facing. The Swedish retail sector is well developed and consolidated, fundamentally dominated by large companies with retail chains accounting for about 63% of the stores and 85% of retail turnover (Handelsrådet, 2022). A few large chains dominate food retailing, clothing, and furniture, in particular. Hultman and Elg (2012) reported general trends in Swedish retail, including an increasing degree of international entrants, an increasingly ageing Swedish population, high concentration of the population in urban centres, a highly globalized and wired community, and a growing interest in environmental and social sustainability—factors that were creating new challenges for retail management.

To provide an example of the changing retail landscape in Sweden, one can look at how e-retail has increased. While in the 1990’s, the technology and logistics were not sufficiently developed, and the customer was not mature, today’s situation is completely different (Hultman *et al.*, 2017). From 2011 to 2019, the number of companies in the retail sector decreased by 4% due to merging and consolidation (Handelsrådet, 2022).

However, from 2019 onwards the number has been increasing despite a number of companies going bankrupt, the trend reversal largely attributable to pure e-retailers (Swedish Trade Federation, 2022). When the Coronavirus pandemic broke out in 2020, online shopping accelerated sharply, with e-retail growing up to 40% as consumers shifted from physical stores to online retail, according to the latest E-barometer report by PostNord (2022), a joint publication with the Swedish Institute of Retail and Swedish Digital Traders Association. For specific sectors, for instance, grocery retail showed a growth rate of 35% while furniture retail had 27%. Despite this, Swedish e-retail still managed to grow by almost 20% the year after, taking up 16% of the total Swedish retail market by 2021. While the pandemic and continued restrictions played a part, this also demonstrates that consumer behavior has gradually changed as more consumers who were previously unaccustomed to online retail have started to embrace digital behaviors (PostNord, 2022).

Sundström and Ericsson (2015) report that while the retail sector is an important economic engine in the Swedish society, research lags behind advances in the industry as it is transformed by digitalization and consumer behaviors. They have suggested that an important avenue for research relates to how Swedish retailers are moving from being traditional value chain actors to being part of new value networks where innovation and cooperation play a greater role, which have implications on capabilities and skills needed from leaders and employees—which further signifies that Swedish retail is an interesting context for this research.

Dissertation outline

In order to answer the research questions above and to fulfill the purpose of the dissertation, the text is structured in a fairly traditional way: first describing the theoretical research base, the research methodology, results and discussion, and conclusions.

The next chapter presents a multidisciplinary frame of reference—a review of relevant innovation management and sector-specific innovation literature which serves as the theoretical research base of this dissertation. This is followed by the Methodology chapter which describes the research process, with a description of the different studies that contribute to this dissertation, along with a reflection on the research quality as well as limitations of the research methods. A summary of the results of the four appended papers are then provided, which is followed by the discussion chapter which addresses the overall research purpose by presenting the answers to the research questions introduced in this chapter and summarizes the contributions of the research. Lastly, the final chapter proposes areas for future research.

Theoretical frame of reference

This chapter explains the theoretical research base of the dissertation which provides support for how the research purpose is addressed. Key concepts that relate to the thesis topic are presented in order to clarify the research positioning.

Innovation in organizations

“Innovation” as a concept has been contentious and problematic, and has been tackled from various perspectives, at various levels, and with various units of analysis in mind, ranging from individuals to as broad as national innovation systems (Storey, 2000). There is a fragmentation of the innovation literature and its state is characterized by many inconsistencies, competing theoretical frameworks, diverse conceptualizations of innovation determinants and knowledge gaps (Keupp *et al.*, 2012; Lam, 2005). While this is important to keep in mind, reconciling the various levels and lenses of analysis is not within the scope of this dissertation. The focus of my study of innovation is at the level of the firm, and looking at internal conditions in the organization, particularly an organization’s capability for innovation and self-renewal.

Innovation is different from creativity. According to Amabile (1988), creativity is “the production of novel and useful ideas by an individual or small group of individuals working together” while innovation is “the successful implementation of creative ideas within an organization” (p.126). The most recent version of the OECD Oslo Manual (2018), the primary international basis of guidelines for defining and assessing innovation, defines innovation as both an activity and an outcome:

“An innovation is a new or improved product or process (or combination thereof) that differs significantly from the unit’s previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process).” (OECD/Eurostat, 2018, p.20)

Innovation has been shown to be the fundamental element with which organizations can deliver business value and secure competitive advantages (Damanpour, 1991). However, not all innovations are the same. In technology and innovation management literature, innovations are frequently classified into typologies as a means of

distinguishing the “degree of innovativeness.” Garcia and Calantone (2002) reviewed these different typologies, although the most often used are dichotomous categorizations, e.g., discontinuous/continuous (Anderson and Tushman, 1990) sustaining/disruptive (Christensen, 1997), and radical/incremental (Schumpeter, 1934; Freeman, 1994; Kessler and Chakrabarti, 1999). In this thesis, I use the terms incremental and radical innovation to represent this dichotomy.

In his seminal text, Drucker (1985) presented innovation as a discipline, capable of being learned and practiced. Innovation as “a systematic activity” was emphasized—involving the purposeful and organized search for changes and a systematic analysis of opportunities that such changes might offer. Van de Ven (2017) points out that innovation is a process that cannot be controlled per se, but can nonetheless be maneuvered by managers in order to increase the odds of success, through development of skills and capabilities for traversing the innovation journey. These, to me, are not mutually exclusive viewpoints and only further draws attention to how innovation is not something that “just happens” in an organization but rather is a complex process that needs systematic and sustained efforts. Innovation and its management is thus a key strategic issue for an organization.

Understanding how to organize for innovation is a central problem in innovation management (Dougherty, 2001; Tushman and O’Reilly, 1997). Tushman and Anderson (1997) have argued that the management of innovation is an organizational problem—“innovations are the products of organizational action, so it is necessary to understand how adaptive organizations are built and managed.” Various ways of theorizing about innovation have been proposed in research which have led to a fragmentation of the innovation literature, with diverse conceptualizations and competing theoretical frameworks existing. In the following sections I discuss constructs that form the theoretical underpinning of this thesis (which stem from the dynamic capabilities theory) and justify the need for their use.

Innovation capability: a holistic perspective

Dynamic capabilities are defined as “the firm’s ability to integrate, build and reconfigure internal and external resources to address rapidly changing business environments” (Teece *et al.*, 1997, p.516) and are the foundation of firm-level competitive advantage in periods of rapid change. The dynamic capabilities framework advances a neo-Schumpeterian theory of the firm and builds on what has come to be known as the resource-based approach (Teece *et al.*, 1997; Teece, 2009). Zollo and Winter (2002, p.340) meanwhile define dynamic capability as “a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness.” They suggest that dynamic capabilities are structured and persistent and an organization that adapts

in a creative but disjointed way is not exercising a dynamic capability. Dynamic capabilities are developed from learning and constitute a firm's systematic methods for modifying operating routines. (Zollo and Winter, 2002).

Denrell and Powell (2016) emphasize that despite disagreements on various frameworks of dynamic capability, the primary contribution of this theory is its claim that the landscape of global business competition has fundamentally changed and that new ways of thinking about competitive advantage is needed. The original Teece *et al.* (1997) paper spawned a large number of commentaries and extensions on the concept. It has since been proposed that an organization's propensity to innovate or to adopt innovations can be seen as a type of dynamic capability that contributes to competitive advantage (e.g., Helfat *et al.*, 2007; O'Connor, 2008; O'Connor *et al.*, 2008; Francis and Bessant, 2005; Assink, 2006). As with the original theory of dynamic capabilities, there are also different definitions and perspectives of innovation capability.

Lawson and Samson (2001) define innovation capability as the "ability to continuously transform knowledge and ideas into new products, processes, and systems for the benefit of the firm and its stakeholders." They propose that the dimensions that make up an organization's innovation capability can be grouped into the following elements, built up from literature on innovation management and best practice models: vision and strategy; harnessing the competence base; organizational intelligence; creativity and idea management; organizational structures and systems; culture and climate; and management of technology.

Saunila and Ukko (2013) define innovation capability "to consist of the drivers of successful innovation, or aspects influencing an organisation's capability to manage innovation." The authors suggest that these aspects are: participatory leadership culture; ideation and organizing structures; work climate and well-being; know-how development; regeneration; external knowledge; and individual activity.

O'Connor (2008), espousing a systems view on building dynamic capability for "major innovation" (radical and really new innovation), propose that sustained innovation will need more than innovation champions but rather necessitates a management system that exceeds the complexity of operating routines and repeatable processes as the dynamic capabilities theory has suggested. An integrated system that comprises the dynamic capability for major innovation therefore is composed of the following interdependent elements: organizational structure; mechanisms for interfacing with the mainstream organization; exploratory processes; development of skills and talent; governance and decision making mechanisms on multiple levels; appropriate performance metrics; and an appropriate culture and leadership context.

A few systematic literature reviews of organizational innovation and innovation capabilities also offer insights on dimensions and determinants of innovation capabilities in organizations. Crossan and Apaydin (2010) propose that dynamic

innovation capabilities reside in five types of managerial levers which enable innovation: missions/goals/strategies; structures and systems; resource allocation; organizational learning and knowledge management tools; and culture. In another systematic review of innovation capability literature, Iddris (2016) proposes innovation capability to be “a firm’s ability to generate innovation through continuous learning, knowledge transformation, creativity, and exploitation of internal and external resources available to the firm.” The author further identifies the following dimensions of innovation capability: knowledge management; organizational learning; organizational culture; leadership; collaboration; creativity; idea management; and innovation strategy. In a more recent systematic literature review of innovation capability, Mendoza-Silva (2020) suggests the following determinants of innovation capability: management style and leadership (the overall leadership skills and attitudes that support and facilitate innovation); corporate strategy (the strategic goals and vision that promote innovation); resources (resource planning to direct them where required); work climate (the shared values and vision that foster innovation); ideation and organizational structure (organizational configuration of work tasks and systems necessary to develop innovation); technology (which facilitates innovative behavior); external relations (interorganizational relationships and external knowledge as critical factors for innovative activities); know-how development (the organization’s ability to manage and use knowledge to enhance innovations); individual activity (employees’ skills and attitudes which affect the organization’s overall innovation capability); and finally, network characteristics (the resources embedded among individuals and their networks of relationships).

Clearly, despite the significant attention that the concept has been given in academic literature, innovation capability embodies a multifaceted nature of boundaries, without a consensus on its dimensions (Iddris, 2016; Mendoza-Silva, 2020), determinants (Damanpour, 1991), components (Zawislak *et al.*, 2018), antecedents (Frishammar *et al.*, 2012), managerial levers (Crossan and Apaydin, 2010), elements (Lawson and Samson, 2001; O’Connor, 2008), building blocks (Samson *et al.*, 2017), and success factors (Samson *et al.*, 2017). Despite differences in terminologies and typologies, I believe that these papers nonetheless address a similar concern: innovation is something that can be managed and that organizations can develop the sustained capability to innovate. While these dimensions can be consolidated into key thematic areas such as leadership, strategy, structures and systems, culture, knowledge management and learning—corporate conditions that support innovation—an important aspect is in the consideration of innovation as a moving target and that managing it is about building dynamic capabilities (Tidd and Bessant, 2018) which is less about doing one thing particularly well, but is about being able to manage an internal system with various dimensions (Bessant *et al.*, 2005). In this thesis, by adopting innovation capability as a theoretical lens, a holistic, systematic and sustained approach to innovation in organizations is thus emphasized.

Developing innovation capability: the call for ambidexterity

Since Christensen's (1997) concept of "the innovator's dilemma" has been introduced, there has been a significant amount of research on the importance and impact of disruption. There is a shared view that organizations faced with disruptive changes need to somehow compete in mature businesses where continual improvement and cost efficiency are often the keys to success (exploitation) and also pursue new business models that require experimentation and innovation (exploration) (O'Reilly and Tushman, 2021). What remains disputed is how established firms can actually do this. Christensen (1997), for instance, stressed that mature organizations are not equipped to do both simultaneously and will need to spin-out the exploratory unit.

An alternative solution has since been proposed in resolving the "innovator's dilemma" of incumbents attempting to adapt to disruptive changes, which is the concept of the "ambidextrous organization" (O'Reilly and Tushman, 2008). This theory suggests that an organization's sustainable competitive advantage relies on being equipped with the organizational and managerial skills to compete in a mature market (where cost, efficiency, and incremental innovation are key) while simultaneously being able to develop new products and services (where speed, flexibility, and radical innovation are critical) (Tushman and O'Reilly, 1996). When the firm's exploitation and exploration activities are strategically integrated, ambidexterity therefore acts as a dynamic capability that enables the firm to survive in the face of disruptive change (O'Reilly and Tushman, 2008). Ambidexterity was also implicit in Eisenhardt and Martin's (2000) conceptualization of dynamic capabilities, in that dynamic capabilities require a blend of the two different strategic logics of exploration and exploitation. Although ambidexterity research can be traced back to Duncan (1976), Tushman and O'Reilly's (1996) paper initiated a renewed attention to the concept.

The theoretical underpinnings of organizational ambidexterity can be linked to March's (1991) study on organizational learning where he discussed how "exploitation" and "exploration" are incompatible but inseparable knowledge management processes. Exploration and exploitation are two business logics that form a paradoxical relationship (Andriopoulos and Lewis, 2010; Smith and Lewis, 2011) because they place substantially different requirements on organizations in terms of organizational architectures, processes, and capabilities (Benner and Tushman, 2003). Exploitation involves exploiting existing capabilities for profit while the exploration is focused on exploring new opportunities for growth (O'Reilly and Tushman, 2004). Exploitation demands a short-term time perspective, efficiency, discipline, incremental improvement and continuous innovation while exploration requires a longer time perspective, more autonomy, flexibility and risk taking, and less formal systems and control (O'Reilly and Tushman, 2008). Organizational ambidexterity is thus the capability of an organization to manage tensions that emerge from these differences, simultaneously engaging in exploratory activities leading to radical innovation on one

hand and exploitative activities leading to incremental innovation on the other (Raisch and Birkinshaw, 2008; Gibson and Birkinshaw, 2004; He and Wong, 2004; Tushman and O'Reilly, 1996). Dougherty (2006) refer to tensions of innovation work in organizations as "paradoxical practices," reflecting the fact that these complex tensions must be balanced in some way rather than split up. Addressing the exploration-exploitation tensions therefore is a complex but critical issue in innovation management, as organizations need to implement mechanisms and tactics that help manage these interwoven, synergistic paradoxes (Andriopoulos and Lewis, 2009).

Research in ambidexterity has identified structural or contextual configurations through which organisations can achieve the balance between exploration and exploitation. Structural ambidexterity refers to when ambidexterity is facilitated through structural separation of explorative and exploitative units that require coordination and integration mechanisms including senior management integration (Tushman and O'Reilly, 1996; O'Reilly and Tushman, 2004; Smith and Tushman, 2005; Jansen *et al.*, 2009). Separate structures are seen as necessary to accommodate the opposing competencies, systems, and practices of exploration and exploitation. Proponents of contextual ambidexterity, meanwhile, suggest that ambidexterity can be achieved within an entire business unit, when there is an organizational context that enables individuals to make their own judgments on how to divide their time between the demands of adaptability (exploration) and alignment (exploitation) (Gibson and Birkinshaw, 2004). This organizational context is said to be characterized by a combination of stretch, discipline, support, and trust (Gibson and Birkinshaw, 2004; Ghoshal and Bartlett, 1994).

