

Mattila, Malla, Pia Hautamäki, Mika Yrjölä, and Leena Aarikka-Stenroos. 2020. "Business-to-Business Selling in Transition: A Digital Dynamic Managerial Capability Framework." In *Enhancing Entrepreneurship in Finland*, guest-edited by Tiina Brandt. Special issue of *Journal of Finnish Studies* 23 (2): 156–192.

Business-to-Business Selling in Transition: A Digital Dynamic Managerial Capability Framework

Malla Mattila, Tampere University
Pia Hautamäki, Tampere University of Applied Sciences
Mika Yrjölä, Tampere University
Leena Aarikka-Stenroos, Tampere University¹

Abstract

Despite an increased understanding of changing customer behavior and requirements for more digitalized selling opportunities, the use of new advanced technologies (such as artificial intelligence, machine learning, and robotic process automation) in business-to-business (B2B) selling is still in an early stage among Finnish small- and medium-sized enterprises (SMEs). Furthermore, the increased complexity of expanding relationships and rapidly evolving technologies to be managed in the ecosystem era challenges many SMEs. In order to assist managers in these enterprises to enact a digital transformation and to survive in the ecosystem era, this article draws analytical insights from various streams of literature (B2B selling and sales management, dynamic managerial capabilities, digital transformation, and ecosystems) and establishes a new understanding of the dynamic capabilities of managers in relation to the digital transformation occurring around B2B-selling processes. The article contributes to the sales management literature by developing (1) a framework of digital dynamic managerial capabilities as a means to address the current digital transformation in B2B selling, and (2) a research agenda for further study in the field of B2B selling. With regard to managerial implications, the article offers insights for managers on how to identify and develop their dynamic capabilities needed for strategic digital transformation.

Keywords: Dynamic managerial capability, B2B selling, digital transformation, sales management, framework, SME

¹ This study is part of the ROBINS research project funded by Business Finland 2019–2022 (document numbers 7885/31/2018 and 7802/31/2018).

Introduction

Business-to-business (B2B) selling—defined for our purposes as consultative, relational, and transformative processes occurring between customers and sales organizations and often including interactions, transactions, and exchanges of products, information, and services (Cuevas 2018; Moncrief 2017)—is undergoing a major change. This change has been unprecedented (Moncrief 2017; Sheth and Sharma 2008). It has been labelled as a “sales renaissance” (Syam and Sharma 2018), in which traditional ways to organize and manage B2B selling are being transformed into new forms that are enabled by advanced digital technologies—such as artificial intelligence (AI), machine learning (ML), robotic process automation (RPA), and social media—elongating and bridging organizational walls and boundaries. There has been an increasing discussion about the change in customer behavior in this digital era, such as how customers have the power and access to the knowledge, and how the number of salespeople needed is decreasing (see, e.g., Adamson, Dixon, and Toman 2012). Additionally, customers’ demands are at a higher level because of the sophistication of the procurement departments’ greater focus on value and customer segmentation strategies (Cuevas 2018). However, there is still a need for salespeople in organizations, but their roles need to change (Moncrief 2017).

Authors of previous studies have argued that sales organizations should support salespeople’s work by providing them with sales-related technological tools to enhance performance (Chang, Park, and Chaiy 2010; Marshall et al. 2012a; Rodriguez, Ajjan, and Peterson 2016). Advanced technologies, however, change both the nature of and processes within the selling work (Moncrief 2017). The increasingly digitized selling work is transforming the salesforce into co-creative consultants and boundary-spanning experts (Cuevas 2018; see also Verbeke, Dietz, and Verwaal 2011), who need to operate with an increasing number of people during sales processes. Today, B2B customers have more information available than ever before, but this does not necessarily mean that these customers know how to use all the knowledge available to them (Verbeke, Dietz, and Verwaal 2011). On the contrary, the salesforce needs new capabilities that will enable them to gain insight, share innovative new ideas, build commitments, and, consequently, create long-term value for their customers (Kaski et al. 2017; Sheth and Sharma 2008; Verbeke, Dietz, and Verwaal 2011). In addition, Moncrief (2017) adds that much of sales research is no longer valid as a result of changes in transformed digital business environments, and there is a need for new strategic-level sales management studies.

In addition to the aforementioned changes in B2B selling, the landscape of B2B itself is facing an increasing complexity that further complicates selling processes and activities, as well as related capabilities and management. The complexity originates from the current shift to

“an ecosystem era” that is characterized by a shift from dyadic relations toward multi-actor ecosystems and toward broader and more heterogeneous compositions of B2B relationships and networks in which one has to operate and navigate (Aarikka-Stenroos and Ritala 2017). An “ecosystem” can be considered a general umbrella concept for distinct types of interdependent and co-evolving systems of actors, technologies, and institutions (Aarikka-Stenroos and Ritala 2017). The concept of an “ecosystem” was originally adapted from biology to business settings by Moore (1993), who used the term “business ecosystem” as an analogy to describe the interdependence of multiple business actors. Later, the ecosystem concept and approach was extended by others. Some relevant examples include “innovation ecosystems,” which are characterized by innovation-driven goals (Ritala et al. 2013) and often include societal actors, as well as private and public organizations that support innovation (Clarysse et al. 2014); “entrepreneurial and start-up ecosystems,” in which the focus is on the creation and growth of new businesses (Isenberg 2010); “platform ecosystems,” which are created around technological platforms owned and governed by the focal organization and which connect multiple aspects of markets, such as users, advertisers, and content providers (Basole 2009; Gawer and Cusumano 2014; Eloranta and Turunen 2016); and finally, “service ecosystems,” which are spatial and temporal structures of loosely coupled social and economic actors that interact through institutions, technology, and language to co-create value (Vargo and Lusch 2016). To summarize briefly, these ecosystem approaches differ in terms of the relevant focal actors and their goals, as well as over the determining or defining factors of the ecosystems. In this study, we see that many of these ecosystem approaches have become relevant in the contemporary complex and digitalized sales settings and will be reflected in sales, capabilities, and management.

As the above discussion illustrates, researchers and sales practitioners need more knowledge on the capabilities needed in B2B sales management in the digital era. It is important to understand *how* managers can successfully renew their organizations’ resources and competencies to remain competitive in the digital environment. In other words, what kinds of dynamic capabilities are required to acquire, modify, and leverage digital resources and capabilities to support selling processes and sales management? Dynamic capabilities, the “capabilities with which managers build, integrate, and reconfigure organizational resources and competences” (Adner and Helfat 2003, 1012), can be inspected at the organizational or managerial level. This article adopts the managerial level because the role of an individual manager or executive is typically critical in transforming a small- and medium-sized enterprise (SME). Therefore, this article focuses on the dynamic capabilities of managers in enacting digital transformation. The term digital transformation is understood to mean “the use of new digital technologies [...] to enable major business improvements (such as enhancing customer experience, streamlining operations, or creating

new business models)” (Fitzgerald et al. 2014, 2, italics removed). In this article, we ask, “What are the digital dynamic managerial capabilities required to transform B2B selling?”

To answer this research question, we first draw analytical insights from various streams of literature (i.e., B2B selling and sales management, dynamic managerial capabilities, digital transformation, and ecosystems) to identify digital dynamic managerial capabilities needed in addressing changes brought by digitalization to the work of selling. Second, we develop a framework of digital dynamic managerial capabilities (DDMCs) in transforming B2B selling.

Finnish SMEs were chosen as a research context for two main reasons. First, the former Finnish Government had given a high priority to increasing the application of artificial intelligence (AI) in different sectors. As a result, Finland has been one of the first countries to set an AI program that included an action plan for making the country a leader in the application of AI in both public and private sector activities (Ministry of Economic Affairs and Employment 2019). In 2018, Finland was classified as Europe’s third-best country based on digital performance (European Commission 2018). Finland’s success in digital performance has mostly been based on digitalized public services like an electronic baccalaureate, the use of internet services by citizens, and the integration of digital technology by businesses (European Commission 2018). Our study, however, highlights private sector actors, especially the role of managers of SMEs in addressing and enacting digitalization—an issue that we expect to play an increasingly important role in enhancing national-level digital performance. Related to this, important obstacles for SME growth in Finland are currently the lack of skills in digitalization and professional selling (Confederation of Finnish Industries 2016). This study develops a means for addressing these important issues.

Second, Finnish SMEs seem to face difficulties in using advanced technologies in their business processes. According to the recent SME Barometer (2018), only six percent of Finnish SMEs are currently using AI in some form in their businesses, three percent are experimenting or piloting AI solutions, and 24 percent are studying the matter. The most popular forms for AI utilization or experimentation are AI platforms (utilized especially in the sectors of construction and services), followed by AI solutions related to speech and language and customer service robots (utilized or piloted especially in the retail sector), and lastly, intelligent robots and optimizing related to the Internet of Things solutions (utilized especially among industrial companies) (SME Barometer 2018). These findings indicate that Finnish SMEs need a more thorough understanding of how to adopt and use advanced technologies in their enterprises’ current and future business processes, including sales activities. Related to this, a recent study conducted among Finnish technology companies operating in B2B markets shows that these companies do perceive the importance of adopting digital tools, such as social media, for external

communication, especially among supervisors (Ammirato et al. 2019). The aforementioned study also demonstrated that there is a lack of an understanding of the benefits of social media use at an employee level as well as a lack of resources to deploy social media technologies. In addition, there are cultural and behavioral barriers to solve before the use of social media starts to become a new norm (Ammirato et al. 2019). In practice, there is a need for managerial activities among Finnish companies to better support the adoption of digital tools to business operations (Jussila, Kärkkäinen, and Aramo-Immonen 2014) and a need for “AI leadership” capabilities (Ernst and Young LLP 2018, 9).

The current study develops an understanding of the DDMCs that are needed in addressing major changes brought by digitalization to the work of selling. Despite an increased understanding of changing customer behavior and requirements for more efficient sales management in an emerging digital era (Syam and Sharma 2018), and the role of digital technologies in creating and using marketing and customer-related capabilities (Wang and Kim 2017; Wedel and Kannan 2016), the sales management literature has so far neglected to address the role of the dynamic capabilities of managers in relation to the digital transformation occurring around B2B-selling processes and activities (Rodriguez, Ajjan, and Peterson 2016; see also Kouropalatis, Giudici, and Acar 2018). Furthermore, there is a lack of studies that examine both SMEs and sales processes in this changed situation (Bocconcelli, Cioppi, and Pagano 2017) especially in the Finnish business landscape.

Digitalization and the Ecosystem Era Changes in B2B Sales Management

Four Shifts and Their Reflections on Sales Management and Related Capabilities

Aarikka-Stenroos and Ritala (2017) have recently suggested four shifts in business management as a result of the ecosystem era and digitalization. Based on an extensive literature review in the field of B2B research, the authors have argued for the following shifts that also reflect on sales management. First, there is a need to manage wider collaborations, as enterprises can no longer merely choose partners, key relationships, and relationship portfolios, but, instead, they need to consider and choose between larger entities, in other words, networked or competitive ecosystems that include both vertical and horizontal relationships. Firms need to choose or build an ecosystem. The shift to wider collaborations requires the understanding of institutions, regulators, users, and other actors that have more distant but crucial impacts on potential success and survival (Frow, McColl-Kennedy, and Payne 2016; Mele and Russo-Spena 2015; Wang et al. 2016; see also Mattila 2017; Mattila, Yrjölä, and Lehtimäki 2019). In addition, the involvement of nontraditional actors in the sales environment (see Hartmann, Wieland, and Vargo 2018) may further increase a need for managerial sales-related capabilities.

Second, there is also a shift in processes that are relevant for managing exchange. This shift has changed domains and processes with regard to managing. Managing a complex system of actors and technologies, and their interactions requires coordination, coupled with processes of self-organization and emergence throughout the individuals and actors in the ecosystem (Pera, Occhiocupo, and Clarke 2016; Taillard et al. 2016). Such interactions can happen between very diverse participants who exchange ideas, knowledge, and expertise and who integrate competences, even in the resemblance of a collective learning process (Wang et al. 2016; Storbacka and Nenonen 2015; Xu, Frankwick, and Ramirez 2016).

Third, management is challenged because of a shift in managerial methods and tools. As a result of digitalization and the ecosystem era, multiple types of knowledge need to be derived from the complex and extensive ecosystem. This requires novel methods and tools, such as social media, crowd-sourcing, online interactions, and virtual forums that enable managing and maximizing ecosystem actors' contributions (Gyrd-Jones and Kornum 2013; Simula and Ahola 2014). To give some examples of potentials and challenges, enterprises can apply social media in knowledge acquisition for market and technology development (Nguyen et al. 2015), connect ecosystem actors together via platforms and interfaces (Eloranta and Turunen 2016; Muzellec, Ronteau, and Lambkin 2015; Ritala, Golnam, and Wegmann 2014), and analyze the increasingly accessible and growing datasets on customer preferences and value creation (Mu 2015; Simula and Ahola 2014).

Fourth, there is also a shift in pace, as the digitalization seems to require rapid operation modes and to increase dynamics, which jointly generate new challenges regarding management. Therefore, managing broad collaborations, industry networks, relationship portfolios, and dyadic relationships requires rapid and comprehensive adaptation. The shift in pace challenges firms to consider how to conduct business and management activities among diverse collaborating and complementing players representing different positions in constantly changing ecosystems (Nguyen et al. 2015; Ritala, Golnam, and Wegmann 2014). The increased pace pushes firms to update business models constantly, in order to survive in an evolving ecosystem environment (Muzellec, Ronteau, and Lambkin 2015), and, therefore, being agile and fast becomes a critical capability in the ecosystem era (see also Chen 2010; Verganti and Öberg 2013). Digitalization is also seen in the rise of large, powerful global tech leaders with competitive platforms, such as Microsoft, Apple, IBM, and Amazon.com (Henneberg, Gruber, and Naudé 2013; Ritala, Golnam, and Wegmann 2014).

When considering the different ecosystem approaches (from business to platform ecosystems) and the shifts discussed above, we can conclude that the various moves and shifts seem to be concerned with very different aspects of contemporary B2B sales. The change seems to require managing

and steering diverse actors in the ecosystem but also in managing rapidly changing business, technology, data, and information.

State of the Art and the Finnish Focus on Digital B2B Selling

The B2B selling and sales processes in digitalized and complex ecosystems have gained momentum only recently (Moncrief, Marshall, and Rudd 2015). To adopt and act upon changes occurring within this digital and ecosystem era, previous research has shown that enterprises need to better harness the opportunities provided by new advanced technologies (such as AI), automatization, digitalized sales processes (Moncrief 2017), and new sales management practices (Moncrief, Marshall, and Rudd 2015) to B2B-selling processes. Until now, however, studies have focused mostly on social media (Agnihotri et al. 2016; Ammirato et al. 2019; Bocconcelli, Cioppi, and Pagano 2017; Rodriguez, Ajjan, and Peterson 2016; Wang et al. 2016) and its roles in the B2B-selling transformation, rather than shifting the view from (single) grassroots selling activities toward scrutinizing the issue on a more holistic and strategic level. This is surprising because, with the help of the advanced digital technologies, a sales manager could, for example, spend more time on developing a salesforce's strategic (both customer and company specific) knowledge (Cuevas 2018) and on supporting sales performance (cf. Chang, Park, and Chaui 2010), and the multi-actor teams could have more time to prepare for demanding relational customer interactions with the technology handling routine tasks (Syam and Sharma 2018).

Furthermore, most of the current studies regarding digitalization and B2B selling have been conducted in the context of the United States, and they have often focused on large or multinational companies (see, e.g., Marshall et al. 2012a, 2012b; Trainor 2012; Trainor et al. 2014). As such, these studies provide a limited sense for how smaller enterprises in other developed countries are to adopt and use new advanced technologies in their selling processes. Therefore, our study presents a less represented context, the case of Finland, and we chose to situate it at the level of SMEs. Finland is considered one of the leading countries when it comes to the utilization of digitalization in both private and public sectors (European Commission 2018). The latest International Digital Economy and Society Index shows that Finland occupies third place (after Denmark and Sweden) of all European countries based on digital performance (European Commission 2018). Further, SMEs are enterprises, which employ fewer than 250 persons (an annual turnover maximum of EUR 50 million, and/or an annual balance sheet maximum of EUR 43 million) (European Commission 2003). These enterprises represent 99 percent of all businesses in the European Union. In Finland, only 0.1 percent of enterprises had over 500 employees on their payroll in 2017 (Statistics Finland 2017).

Until now, research on Finnish B2B selling in the emerging digital era has been scarce (for exceptions, see Ammirato et al. 2019; Jussila,

Kärkkäinen, and Aramo-Immonen 2014). Thus, albeit Finland has rather long been considered one of the “digital forerunners,” the digital transformation within B2B selling has not yet reached an operational or strategic level among Finnish enterprises. For example, the use of social media tools among Finnish companies is in its infancy, especially regarding their use in business partner communication (Ammirato et al. 2019). Finnish enterprises’ index values regarding digital marketing investments (such as access, analytics, automation, assets, and audience) are higher than those in the compared countries, but Finnish enterprises make relatively low investments in digital tools (Business Finland et al. 2018). Whereas the integration of marketing automation and sales processes requires close collaboration between different business functions (Järvinen and Taiminen 2016), these types of structural changes also seem to be largely ignored among Finnish SMEs. Related to this, reward systems are still based on short-term gains, potentially hampering the efforts to meet customer expectations in the long run (Kaski et al. 2017).