In a review of studies related to innovation and structure from 1967 to 2009, Damanpour and Aravind (2012) report that the focus of research on organizing for innovation has shifted from the debate on organic versus mechanistic structures (Burns and Stalker, 1961) towards structures related to ambidexterity (e.g., Tushman and O'Reilly, 1996). Therefore, the critical issue that needs to be investigated moving forward is regarding strategic and operational integration of units that have differentiated goals, structures and systems. Ambidexterity researchers, however, have also suggested that there are complementarities between different paths to ambidexterity, and that structural and contextual ambidexterity may not necessarily be mutually exclusive but can co-exist within a single setting, being employed simultaneously or sequentially (Papachroni *et al.*, 2016; Raisch and Birkinshaw, 2008).

Innovation in retail organizations: sector-specific characteristics

Innovation process and output in the retail context

Retailing, like banking and insurance, is one of the few service industries with “local innovation theories” that have been adapted to the specific context of this industry (Gallouj, 2008). These are localized theories on broader institutional change across the retail industry as a whole, including the retail life cycle models that were used to understand retail institutional transformation (e.g., McNair, 1958; Hollander, 1960; Davidson *et al.*, 1976). However, these are mostly dated theories that were largely borrowed from management studies and have since been reinvestigated and questioned in light of more recent developments in retail practice and literature (see e.g., Davies, 1992; Reynolds *et al.*, 2007).

More contemporary research on retail innovation, beyond looking at broad institutional changes, have been found in various areas of interest, including retail business model innovation (Jocevski, 2020; Bilińska-Reformat *et al.*, 2019; Sorescu *et al.*, 2011), retail format innovation (Gauri *et al.*, 2021; Botschen and Wegerer, 2017; Reynolds *et al.*, 2007). There have also been studies on retail innovations and retail innovativeness from the consumers’ perspective (Pantano *et al.*, 2019; Lin, 2015; Pantano and Di Pietro, 2012). Moreover, technology-based innovations in retail and their use in the various functional areas of the retail business have received a lot of attention (Grewal *et al.*, 2021b; Shankar *et al.*, 2021; Pantano and Vannucci, 2019; Pantano and Viassone, 2014; Pantano and Laria, 2012).

Among these retail innovation sub-streams, the most interesting and relevant to this dissertation are reports and articles on the unique characteristics of innovations in retailing (e.g., Hristov and Reynolds, 2015; Sundström and Radon, 2014; Sundström and Reynolds, 2014; Gallouj, 2008; Hristov, 2007) and drivers and barriers of retail innovation (e.g., Albors-Garrigos, 2020; Pantano, 2014; Reynolds and Hristov, 2009). Retail innovation possesses a range of sector-specific meanings that are distinct from generic understandings of innovation, which lead to retailers to “innovate differently” (Hristov and Reynolds, 2015). For instance, retailers engage in innovations that are characteristic of both production and service sectors, engage in both product and process innovation, as well as technological and non-technological innovation, demonstrating the complex and hybrid nature of retail innovation (Sundström and Reynolds, 2014). Due to the low appropriability and transparency of the retail competitive environment, most retailers also tend to innovate incrementally and continuously rather than through radical or breakthrough innovation (Sundström and Radon, 2014; Hristov, 2007; Reynolds *et al.*, 2007).

Reynolds *et al.* (2007) discusses what strategic innovation versus operational innovation looks like in retailing, noting that what retailers refer to as “strategic innovations” are often still continuous in nature, with relatively short cycles. Hristov and Reynolds (2015) suggest that incremental innovations – which are more predominant than radical innovations – at strategic and operational levels may be more appropriate to the role of the retail sector in incrementally and continuously addressing customer needs, as they capitalize on their market matching capabilities being intermediaries in a value chain where they are closest to the consumer.

Pantano (2014) discusses the main innovation drivers in the retail industry, which are (consumers’) demand for innovating, availability of new technology-based tools for investigating the market, and uncertainty in adopting innovations (which is mentioned as a driver, but pointed out as a restraining force). Sundström and Reynolds (2014) emphasize that consumers are still the most important external driver for retail innovation, but fear of industry disruption and technology systems are also competitive drivers.

Internally in the retail firm, innovation drivers include supportive organizational processes and culture, a flexible organizational structure, willingness to invest in appropriate technologies, and the development of strategic, organizational, and technological skills (Sundström and Reynolds, 2014). Meanwhile, Reynolds and Hristov (2009) investigate barriers to innovation in retail organizations, which are mostly related to costs (cost of finance and perceived economic risks of innovation) and shortages of technical, leadership, and project management skills. However, despite these barriers, they conclude that retailing is not inherently less innovative than other sectors within developed markets. Nonetheless, retailers can still improve their awareness and engagement in external initiatives and collaborations for innovation and knowledge exchange, especially given the open nature of innovation in retailing (Sundström and Radon, 2014).

The definition, measurement, and management of innovation in retail is problematic, although as this current section has shown, this is slowly changing. While *innovations* in retail are not necessarily under-researched, retail *innovation management* is still a fragmented and nascent topic. There is a knowledge gap regarding the management of the components of innovation in a retail organization, and its integration into overall retail management. While there are a growing number of researchers who have investigated the process of innovation and typical characteristics of how it is being managed by retailers, challenges and opportunities for research still lie ahead.

The work of some of the authors mentioned above, especially Sundström and Radon (2014), Sundström and Reynolds (2014) and Hristov and Reynolds (2015) who present research on practices and perceptions of retail innovation on a firm level, provide a starting point in this topic and to a certain extent serve as a foundation for

what is being done in this thesis. However, previous research, empirically-grounded or not, have not fully utilized the possibility of studying organizational innovation management through an in-depth investigation of specific retail cases. There is value in looking more closely and conceptually at retail innovation, such as by exploring actual accounts of how innovation is pursued and managed in various Swedish retail organizations, mostly retailers with long traditions in store-based retailing, which is the chosen focus in this dissertation.

Systematic innovation management in retail firms

Retail practitioners have historically been suspicious of strategy (Reynolds, 2004). Strategy did make its way to retail practice, though, as well as in retail research. This was due to the most important structural trend of retailers “becoming increasingly complex animals: very large, widely spread organizations, managing multiple product supply lines, managing very large amounts of data, and above all, far from being ciphers, are competing more and more with other large organizations rather than small ones” (Reynolds, 2004, p.3). European retailing has become characterized by large, public corporations and modern co-operatives, replacing family firms, small firms, and traditionally organized co-operatives (Howard, 2004). Thus, retail is unquestionably the domain of strategy. As I started to suggest in my licentiate thesis, here in my doctoral dissertation I continue to draw attention to the need for innovation to play a more prominent role in retail strategy and management. McGrath and Kim (2014) advocate for a greater integration of an innovation perspective in strategic management given the advent of hyper-competition, particularly in sectors with shorter product life cycle offerings like fast-moving consumer products, technology service sectors, and of course, retailing. Thus, it could be said that the need for innovation is no longer distant from the primary concerns of the retail organization. The disruption of traditional retail signifies a need to apply new conceptual frameworks and theoretical models that are relevant in today’s era of globalization, technology, and competition (Paul and Rosenbaum, 2020).

The question is no longer whether established retailers need to innovate; as presented in this chapter, innovation capability is essential to long-term survival and established retailers are especially not exempt from this. Although there is evidence that innovative activity and behaviors exist in retail organizations, due to the way that the retail game is changing, with retail transformation being accelerated by various external forces, current ways of continuous yet incremental innovation may not be sufficient for sustained competitive advantage. Thus, “innovation beyond the steady state” (Bessant *et al.*, 2005) is what established retailers need to be concerned with. This entails that these organizations need to not just be able to engage in incremental innovations but also have the sustained capability to respond to disruptive and radical change—which

suggests that especially for retailers competing in modern, omnichannel environments, there is a need to rethink current approaches to organizing for innovation, ultimately placing a greater emphasis on sustained and systematic innovation management in retail organizations.

The kind of organizational behavior that is needed during highly uncertain and rapidly evolving conditions, such as agility, flexibility, ability to learn fast, are often found in small, entrepreneurial firms (Bessant *et al.*, 2005). It is harder for established players to exhibit these practices, and as major retailers become larger and more complex, they are subject to the same organizational challenges as non-retail counterparts when it comes to facing the innovation imperative. Tushman and O'Reilly (1997) describe companies that are trapped by the “tyranny of success,” when senior managers of successful organizations are unable to lead innovation and success in periods of rapid change due to organizational resistance and inertia. An organizational context based on past success and rooted in short-term efficiency can sow the seeds of organizational failure by hindering long-term adaptability and competitiveness. In this new retail landscape, retailer leaders must have an appetite to explore innovation possibilities because capabilities that have led to success in the past may not be relevant now and in the future (Treadgold and Reynolds, 2021). When the rules of the retail game are changing and the environment is characterized by high uncertainty, it's less about how to “do what we do, but better” but rather “do different” (Tidd and Bessant, 2018).

Research positioning

There is a need for innovation to be studied from different perspectives as no single discipline can potentially deal with all the aspects of the phenomenon of innovation (Fagerberg, 2005). Gopalakrishnan and Damanpour (1997) emphasize the “need for cross-fertilization of research ideas across different subject areas to help understand sources, processes, and determinants of innovation.”

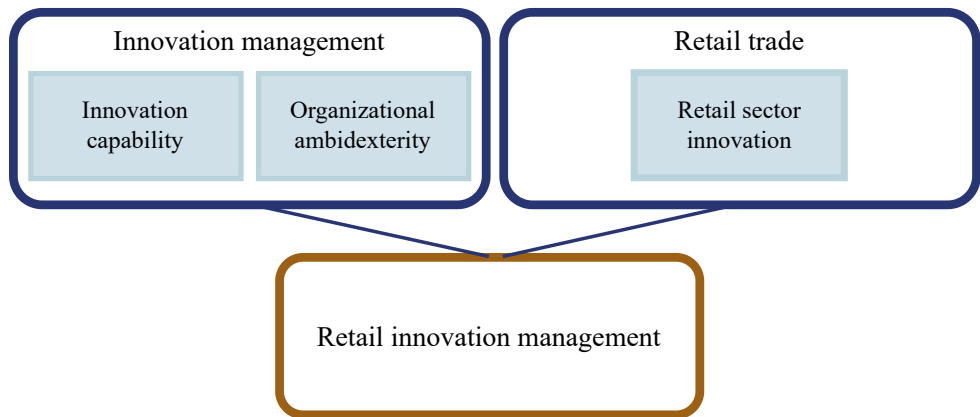


Figure 1. Research positioning

This dissertation is an exploration of innovation in retail organizations, in particular, how retail organizations can develop innovation capability and the challenges encountered in this pursuit. In order to address the purpose of the thesis, I thus propose that the research positioning needs to be situated in the integration of knowledge from retailing and innovation management (see Figure 1). Retail innovation management, while not a well-established subject, is increasing in academic and practical relevance. The dissertation aims to present a unique contribution in this subject, building on theoretical constructs from innovation management (innovation capability and organizational ambidexterity) combined with retail sector innovation research.

Methodology

In this chapter I present my research methodology, starting with my philosophical assumptions, followed by the research methods utilized, reflections on research quality and ethical considerations, and lastly, limitations of the doctoral dissertation, methodologically speaking. Rarely does a research journey turn out the way one initially plans from the research proposal, so this chapter hopes to elucidate the choices that have been made and the circumstances that have led to the final output. This research has undoubtedly evolved over time, but from my licentiate thesis to this doctoral dissertation, some of the foundational ideas have been retained. The section on research philosophy includes excerpts of texts from my licentiate thesis, as my personal stance that critical realism embodies my philosophical position has not significantly changed, although a deeper understanding of this research philosophy has been achieved since then. Also, the discussion of the methods has been expanded to include two main studies; while Study 1 was included in my licentiate thesis, Study 2 is completely new in this dissertation.

Research philosophy

My PhD studies started with a personal impression that the research approach was black and white, that one has to choose between the dualities of inductive or deductive reasoning, qualitative or quantitative strategy, and interpretivist-constructivism or objectivist-postpositivism. Upon greater reflection, I realize that this could have been a product of my predominantly technical academic background, and being a new PhD student with a very basic understanding of research paradigms. Since the overall purpose of the thesis is to explore how innovation capability can be developed in the context of large, established retail organizations, which may be considered as a complex and under-investigated topic, my initial assumption was that a qualitative approach, from a constructivist-interpretivist stance, was the only way to move forward. A qualitative approach tends to be exploratory and flexible, and is particularly relevant when there are limited prior insights about the phenomenon being investigated (Ghauri and Gronhaug, 2002).

However, I have since learned that it is limiting to adhere to this way of approaching research. At least based on my experience, a novice researcher cannot always clearly place oneself in one side or the other, as there can be grey areas when it comes to the different “-isms” of research paradigms, especially as one naturally progresses through the research journey. Because my research problem occupies an integration of two broad research domains, it was also considered that there are already existing theories frameworks that are used, for instance, to examine certain aspects of innovation management in organizations, some of which could be argued to be useful in this research. I acknowledged that my research process could not proceed by assuming a purely interpretivist and constructivist worldview, and as I navigated the maze of philosophical terms such as ontology, epistemology, positivism, constructivism, and so on, I realized that what I needed was a more inclusive and pluralist research paradigm. While I do not deny that this research topic could certainly be investigated through an either positivist or constructivist lens, given the scope and demands of the research project, in addition to the evolution of my own understanding of the philosophy of science, an alternative was arrived at.

As I progressed in my research studies, attending research philosophy and methodology courses, engaging in discussions with other students and colleagues, and delving deeper into extant literature, I learned that the research philosophy that I am able to personally relate to the most is “critical realism” (chiefly espoused by Bhaskar, 1978), which has been able to help me understand and reconcile the dualistic aspects of my worldview. Critical realism is a relatively new philosophical orientation. Essentially, it proposes that there exists a reality “out there” independent of observers; however, unlike direct realists who would assume that this reality can readily be accessed (e.g., in the natural sciences, where researchers can accurately measure controllable and closed systems), critical realists accept that reality is social constructed, but not entirely so (Easton, 2010). According to Van de Ven (2007), this view “takes an objective ontology (i.e., reality exists independent of our cognition) and a subjective epistemology.” Or as O’Gorman and MacIntosh (2015) put it simply, “the position is ‘realist’ in believing an external reality, but ‘critical’ of our ability to access and measure it.” While I do acknowledge that the world is real, I am also aware that knowledge production is fallible and theory-dependent but not necessarily theory-determined.

Critical realism is compatible with a wide range of research methods although the choice of methods should depend on the nature of the object of study and what one wants to learn about it (Sayer, 1999). Easton (2010) proposes that critical realism provides the philosophical validation (i.e., ontological and epistemological underpinnings) that justifies case research, and is well suited when studying clearly-bounded but complex phenomena such as organizations:

“Critical realists argue that in the real world there are entities, such as organisations, which have powers to act and are liable to be acted upon by others. These entities can

also have internal structures, such as departments and individuals which in their turn, have their own powers.” (Easton, 2010, p.128)

Retroduction is the logic of inference-making in critical realism in order to identify the mechanisms that explain what caused particular events to occur. According to Mukumbang (2021), retroductive theorizing is associated with applying different forms of abductive reasoning as the researcher moves back and forth between deductively and inductively obtained data, which makes critical realism a useful approach for integrating qualitative and quantitative methods, i.e., mixed methods research. In case research, Dubois and Gadde (2002, 2014) have proposed that “systematic combining” grounded in abduction, a closely related process to retroduction, can be used for theory development.