Furthermore, only 9–10 percent of the Finnish enterprises are currently seeking growth (Torkkeli et al. 2016; Kuismanen, Malinen, and Seppänen 2019). As sales can be seen as a tool for growth, these activities need sales professionals. However, SMEs lack competencies and managerial support to organize sales operations effectively with the help of digital tools (Ammirato et al. 2019; Jussila, Kärkkäinen, and Aramo-Immonen 2014). Also, automation tools are often expensive, and owners, who are dedicated to their substantive area, may not understand the value in utilizing digital technologies for growth. Within Finnish B2B selling, the digital development of the sales process could also focus on developing customer experiences via certain digital tools based on data (see also Cuevas 2018). In addition, it is very profitable for Finnish enterprises to grow organically with the customers because the business investment markets in Finland are very narrow. There have been several attempts to increase the venture capitalist funds in Finland. At the moment, the average size of a Finnish venture capitalist fund was 40 MEUR while a corresponding sum in Europe was over 100 MEUR (Ministry of Economic Affairs and Employment of Finland 2018).

Furthermore, a recent report on the internationalization of the Finnish SMEs concludes that the marketing and sales capabilities of these firms are often inadequate (Rikama 2017). Further, there is a growing need for sales professionals in the SMEs to update their skills in this transition. Labor needs have increased mostly around the sales and service professionals, and, in the beginning of the year 2019, one-quarter of the open vacancies in Finland were for sales and service professionals (Ministry of Economic Affairs and Employment of Finland 2019). In addition, at the moment, only a few universities in Finland offer students the opportunity to study sales and sales management at a master’s level, and, as far as we know, in only one university is the curriculum focused on digitalization and sales management in international growth. To recognize capabilities

needed in transforming B2B selling to digital, it seems to be important to enhance the low appreciation of the B2B-selling work. One potential path could concern investments in sales education (Deeter-Schmelz and Kennedy 2011).

Consequently, there seems to be a need for studies that adopt a strategic-level view to B2B selling and provide an in-depth understanding of the role of managers and executives in transforming B2B selling as part of the ongoing digital transformation, especially among the Finnish SMEs. Hence, could there be more digitally and growth-oriented SMEs if these enterprises recognized better the capabilities needed in the ongoing digital transformation occurring in their B2B-selling processes and activities that further cross structural and functional borders?

The Dynamic Managerial Capability Perspective

Dynamic managerial capabilities (DMCs), defined as “capabilities with which managers build, integrate, and reconfigure organizational resources and competences” (Adner and Helfat 2003, 1012), have received an increasing interest among strategic management scholars for over a decade (for a review, see Helfat and Martin 2015). The concept extends the dynamic capability approach (see, e.g., Eisenhardt and Martin 2000; Teece, Pisano, and Shuen 1997) by emphasizing an active agency of managers in enacting strategic change (Adner and Helfat 2003; Helfat and Martin 2015), affecting both internal attributes of the company and factors external to it (Harris and Helfat 2016). In other words, DMCs are the capabilities that management uses to alter the company’s portfolio of resources and competencies (Helfat and Martin 2015; Kor and Mesko 2013). They allow company-level heterogeneity and, consequently, affect the sustainability of competitive advantages (Teece 2016).

At the organizational level, one example is the capacity to derive customer insights from customer relationship management resources (e.g., databases and analytical tools) in order to create a competitive advantage (Maklan and Knox 2009). The assimilation of information technology (IT) with marketing resources is a related discussion, where e-marketing has been examined as a dynamic company-level capability, providing empirical evidence that it enables increasing company performance by both expanding revenues (through, e.g., increased customer satisfaction) and reducing costs (through, e.g., increased organizational efficiency) (Trainor et al. 2011). At the managerial level, dynamic managerial capabilities emphasize the active role and agency of individual managers in enacting strategic change (Adner and Helfat 2003; Helfat and Martin 2015).

While the original dynamic capability approach focused on company-level abilities to drive change, such as acquisitions, service innovation, alliances, and product innovation (Eisenhardt and Martin 2000; Kindström, Kowalkowski, and Sandberg 2013), the DMC approach takes the viewpoint that dynamic capabilities reside within the cognitions,

decisions, and actions of managers (Teece 2007, 2012). The DMC concept denotes three interconnected managerial resources, which provide the basis for (intentional) action: managerial human capital, social capital, and cognition (Adner and Helfat 2003).

Managerial human capital includes skills and knowledge that managers gain through their prior education, training, and personal and professional experiences (Bailey and Helfat 2003; Becker 1993). Managers' experiences from specific contexts, such as industry, geography/culture, or technology, shape the human capital they can acquire and develop (Ambrosini and Bowman 2009; Kor 2003; Tripsas and Gavetti 2000). However, previous research has indicated that this capital need not be specific to the firm to benefit the company (Campbell et al. 2012; Ployhart et al. 2014). For instance, managers' skills related to the practical execution of projects (Ambrosini and Bowman 2009; Lockett 2005) as well as leadership skills (Pablo et al. 2007; Rosenbloom 2000; Wang et al. 2011) help in renewing the company's performance level in adopting higher levels of innovative and creative activities among followers. In addition, previous sales management literature has emphasized a need for unlearning and replacing one capability with another. For example, Lacoste (2018) shows that there is a need in sales organizations to understand the customer within a larger context and move the thinking in B2B selling toward a strategic level to be able to unlearn outdated ways to approach sales. Furthermore, Koponen, Julkunen, and Asai (2019) also add business acumen to their conceptualization of B2B sales solutions, and in this conceptualization, it is seen to consist of strategic B2B sales and leadership skills.

The *managerial social capital* involves managers' ability to access various resources, such as information, through networking relationships (Adler and Kwon 2002). These different relationships and connections can be formal and informal in nature (Kor and Mesko 2013). This capital resonates with research on inter-firm network capability (Ziggers and Henseler 2009), networking capability (Mitrega et al. 2012), network competence (Ritter and Gemünden 2003), and relational capability (Capaldo 2007), in which the focus has been on scrutinizing how companies sustain their innovativeness and long-term orientation by fostering the creation and maintenance of network relationships with their external parties such as customers and suppliers. The managers' ability to foster trust (Pablo et al. 2007), inspire organizational learning (Pablo et al. 2007; Rosenbloom 2000), and form relationships with various stakeholders are examples of how social capital facilitates the acquisition, integration, and disposition of resources (Ambrosini and Bowman 2009; Blyler and Coff 2003). In addition, the sales management literature has acknowledged the role of managerial social capital in today's professional sales; relational interaction capabilities enable coping with uncertain business environments (Ingram et al. 2005), especially in situations targeted to build long-term relationships with the customers (Kaski et al. 2017).

Managerial cognition concerns managers' beliefs and mental models (Adner and Helfat 2003), automatic and controlled mental processing activities (such as perception, attention, problem-solving, and reasoning), language and communication, social cognition (Helfat and Peteraf 2015), and also emotions (Hodkinson and Healey 2011). Managers' perceptions and interpretations of their environment, including its perceived uncertainty and complexity, affect how and why dynamic capabilities are deployed to change the company's pool of resources and competences (see, e.g., Adner and Helfat 2003; Aragón-Correa and Sharma 2003). Related to this, Helfat and Peteraf (2015) have noted the interconnectedness of cognitive capability development and past experiences gained through practice. Managerial cognition helps managers to sense opportunities as they engage in scanning, creative search, or strategic sense-making (Pandza and Thorpe 2009; Danneels 2008). In addition, Koponen, Julkunen, and Asai (2019) have shown that foreign language skills are crucial in international solution sales. Thus, there is a need to understand the communication culture in foreign countries, which calls for open and positive attitudes (ibid.), especially when doing sales in global environments.

Digital Dynamic Managerial Capabilities in B2B Selling: A Framework

IT has long been considered a facilitator in creating and maintaining dynamic capabilities (see, e.g., Bhatt and Grover 2005; Sher and Lee 2004; Wamba et al. 2017), influencing strategic change and the competitiveness of organizations (see, e.g., Cenamor, Parida, and Wincent 2019; Dunaway, Sullivan, and Wamba 2019; Mikalef and Pateli 2017). With regard to the ongoing digital transformation across industries fueled by new digital technologies, it is somewhat surprising that the relationship between these (and more advanced) technologies and DMCs has not been given much attention. Recent industrial marketing research has, however, stressed the importance of investigating roles and interplay between advanced technologies and critical resources and capabilities in contemporary business operations (Kouropalatis, Giudici, and Acar 2018). This article integrates the aforementioned insights to develop the framework of digital dynamic managerial capabilities in transforming B2B selling.