The research purpose of the dissertation is to explore how innovation capability can be developed in large, established retail firms, and in order to address this, I aim to investigate the challenges faced in developing innovation capability, and the management practices and mechanisms that are needed to establish a systematic and sustained approach to innovation. Given the research questions raised, I have been particular to the use of abduction or retroduction type of reasoning, with its iterations, as opposed to either only deduction or induction, as it can imply re-contextualization of empirical phenomena within the framework of alternative theories. Retroduction and abduction imply a commitment to theoretical pluralism, at least at the outset of an investigation (Vincent and O’Mahoney, 2018).

The dissertation is based on two research projects that utilized several methods of data collection and analysis. While qualitative methods for case study research were used predominantly throughout my PhD journey, one of the four appended papers used a combination of qualitative (e.g., interviews) and quantitative methods (survey study), resulting to a synthesizing dissertation that is technically a product of mixed-methods research. The details on the research design and methods are discussed in the next section.

Research design and methods

As Van de Ven (2007) suggests, “knowing a complex reality demands use of multiple perspectives.” Researchers can, and do, put together combinations of methods, for supplementary, complementary, informational, developmental, and other reasons (Strauss and Corbin, 1998). As such, I have acknowledged early on in my research process that only using methods adapted from the natural sciences, which are often used on closed and controlled systems, will be insufficient for the research topic and line of inquiry. Studying the complex phenomenon of innovation and its management,

not least in retail where the topic is emerging and not yet strongly established, would require a more open and pluralistic approach. In addition, there is a high need for trust between the researcher and the respondents who are acting as representatives of their organizations. Thus, an explorative approach was employed. More specifically, a qualitative approach through case study methodology (e.g., using interviews and observations) played a primary mode, while a quantitative method (using a traditional survey) offered a supplementary role.

I acknowledge that my view of case study research has also evolved beyond the positivist traditions of Eisenhardt (1989) and Yin (2003) (to some extent) to those of other researchers (e.g., Byrne and Ragin, 2009; Easton, 2010; Piekkari and Welch, 2018) who espouse a critical realist orientation of case-based methodologies. A key assumption here is that “the central project of any science is the elucidation of causes that extend beyond the unique specific instance” (Byrne, 2009, p.1). The goal is still explanation, generalizing causal explanations beyond the case at hand; however, an important distinction is in attending to the limits of such generalizations. Causality takes a different meaning than the regularity model favored by the positivist school.

The value of using mixed methods studies guided by a critical realist philosophy in order to evaluate broad, complex and multifaceted issues has also been discussed in research (Mukumbang, 2021; Zachariadis *et al.*, 2013). In mixed methods research, “the researcher bases the inquiry on the assumption that collecting diverse types of data best provides a more complete understanding of a research problem than either quantitative or qualitative data alone” (Creswell, 2013). Moreover, as Strauss and Corbin (1998) suggest, “a researcher’s own preference, familiarity, and ease with a research mode inevitably will influence choices. Although the purpose of the research and the nature of the questions asked often will determine the mode, a researcher ultimately has to work with those modes with which he or she feels more comfortable (p. 33).”

The mixture of qualitative and quantitative methods that were used in the research projects that were part of this dissertation are discussed in more detail in the following sections. The qualitative methods included interviews (unstructured, semi-structured, and structured), participant observations, supporting documents as part of the case study approach, while the quantitative method used an established survey questionnaire for evaluating a specific aspect of the organizational conditions (i.e., climate for innovation and creativity).

Overall, the process of data analysis employed an retroductive or abductive approach as introduced earlier. Swedberg (2012) has emphasized the importance of discovery and abduction (Peirce, 1957) in theorizing. This essentially means that the empirical data should drive the imaginative, “discovery” phase of the theorizing process, and the key to formulating the central concept is through abduction, which is basically “guessing

right.” Therefore, in general, the data analysis process was an iterative journey of looking at what the empirical data is saying, creating themes that are seen to best represent the data, looking at the connection and relationships between the themes (using different techniques suggested in literature), until eventually forming empirical generalizations from these themes.

As there is also a survey questionnaire used during one of the studies, descriptive statistics were employed to analyze the quantitative data, as discussed below, as well as in greater detail in the methods section of Paper I. Since a convergent parallel mixed methods design was adapted in Paper I, the qualitative and quantitative data were analyzed separately and then integrated later and compared with each other to see the relations between the findings. For the rest of the appended papers, qualitative case study methodology was deemed as the appropriate strategy given the focus of the research being contemporary and complex phenomena (innovation and dimensions of its management) in a real-life context (in retail organizations) (Yin, 2003).

Figure 2 shows an overview of the research process that led to the dissertation. The next section introduces the retail companies that were part of the research projects, followed by a presentation of the methods used in the research projects.

Overview of the research journey towards the doctoral dissertation

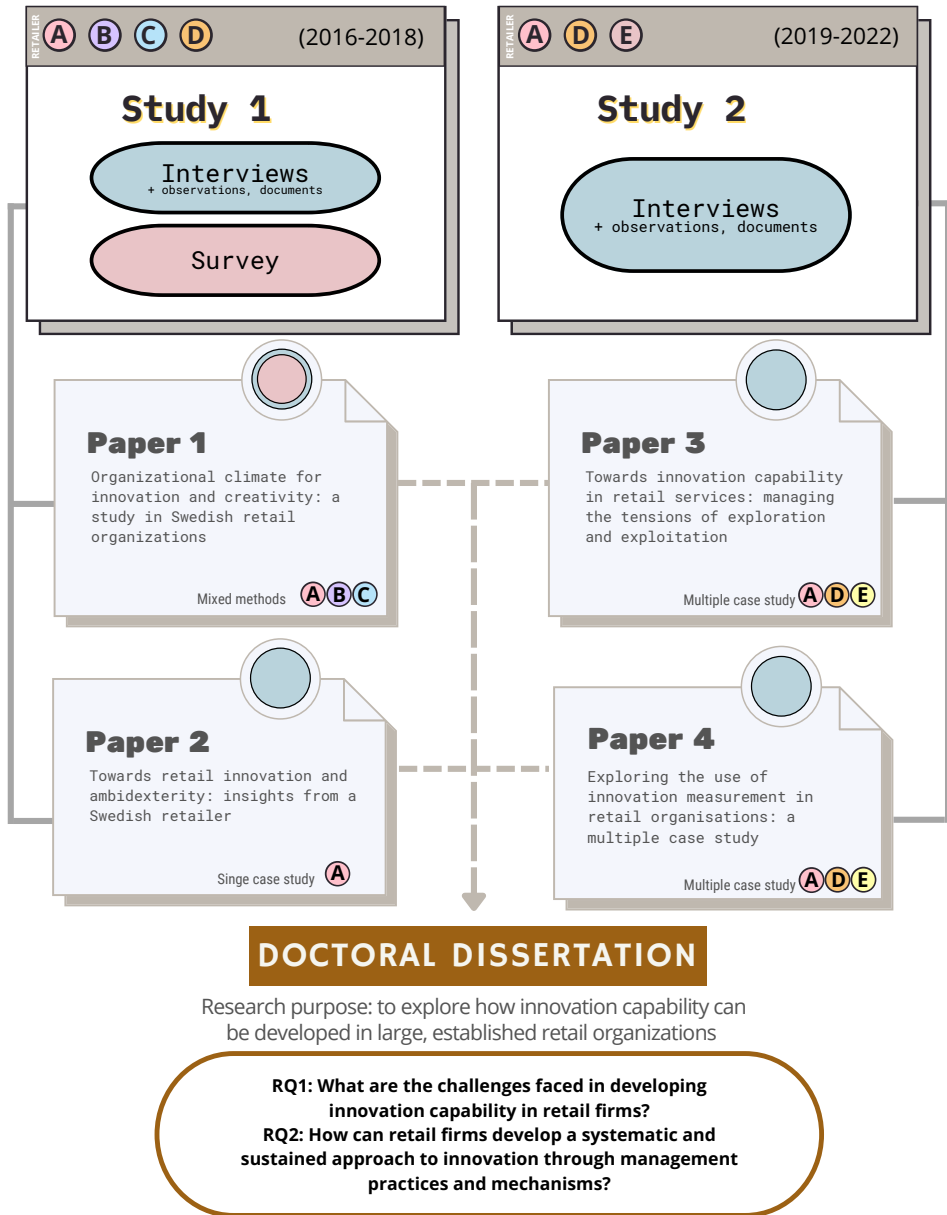


Figure 2. Overview of the research journey towards the dissertation

Retail organizations involved in the studies

Five major Swedish retail organizations were part of my PhD research. Due to confidentiality agreements, detailed background information about the companies cannot be provided aside from brief, generic descriptions. While they are referred to as Retailers A to E in this dissertation, different names are used in the appended papers. Table 1 presents the details about the retailers, and how they are referred to in the appended papers.

Table 1. Retail organizations involved in the studies

RETAILER	DETAILS				
	Number of physical stores (Sweden)	Number of employees (Sweden)	Description	Participation in study	Name in appended papers
RETAILER A	1,267	8,662	Grocery retailer	Study 1 Study 2	Paper 1: A Paper 2: SIRF Paper 3: GR Paper 4: GR
RETAILER B	800	7,500	Grocery retailer	Study 1	Paper 1: B
RETAILER C	N/A (e-retail)	830	Drugstore e-retailer	Study 1	Paper 1: C
RETAILER D	20	9,400	Furniture retailer	Study 1 Study 2	Paper 3: HR Paper 4: HR
RETAILER E	394	2,400	Convenience retailer	Study 2	Paper 3: CR Paper 4: CR

Swedish retail has been predominantly dominated by domestic brands and a small number of large chains particularly in the food retail, furniture and clothing segments. The high concentration of the food retailer market in Sweden implies that strategies of one or two retailers have a great impact on the market as a whole (Anselmsson and Johansson, 2009). These retail companies were purposefully selected because they represent successful, well-known retailers from several retail sectors (grocery, convenience, drugstore, and furniture). They have differences in company size and age, product range, ownership structures, market shares, and market reach. However, these retailers are also experiencing challenges related to pursuing innovation and how to internally configure their organizations in order to become more innovative. As mentioned in the Introduction chapter, the research purposely focuses on large, established incumbent retailers (represented by four out of five of the retail companies) because I believe these are the organizations that especially need to build innovation capabilities in order to face the ongoing disruption of the retail landscape.

Retailers A and B are grocery chains that operate hypermarkets, supermarkets, and convenience stores. Retailer A operates on a business model of independent retailers working together, where economies of scale are combined with the entrepreneurship of the local retailers. Retailer B is a Swedish major grocery chain operating on a consumer cooperative structure. Retailer E is a convenience retailer specializing in franchise-operation with convenience stores and kiosk formats. Retailers A and E have operations in the Nordic and Baltic region, although this research only focuses on Sweden. Retailer D is a big-box furniture retailer with complex multinational ownership and governance structure. Similarly, only its Swedish operations was considered in this research.

Retailer C is a Swedish drugstore e-retailer. In Sweden, online shopping for pharmaceutical products has been an ongoing trend in recent years. According to the latest E-barometer report (PostNord, 2022), in 2021, online shopping for drugstore products accounted for 19% of total drugstore retail sales, while the number was only 4% five years ago. The inclusion of this retailer was primarily to function as a point of comparison in Paper I, as Retailer C is the only e-retailer among the retail organizations studied, and is a newer company built up purely on an e-commerce channel, where the entrepreneur who started the business is still heading it. The rest of the companies are retail chains that represent more traditional retail in established sectors with a long tradition of store-based retailing, and where online channels were introduced only relatively recently, and with varying degrees of multichannel retailing.

Study 1: First research project (2016-2018)

The first study was carried out through a research project, funded by the Swedish agency for innovation (Vinnova) from October 2016 to October 2018, involving Retailers A, B, C, and D. The research methods used in Study 1 are qualitative interviews and a quantitative survey, and the data collection was done during the period of December 2016 to July 2018. Retailers A, B, and C took part in the survey, while all four retailers were part of the qualitative interviews. Because Retailer D did not take part in the survey study, the results of the interviews were not included in Paper I but they contributed to the research and participated in both studies.

I was a member of the project team, which included 4 other senior researchers. As part of the project team, my contribution to the survey study part of the research project was in data analysis and writeup of the survey results (Paper I). For the qualitative interviews, I contributed to data collection (conducting 10 out of 32 interviews), analysis, and writeup of the results (Papers I and II). Details of data collection for Study 1 can be found in Table 2.

Table 2. Data collection for Study 1

Retailer	Qualitative		Quantitative		
	Interviews (semi-structured)	Participant observations	Documents	Survey responses	Paper
RETAILER A (Grocery retailer)	9 interviews (7 respondents) March-April 2018, June 2021	13 meetings and workshops December 2016- June 2018	Internal and public documents	114 February-March 2017	1 and 2
RETAILER B (Grocery retailer)	13 interviews (13 respondents) February-April 2017, May-July 2018		Internal and public documents	43 February-March 2017	1
RETAILER C (Drugstore e- retailer)	6 interviews (6 respondents) April 2017		Public documents	34 February-March 2017	1
RETAILER D (Furniture retailer)	4 interviews (4 respondents) June 2017		Internal and public documents	N/A (did not participate)	
Total	N=32 interviews (30 respondents)			N=191 survey responses	

Qualitative data collection and analysis

The qualitative data was collected from December 2016 to July 2018, with a follow-up interview with one of the companies (Retailer A) in June 2021. Thirty-two (32) semi-structured interviews were conducted with respondents from the different organizations. Since the research looks upon innovation management from a strategic management level within the organization, all the respondents chosen are either executives or managers who operate at the corporate headquarters-level of the organization, and they represent various business functions relevant to the study. A list of the interviewees' functions is found in Appendix A. The interviews lasted from one to two hours each and were recorded and transcribed accordingly, with approval of the respondents. For retailer A, additional data was used from field notes taken during participant observations in meetings and workshops in order to triangulate and help build the case study in Paper II.

The interviews covered different aspects of innovation and how the process is managed and enabled in the organization. This included how the respondents view innovation personally, how innovation and development is understood, communicated, and approached in the organization, the relationship of innovation and strategic leadership in the company, vision and direction, how they look upon value creation for customers and other stakeholders, the organizational structures and processes that are related to

innovation and development, the external linkages and networks (i.e., external collaboration in relation to innovation and development), and the organizational culture.

For data analysis in Study 1, there were main topics that were used to loosely guide the interview questions (see Appendix B). Thus, in the first stage of analysis, the transcript of each interview was organized by sorting the raw data into sections, according to the main category that they best “fit” into, based on the general interview topic.

For Paper I, since the focus of the paper was organizational climate for innovation, data from relevant categories were retained and analyzed at the next stage. Within-case analysis was performed by going through all interview transcripts for each retail case. Themes in the transcripts that were related to dimensions of the organizational climate or culture were compiled and further compiled. However, as I also wanted to try to “let the data speak for itself” to some extent, constant comparative analysis was done so as not to be constrained by the initial loose framework that was used. Thus, throughout this process, I used some of the techniques suggested by Ryan and Bernard (2003) to identify themes or categories, such as looking for repetitions, and comparing similarities and differences in the transcripts. Therefore, while there were segments of data that were coded according to, for instance, Ekvall’s (1996) dimensions of organizational climate, such as debate, risk-taking, freedom, conflict, trust (see Paper I, Table 1), the data analysis process also gave way to other emerging themes, such as innovation support (presence or lack of), entrepreneurship, and commitment, among others.

For Paper II, which is a single case study of Retailer A, data that were sorted according to the main categories in the interview guide were revisited and analyzed at another stage wherein segments of data were sorted in initial codes, keeping in mind to have it open-ended, but still acknowledging that we as researchers might hold prior ideas and skills (Glaser, 1978). Segment lengths of several sentences were coded usually into one code. Codes that were generated from the data were then reviewed according to relevance, and shortlisted codes were clustered in higher-level codes. These were then clustered and reduced even further by conceptualizing into higher-level categories (or omitted from the study, if not found relevant), which ultimately were all connected to several main themes related to the concept of organizational ambidexterity, including structural and contextual ambidexterity, and differentiation and integration mechanisms. Throughout this abductive process, the emerging themes and patterns were being compared with literature iteratively to see how the findings correspond with earlier premises. Thus, it was ultimately a balanced and iterative process of again letting the data speak for itself but also looking at how it relates with previously established knowledge in innovation management literature.

To reiterate, the results of these qualitative interviews contribute to Papers I and II. Paper I is a more focused account of the organizational climate in particular for Retailers

A, B, and C (including the survey study below). Paper II, meanwhile, is an in-depth single case study of Retailer A and its efforts towards organizing for innovation, analyzed from an ambidexterity perspective.

Quantitative data collection and analysis

The quantitative data for the survey study was collected and analyzed during the first half of 2017. The survey, based on Ekvall's work (1996), was used for measuring and evaluating the organizational climate for innovation and creativity in Retailers A, B and C. Appendix C shows details of the survey respondents. The survey consists of 50 items, 5 for each of the 10 climate dimensions that Ekvall proposes. The aggregated or mean climate score of the organizational members' ratings constitute a valid and reliable measure of the situational variation in climate terms between organizations (Ekvall, 1996).

Essentially, the mean values are computed for the climate dimensions for each organization and are compared with established benchmark values for "innovative" and "stagnated" organizations. To better compare the organizational climate of the retail organizations to the benchmark values, profile deviation scores were calculated (see, e.g. Venkatraman 1990; Drazin and Van de Ven 1985) which measure the degree of adherence to an externally specified profile, which in this case are the innovative and stagnated profiles. The greater the deviation in co-alignment (i.e. misalignment) from the innovative profile, the less innovative the climate; conversely, the greater the deviation from the stagnated profile, the more innovative the climate.

The results of the survey study contributes to Paper I, which also explains in more detail the data analysis procedure.

Study 2: Second research project (2019-2021)

The second study is a research project that was also funded by Vinnova, essentially a continuation of our initial investigation of innovation in retail organizations from the first study. The second research project was carried out from October 2019 to October 2021, involving Retailers A (Grocery retailer) and D (Furniture retailer) which were also part of the first study, and an additional retailer, Retailer E (Convenience retailer). Retailers B and C did not participate in the second study. Qualitative data was collected through interviews, observations, and documents from November 2019 until June 2021.

The project team includes the same researchers from the previous project, but with varying degrees of involvement of the four other researchers. In this project I had greater contribution in running the research study overall, being in charge of data collection (e.g., conducting all 65 interviews and participating in all meetings, workshops, site

visits), analysis, and writeup of the results (Papers III and IV). Details of data collection for Study 2 can be found in Table 3.

Table 3. Data collection for Study 2

Retailer	Interviews (semi-structured)	Unstructured interviews	Participant observations	Documents	Paper
RETAILER A (Grocery retailer)	15 interviews (5 respondents) February 2020- June 2021	3 meetings December 2019, June 2020, March 2021	9 workshops 1 site visit February 2020- February 2021	Internal and public documents	3 and 4
RETAILER D (Furniture retailer)	19 interviews (12 respondents) January 2020- April 2021	4 meetings November 2019, June, December 2020	3 site visits November 2019- February 2020	Internal and public documents	3 and 4
RETAILER E (Convenience retailer)	31 interviews (20 respondents) January 2020- April 2021	9 meetings November 2019- May 2021	5 site visits January, February, September 2020	Internal and public documents	3 and 4
Total	N=65 interviews (37 respondents)				

Qualitative data collection and analysis (to revise)

Data collection was done over a period of 19 months, from November 2019 until June 2021. Employing a multiple case study methodology, multiple data sources were used from semi-structured interviews, participant observations, unstructured interviews during meetings, as well as internal and public documents. The interviews, meetings and workshops involved managers directly linked to innovation initiatives that I was following in the case companies, as well as other internal stakeholders that were connected to these initiatives (see Appendix D for details). Interview sessions lasted from 1 to 1.5 hours and were recorded and transcribed accordingly, with approval of the respondents. The semi-structured interviews were based on an interview structure that addressed key topics of the research (see Appendix E). It should be noted that the interviews were considered as the main source of data in the study. However, field notes were also taken during meetings, workshops, and site visits to include our observations, reflections, and more subjective interpretations. These, as well as the internal and public documents, were used as supplementary information to help build the case studies and for triangulation purposes.

As a whole, the data analysis involved a process of “systematic combining” or an abductive approach to case study research (Dubois and Gadde, 2002), following

thematic analysis (Braun and Clarke, 2006) as a qualitative analytic method. This entails looking at what the empirical data is saying, creating themes that are seen to best represent the data, looking at the connection and relationships between the themes (e.g., by clustering related themes, conceptualizing a cluster, and seeing how they relate to others), eventually deriving patterns on the basis of the available material and using these to structure the comprehensive case studies.

During the first stage, familiarizing myself with the data required reading and re-reading the transcriptions of interviews and field notes, noting down initial ideas in memos. An open coding process was performed for each transcript, using software (ATLAS.ti) during initial coding to improve traceability and transparency, resulting in a set of first-order codes which were ranked in frequency and relevance. The next step involved sorting and synthesizing the data wherein challenges and enablers of innovation inside each retail case emerged and were further developed as initial categories. Inspired by Strauss and Corbin's (1998) suggestions on axial coding, categories were reduced to a manageable size, developed and related based on similarities and differences found between them. Building upon this, I proceeded to a more theoretically driven stage. This form of thematic analysis tends to provide less a rich description of the data and more of focused analysis on some aspects of the data (Braun and Clarke, 2006). I explored various literature streams including dynamic capabilities, innovation capabilities, organizational ambidexterity and paradox perspectives, organizational determinants for innovation, and management control systems for innovation. These were used to analyze whether emerging themes in the data suggested concepts that help describe or explain the phenomena being investigated. At this stage, the analysis process was documented using memos in combination with manually-sketched thematic maps.

This abductive process revealed several insights. First, opposing dualities were recurring in the data in relation to the organizational efforts to enable innovation. Second, the retail cases were implementing various types of organizational mechanisms and undergoing different stages of transformation. Because of the amount of data that I had, and the various emerging concepts in the study, this resulted to separating the process into two directions which were done in parallel, and still involving an abductive journey. I iterated between the cases and the emergent concepts and then weaved in relevant literature, focusing on certain theoretical realms. To illustrate, an example of the data structure that emerged from the data analysis process is shown below:

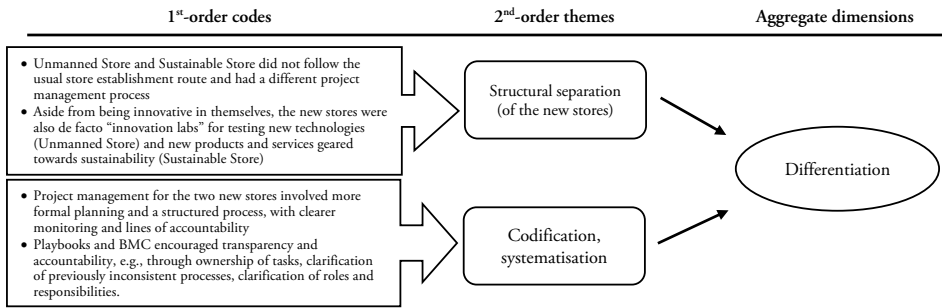


Figure 3. Example of data structure

For Paper III, focus was placed on part of the results that revealed the challenges of innovation management in organizations, using a theoretical lens of exploration-exploitation paradox in order to explain it in terms of tensions that need to be reconciled. For Paper IV, I focused on the part of the data that covered themes on control mechanisms related to performance measurement.

Reflections on research quality

As a research journey that utilized different research methods, which at most times involved co-authors or colleagues in the research project, there were certain guidelines that needed to be adhered to in order to address concerns on research quality. During the writeup of my results, whether it was for the appended papers or for this thesis compilation, I find that because my research is predominantly qualitative in nature, using case study methodology for the most part, reflecting and reporting on research quality proved to be a challenging task. The traditional dominance of quantitative research over qualitative research has led to a particular approach and terminology on how research “should be” conducted. I admit that there were times of confusion surrounding the debate on concepts such as validity, reliability, trustworthiness, and qualitative rigor. However, I also now have a better acknowledgment that reliability and validity are not simply declared by researchers themselves or awarded by reviewers, but rather, these are built into the process of inquiry (Meadows and Morse, 2001). Thus, in this section I describe the strategies that I (and research collaborators) tried to adhere to throughout the research journey.

Several of the strategies suggested by Creswell (2009) were followed for promoting validity. One is through member checking, or taking specific descriptions and themes

back to participants for verification. As Gioia *et al.* (2012) suggest, qualitative rigor is enhanced when efforts are made to “give voice to the informants in the early stages of data gathering and analysis and also to represent their voices prominently in the reporting of the research, which creates rich opportunities for discovery of new concepts rather than affirmation of existing concepts.” In both studies, feedback sessions with representatives of the retail companies were done not just at the early stages but in different phases of data collection and analysis.

Spending prolonged time in the field is another strategy for validity. While it is unclear to me how long one should *really* spend collecting and analyzing data, and when one truly reaches “saturation,” I believe that throughout the duration of my PhD studies I have sufficiently collected enough information needed from multiple respondents across the retail organizations to produce the work required for this dissertation, given the constraints and framework of the research project. It is said that the more experience that the researcher has with their subject in their settings, the more valid the findings will be. To this, I have to also acknowledge that the COVID pandemic certainly affected the data collection process in the sense that physical presence and actual immersion in the case companies was not allowed from 2020-2021, thus participant observations from site visits were not conducted as much as I initially planned. Nonetheless, like the rest of the world, I had to make do with the tools available at the moment and conduct all my data collection online. And as a whole, I still believe that the total data that I have managed to collect was sufficient to progress with the research journey.

Yin’s (2014) suggestion of using documentation of procedures of the studies with different companies was followed to promote reliability, and as many steps of the procedures as possible were used. Because I was responsible for most of the data collection and analysis, I needed to make sure that, as much as possible, the approach was consistent across the different retail cases. Interview guides were used, although I provided room for flexibility as the case requires and as the process evolved. Data and documentation on the different cases were always available and transparent to the other members of the project team in a shared database, for continuous cross-checking and comparison. Also, regular documented meetings and discussion sessions were held to coordinate the data analysis process.

Peer debriefing was performed on a continuous basis during data collection and analysis. This was done by having a reference group in the project team (not involved in data collection) to review the data and the research process, with the purpose of not only providing support and direction but also raising questions and challenging my assumptions as the principal researcher. Case descriptions and initial analysis in unpublished working documents were also presented in several internal seminars involving other academic colleagues in order to obtain feedback that can be used to improve the analysis and writeup of results findings.

Finally, peer review from journal reviewers were helpful in ensuring that the text in three out of the four appended papers evolved and improved. While one has been published already, two are still under the review process, and the final paper has just been submitted. Having external reviewers evaluate the papers and give constructive comments is the last, if not most important part in checking that the final output of the research journey exhibits meaningful coherence, resonates with the reader, and offers a significant contribution to theory and practice.

Reflections on ethical considerations

In line with ethical principles of scientific research, the privacy of research subjects was protected throughout both research studies. The quantitative survey data and qualitative interviews were conducted with the condition of anonymity of the respondents. For the quantitative survey study, there was one intermediary in each retail company who was tasked to send out and collect the surveys on behalf of the research project team. Personal data was not collected and processed. Consent was informed, voluntary, and explicit. All participants received information about the nature of the research project, its background and research aims, the other partners involved, as well as the funding body. They were also informed on how the collected data is protected. Only members of the research team had access to the data and other documents in our research project database.

Aside from interviews, participant observations were also done in the case studies, both on-site and in Zoom or Teams when meetings were conducted digitally during the pandemic. When I conducted site visits to the retail companies' offices, or when I conducted participant observation in various meetings and workshops whether physical or online, all participants were made aware at the beginning that I am a doctoral student conducting a research study involving their companies.

Both studies were research projects with external funding. As such, maintaining communication with the funding body of both research projects (Vinnova) and performing due diligence in terms of reporting and other deliverables was also done. As participants in the project, representatives of the retail cases sign a participant approval form that express their commitment to the terms and conditions included in being industry partners in the research project.

Conducting research with retail companies that were considered as competitors presents some ethical concerns. The research project team (including me) took measures to not share specific information across retail companies unless it was sanctioned, for instance in joint meetings involving more than one company. For Study 1, the data collection part of the research was a more distributed endeavor wherein the

research project team members (who are also my co-authors in the appended papers) participated.

Finally, research findings are made available to the general public in various forms. The appended papers, while only 1 is published thus far, and the rest are in various stages of the publication pipeline, are (or will be) published as open-access papers. Given that all publications are multiple-author papers, authorship credit was made based on substantial contribution to each research publication.

Reflecting on power balance in managerial research, it is often that research ethics principles lean towards protection of the research subject; however, it should also be noted that in research involving private corporations, especially with people in positions of management, power is normally situated more towards the research subjects than the academic. In my case, I am also a novice researcher, and non-Swedish. While confidentiality agreements, e.g., in terms of NDA, are there to protect the industry partners, some management researchers (e.g., Bell and Bryman, 2007) also raise the issue of if and how this common practice can inevitably undermine the purpose of conducting scientific research. In retail where secrecy of internal activities is especially a common practice of enabling competitive advantage, this is understandable. Although the investigation of innovation management practices inside organizations does not touch upon particularly sensitive topics, confidentiality agreements can still raise some challenges, for instance in terms of what results can be published or not.

Limitations of the research

Given the research approach used in the different papers, and the philosophical underpinnings of the doctoral dissertation as a whole, generalizability limitations exist and caution should be taken in applying the findings to other types of retail organizations and contexts. In this dissertation, I answered my research questions with data collected from four established retail players, and one newer e-retailer, all based in a mature economy (Sweden). However, retail is an incredibly wide and diverse industry. Many other types of retail actors and settings are not represented in my research of retail organizations, such as (but not limited to) other retail subsectors (e.g., discount stores, department stores, electronics and appliances, clothing and accessories, sporting goods), small and medium-scale retailers, retail in emerging markets other geographical contexts, and even more examples of online retailers. The companies that agreed to be a part of this research, Retailers A to E, are not representative of Swedish retail as a whole. Although as much as possible, the retailers chosen for the empirical studies have different company size, maturity, ownership structure, and market shares, even though some may overlap in certain product categories. However, for the purpose of this thesis, the retailers selected proved to be a good starting point to answer the research questions.

Moreover, although we try to represent at least a few types of retail companies, due to non-disclosure issues as mentioned previously, the dissertation cannot present detailed information on the identity of these retailers. Also, more detailed information on the innovation initiatives that were followed in the research beyond the descriptions mentioned in the papers are excluded from the text. This, to a certain degree, inhibits a potentially more descriptive and nuanced discussion of the results of the studies.