Defining Digital Dynamic Managerial Capabilities

To further theorize the relationship between the dynamic capabilities of managers and new digital technologies, we next introduce *digital dynamic managerial capabilities* (DDMCs) as our framework. The framework (see Figure 1) aims to capture and integrate management capabilities that become relevant in the digital and ecosystem era particularly with regard to B2B selling and sales management.

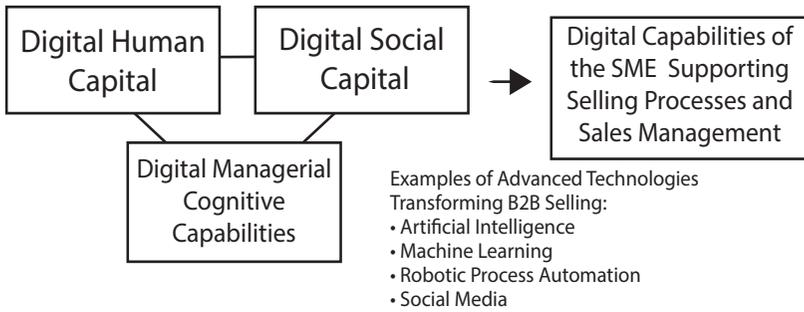


Figure 1. Theoretical framework: Digital dynamic managerial capabilities (DDMCs).

The framework connects digital capabilities and dynamic capabilities of managers (as discussed in the previous section) and acknowledges the ecosystem context of contemporary B2B selling. The concept of digital capability is based on two terms, namely digital technologies, “combinations of information, computing, communication, and connectivity technologies” (Bharadwaj et al. 2013, 471), and organizational-level ordinary (non-dynamic) capability, in other words, a high-level routine (or a collection of routines) “through which a firm makes its living” (Drnevich and Kriauciunas 2011, 255; see also Winter 2003). Thus, in the context of this study, digital capabilities refer to a set of company-specific, ordinary, and path-dependent capacities and practices that act on or use digital technologies in B2B sales processes.

Previous sales management research has empirically identified several organizational capabilities throughout B2B sales operations (Töytäri and Rajala 2015), but falls short in providing a refined understanding about the influence of managerial action in altering or creating digital capabilities for better supporting B2B sales processes—in our view a first critical step in enabling a digital transformation in SMEs. As Teece (2014) has noted that “[d]ynamic capabilities involve higher level activities that can enable an enterprise to direct its ordinary activities toward high-payoff endeavors. This requires managing, or ‘orchestrating’, the firm’s resources to address and shape rapidly changing business environments” (328). Thus, the developed framework provides a fresh frame of reference for individual managers and CEOs to reflect on how they can, through either digital human capital, social capital, or cognition, transform their organizations’ selling activities and processes to meet the emerging digital and ecosystem era. The right-hand side of the framework represents the object of the transformation, the (ordinary) digital capabilities of the SME that support its selling processes and sales management. Keeping this simple framework in mind, managers can constantly act to frame, create, implement, and transform selling activities and processes so that their firms remain competitive in an emerging digital business economy.

DDMCs denote the dynamic capabilities of managers to build, mobilize, and deploy digital resources and capabilities for supporting contemporary selling processes and sales management, further related to enacting the (un)planned digital transformation in the SME context. To the best of our knowledge, only one study has previously made the effort to combine the views of digital resources and capabilities with DMCs (Tai, Wang, and Yeh 2019). However, this study has focused solely on the functioning of the IT department in sustaining IT-business alignment, thus neglecting the role of individual managers in enacting the issue in smaller enterprises as well as anchoring the discussion around the management of B2B selling.

The DDMCs framework resonates with those working with “IT resources” (Aral and Weill 2007), “IT capability” (Bharadwaj 2000), and “digital capability” (Sandberg 2014) as it emphasizes digital technologies as precursors for enacting strategic change in firms. The framework, however, makes the effort to bridge organizational silos (such as those of IT, sales, marketing, and product development) by elevating the role of managerial action in integrating digital capabilities with sales activities taking place in the SMEs, and, consequently, in providing means for responding to rapid technological and market changes (for a discussion of the managers’ important entrepreneurial role in orchestrating various assets and resources, see Teece 2012). Although not from a dynamic managerial capability perspective, Cuevas (2018) has indicated that a salesforce increasingly needs integrated managerial competencies that expand selling skills “traditionally” held as important, such as interaction-related capabilities. This is one example of the broadening role of sales discussed previously.

Yoo et al. (2012) have argued that, on the one hand, digital technologies make it possible to connect customer experiences, offer new ones, and bridge previously separate industrial sectors (see also von Leipzig et al. 2017). For instance, digital technologies allow enterprises to create multichannel customer experiences that combine physical and digital elements (Lemon and Verhoef 2016; Yrjölä, Saarijärvi, and Nummela 2018). On the other hand, because of their dynamic and malleable characters, digital technologies bring forth constant organizational changes. Here, we concur with Warner and Wäger (2018, 2) who have argued that “the ubiquity of new digital technologies is changing the very nature and purpose of dynamic capabilities [...] because organizations can now scale up or scale down their operations at a speed, ease, and cost that was not possible only a decade ago.” These are issues managers need to be able to address while planning, shaping, and managing business models in an emerging digitalized economy (Teece 2018). Scholars have elaborated on these topics while discussing the underpinnings of the DDMCs in relation to the microfoundations of the dynamic capabilities (Teece 2007) and capability building for digital transformation (Warner and Wäger 2018).

Table 1 below summarizes the key advanced technologies transforming B2B selling.

Advanced Technology	Definition	B2B-Selling Applications	Examples of Research
Artificial Intelligence (AI)	Machines mimicking natural cognitive functions, such as learning and problem-solving (Russell and Norvig 2016)	AI could be used in segmentation, customer and channel relationship management, personal selling and pricing (Martínez-López and Casillas 2013; see also Syam and Sharma 2018). In particular, AI could help in communicating to customers in a contextualized and personalized manner (Arli, Bauer, and Palmatier 2018).	Martínez-López and Casillas (2013) provide a detailed review of AI applications in a B2B context. Syam and Sharma (2018) provide a review of how AI could be used in sales.
Machine Learning (ML)	“Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed.” (ExpertSystem 2019)	ML can be used for example in sales (demand) forecasting based on information, such as products offered to specific clients, client company size and growth, the existence of competitors in the area, and cross sale opportunities (Bohanec, Borštnar, and Robnik-Šikonja 2017; see also Syam and Sharma 2018). ML can also be used to help direct sales efforts by evaluating the	Bohanec, Borštnar, and Robnik-Šikonja (2017) present a real-world case of B2B sales forecasting. Syam and Sharma (2018) provide a review of how ML could be used in sales.

		likelihood that a particular lead will become a customer (Meire, Ballings, and Van den Poel 2017).	
Robotic Process Automation (RPA)	RPA is “the automation of service tasks that were previously performed by humans” (Lacity, Willcocks, and Craig 2015, 4). In other words, RPA involves using software robots to replace human workers in business processes by having the software watch how the user performs tasks (see also Lhuer 2016).	<p>Many tasks performed by sales personnel can be automated via RPA—as long as the tasks are entirely rule based (Ennis et al. 2018). The software robots can write emails, use multiple databases and correct errors (Hallikainen, Bekkhus, and Pan 2018).</p> <p>Examples:</p> <ul style="list-style-type: none"> • Using RPA to monitor customer relationship management (CRM) data quality • Using RPA to import sales lead information from external databases • Using RPA to automate sending first emails to potential sales leads 	Most studies are conceptual (Ennis et al. 2018) or focus on case examples of RPA adoption in an organization (see, e.g., Lacity, Willcocks, and Craig 2015; Hallikainen, Bekkhus, and Pan 2018).

<p>Social Media</p>	<p>Software that supports group interaction toward establishing communities as well as supporting the creation and exchange of content (Von Krogh 2012).</p>	<p>Salespeople can use social media to engage with customers and develop relationships with them in new ways (Agnihotri et al. 2012).</p> <p>Social media channels can also enable network collaboration in different business ecosystems (Ammirato et al. 2019).</p> <p>Data from social media can be used to direct customer acquisition activities (Meire, Ballings, and Van den Poel 2017).</p>	<p>Meire, Ballings, and Van den Poel (2017) illustrate how data from social media can be used to evaluate the likelihood that a particular lead will become a customer.</p> <p>Ammirato et al. (2019), based on survey data, have examined awareness of and intentions to use social media among B2B companies in Finland.</p>
---------------------	--	---	--

Table 1. A Summary of Key Advanced Technologies Transforming B2B Selling.