Summary of appended papers

This chapter presents a summary of the four appended papers, which all contribute to answering the research questions presented in the Introduction chapter and to the overall purpose of the dissertation.

Overview

A summary of the four appended papers is shown in Table 4, presenting their individual research aims, methods, key results, and how each paper contributes to the thesis research questions. Papers I and II contain research findings from the first study and build on data from Retailers A, B, and C (grocery retailers and drugstore e-retailer) while Papers III and IV contain research findings from the second study and build on data from Retailers A (grocery retailer), D (furniture retailer), and E (convenience retailer). The papers are discussed in more detail in the next sections, while a synthesizing discussion is presented in the following chapter.

Table 4. Overview of appended papers

Paper	Specific research aims	Methods	Key results and contribution to the thesis research questions: RQ 1: What are the challenges faced in developing innovation capability in retail firms? RQ 2: How can retail firms develop a systematic and sustained approach to innovation through management practices and mechanisms?
PAPER I	To evaluate the organizational climate for innovation and creativity in retail firms.	Mixed methods (survey and interviews)	<ul style="list-style-type: none">• All retailers in the study had organizational climates that lean more towards innovative than stagnated regarding certain climate dimensions. Risk-taking is a value that scored low in the organizational climate of traditional retailers, unlike in the newer e-retail company. While results show that innovative behavior exists in retail, innovation support is lacking, e.g., innovation structures and systems.• The paper contributes to RQ1 by showing that although the survey study shows that climate appears to be more innovative than stagnated, innovativeness is mainly geared towards incremental innovation, and values that are related to radical innovation such as risk taking are perceived to be weak in the traditional retailers. Moreover, retailers still struggle to incorporate innovation on a strategic level and there is an acknowledged need for greater innovation support and structure.• The paper contributes to RQ2 by demonstrating organizational climate as a mechanism that can play a key role in developing innovation capability in retail.
PAPER II	To explore how an incumbent retail firm can organize for innovation from an ambidexterity perspective	Qualitative, single case study	<ul style="list-style-type: none">• Given the inherently limited formalization of innovation processes in most retail organizations, structural ambidexterity is needed when the aim is radical, strategic retail innovation. Structural mechanisms can safeguard the space and resources to focus on long-term research and projects with higher risk and uncertainty, although integration mechanisms that couple the innovation activities to the main retail organization are essential. Pursuing contextual ambidexterity, wherein employees are empowered to divide their time between innovation-related and efficiency-related tasks, would more likely lead to retail innovations that are incremental and operational.• The paper contributes to RQ1 by showing that differentiated structures for innovation brings forward opportunities but also new challenges emerging from separating innovation from the main organization, such as the need for various integration mechanisms as well as finding the appropriate metrics for radical innovation.• The paper contributes to RQ2 by showing how structural mechanisms that safeguard the space and resources for explorative innovation to thrive can contribute to a systematic and sustained approach to innovation.

Paper	Specific research aims	Methods	Key results and contribution to the thesis research questions: RQ 1 : What are the challenges faced in developing innovation capability in retail firms? RQ 2: How can retail firms develop a systematic and sustained approach to innovation through management practices and mechanisms?
PAPER III	To explore tensions that emerge when pursuing exploration in an organization characterised by exploitation, and how these are managed	Qualitative, multiple case study	<ul style="list-style-type: none"> The paper reveals underlying organizational tensions as large, established retailers pursue exploration in an exploitative context. These are tensions related to strategic intent (profit vs. impact), culture (predictability vs risk-taking), and structure (ad hoc vs formal). These are perceived and managed as paradoxes due to the need to balance the opposing poles. Managing these tensions require various differentiation and integration mechanisms in the organization. The paper contributes to RQ1 by explicating the challenges to innovation capability building in the form of organizational tensions related to strategic intent, culture, and structure. The paper contributes to RQ2 by demonstrating how incumbent retailers are establishing differentiated mechanisms for innovation through structural separation and systematization of innovation, which need to be complemented with formal and non-formal integration mechanisms including interfaces for coordination and collaboration, shared values across the organization, and senior management integration. Large, established retailers are aiming to become more active innovators, adopting a greater control of the innovation process, implementing a variety of financial and non-financial indicators that capture not only innovation output but also the inputs and the process itself. Moreover, innovation projects serve as a vehicle for experimenting and learning about how to better structure innovation efforts. Existing practices on performance measurement may support the development of innovation capability in retail, especially in terms of culture and competence development as well as the opportunity to use external knowledge and engage in open innovation. The paper contributes to RQ1 by demonstrating that difficulties are faced when there is a misalignment between strategic objectives and the performance measurements used across the organization. Teams and projects responsible for innovation struggle in fully enacting their mandate due to existing control systems and metrics (e.g., short-term financial indicators) that are more useful for incremental and operational projects or activities. This suggests that when retailers are pursuing radical innovation that offers a broad, strategic impact, alternative metrics might be more relevant. The paper contributes to RQ2 by emphasizing the need to clarify and communicate the organization's commitment to innovation which ultimately hinges on senior management's vision and strategic mandate, and implementation of holistic managerial control systems including performance measurements that contribute to the development of innovation capability.
PAPER IV	To explore how retailers currently measure innovation and the key issues faced in the use of innovation measurement	Qualitative, multiple case study	

Paper I: Organizational climate for innovation and creativity: a study in Swedish retail organizations

The purpose of this paper (Olsson *et al.*, 2019) was to explore retailers' innovativeness in terms of evaluating how organizational climate for innovation and creativity plays a role in these retail organizations. Extant research has reported on the importance of organizational climate on influencing creativity and innovation (e.g. Amabile and Gryskiewicz 1989; West 2002). Generally, a climate that is supportive of innovation is conducive of organization-level innovation (Jung *et al.*, 2008; Patterson *et al.*, 2005).

A mixed methods study was conducted through surveys and interviews in three Swedish retail organizations. Two of the retail firms (Retailers A and B) represent traditional retail in an established market with long traditions, where online channels were introduced only quite recently, and are larger, more established companies. A third retailer (Retailer C) is a newer retailer, built up solely on an e-commerce channel.

The survey instrument used is an established organizational climate survey by Ekvall (1996), which measures shared perceptions on the ten dimensions of the organizational climate (*challenge* or *motivation*, *freedom*, *idea support*, *trust* or *openness*, *dynamism*, *humor*, *debates*, *conflicts*, *risk-taking*, and *time slack*) and are compared to benchmark values for “innovative” and “stagnated” organizations. The semi-structured interviews, meanwhile, covered not only the organizational climate but also the other aspects of innovation management within the organization, such as the innovation process, vision and strategic leadership, if and how the company organizes innovation activities, use of external networks and linkages, and how these all relate to value creation for customers.

The paper shows that all the retailers score positively on having an organizational climate for innovation, at least regarding most dimensions of Ekvall's survey. The *conflict* scores are even better than the innovative curve for all studied organizations, while the *debate* scores are near the innovative score. This could suggest that the organizations put less efforts into personal tensions and emotions, in contrast to encounters between viewpoints and ideas (Ekvall, 1996), which in turn is associated with a good environment for idea generation and development. The retailers score differently in the overall innovation climate and also within the ten dimensions, but in general, the findings demonstrate that prerequisites for innovation exist to some degree and that innovation-related behavior and activity is not missing.

Although the ten dimensions affect each other and contribute to an overall organizational climate, certain dimensions (namely, *debates*, *risk-taking*, *idea support* and *idea time*) are more connected to innovation (Ekvall, 1996). Moreover, the dimensions of *debates*, *risk-taking*, *dynamism*, and *freedom* seem to be crucial in supporting radical rather than incremental innovation. All the organizations scored higher than the stagnated values for the dimensions mentioned, although in varying

degrees. However, looking at the qualitative data, it appears that generally the organizational climate seems to relate more towards incremental rather than radical innovation efforts. Moreover, formal support for innovation is said to be lacking in all three retail companies.

The qualitative and quantitative data are not clearly correlated for retailers A and B in every aspect of the innovation climate because respondents had mixed responses regarding most of the climate dimensions, such as *conflict*, *challenge*, *debates*, *freedom*, and *trust*. However, it was evident that *risk-taking* was perceived to be something that is lacking in the two traditional retailers. Only C—which is the newest and least traditional retailer among the three, and also the only purely e-retail company—scores high on all dimensions (with the exception of *freedom*). It should be noted that C is a relatively young and lean organization and the founder-entrepreneur still leads the company. Also, C still benefits from its original innovative business model, one that helped changed the retail landscape in their specific category (pharmacy)—and they are the most “startup-like” among the four companies.

The paper concludes with a recommendation that retailers could benefit from challenging their current innovation practices by moving towards becoming more active and systematic innovators, since the creative climate—to a certain extent—seems to allow for it. Some respondents reflect on how the industry status quo of retailers being “reactive” in general might not be sufficient anymore, especially as the new challenges that digitalization brings might require a different approach, especially from traditional retailers. Moreover, all the respondents express the need for stronger innovation support, whether it be through integrated or formalized structures and processes, or an improvement in the current conditions of the organizational climate. Especially with the more traditional, established retailers, the findings imply that much work needs to be done.

This paper’s theoretical contribution is an increased understanding of retail innovation management with a focus on the organizational climate for innovation. Also, the use of the Ekvall climate survey in a retail organization (and complementing it with qualitative interviews to present an in-depth investigation) provides an original contribution to the emerging yet fragmented research area of retail innovation management.

This paper is the published version of an earlier conference paper appended in my licentiate thesis (Paredes, 2018). Compared to the previous version, the paper had major revisions in problematization, presentation of results, and discussion of key findings.

Paper II: Towards retail innovation and ambidexterity: insights from a Swedish retailer

There are few studies that focus on how established retailers can manage the pursuit of innovation while still ensuring efficient execution of their core retail business operations, referred to in research as organizational ambidexterity (e.g., Tushman and O'Reilly, 1996; Raisch and Birkinshaw, 2008). The purpose of this paper (Paredes *et al.*, 2022a) was to explore how an established or incumbent retailer can organize for innovation using an organizational ambidexterity perspective.

A qualitative single-case study was conducted with an incumbent Swedish retail organization (Retailer A, referred to in the paper as “SIRF”). The case company, one of the leading players in Swedish retail, has implemented a series of initiatives that aim to address the more strategic and radical innovation imperative. However, being a large, incumbent retailer, it has faced the well-known dilemma of balancing its dominant characteristics for exploitation (i.e., the on-going business) with its desire to allow for more explorative endeavors (i.e., innovation initiatives). We observed a period of developments wherein these initiatives were implemented: first, a digital marketing program, and later, a corporate “innovation hub.” Data was collected through interviews, participant observations, and internal and public documents. The respondents were individuals in management teams directly linked to these two initiatives.

Like many retailers, the concept of “innovation” had not been commonly used in the case company, while entrepreneurship and continuous improvements were more relatable concepts. However, given the disruptive changes happening in the retail industry as a whole, the company management expressed a need to explore new forms of innovation and business development. In order to address this lack of exploration in the company, the retailer first launched an innovation initiative which focused on digital marketing coupled with the introduction of new, agile ways of working, including innovation toolboxes, hackathons, innovation days, and design sprints. While it was hailed as the “first of its kind” in the company and had ambitious objectives, due to its location in the organizational structure, innovation remained limited within the realm of marketing and IT functions. Eventually, it was ultimately considered as insufficient in fully addressing the need for radical innovation in the company. A corporate “innovation hub” was thus also established, with a different strategic intent (i.e., a broader innovation mandate) and a more separated organizational structure and budget from the main business units. The innovation hub’s activities included research and development projects as well as external partnerships and investments.

These two initiatives represent contextual and structural mechanisms that were implemented to enable more exploration by an organization that has been inherently exploitative in the past. The findings suggest that contextual ambidexterity would more likely lead to incremental, operational retail innovation, while structural ambidexterity would more likely lead to radical, strategic retail innovation.

The first initiative demonstrates the retailer's attempt towards contextual ambidexterity given its ambitious innovation goals and the introduction of experimental and innovative ways of working through agile methods. Exploration-oriented activities were not assigned to a different unit but rather integrated with exploitation-oriented activities under the existing functions of marketing and IT. However, this also became a constraint and led to a limited innovation focus, having defined the boundary of projects within digital marketing. Regardless of application area, i.e., whether the projects were customer-related, support-related, or organizational-related, the innovations here were more operational than strategic in terms of impact.

Given the inherently limited formalization of innovation processes in most retail organisations, organizing for structural ambidexterity was needed when the aim was radical, strategic retail innovation. Structural differentiation, through the creation of innovation hub was important because without an independent function purely responsible for long-term innovation work, it was too difficult for the incumbent retailer to escape the inertia of existing business units towards efficiency. However, finding the appropriate distance and balance was an important issue, and the paper demonstrates the critical role of integration at various levels. Informal and formal integrative mechanisms (Jansen *et al.*, 2009) helped ensure that the innovation hub's work would not remain isolated from the main organization. Finding relevant innovation metrics for radical innovation—that could serve an integrative purpose—proved to be one of the ongoing challenges. Finally, clear sponsorship of the innovation hub on senior management level signified higher level integration, but also an ambidextrous vision and strategic intent is ultimately essential.

This paper demonstrates that while the strategic management of innovation might not have had a clear relevance in retail in the past, this is changing as demonstrated by the establishment of Retailer A's innovation initiatives. The paper adds evidence to the emerging topic of strategic management of innovation in retailing, explicating how retailers can organize for innovation depending on the type of innovation that is aimed for, using organizational ambidexterity as a new perspective.

Paper III: Towards innovation capability in retail services: managing the tensions of exploration and exploitation

As retail transformation is accelerated by various external forces, including digitalization's effect on the erosion of institutional retailing (Reinartz *et al.*, 2019), current ways of innovating may not be sufficient for sustained competitive advantage and "innovation beyond the steady state" (Bessant *et al.*, 2005) is what retailers need to be equipped for. Engaging in both incremental and radical innovation has been shown to be necessary for the long-term success of firms, that is, having the capability to create gradually improved exploitative innovations while also exploring new opportunities to create breakthrough innovations (Lin *et al.*, 2013; Gibson and Birkinshaw, 2004; He and Wong, 2004). However, despite the growing acknowledgment of the importance of innovation in retail, there is insufficient knowledge on how retailers can perform it successfully. Organizational barriers to innovation is a substantial yet under-researched topic (Reynolds and Hristov, 2009). Paper III (Paredes *et al.*, 2022b) addresses this research gap by investigating the tensions that emerge as retailers pursue innovation and how these are managed.

Using the theoretical lens of the exploitation-exploration paradox, the study looks into how mature retailers pursue exploration in an organizational context otherwise characterized by exploitation, the tensions that emerge, and how these are managed. The paper uses a multiple case study approach with three large retailers in Sweden (Retailers A, D, E – or "GR," "HR," and "CR" in the paper, respectively) that have established various innovative initiatives that are new to their organization. Qualitative data was collected using semi-structured interviews, participant observations, and public and internal documents, which were analyzed in an iterative, abductive process using thematic analysis techniques. Within-case analysis was followed by a cross-case search for differences and similarities of patterns across the cases.

Paper III demonstrates that despite a growing acknowledgment of the importance of innovation as a source of competitive advantage, it is still challenging for retailers to enable exploration along with exploitation inside their organizations due to inherent tensions that emerge from this pursuit. The findings reveal that challenges in managing innovation in retail organizations can be distilled into three types of tensions: *profit versus impact*, *predictability versus risk-taking*, and *ad hoc versus formal*. These complex tensions are considered as paradoxes because study respondents tend to describe the need to balance these enduring, opposing poles instead of making a choice between them, reflecting on the complementary nature of the opposing sides, i.e., interwoven and synergistic as opposed to simply being either/or dilemmas (Smith and Lewis, 2011; Andriopoulos and Lewis, 2009).