As Table 1 illustrates, different advanced technologies, including AI, ML, RPA, and social media (see the table for specific definitions), are currently changing the B2B landscape both in Finland and globally. First, AI is expected to provide B2B firms with assistance in the areas of customer profiling, channel management, and pricing decisions (Martínez-López and Casillas 2013; see also Syam and Sharma, 2018). Here, a relevant issue for managerial capabilities is the ability of managers to find a way to synergistically combine salespeople, analytics, and AI to enhance the customer experience (Arli, Bauer, and Palmatier 2018).

Second, ML is used in B2B selling for handling analytical tasks that have traditionally been carried out by the salesforce, such as sales predictions (Bohanec, Borštnar, and Robnik-Šikonja 2017; see also Syam and Sharma 2018) and tasks related to directing sales efforts toward the most promising customer leads (Meire, Ballings, and Van den Poel 2017). We were unable to find existing studies that would have enabled us to cite a direct link between ML and managerial capabilities. However, ML tools are more readily available, and analyses can be run on standard hardware

or, in the case of larger datasets, on leased online virtual computers. Research in ML applications in a wide variety of fields is expanding rapidly, making the technology even more available.

Third, RPA offers means to automate many tasks and duties of the sales personnel, ranging from pre-contacting to closing customer deals and taking care of customer relationship management (CRM) data—as far as these tasks are based on predefined rules (Ennis et al. 2018). Here, a key managerial priority is to address internal concerns about job loss and explain how adopting RPA will free up employees' time for more interesting work (Hallikainen, Bekkhus, and Pan 2018; see also Ennis et al. 2018).

Fourth, as previously discussed, social media have been given only limited attention in previous sales research among SMEs (see, e.g., Agnihotri et al. 2012; Bocconcelli, Cioppi, and Pagano 2017; Jussila, Kärkkäinen, and Aramo-Immonen 2014). In the B2B sales research context, attention has also been focused on social media as a tool in the sales process (see, e.g., Andzulis, Panagopoulos, and Rapp 2012; Marshall et al. 2012b; Moncrief, Marshall, and Rudd 2015), limiting the understanding of how to increase the organizational commitment and use of social media tools in sales (Guesalaga 2016). With respect to managerial capabilities, managers should focus on lowering the (cultural or organizational) barriers for adoption of social media tools as well as support and guide the use of social media in inter-firm business activities (Ammirato et al. 2019).

The last column of Table 1 provides examples of research related to each specific advanced technology listed. Generally speaking, research regarding the advanced technologies from a B2B-selling viewpoint is scarce (for an exception, see Syam and Sharma 2018). In particular, more studies that address the actual use (rather than the envisioned potential) of advanced technologies in a B2B sales setting are needed.

Identifying Digital Dynamic Managerial Capabilities

Teece (2007) has argued that dynamic capabilities can be classified for analytical purposes into three distinct activities: (1) sensing opportunities (and threats), (2) seizing those opportunities, and (3) reconfiguring intangible and tangible resources for maintaining competitiveness. Inspired by this classification, Warner and Wäger (2018) have suggested a process model for digital transformation among incumbent firms in traditional industries. The model depicts digitally based dynamic capability building along three major categories: (1) digital sensing (digital scouting, digital scenario planning, and digital mindset crafting), (2) digital seizing (rapid prototyping, balancing digital portfolios, and strategic agility), and (3) digital transforming (navigating innovation ecosystems, redesigning internal structures, and improving digital maturity) (ibid.).

Despite providing an explorative avenue in terms of combining the dynamic capability perspective and the digital transformation, the aforementioned study limits the understanding of the role of individual

managers as active change agents, and how they can identify the digital dynamic capabilities while addressing the ongoing digital transformation. We next combine the aforementioned insights and build new understanding regarding the DDMCs in the context of SMEs. Table 2, based on the authors' reflection, provides a summary of the discussion.

Underpinnings of the DDMCs	Sensing	Seizing	Transforming
Digital Human Capital	Personal and professional experiences of digital selling tools and technologies	<p>Capability to build new business with the help of digital selling tools and technologies</p> <p>Capability to be proactive and react quickly, respond and react to the signals drawn from the ecosystem</p>	<p>Capability to search, adopt, use, and assess digital selling tools and technologies</p> <p>Capability to lead change, solve conflicts, and disseminate sales strategy</p>
Digital Social Capital	<p>Capability to identify external resources and ecosystem relationships, even with peripheral actors</p> <p>Capability to identify the value of diverse digital tools and platforms in business</p>	<p>Capability to build new business models based on external resources and ecosystem relationships</p> <p>Capability to utilize social and networking tools (e.g., platforms, automation, social media, and AI) in business</p>	<p>Capability to link external digital resources with internal ones and assess their relevance</p> <p>Capability to orchestrate dispersed and decentralized selling/sales processes and activities</p> <p>Capability to develop selling processes based on the available data of customers' buying process and touch points</p>

	Capability to motivate ecosystem actors to share market/sales/customer-related insights and knowledge through digital tools and technologies	Capability to build new business models based on scalable business platforms and ecosystems	Capability to renew sales processes together with followers and customers
Digital Managerial Cognition	<p>Capability to direct attention, search, and find analogous examples of digital technology use in creative manners</p> <p>Capability to spot and interpret novel business opportunities brought by new digital selling tools and technologies</p> <p>Continuous learning mindset</p>	<p>Capability to pursue and act on novel digital business opportunities</p> <p>Capability to lead international growth by adopting scalable technologies</p> <p>Capability to lead vision of transforming the ways of thinking</p>	<p>Capability to instill a digital mindset throughout the sales organization</p> <p>Capacity for problem solving in relation to digital technology use</p> <p>Capacity for learning based on rapid digital experiments</p>

Table 2. Insights into DDMCs for Transforming B2B Selling in SMEs.

First, *digital human capital* directs attention to managers’ personal and professional experiences regarding advanced technologies as well as their capabilities to seize signals from the firm’s ecosystem quickly, build new businesses around these technologies, and adopt, use, and assess various digital selling tools and technologies. Warner and Wäger (2018) have pinpointed that prior experiences (regarding contextual and technological knowledge) of executives on digital transformation projects provide crucial standpoints for building dynamic capabilities for digital transformation in companies. We follow this observation and suggest that the experiences of managers also play an important role in how SMEs can sense and transform digital capabilities. The value of these experiences should not be underestimated. Investments in digital selling tools and technologies alone do not guarantee better performance in sales (Chang, Park, and Chaiy 2010; Rodrigues, Ajjan, and Peterson 2016).

Second, *digital social capital* emphasizes managers' capabilities to identify and assess external resources and ecosystem relationships, motivate them to share insights and knowledge through advanced technologies, and spot the value of various digital technologies regarding their business. Besides these, the managers also need to seize the opportunities (and deal with threats) provided by the aforementioned issues. Thus, digital social capital also puts an emphasis on the managerial capabilities which enable managers to utilize digital resources and capabilities provided by the ecosystem relationships and advanced technologies in the business for building new scalable business models (see, e.g., Muzellec, Ronteau, and Lambkin 2015). Further, these capabilities lay the groundwork for managerial capabilities that enable, for example, linking the external digital resources with internal ones and orchestrating the dispersed selling/sales processes and activities in the ecosystem. Medlin and Törnroos (2015) have, for example, suggested that managers need capabilities through which they together with their partners exploit current networks (e.g., acquiring and combining various resources required for technology development) and explore possible future network relationships (for advancing technology development and its commercialization).

In the sales management literature, it has been argued that technology and sales processes should be integrated for achieving sales performance (Coltman 2007), but it is notable that the technology investments do not lead directly to better sales performance (Rodriguez, Peterson, and Krishnan 2012). The starting point could be for the managers to communicate the goal in using the digital tools and to provide support and guidance for dissemination (*ibid.*). Furthermore, relationships with the customers are more interactive than before (Marshall et al. 2012b; Moore, Raymond, and Hopkins 2015) and call for interactional capabilities of the salesforce (Haas, Snehota, and Corsaro 2012; Hohenschwert and Geiger 2015). For example, social media have enabled customers to collaborate directly with salespeople at any time and still receive quick responses to questions and concerns about sales (Marshall et al. 2012b).

Sales managers, however, need digital social capabilities, which enable them to manage the selling work so that it enables the creation of value together with the customer before the solutions are available and often in close collaboration with research and development representatives (Cuevas 2018). Cuevas sees that complex, multi-functional, and multi-level co-creative interactions will in the future lead to dynamic relationships. Warner and Wäger (2018) continue along this line as they have suggested that decentralized organizational structures and transformative leadership assist in building digital dynamic capabilities in an organization.