The first tension of *profit versus impact* relates to tensions around strategic intent. While short-term profit is essentially what keeps the retail business running, the impact (besides tangible output) of strategic innovations and its contribution to long-term growth were acknowledged to be necessary, reflecting a paradoxical link. The impact particularly refers to the non-financial effects of innovation in terms of increasing brand loyalty and customer value through sustainable retail practices. Sustainability was considered as a major driver of innovation in all the cases; however, it was difficult to reconcile a sustainable vision with short-term financial objectives in retail.

The second tension of *predictability versus risk-taking* relates to tensions around organizational culture or climate, particularly behaviors and perceptions towards uncertainty and change. A culture of predictability and efficiency in these established retailers is a result of typical practices of streamlining business processes, which characterize most organizations, not least in retail. While retailers may have certain elements of an organizational climate that enables innovation and creativity as discussed in Paper I, this seems to relate more towards short-term perspectives with less unknown outcomes. A paradox exists because there is an acknowledgment of the role that risk-taking plays in exploring new opportunities for growth, however operating in an organizational context wherein uncertainties and inefficiencies are minimized is still the status quo.

The final tension, *ad hoc versus formal*, relates to the tensions around structure and control. Given retailers' proximity to the end customer, they are more able to be adaptable and flexible when innovating on a continuous yet ad hoc basis. However, tensions emerge when retailers attempt to actively pursue more ambitious and explorative activities as these types of innovation involve greater resources and require more collaborative ways of working, causing a shift towards clearer, and often formal, lines of accountability. Among the three, this tension could be the most unique to retail because unlike other industrial contexts, in retailing, formalization appears to be a much needed means of enabling innovation as it leads to transparency, accountability, and clarity with regards to innovation activities in an organizational context that is otherwise characterized by loose, flexible, ad hoc activity.

Retailers aiming to increase explorative, innovative activity are challenging existing ways of working and adopting greater structure and active management of the innovation process in order to facilitate clearer, strategic focus of their innovation effort, unlike other industries with firms that struggle the other way around, i.e., moving from highly controlled to flexible and adaptable in order to be innovative. However, while flexibility and adaptability are essential for creative problem solving and innovation, these should not come at the expense of monitoring and feedback mechanisms that capture lessons from both successful and unsuccessful innovation efforts. Retailers therefore need to navigate between formalization and control of innovation work and

the inherent nature of adaptability and ad hoc activity of retail operations, showing that “disciplined experimentation is a balancing act” (Pisano, 2019).

The findings reveal that managing these three sets of underlying tensions as paradoxical practices requires a combination of differentiation and integration mechanisms. Differentiation is pursued through structural factors, e.g., structural separation of innovation work, but also through systematization of the innovation process, e.g., codification of processes, tools and tasks. Contrary to previous research on the lack of innovation-related structures and processes in retail organizations, it is evident that retailers are actively organizing for innovation through differentiated mechanisms that safeguard the space and resources to carry out explorative activity, adopting a greater structure and control of innovation.

Paper III also confirms previous extant research which shows that differentiation mechanisms that encourage structure and control are complemented by integrative mechanisms of mostly social and cultural nature in order to balance the tensions. Integration of the differentiated structures, activities and strategic agendas is crucial at senior management level, but beyond this, other social and cultural factors are needed to facilitate integration, including formal and informal coordination and collaboration mechanisms, as well as the importance of shared corporate values such as trust, communication, and entrepreneurialism. These factors are mechanisms that make the work of managing innovation paradoxes not just senior management’s concern but a shared responsibility across the organization.

Paper IV: Exploring the use of innovation measurement in retail organizations: a multiple case study

Research on innovation measurement has been biased towards manufacturing industries, although there is an increasing shift towards looking into service industries (Dzillas and Blind, 2019). Nonetheless, retail-specific innovation performance measurement remains notably under-researched (Wood *et al.*, 2008; Hristov and Reynolds, 2015). A reason for this is that the definition and measurement of innovation in retailing proves to be a challenging task due to the complex and hybrid nature in this sector (Hristov and Reynolds, 2015).

Given the increasing importance of innovation management in retailing, there is a need to address the knowledge gap regarding the use of performance measurement for innovation in retail organizations. The purpose of Paper IV (Paredes *et al.*, 2022c) is therefore to explore how retail organizations currently measure innovation and the key issues faced in the implementation of innovation measurement.

Due to the explorative nature of the research aim, and the novelty of the topic of retail innovation measurement research, a multiple case study methodology was used with three established retailers in Sweden (Retailers A, D, E – or “GR,” “HR,” and “CR” in the paper, respectively). Semi-structured interviews were conducted with managers and employees directly involved in innovative activities and projects, as well as related internal stakeholders. Moreover, participant observations, and internal and public documents were also utilized in data collection. While most of the case study interviews were based on a loose interview guide that addressed key topics of the research, I also provided during the final stage of data collection a checklist of innovation measurements (see Table 3, Paper IV) to provide further structure to the interviews. Similar to Paper III, the qualitative case data was analyzed in an iterative, abductive process using thematic analysis techniques. Within-case analysis was followed by a cross-case search for differences and similarities of patterns across the cases.

Confirming extant research by Hristov and Reynolds (2015), financial indicators used by retail companies in this study were mostly related to rate of return measures, profit margins, and sales and market shares attributed to innovations. Financial effectiveness at project level is also measured (e.g., project cost vs budget). Non-financial indicators were also used, both at the strategic level and project level. At the project level, all retailers monitor customer insights and emphasize its importance; however, beyond this, there was more variation between retailers regarding other project -level indicators. This could be due to the differences in the type of retail innovation projects that were followed across the cases, which would require different types of project metrics.

The paper highlights several key themes in retail organizations’ use of performance measurement for innovation. First, as retailers aim to become more active innovators

and develop new retail offers beyond continuous, operational developments, there is a conscious shift internally in these organization towards greater structure and control, which demonstrates a development from previous retail literature (Sundström and Radon, 2014; Schaffers *et al.*, 2011; Reynolds *et al.*, 2007). They were involved in various degrees of codification of processes related to development and innovation, establishing clearer working methods, roles and responsibilities, and implementation of performance indicators that not just measure the output but assess the inputs and the innovation process itself. Second, it is predominantly the innovative projects that serve as the driver for developing a greater structure of the innovation process through identification of needed control mechanisms such as innovation performance measurement. Retailers use innovation projects as the vehicle for experimenting and learning about how to better capture value from the innovation process.

Although the study shows various innovation indicators being used in all the retail cases, the inherent difficulty of measuring innovation in retail was manifested as managers faced challenges in implementation. Challenges are faced when there is a lack of alignment of metrics with the company's strategic objectives, such as when sustainability is established as a key driver for innovation but is not supported by the current system of performance measurement, including instances when inconsistencies in targets exist. Teams and projects with an official mandate for innovation feel held back in their mission due to existing control systems especially in relation to established financial goals. While non-financial metrics that capture other types of value are used to some extent, short-term profitability is still of utmost importance. The findings suggest that when retailers pursue radical innovation of a broader strategic impact that encompass multiple application areas (e.g., innovative store formats), it is insufficient to rely on established metrics that are used in projects that are more incremental and operational in nature. Moreover, the paper suggests that these indicators can be reviewed at both strategic and project levels to assure a clear understanding of the innovation strategy and that compatible metrics reinforce the strategy—not least given the nature of the sector where using metrics and analytics to drive profitability and growth is not unfamiliar. Retailers can benefit from assessing the innovation portfolio balance as well as considering measures for willingness to invest in innovation, which are important indicators for organizations that have the strategic intent to become more innovative.

The paper shows that existing practices on performance measurement may support the development of innovation capability, especially in terms of culture and competence development as well as the opportunity to use external knowledge and engage in open innovation. We observed various forms of partnerships with external actors such as sustainability-related and technology-related start-ups, incubators and innovation platforms, in addition to retail's established proximity to end consumers, proving retailers' position as potential "innovation hub" in the value chain (Sundström and

Radon, 2014; Hristov, 2007). The continuous use of qualitative, non-financial metrics related to culture, leadership, and employee well-being and satisfaction (e.g., through employee surveys), as well as access to diverse sources of innovation input—including market research and customer related measures, external networks and collaborations—indicate that dimensions of innovation capability exist and can be further strengthened.

Finally, Paper IV highlights the critical role of senior management in ensuring a holistic approach to innovation performance measurement, and innovation management overall. Ultimately, they are responsible in the strategic integration of performance measurement on all levels, assuring consistency and compatibility of metrics used across the organization. As large retailers attempt to become mature, strategic, and systematic innovators, there is a need to clarify and communicate the organization's commitment to innovation which ultimately hinges on management's vision and strategic mandate and implementation of holistic managerial control systems, including aligned performance measurements that contribute to the development of innovation capability.

The paper contributes to theory by building on very limited extant research on innovation measurement in retailing, increasing our understanding of the nature of innovation efforts in large retail companies through the analysis of attempts to monitor and measure innovation performance. By doing so it provides a contemporary understanding of the growing phenomenon of strategic innovation management in retail firms, signifying a shift from previous understandings of how retailers innovate.

Discussion and contribution

In the first chapter, the overall research purpose of the dissertation was introduced, which was to explore how large, established retailers (incumbents) can develop innovation capability. The following research questions were thus presented:

- RQ 1: What are the challenges faced in developing innovation capability in retail organizations?
- RQ 2: How can retail organizations develop a systematic and sustained approach to innovation through management practices and mechanisms?

In this chapter, I attempt to answer these questions in order to position the results and the overall contributions of my research.

Challenges in developing innovation capability in retail firms

The traditional retailers involved in the thesis have decided to go out of their comfort zone as they carried out projects and initiatives that are supposed to enable more radical and ambitious innovation in the organizations in various ways. Retailer A, in the first study, implemented two initiatives that both had ambitious innovation goals, first a digital marketing innovation project and the second a corporate innovation hub with a more cross-functional, wide-ranging scope for innovation. In the second study, Retailer A also established a new innovation team in charge of radical product innovation for their private-label brands. While Retailer A's efforts toward product innovation might seem not as radical among all the innovation initiatives and projects in terms of impact, internally it was considered ambitious to be completely driven by sustainability in creating new product concepts for their private label. Especially considering that this involved networking and partnering with new forms of external actors—something previously not done at least for their private labels' product development process—as the innovation team was considering various possibilities of promoting more long-term impact in the food value chain. Retailer E, meanwhile, was exploring new services, technologies, and process innovations through the development of two completely new store formats under new brands, an unmanned store and a sustainable store. Although

Retailer E was not the first to establish these store formats in Sweden, both projects represented two of the biggest projects in the company to date and were considered as radical, pioneering efforts in the convenience retail sector. The same was the case for Retailer D which was going through a multi-year transformation towards a new business model, as reflected in their new store expansion program. Moving away from the big-box store format and opening smaller, new concept stores in the city center, the expansion program had significant implications not only on offer/customer-facing aspects of the business but also across operations and supply chain management.

In the case of large, established retail chains that have enjoyed many years of operating within the same business model—such as traditional brick-and-mortar retailing competing on e.g., cost efficiency strategies—the thesis reveals that despite the acknowledgment that more radical and explorative innovation is needed in these types of organizations, it continues to be a difficult undertaking to pursue this work in an organization that has conventional mechanisms in place catering to the delivery of incremental (yet continuous) developments. Overall, the challenge of developing innovation capability in retail stems from the inherent difficulty of aiming to increase exploration work in an organizational context characterized by predominantly exploitation-oriented strategies, culture, structures and systems. When large, established retailers attempt to actively pursue innovation beyond their status quo, there are complex organizational tensions that need to be acknowledged in order for senior management to provide appropriate mechanisms and strategies in addressing them. These tensions are perceived to be paradoxes in practice—retail managers and employees accept the need to balance the opposing sides instead of choosing one or the other.

The thesis demonstrates that robust tensions exist in relation to strategic intent, culture or climate, structure and performance measurement systems. A critical step in institutionalizing innovation lies in the link between vision, strategy, and innovation (Lawson and Samson, 2001). A clear articulation of a common vision and the firm expression of the strategic direction is needed for successful innovation; without this, interest and attention become too dispersed. Wang and Ahmed (2004) provide empirical evidence showing a firm's strategic orientation as a prime factor of innovation capability. Across the retail cases, it was evident that sustainability and digitalization were the most important drivers of innovation efforts—all the traditional retailers essentially have a vision towards customer-centric, sustainable, omnichannel retailing. However, tensions exist because value creation and capture activities in retail are primarily aligned to the profit imperative. It was difficult to reconcile the short-term profit emphasis and the non-tangible impact of radical innovation and its contribution to long-term growth. Although innovation (especially in relation to sustainability) may be claimed to be a strategic priority, evidenced with a formal innovation mandate

enacted by certain people, teams and projects, tensions in relation to contrasting agendas nonetheless become apparent.

Tensions also exist in relation to culture and climate, particularly behaviors and perceptions towards uncertainty and change. Many scholars have stressed the importance of organizational climate on influencing innovation (e.g., Amabile and Gryskiewicz, 1989; West, 2002). Organizational climate refers to recurring patterns of behaviors, attitudes and feelings that characterize life in the organization (Ekvall, 1996). Although respondents acknowledge the role of risk-taking in innovation and exploring new opportunities for growth, there is still a permeating culture of predictability and efficiency in these large, established retail organizations. The thesis demonstrates that certain positive aspects contribute to an innovative climate in all the retail organizations; however, the innovative climate in retail is more geared towards incremental innovation and short-term perspectives. When initiatives that are more explorative than usual—ambitious, less predictable and highly uncertain—are started in these organizations, this is where they are challenged as the existing climate is not adapted to carrying out more radical attempts to innovate.

An important challenge that the retailers faced in this thesis relates to structure and systems of the innovation process. During the earlier part of the research period, respondents were challenged by the lack of such structure and systems. Entrepreneurial employees were reflecting on the lack of formal innovation support. Eventually, the tensions that emerged came from the introduction of structure itself, i.e., the need to balance a new structured approach to innovation with prevailing ad-hoc and flexible ways of working with continuous improvements. Clearly, these large, established retailers are highly capable of incrementally adapting to customer needs; however, when it comes to explorative activities towards radical innovation, these require greater resources as well as collaborative action, which necessitate clearer, and often formal, processes and lines of accountability.

Finally, the measurement of innovation in retailing also continues to be a challenging endeavor. Innovation has a multi-dimensional nature and encompasses multiple performance objectives that require different metrics, a topic that has acquired considerable attention in research (see e.g., Adams *et al.*, 2006; Dewangan and Godse, 2014; Dziallas and Blind, 2019). As the subject of innovation is diverse and deep, its measurement is still clouded with problems, and a technical bias for innovation performance measurement has resulted to limited research on innovation performance measurement in service sectors (Hipp and Grupp, 2005). The thesis is evidence of how retailers face the reality that measuring innovation is a complex undertaking when they start to engage in innovation work beyond incremental developments and continuous improvement. Tensions are faced when there is a misalignment between strategic objectives and the performance measurements used across the organization, especially in relation to innovation efforts. This findings confirm Hristov and Reynolds' (2015)

observation that retail managers often only measure what is easy or conventional to measure arising from innovation, e.g., short-term financial benefits, instead of long-term behavioral or organizational transformation. Teams and projects responsible for innovation struggle to fully enacting their mandate due to existing control systems and metrics (e.g., short-term financial indicators) that are more useful for incremental and operational projects or activities. This implies that when retailers are pursuing radical innovation that offers a broad, strategic impact, alternative metrics might be more relevant.