Finally, *digital managerial cognitive capabilities* concern capabilities that the manager utilizes when searching for analogous examples from previous digital projects, learning new related issues, and sensing novel opportunities brought by new digital selling tools and technologies. They

also involve capabilities through which managers can act on novel digital business opportunities (and address threats) as well as lead envisioned digital, future-oriented strategies (see, e.g., Xu, Frankwick, and Ramirez 2016). Previous researchers have argued that managerial cognition has an influence on developing new capabilities, including technical ones (Tripsas and Gavetti 2000), as well as on how quickly organizations adopt new product technologies (Eggers and Kaplan 2009). However, sensing and seizing digital managerial cognitive capabilities in a turbulent business environment may be difficult. For example, Kaplan (2008) has shown that attention to emerging technology correlates with investments in those technologies, while Eggers and Kaplan (2009) demonstrated how attention to existing technologies was associated with slower progress. Church and Burke (2017) have pointed out that a digital (learning) mindset of the managers was critical in transforming business processes to reflect digital (and data-driven) foci as they have written, “If an organization is moving toward a digital mindset and yet the leaders do not embrace technology or the use of data for decision-making, for example, there will be little belief on the part of employees that the transformation is real or supported” (52). Warner and Wäger (2018) have also noted the need of firms to construct a leadership team as well as business strategies and models so that they elevate the digital focus. Eggers and Kaplan (2009) have, however, reminded that managers who have invested in specific technologies in the past may be reluctant or unable to consider newer emerging technologies.

Furthermore, Warner and Wäger (2018) have shown empirically that senior executives’ ability to make sense of the digital transformation and take part in the journey into the digital age by shaping new opportunities (and addressing threats) plays an important role in the building of digitally enabled dynamic capabilities among their incumbent firms. According to the authors (*ibid.*), this digital sensing comprises new ways of strategizing in which information provided by new advanced technologies is harnessed so as to establish a long-term vision which supports an entrepreneurial and digital mindset covering all parts of the organization. In addition, the increasing availability and use of data, enabled by advanced digital technologies, link with the ongoing transformation of decision-making from sales personnel to “intelligent” machines (Syam and Sharma 2018). In their paper on the changes brought by AI, Agrawal, Gans, and Goldfarb 2017, 26) have, however, noted that “it seems likely that organizations will have continuing demand for people who can make responsible decisions (requiring ethical judgement), engage customers and employees (requiring emotional intelligence), and identify new opportunities (requiring creativity).” Thus, the managers and executives in the SMEs should also elevate their digital cognitive capabilities.

Discussion and Conclusions

In the present article, we have examined how the digitalization of business processes and activities is critically changing B2B-selling processes and

their strategic and operative management. As a result, we developed a framework that outlines the underpinnings of the capabilities required of managers in this new environment. It thereby serves as a fruitful tool for researchers, sales professionals, other B2B practitioners and policy makers. The framework lays the groundwork for deeper understanding of the importance of the DDMCs as managers are addressing the pressures brought by the digital transformation of their enterprises. Our article contributes to the literature on sales management by providing a strategy-laden framework, which enables managers to better understand how contemporary B2B selling can be transformed in an increasingly digitalized business world where managing is challenged because of the increased complexity of the ecosystem era, requiring the rapid management of human resources, organizational actors, business processes, and technology.

Focusing on the role of managers in enacting digital transformation in the changing B2B-selling setting, this article joins with the sales management studies that have emphasized sales managers as change leaders (Ingram et al. 2005) and key catalysts for organizational (and strategic) change, both in their own organizations and with their customers (Dixon and Tanner 2012). For instance, many sales organizations do not have a coherent sales strategy (Moncrief 2017), even when a sales strategy might boost financial performance (Panagopoulos and Avlonitis 2010). This article transcends current sales management literature by drawing analytical insights from various streams of literature (i.e., B2B selling and sales management, managerial dynamic capabilities, digital transformation, and ecosystems) and arguing that the dynamic capabilities of managers are crucial in driving strategic change in the SMEs. More specifically, the developed framework addresses the capabilities required by managers in their quest to transform their organizations' B2B selling with digital resources and competencies. This study encourages research among the Finnish SMEs to the next phase in which the focus is shifted onto external and customer-oriented activities, sales-related managerial capabilities and strategic sales management processes. The emerging ecosystem era and increased digitization are affecting organizations and business functions across industries, and B2B selling is no exception. We propose that, in addition to technological training, skills, and experience (human capital), managers would also benefit from considering social and networking skills (social capital) as well as creative thinking that embraces the digital mindset (managerial cognition). Thus, we suggest a set of capabilities that can be argued to be crucial when managing B2B selling in the ecosystem era and that are needed in order to survive in the evolving business, innovation, and platform ecosystems comprising human resources, organizations, technologies, activities and processes, and data and information. We also expect that these capabilities play an important role in the attempts to transform Finland into a leading country of AI applications (see Ministry of Economic Affairs and Employment 2019). Hence, our

study helps managers in Finnish SMEs to support digital transformation better, for instance in the adoption of digital tools to business operations (Jussila, Kärkkäinen, and Aramo-Immonen 2014).

The developed framework utilizes the classification of Teece (2007) regarding dynamic capabilities. This classification provides a means to address three distinct processes of dynamic capabilities—sensing, seizing, and transforming—with the managerial capabilities needed in enacting the digital transformation. We acknowledge that the classification, while useful for analytical purposes, is limited in a sense, since in reality the DDMCs are overlapping. For example, it is not enough for single managers to acknowledge their previous experiences related to digitalization or to make sense of the new advanced B2B-related selling technologies, if they are not able to make the connection between these technologies and available external digital resources and capabilities and further harness related emerging opportunities as a strategic part of their organizations' defined sales process.

Furthermore, the DDMC framework developed in this article translates to a research agenda that enables new avenues, including a development orientation to the issue. Table 3 summarizes the key topics and related research questions.

DDMC Related Topics	Important Research Questions
Digital Human Capital	<ul style="list-style-type: none">• How can managers organize B2B-selling work and sales processes to support the use of digital B2B-selling tools and technologies?• How can managers increase and strengthen human-technology interaction that enables turning social and human capital into digital knowledge within the focal ecosystem?• How can managers organize and manage relational digital sales-service connections in the ecosystem as a part of a sales process?• How can managers support the adoption of digital B2B-selling processes inside the firm and as a part of the emerging digitally governed ecosystems (e.g., business, entrepreneurial, innovation, and platform ecosystems)?• How do managers assess which parts of the B2B-selling processes can be automated or semi-automated with advanced technologies?• How does one lead digitized customer-centric and digital B2B selling in different kinds of organizations?• How do managers determine the roles of the salesforce in the era of advanced technologies?

<p>Digital Social Capital</p>	<ul style="list-style-type: none"> • How can managers encourage the enterprise’s employees to leverage digital connections, resources, and capabilities possessed by other instances? • How can managers effectively assess the utilization of diverse ecosystem relationships in the digital B2B-selling processes? • How can managers build the enterprise’s relationship portfolio for supporting digital business creation? • How can managers integrate upstream and downstream flows (particularly within the business ecosystem) to enhance operational effectiveness in digital B2B selling? • How can managers influence their subordinates’ understanding of the digital ecosystem and its role in sales processes? • How much can managers lead subordinates with the help of digital management tools?
<p>Digital Cognitive Managerial Capabilities</p>	<ul style="list-style-type: none"> • How can managers recognize connections between their current business models and new ones provided by digital B2B-selling tools and technologies to survive in constantly and rapidly evolving business ecosystems? • How are managers utilizing their personal experiences of previous digital projects while developing the digital B2B selling in their firms and further while envisioning new digital business models? • How are attitudes and beliefs about digital B2B selling shared within an organization? How can these attitudes and beliefs be altered at an organizational level so as to promote digital transformation? • How are B2B-selling activities with different underlying logic (transactional, consultative, etc.) managed in a digital era? • How are previous projects related to digitalization utilized in an organization while envisioning future business goals and models? • What are the practices for managing digital B2B selling that enable proactive, active, and reactive actions in fast manners? • How can managers instill a digital mindset focused on continuous learning?

Table 3. Research Agenda for Studying DDMCs in B2B-Selling Setting.

In addition to the topics and questions suggested in the research agenda, research methods require special attention. To guarantee a successful strategic change in the SMEs’ digital resources and competences, there is a need for research methodologies that enable focusing on detecting and analyzing the DDMCs, particularly in complex ecosystem settings. Previous studies have emphasized the emergence of the DMCs through human action (see, e.g., Adner and Helfat 2003; Helfat and Martin 2015;

Helfat and Peteraf 2015). In previous empirical studies, DMCs have usually been identified ex post (Zahra, Sapienza, and Davidsson 2006). These observations suggest that an emic approach is also to be followed regarding the DDMCs, as it allows researchers to zoom into events and happenings occurring inside the firms and during daily organizational life. This paves the way to consider case study methodologies (that have already been used in the area of the dynamic capabilities, see, e.g., Danneels 2002) or the critical incident technique (Evers 2011) as suitable for investigating digital DMCs among the SMEs. An ethnographically informed study could also be applicable, since it enables addressing micro processes related to the construction and development of the DDMCs.

To advance this work, the next step in future research would be to investigate the usability of the suggested conceptual framework in different empirical settings. This would also include an empirical investigation of how the individual-level DDMCs inform the capacity of both a team and an organization to make a strategic change in the ever-increasing digitalized world as well as the role of (sales) managers in leading digital transformation in the ecosystems. A key consideration in future studies would address the important distinction between: (A) digitalizing current B2B-selling activities, and (B) using advanced technologies to create entirely new types of selling activities, potentially disrupting existing business models. Further research is also needed to explore the development of the DDMCs in the SME context, contributing at least partially to Warner and Wäger's (2018) call for studies on dynamic capability building processes among venture firms. Finally, we believe that service dominant logic could be a useful theoretical lens for understanding digital capabilities in broader (institutional) contexts. The study by Hartmann, Wieland, and Vargo (2018) could be a starting point in these efforts.

References

- Aarikka-Stenroos, Leena, and Paavo Ritala. 2017. "Network Management in the Era of Ecosystems: Systematic Review and Management Framework." *Industrial Marketing Management* 67: 23–36.
- Adamson, Brent, Matthew Dixon, and Nicholas Toman. 2012. "The End of Solution Sales." *Harvard Business Review* 90 (7–8): 60–68.
- Adler, Paul S., and Seok-Woo Kwon. 2002. "Social Capital: Prospects for a New Concept." *Academy of Management Review* 27 (1): 17–40.
- Adner, Ron, and Constance E. Helfat. 2003. "Corporate Effects and Dynamic Managerial Capabilities." *Strategic Management Journal* 24 (10): 1011–25.
- Adner, Ron, and Rahul Kapoor. 2010. "Value Creation in Innovation Ecosystems: How the Structure of Technological Interdependence Affects Firm Performance in New Technology Generations." *Strategic Management Journal* 31 (3): 306–33.

- Agnihotri, Raj, Rebecca Dingus, Michael Y. Hu, and Michael T. Krush. 2016. "Social Media: Influencing Customer Satisfaction in B2B Sales." *Industrial Marketing Management* 53: 172–80.
- Agnihotri, Raj, Prabakar Kothandaraman, Rajiv Kashyap, and Ramendra Singh. 2012. "Bringing 'Social' into Sales: The Impact of Salespeople's Social Media Use on Service Behaviors and Value Creation." *Journal of Personal Selling & Sales Management* 32 (3): 333–48.
- Agrawal, Ajay, Joshua Gans, and Avi Goldfarb. 2017. "What to Expect from Artificial Intelligence." *MIT Sloan Management Review* 58 (3): 23–26.
- Ambrosini, Véronique, and Cliff Bowman. 2009. "What Are Dynamic Capabilities and Are They a Useful Construct in Strategic Management?" *International Journal of Management Reviews* 11 (1): 29–49.
- Ammirato, Salvatore, Alberto Michele Felicetti, Marco Della Gala, Heli Aramo-Immonen, Jari J. Jussila, and Hannu Kärkkäinen. 2019. "The Use of Social Media for Knowledge Acquisition and Dissemination in B2B Companies: An Empirical Study of Finnish Technology Industries." *Knowledge Management Research & Practice* 17 (1): 52–69.
- Andzulis, James "Mick," Nikolaos G. Panagopoulos, and Adam Rapp. 2012. "A Review of Social Media and Implications for the Sales Process." *Journal of Personal Selling & Sales Management* 32 (3): 305–16.
- Aragón-Correa, J. Alberto, and Sanjay Sharma. 2003. "A Contingent Resource-Based View of Proactive Corporate Environmental Strategy." *Academy of Management Review* 28 (1): 71–88.
- Aral, Sinan, and Peter Weill. 2007. "IT Assets, Organizational Capabilities, and Firm Performance: How Resource Allocations and Organizational Differences Explain Performance Variation." *Organization Science* 18 (5): 763–80.
- Arli, Denni, Carlos Bauer, and Robert W. Palmatier. 2018. "Relational Selling: Past, Present and Future." *Industrial Marketing Management* 69: 169–84.
- Bailey, Elizabeth E., and Constance E. Helfat. 2003. "External Management Succession, Human Capital, and Firm Performance: An Integrative Analysis." *Managerial and Decision Economics* 24 (4): 347–69.
- Basole, Rahul C. 2009. "Visualization of Interfirm Relations in A Converging Mobile Ecosystem." *Journal of Information Technology* 24 (2): 144–59.
- Becker, Gary S. 1993. *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*. Third Edition. Chicago: The University of Chicago Press.

- Bharadwaj, Anandhi S. 2000. "A Resource-Based Perspective on Information Technology Capability and Firm Performance: An Empirical Investigation." *MIS quarterly* 24 (1): 169–96.
- Bharadwaj, Anandhi, Omar A. El Sawy, Paul A. Pavlou, and N. Venkatraman. 2013. "Digital Business Strategy: Toward a Next Generation of Insights." *MIS Quarterly* 37 (2): 471–82.
- Bhatt, Ganesh D., and Varun Grover. 2005. "Types of Information Technology Capabilities and Their Role in Competitive Advantage: An Empirical Study." *Journal of Management Information Systems* 22 (2): 253–77.
- Blyler, Maureen, and Russell W. Coff. 2003. "Dynamic Capabilities, Social Capital, and Rent Appropriation: Ties that Split Pies." *Strategic Management Journal* 24 (7): 677–86.
- Bocconcelli, Roberta, Marco Cioppi, and Alessandro Pagano. 2017. "Social Media as a Resource in SMEs' Sales Process." *Journal of Business & Industrial Marketing* 32 (5): 693–709.
- Bohanec, Marko, Mirjana Kljajić Borštnar, and Marko Robnik-Šikonja. 2017. "Explaining Machine Learning Models In Sales Predictions." *Expert Systems with Applications* 71: 416–28.
- Business Finland, Liikenne- ja viestintäministeriö, Teknologiateollisuus ja Verkkoteollisuus. 2018. *Digibarometri 2018* [Digi barometer 2018] [online publication]. Helsinki: Taloustieto Oy. <http://www.digibarometri.fi>.
- Campbell, Benjamin A., Martin Ganco, April M. Franco, and Rajshree Agarwal. 2012. "Who Leaves, Where to, and Why Worry? Employee Mobility, Entrepreneurship and Effects on Source Firm Performance." *Strategic Management Journal* 33 (1): 65–87.
- Capaldo, Antonio. 2007. "Network Structure and Innovation: The Leveraging of a Dual Network as a Distinctive Relational Capability." *Strategic Management Journal* 28 (6): 585–608.
- Cenamor, Javier, Vinit Parida, and Joakim Wincent. 2019. "How Entrepreneurial SMEs Compete through Digital Platforms: The Roles of Digital Platform Capability, Network Capability and Ambidexterity." *Journal of Business Research* 100: 196–206.
- Chang, Woojung, Jeong Eun Park, and Seoil Chaiy. 2010. "How Does CRM Technology Transform into Organizational Performance? A Mediating Role of Marketing Capability." *Journal of Business Research* 63 (8): 849–55.
- Chen, Yi-Min. 2010. "The Continuing Debate on Firm Performance: A Multilevel Approach to the IT Sectors of Taiwan and South Korea." *Journal of Business Research* 63 (5): 471–78.
- Church, Allan H., and W. Warner Burke. 2017. "Four Trends Shaping the Future of Organizations and Organization Development." *OD Practitioner* 49 (3): 14–22.
- Clarysse, Bart, Mike Wright, Johan Bruneel, and Aarti Mahajan. 2014. "Creating Value in Ecosystems: Crossing the Chasm Between