Developing innovation capability in retail firms is evidently a daunting task and an never-ending journey. The thesis highlights various challenges faced in relation to strategic intent, the organizational culture or climate, structure and performance measurement systems. The next section proposes how these mechanisms are nonetheless what will be essential in developing a systematic and sustained capability for innovation in large, established retail firms.

Building innovation capability in large retail organizations

The importance of organizational climate, structures and systems in developing innovation capability in retail

Organizational climate, or to a broader extent, organizational culture, is especially important as a source of competitive advantage in retail companies as they compete in an industry with a low appropriability regime. An organization's culture is difficult to replicate by competitors, even in retailing where there are high levels of transparency and competitors can essentially be an ideation source. In retail, climate and culture is important in ensuring a constant flow of innovative ideas, as innovation is said to be invariably embedded in cultural norms, beliefs, and values (Hristov and Reynolds, 2015). This dissertation shows that retail organizations, whether established retailers or a newer e-retailer, have organizational climates that tend to be innovative rather than stagnated, generally speaking, which implies the key role that climate can play in developing retail innovation capability. It is important to consider culture as a powerful social control system (O'Reilly and Tushman, 2021). And in the case of retail firms, it is evident that there is already a positive foundation when it comes to organizational climate. The dynamic, fast-paced nature of the retail business provides an environment where employees can generally be empowered in their roles and contribute to the retail function of continuously addressing customer needs.

However, climate is a complex, multidimensional construct, and as the previous section highlighted, a component of climate that is important to exploration and radical

innovation yet is something that retailers seem to struggle with is risk-taking. What retailers could benefit from is for risk-taking, freedom and experimentation to be highlighted in innovation work, i.e., within the boundaries of structures where innovation is encouraged. Managers disposed to risk-taking are more willing to allocate resources or to direct processes toward the development of new products and processes (Garcia-Granero, 2015). It should be noted that risk-taking in terms of appetite for radical innovation does not necessarily have to permeate the entire organization; rather, it should be supported in innovation-related projects and initiatives. Meanwhile, other values such as trust, communication, and entrepreneurialism are important to be fostered across the entire organization, as these have a more integrative purpose and can enable coordination and collaboration between people who work on innovation and those with operational responsibilities.

While organizational climate in retail has a great potential to contribute to innovation capability, the thesis also shows that it is insufficient on its own when the rules of the game are changing and when the organization start to pursue innovations that are more complex, strategic, radical, and new to the firm. This is why across the retail cases, organizational structures and systems for innovation were eventually deemed necessary. Organizational structure refers to the ways in which organizational work is divided into separate tasks, delegated and coordinated towards achieving the organization's goals (Mintzberg, 1983). Lawson and Samson (2001) points out that unless structure and the resulting process are conducive to a favorable environment, other components and managerial levers of innovation are unlikely to succeed. According to O'Connor and DeMartino (2006), if large, established organizations want radical, complex innovation to occur in a sustained manner, there is a need for dedicated organizational structures with the specific purpose of nurturing this activity. Jelinek and Schoonhoven (1993) argue that this type of innovation requires structure and clear reporting relationships to ensure that there is opportunity for both discipline and creativity.

In Retailer A, the first attempt at creating an organizational structure for innovation was through an innovation project tasked to deliver marketing innovations. Although it had ambitious goals in introducing new, experimental ways of working such as agile methods, it was eventually acknowledged to be insufficient in actually pushing the boundaries of innovation in the company having defined the boundary of projects within a narrow scope of marketing and IT. A more explorative iteration for an innovation structure was later pursued with the creation of a corporate innovation hub, a structurally separated team that had a stronger innovation mandate and provided a wider, cross-functional scope for innovation. The innovation hub was in charge of capturing new opportunities for innovation that could have a more radical, strategic impact. Aside from teams or subunits that are structurally separated from the main organization, there were cases where introducing formal structure into innovation

activities came by way of systematizing innovation through codifying and formalizing processes, tools, and tasks related to innovation.

While formalization can be a source of tension in itself, this thesis suggests that in large retail organizations, it can be instrumental in facilitating transparency, accountability, and clarity when it comes to innovation activities in the organizational context that is otherwise characterized by loose, flexible, ad hoc activity. Codified “playbooks” and similar tools, for instance, elucidate the innovation process, gates and milestones and can promote alignment, coordination and collaboration by ensuring a shared ownership of the innovation project or initiative. They also help facilitate a more effective way of utilizing formal cross-functional interfaces. These tools are an example of “knowledge codification” as described by Zollo and Winter (2002). It requires a higher level of cognitive effort—a step beyond “knowledge articulation” or the process of collective discussion and evaluation that articulates implicit knowledge—and is a learning mechanism involved in the creation of dynamic capabilities.

The thesis also demonstrates how retailers, in attempting a more systematic management of the innovation process, are implementing ways of monitoring and measuring innovation work. Traditional thinking about management control systems, was that these were detrimental to innovation, constraining the freedom, creativity, experimentation, and flexibility of developers (Davila *et al.*, 2009). However, the new paradigm is that these systems can play a positive important role in innovation and the management of the innovation process (see e.g., Bedford, 2015; Barros and da Costa, 2019). Performance measurement has positive effects on issues related to the innovation capability and organizations can use the act of measurement to improve their capability to become innovative (see e.g., Saunila and Ukko, 2013). Retailers are implementing a variety of financial and non-financial indicators that capture not just the innovation output but also the inputs and the process itself. As Dougherty (2006) states, “the ends or outcomes of innovation take a long time to be achieved and may change in any case, so innovation cannot be controlled by measuring achievement of objectives alone, especially not in the short-term.” But also, some of retailers’ existing practices on performance measurement can contribute to the development of innovation capability, especially with regards to their continuous use of qualitative, non-financial metrics related to culture, leadership, and employee well-being and satisfaction (e.g., through employee surveys). Nonetheless, this thesis agrees with existing calls in retail research and practice that traditional metrics may not be sufficient anymore in capturing the full picture of a retailer’s performance given how the industry is evolving (Kumar and Venkatesan, 2021; Sides *et al.*, 2019), and thus, as innovation becomes more relevant to established retailers, so does the need to experiment with appropriate metrics and indicators that are aligned with the strategic intent for innovation.

To summarize, the thesis highlights the role that organizational climate, structures and systems play in the journey towards building innovation capability. As retailers take the challenge of systematic innovation management seriously, there is a need to create new structures that support retail’s innovation potential, as well as the need to offset retail’s dominant focus on operational activities using alternative metrics and indicators. Finally, it is important to emphasize the positive aspects of retail’s entrepreneurial DNA while undermining its negative characteristics.

Towards a sustained and systematic approach to innovation in retail

Addressing the overall research purpose, this section synthesizes the key findings of the thesis by discussing how innovation capability—a systematic and sustained approach to innovation—can be built in large retail firms. As this thesis illustrates, large, established retail firms, in aiming to become more innovative organizations, are challenging existing ways of working and adopting a more active stance on the management of innovation. The understanding that innovation capability building requires a holistic approach has long been touted in academic literature; however, how this could look like in the context of retail firms has not yet been well understood previously.

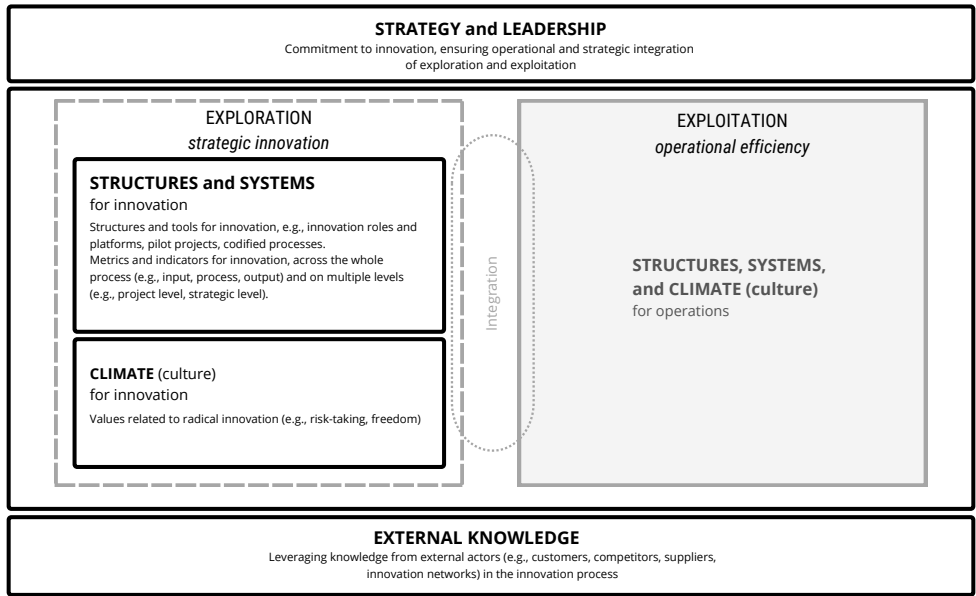


Figure 4. Building innovation capability in retail

The suggested model (Figure 4) represents how developing a sustained and systematic capability for innovation requires a delicate balancing act of strategic innovation work (**exploration**) with mainstream capabilities for operational efficiency (**exploitation**). From a paradox and ambidexterity perspective, a combination of differentiation and integration mechanisms are needed to achieve this balance in relation to the strategic goals of the organization (Koryak *et al.*, 2018; Andriopoulos and Lewis, 2009). In order to enable innovations that are strategic, complex, radical and new to the organization, the work involved must be differentiated from that of ongoing operations, provided that integration is facilitated at operational and strategic levels. The uncertain, risky work involved in the innovation process requires structure and clear reporting relationships but also cannot be expected to thrive in the well-established **structures** and systems for operations (O'Connor, 2008). In addition, there needs to be a way to assess and monitor innovation performance not with existing control systems and metrics for operations but with alternative types of indicators that can capture the new ways in which retailers are starting to innovate. Finally, climate and culture values that are more associated with radical innovation such as risk taking and freedom deserve to be fostered in parts of the organization where exploration is needed, such as in the innovation teams, subunits and projects.

Tether (2013) has stated that there is a need to develop a more detailed understanding of how to formalize the innovation process in different service sectors and contexts and its effectiveness. As the thesis has concluded, in the context of large, established retail organizations, the effect of formal control through structure and measurement systems on innovation is not necessarily negative which resonates with the stream of innovation research (e.g., Damanpour and Aravind, 2012) which suggests that innovation is an intentional, planned, and structured activity; hence, controlling the process—such as with strong performance management systems and structural conditions that support innovation—is important in managing it.

In the case of retail firms that are actively aiming for increased innovativeness, **structures and systems** have great potential in building and developing innovation capability because the organizational **climate** already exhibits trust, openness, and entrepreneurial values. When these values are strongly shared across the retail organization, climate or culture serve as informal social control that complement the formal structures and measurement systems meant to introduce discipline into the creative work of innovation. Adler *et al.* (1999) report that in high-trust organizations, formalized procedures do not have to be imposed on subordinates but can be defined jointly by managers and employees. This was observed to some extent in the retail cases, wherein structures and systems remained flexible and were developed iteratively with employees. For instance, when codified processes and guidelines were treated as interactive, living documents, or experimenting with innovation indicators and re-evaluating whether they were serving their purpose and are still coherent with the

company's strategic direction. Formalization of the work, such as with structures and systems, should not be coercive but rather enabling (Adler and Borys, 1996) when they are mobilized appropriately according to the organizational context.

Learning and experimentation are critical in building innovation capability (O'Connor and DeMartino, 2006; Lynn *et al.*, 1998). The thesis shows evidence of how retailers use the innovation structures (e.g., innovation projects and teams) as a vehicle in itself to drive experimentation and learning about how to get better at working with innovation. In some cases, the new store formats themselves (e.g., Retailer E's unmanned store and sustainability store) serve as "living labs" or test stores where they become a platform to test not only innovation outputs (e.g., new products and services) but also new ways of working with innovation, such as alternative metrics that are not used in their existing stores, or the use of agile project management. Moreover, while innovation structures and systems are relatively new concepts to the retailers I followed, I observed that there was an openness to testing and iteration when it comes to working with these structures and systems for innovation. It implies that a greater attention has been given towards the learning aspect of developing innovation capability.

Strong customer focus coupled with an open innovation approach has been shown to support the development of innovation capability (Samson *et al.*, 2017). Lawson and Samson (2001) suggest organizational intelligence, or learning about customers and competitors, as a key component in building innovation capability. Given the intermediary role of retailers between customers and suppliers, as well as their increasing power and control over the value chain, retailers are in a unique position of having access to diverse sources of **external knowledge**. This denotes that innovation capability in retail organizations can be strengthened if external sources of knowledge are integrated better into the innovation process. This involves not only learning from customers and competitors through market research, which has been commonplace in retail, but is also about leveraging other actors in the retail ecosystem, including logistics, IT, and service partners, as sources of innovation. This research also shows evidence of large retailers engaging in alliances and collaborations with startups in the fields of food, digital technology, and sustainability, as well as academic and research partners, pointing towards a greater adoption of an open innovation approach. Tether and Metcalfe (2004) reflect on how food retailing in particular is an example of how retailers have become orchestrators of diverse forms of knowledge—engineering knowledge, operational knowledge, design and market knowledge, and consumer knowledge—as they become dominant players of global supply chains.

Finally, this thesis demonstrate that if innovation is to be a strategic priority in retail organizations, the importance of strong **leadership** cannot be understated. Senior management is arguably the most influential group in an organization in implementing or preventing innovation since they are the ones in charge of determining strategy and ensuring organizational effectiveness (West and Anderson, 1996). Is there a shared

understanding among everyone in senior management on where to prioritize innovation efforts on, is there a clear vision that involves innovation? It is not just the executive sponsors of innovation projects and innovation structures that need to be onboard. This implies that the concept of retail innovation itself is to be deliberated more on a senior management level to obtain clarity on expectations and make more explicit strategic choices.

Commitment to innovation is communicated across the organization by senior management ensuring the **strategic and operational integration** of these structures, systems, and climate with an ambidextrous vision. When senior management fails to make the entire organization understand that innovation is a shared endeavor, and not just an isolated activity designated to the differentiated innovation teams and subunits, retail's potential for innovation is not maximized. Thus, organizing for innovation with a holistic approach is essential, avoiding a limited perspective of innovativeness, such as when entrepreneurial employees are expected to develop innovative ideas and execute them within existing operational routines, without higher level systems and support. Employees and managers often avoid pursuing the uncertain path of innovation when existing climate, structures and systems do not incentivize people to innovate but rather reward and facilitate towards compliance and convergence.

These findings do not imply that retailers ought to forego their core competences of flexibility, adaptability, and ad-hoc approach of addressing changing market needs. On the contrary, the research shows that innovation work must not be forced upon existing structures and systems on the mainstream, "exploitative" side of retail operations, and that these capabilities geared for efficiency serve their own purpose in addressing customer needs through incremental, continuous developments. What is needed—and perhaps what separates innovative retailers from the rest—is the commitment to ambidexterity, the delicate balance of safeguarding the space and resources for exploration, learning, and innovation to thrive, while facilitating integration of innovative output to the rest of the organization to truly capture the value of innovation, and not waste innovation resources into scattered efforts that do not ultimately benefit the company in the long run. Providing focus by coupling innovation goals to specific strategic priority areas, having a structured approach to ideation, selection and prioritization, capitalizing on existing strengths in implementation and scale-up, and leveraging their intermediary role between end customers and other actors in the value chain—this is what can potentially characterize "the retail way" of developing a sustained and systematic capability for innovation.

Summary of contributions

Contribution to theory

As a whole, this body of research, while fairly explorative in nature, offers several theoretical contributions. First, it adds evidence to the nascent subject of retail innovation management, distinct from general studies of service innovation management as well as technology and innovation management. The highly heterogeneous nature of service industries warrants a deeper understanding of innovation trajectories across service sectors and service firms, and this thesis partly responds to previous calls in service innovation research (e.g., Tether, 2013) to investigate the role of formalization of innovation efforts in different service sectors. This thesis presents retail-specific insights on innovation management, by looking into how large, established (traditional) retailers can develop a systematic and sustained capability for innovation.

By using the concepts of innovation capability and organizational ambidexterity as its theoretical underpinnings, the thesis gives attention to the tensions that may emerge when exploration and exploitation are pursued in a single organization and how these can be potentially addressed. It provides an in-depth account of how large, established retailers are starting to implement mechanisms for innovation, including structures and systems that may complement existing organizational climate that exhibit certain values for innovation. In considering these organizational dimensions altogether, I contribute with a holistic approach of looking at innovation capability building by considering both formal (structure and performance measurement) and informal control (culture or climate) of innovation, but also further emphasizing the importance of strategy and leadership as well as the access of retailers to diverse external knowledge bases that can be better integrated into the innovation process.

The use of Ekvall's (1996) quantitative survey instrument for organizational climate in retail organizations, and complementing it with semi-structured interviews, to have a broader evaluation of the organization climate in these retail organizations also provides an additional contribution. Furthermore, to my knowledge this research is one of the very few academic works that investigate the topic of innovation measurement in the context of retail incumbent firms.

Lastly, the research conclusions have challenged the notion that retailers have only been engaging in incremental and continuous change, and demonstrates a shift from extant research that has described innovation as not being institutionalized in structure in retail firms. Although this might have been true in the past, the dissertation provides a contemporary understanding of how large, established retail firms with long traditions in brick-and-mortar retail are facing the innovation imperative head-on, actively

implementing organizational mechanisms that aim to enable more explorative innovation, building a systematic and sustained capability for innovation, while still successfully exploiting existing capabilities on efficiency in adapting to changing customer needs.

Contribution to practice

The research captures an on-going and highly relevant issue, as retailers are actively acknowledging the importance of innovation management given that innovation itself is no longer distant from the primary concerns of the organization as it becomes less of an optional endeavor and more of a hygiene factor in today's hyper-competitive retail landscape. Although it could be said that retail has always been evolving and adapting to consumer needs, it is also observed that the retailers in this study are in the midst of transformation as they re-examine their existing ways of working when it comes to the innovation process.

The dissertation is highly relevant because it contributes to an increased understanding of how retailers organizations can develop innovation capability especially in terms of the organizational dimensions of organizational culture or climate, structures and systems. Retail executives and managers can reflect on these different aspects and assess how their organizations currently look upon innovation and its management. As shown in the thesis, develop a sustained and systematic approach to innovation is a continuous, iterative journey wherein retailers gradually learn what practices could be strengthened, what needs to be stopped, and what new ways of working could be adopted and further developed. The local context should be taken into account as there is no "one size fits all" approach to innovation management in retailing, despite presenting illustrative examples of certain retail sub-sectors in this dissertation. Retail managers should consider what their "status quo" looks like, what competences exist in the organization, what values are highlighted in the corporate culture. For instance, if theirs is a culture that is resistant to change, clear communication of the need for innovation—the *why*, and not just the *how* to go about it—is important if an organization-wide transformation towards an innovative organization is desired.

Moreover, how are they currently using performance measurement in the organization; are there metrics for innovation that can support the development of innovation capability? Lastly, how might they safeguard the implementation of innovative and explorative activities through structural solutions, and how can these be integrated to the rest of the retail business? What formal integrative mechanisms can be implemented with least resistance, and what informal mechanisms can be leveraged for integrative purposes?

In essence, the thesis encourages retail managers to consider how innovation can be enabled in a more sustained and systematic way in their organizations, without necessarily compromising operational strengths. This means acknowledging the role that innovation plays in the organization, showing a clear commitment to the innovation journey, and clearly communicating the strategic intent for innovation to the rest of the organization. As this research takes on innovation from the perspective of retail corporate management, the managerial implications of the dissertation are especially relevant to these people who are at the helm of retail organizations. The results of this dissertation could be used as an initial reference point when they assess retail innovation management practices within their own their organizations.

Concluding remarks

As with any meaningful research journey, the end is usually just the beginning of something new. This final chapter concludes the dissertation by proposing avenues for further research.

Avenues for further research

The dissertation has only focused on internal conditions for developing innovation capability. However, the potential of retailers for open innovation has been mentioned, which warrants further investigation. Externally-driven approaches to developing innovation capability in retail, including strategic alliances, acquisitions and venturing schemes can be an avenue for further research, What are the types of innovation networks that retail incumbents can leverage and what are the motivations for joining them? It would be interesting to also examine retailers' innovation network orchestration capabilities, e.g., the skills and processes involved in network-centric innovations in retail ecosystems. Moreover, the various forms of external collaborations that retailers can use for innovation provides research opportunities, including investigating the managerial factors that affect their success. Some researchers have started to look into co-creating with customers for product innovation (e.g., Albors-Garrigos, 2020). However, there are other types collaborations that can produce innovative output such as supplier collaboration, and strategic alliances with new partners such as startups or technology companies as well as academic actors. More importantly, how retailers can capture the business value of open innovation in these types of partnerships is also an interesting avenue for research.

The thesis shows senior management as a locus for integrating innovation and operations in retail organizations. This can be further investigated by looking at leadership characteristics that influence retailing innovation. For instance, a deeper investigation into the dynamics of paradoxical leadership (Lewis *et al.*, 2014) and ambidextrous leadership (Rosing *et al.*, 2011) in retail settings could be performed.

Given that this dissertation was exploratory in nature, further investigation of the use of formal control of the innovation process in retail organizations can be done using organizational learning as a theoretical lens, viewing innovation as primarily a

knowledge-creation process. This is a broad investigation of the dynamics of knowledge creation (e.g., Nonaka, 1994; Hurley and Hult, 1998) in the innovation process in retailing and important contextual factors in (e.g., organizational structure and other mechanisms). For instance, using the framework of tacit and explicit knowledge in retail firms and different modes of knowledge creation in relation to innovation. These theoretical frameworks can also be used to conduct multilevel analyses and understanding of organizational learning processes in retailing. For instance, dynamics of knowledge creation for innovation at the levels of frontline employees, store managers, middle managers, and senior management.

Indeed, conducting a firm-level analysis of innovation management by focusing on the perspective of headquarters or service office of large retail organizations, while providing interesting and relevant insights, presents a very limited picture. Looking into how innovation is enabled at the actual retail store and retail innovativeness from the perspective of frontline employees is a research stream that requires alternative conceptual models and theoretical frameworks. In addition, the findings of this thesis could benefit from being expanded to include quantitative, longitudinal, or multilevel approaches to confirm the findings and to obtain wider generalizability.

Finally, it should be noted that parts of the research period occurred during the onset of the COVID pandemic. However, although the pandemic certainly impacted the retail companies involved, a consideration of pandemic effects was deliberately not included in this thesis. Follow-up research is thus needed to analyze the effects of the global COVID pandemic on the capability-building journey of established retail organizations.

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Appendix A: Interviewee list (Study 1)

Retailer	Name in Paper 1	Name in Paper 2	Respondent
Retailer A	A	SIRF	<ol style="list-style-type: none"> 1. Concept manager, Digital Experience 2. Project manager, IT 3. Business Partner, Human Resources 4. Project manager, Loyalty Program 5. Business architect, IT 6. Project manager, Marketing 7. Head, Innovation hub
Retailer B	B	-	<ol style="list-style-type: none"> 1. Category manager, Private label 2. Purchasing manager 3. Product development head, Private label 4. Category and Purchasing developer 5. Format and store experience manager 6. Regional manager 7. Business development manager 8. Customer insights manager 9. Digital communications 10. Head, Private label 11. Product quality and development head, Private label 12. Senior strategic buyer, Private label 13. Design project manager, Private label
Retailer C	C	-	<ol style="list-style-type: none"> 1. CEO 2. CFO 3. Marketing manager 4. Marketing manager 5. Head, Pharmacy 6. Head, IT
Retailer D	-	-	<ol style="list-style-type: none"> 1. Project Manager, Development and Expansion 2. Head, Sustainability Innovation 3. Innovation lead, Customer Experience 4. Matrix manager, Commercial activity

Appendix B: Interview guide (Study 1)

Topic	Masterlist of questions (used flexibly)
Introduction	<p>Can you describe how the company is organized and the role/function you have in it?</p> <p>Do you work with development? Or innovation? (In what way?)</p>
Value creation for customers	<p>How are your offers to customers developed today? What is driving it?</p> <p>How do you talk about "value" to the customer? (In what terms?)</p> <p>How do you follow up with customer assessment of value?</p> <p>Aside from the end consumer, what other actors do you consider as customers to whom you deliver value?</p>
Vison and strategy	<p>Is there an articulated vision for the company? (Please explain.)</p> <p>How does your strategy look like? (How would you formulate your strategy in a few words?)</p> <p>What drives them? (What is the process and who participates in the development?)</p> <p>Is innovation or development part of the the vision and your strategies? How so? (How do people communicate this in the company?)</p> <p>How are strategies communicated generally?</p>
External factors (business intelligence, collaboration, networking, etc.)	<p>Do you interact with others outside your organization to create new value?</p> <p>How do you monitor insights, trends and developments in the outside world?</p> <p>How do you follow your competitors?</p> <p>Do you follow players other than direct competitors and their development?</p> <p>What are the major and important changes in the world for you today?</p> <p>What opportunities do you see? Threats?</p>
Organization and management of innovation	<p>How do you work with generating and/or collecting ideas in the company?</p> <p>How do people get feedback on ideas suggested?</p> <p>How are ideas evaluated? What are the criteria?</p> <p>Is there any categorization of ideas, for example in relation to novelty, what kind of results or new value they can lead to, which resources they require, etc.?</p> <p>How are ideas selected (and categorized) for further development?</p> <p>How is development work organized? Is there a special department / role / function? Is innovation work organized differently – how? Is it done internally or with others? Do you have a formal / specific process for development or innovation?</p> <p>Do you put specific objectives for development or innovation?</p> <p>How do you measure or evaluate development or innovation work?</p> <p>Are there particular roles for innovators and/or innovation leader? Are there innovation managers? If not exactly, what are similar roles?</p> <p>Do you work at times with radical/disruptive innovation? How? Why?</p> <p>The external changes you see – are you well organized/led to tackle them?</p>
Culture/climate	<p>Do you speak about innovation as an ability of employees, such as creativity, entrepreneurial spirit or business sense?</p> <p>Do you speak about the organization's ability to be innovative? How do you describe your environment (in terms of innovation, creativity, openness, freedom, risks, etc...)</p> <p>What typically happens when someone makes a mistake?</p>

How are risks and uncertainties approached in the company? What about in development or innovation work?

How do people learn from each other? How do people learn from successful and unsuccessful projects? How are these learnings documented, shared and communicated?

Others

Additional reflections

Appendix C: Survey respondents (Study 1)

Survey respondents, from each represented department in the retail organizations

Retailer	Name in Paper 1	Survey respondents (from each represented department)
Retailer A	A	A1 group Marketing: 19 IT: 24 A1 = 43 respondents
		A2 group CSR: 14 IT: 33 Assortment and Purchasing: 9 Format and concept development: 15 A2 = 71 respondents
Retailer B	B	Purchasing: 11 Private label: 19 Marketing: 13 B = 43 respondents
Retailer C	C	Marketing: 11 Customer service: 6 Product category/assortment: 10 Finance: 4 IT: 2 Logistics: 1 C= 34 respondents

Appendix D: Interviewee list (Study 2)

Retailer	Name in Papers 3 and 4	Respondent
Retailer A	GR	<ol style="list-style-type: none"> 1. Head, Private Label Innovation & Concept Development 2. Innovation Manager, Private label 3. Innovation Manager, Private label 4. Innovation Manager, Private label 5. Packaging Manager, Private label
Retailer D	HR	<ol style="list-style-type: none"> 1. Market Development Leader 2. Expansion Manager 3. Country Business Development Manager 4. Development and Transformation Program Manager 5. Country Multichannel Network Developer 6. Customer Fulfillment Development Manager 7. Market Manager 8. Market Manager 9. Area Manager 10. Country Digital Manager 11. Investment and Operations Manager 12. Customer Meeting Point Development Manager
Retailer E	CR	<ol style="list-style-type: none"> 1. CEO 2. CIO 3. CFO 4. Finance officer 5. Project and sustainability officer 6. Business development manager 7. Business development analyst 8. Head, Sustainability and HR 9. Regional manager 10. District manager 11. District manager 12. Purchasing manager 13. Communications manager 14. Product manager, Marketing 15. Concept manager, Marketing 16. Project manager, Expansion 17. Franchise owner 18. Franchise owner 19. Consultant, IT 20. Consultant, Sustainability

Appendix E: Interview guide (Study 2)

Topic	Masterlist of questions (used flexibly)
Introduction	<p>Can you describe how the company is organized and the role/function you have in it? What does your assignment look like?</p> <p>Can you describe what your typical work day/week is like?</p> <p>How much of your work would you say is “explorative”?</p>
Innovation (general)	<p>How do ideas for projects come from? How are these selected, and further developed?</p> <p>How are innovation efforts supported?</p>
Initiative in focus (project, program, etc.)	<p>Background: can you explain the story behind the initiative? How did it start?</p> <p>What role do you play in the initiative?</p> <p>What is the formal assignment? (Mandate, objectives, expected results)</p> <p>Explain the details of the initiative. (Structure, personnel, project management, governance, stakeholders, resources, etc.)</p> <p>Describe the innovation process, if applicable. (From front-end to project turnover, commercialization, etc.)</p> <p>How is this different from past/existing projects/initiatives? What are its implications to the company as a whole? How does it contribute to the overall strategy?</p>
Control systems	<p>How do you measure success for this initiative?</p> <p>How are/were the KPIs set?</p> <p>What is the process for budget approval?</p> <p>What are the formal documentation involved? (budgets, KPIs, other templates and tools, etc.)</p> <p>Are there individual incentives?</p> <p>Metrics: Refer to Paper IV for metrics list</p>
Retail operations	<p>How much of your work is related to operations?</p> <p>How are development projects developed and rolled out from the headquarters to the retail stores? Can you describe the process behind this?</p>
Culture/climate	<p>Can you reflect on the culture and ways of working in the company? What kind of organization is [Retailer name] to your understanding? How would you describe the “DNA” of the company, in your own words?</p> <p>Is innovation talked about as an ability or capacity of employees? What about creativity, entrepreneurial spirit or business sense?</p> <p>How do people learn from each other? How do people learn from successful and unsuccessful projects? How are these learnings documented, shared and communicated?</p>
Others	<p>Events to follow and observe, other key persons to interview, next steps, etc.</p>