- Knowledge and Business Ecosystems.” *Research Policy* 43 (7): 1164–76.
- Coltman, Tim. 2007. “Can Superior CRM Capabilities Improve Performance in Banking.” *Journal of Financial Services Marketing* 12 (2): 102–114.
- Confederation of Finnish Industries. 2016. Team Finland kansainvälistymis- ja kaupanestoeselvitys 2016 [Team Finland Review of Internationalization and Business Barriers] [online publication]. <https://ek.fi/wp-content/uploads/Kaupanestoeselvitys-2016-final.pdf>.
- Cuevas, Javier Marcos. 2018. “The Transformation of Professional Selling: Implications for Leading the Modern Sales Organization.” *Industrial Marketing Management* 69: 198–208.
- Danneels, Erwin. 2002. “The Dynamics of Product Innovation and Firm Competences.” *Strategic Management Journal* 23 (12): 1095–1121.
- . 2008. “Organizational Antecedents of Second order Competences.” *Strategic Management Journal* 29 (5): 519–43.
- Deeter-Schmelz, Dawn R., and Karen Norman Kennedy. 2011. “A Global Perspective on the Current State of Sales Education in the College Curriculum.” *Journal of Personal Selling & Sales Management* 31 (1): 55–75.
- Dixon, Andrea L., and John (Jeff) F. Tanner Jr. 2012. “Transforming Selling: Why It Is Time to Think Differently About Sales Research.” *Journal of Personal Selling & Sales Management* 32 (1): 9–13.
- Drnevich, Paul L., and Aldas P. Kriauciunas. 2011. “Clarifying the Conditions and Limits of the Contributions of Ordinary and Dynamic Capabilities to Relative Firm Performance.” *Strategic Management Journal* 32 (3): 254–79.
- Dunaway, Mary, Yulia W. Sullivan, and Samuel Fosso Wamba. 2019. “Building Dynamic Capabilities with the Internet of Things.” *Proceedings of the 52nd Hawaii International Conference on System Sciences*. <http://hdl.handle.net/10125/60026>.
- Eggers, Jamie P., and Sarah Kaplan. 2009. “Cognition and Renewal: Comparing CEO and Organizational Effects on Incumbent Adaptation to Technical Change.” *Organization Science* 20 (2): 461–77.
- Eisenhardt, Kathleen M., and Jeffrey A. Martin. 2000. “Dynamic Capabilities: What Are They?” *Strategic Management Journal* 21 (10&11): 1105–21.
- Eloranta, Ville, and Taija Turunen. 2016. “Platforms in Service-Driven Manufacturing: Leveraging Complexity by Connecting, Sharing, and Integrating.” *Industrial Marketing Management* 55: 178–86.
- Ennis, Caroline, Nicholas Barnett, Sergio de Cesare, Rachel Lander, and Alan Pilkington. 2018. “A Conceptual Framework for Servitization in Industry 4.0: Distilling Directions for Future Research.” Conference paper presented at *The Advance Services Group Spring Servitization Conference 2018*. The Aston University and Higher Education Academy.

- Ernst and Young LLP. 2018. *Artificial Intelligence in Europe. Finland. Outlook for 2019 and Beyond*. Report commissioned by Microsoft. https://info.microsoft.com/rs/157-GQE-382/images/FINLAND_MGC0003161.pdf
- ExpertSystem. 2019. *What is Machine Learning? A Definition*. <https://www.expertsystem.com/machine-learning-definition/>.
- European Commission. 2003. "Commission Recommendation of 6 May 2003 Concerning the Definition of Micro, Small and Medium-Sized Enterprises." *Official Journal of the European Union* L124: 36–41. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003H0361&from=EN>
- . 2018. *International Digital Economy and Society Index 2018*. SMART 2017/0052. Final Report. Tech4i2. https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=54991.
- Evers, Natasha. 2011. "International New Ventures in 'Low Tech' Sectors: A Dynamic Capabilities Perspective." *Journal of Small Business and Enterprise Development* 18 (3): 502–28.
- Fitzgerald, Michael, Nina Kruschwitz, Didier Bonnet, and Michael Welch. 2014. "Embracing Digital Technology: A New Strategic Imperative." *MIT Sloan Management Review* 55 (2): 1–12.
- Frow, Pennie, Janet R. McColl-Kennedy, and Adrian Payne. 2016. "Co-Creation Practices: Their Role in Shaping a Health Care Ecosystem." *Industrial Marketing Management* 56: 24–39.
- Gawer, Annabelle, and Michael A. Cusumano. 2014. "Industry Platforms and Ecosystem Innovation." *Journal of Product Innovation Management* 31 (3): 417–33.
- Guesalaga, Rodrigo. 2016. "The Use of Social Media in Sales: Individual and Organizational Antecedents, and the Role of Customer Engagement in Social Media." *Industrial Marketing Management* 54: 71–79.
- Gyrd-Jones, Richard I., and Niels Kornum. 2013. "Managing the Co-Created Brand: Value and Cultural Complementarity in Online and Offline Multi-stakeholder Ecosystems." *Journal of Business Research* 66 (9): 1484–93.
- Haas, Alexander, Ivan Snehota, and Daniela Corsaro. 2012. "Creating Value in Business Relationships: The Role of Sales." *Industrial Marketing Management* 41 (1): 94–105.
- Hallikainen, Petri, Riitta Bekkhus, and Shan L. Pan. 2018. "How OpusCapita Used Internal RPA Capabilities to Offer Services to Clients." *MIS Quarterly Executive* 17 (1): 41–52.
- Harris, Dawn, and Constance E. Helfat. 2016. "Dynamic Managerial Capabilities." In *Palgrave Encyclopedia of Strategic Management*, edited by Mie Augier and David J. Teece. Basingstoke: Palgrave Macmillan.

- Hartmann, Nathaniel N., Heiko Wieland, and Stephen L. Vargo. 2018. "Converging on a New Theoretical Foundation for Selling." *Journal of Marketing* 82 (2): 1–18.
- Helfat, Constance E., and Jeffrey A. Martin. 2015. "Dynamic Managerial Capabilities: Review and Assessment of Managerial Impact on Strategic Change." *Journal of Management* 41 (5): 1281–1312.
- Helfat, Constance E., and Margaret A. Peteraf. 2015. "Managerial Cognitive Capabilities and the Microfoundations of Dynamic Capabilities." *Strategic Management Journal* 36 (6): 831–50.
- Henneberg, Stephan C., Thorsten Gruber, and Peter Naudé. 2013. "Services Networks: Concept and Research Agenda." *Industrial Marketing Management* 42 (1): 3–8.
- Hodgkinson, Gerard P., and Mark P. Healey. 2011. "Psychological Foundations of Dynamic Capabilities: Reflexion and Reflection in Strategic Management." *Strategic Management Journal* 32 (13): 1500–16.
- Hohenschwert, Lena, and Susi Geiger. 2015. "Interpersonal Influence Strategies in Complex B2B Sales and the Socio-Cognitive Construction of Relationship Value." *Industrial Marketing Management* 49: 139–50.
- Ingram, Thomas N., Raymond W. LaForge, William B. Locander, Scott B. MacKenzie, and Philip M. Podsakoff. 2005. "New Directions in Sales Leadership Research." *Journal of Personal Selling & Sales Management* 25 (2): 137–54.
- Isenberg, Daniel. 2010. "The Big Idea: How to Start an Entrepreneurial Revolution." *Harvard Business Review* 88 (6): 41–50.
- Järvinen, Joel, and Heini Taiminen. 2016. "Harnessing Marketing Automation for B2B Content Marketing." *Industrial Marketing Management* 54: 164–75.
- Jussila, Jari J., Hannu Kärkkäinen, and Heli Aramo-Immonen. 2014. "Social Media Utilization in Business-to-Business Relationships of Technology Industry Firms." *Computers in Human Behavior* 30: 606–13.
- Kaplan, Sarah. 2008. "Cognition, Capabilities, and Incentives: Assessing Firm Response to the Fiber-Optic Revolution." *Academy of Management Journal* 51 (4): 672–95.
- Kaski, Timo Arvid, Pia Hautamaki, Ellen Bolman Pullins, and Heidi Kock. 2017. "Buyer Versus Salesperson Expectations for an Initial B2B Sales Meeting." *Journal of Business & Industrial Marketing* 32 (1): 46–56.
- Kindström, Daniel, Christian Kowalkowski, and Erik Sandberg. 2013. "Enabling Service Innovation: A Dynamic Capabilities Approach." *Journal of Business Research* 66 (8): 1063–73.
- Koponen, Jonna, Saara Julkunen, and Akiko Asai. 2019. "Sales Communication Competence in International B2B Solution Selling." *Industrial Marketing Management* 82: 238–52.

- Kor, Yasemin Y. 2003. "Experience-Based Top Management Team Competence and Sustained Growth." *Organization Science* 14 (6): 707–19.
- Kor, Yasemin Y., and Andrea Mesko. 2013. "Dynamic Managerial Capabilities: Configuration and Orchestration of Top Executives' Capabilities and the Firm's Dominant Logic." *Strategic Management Journal* 34 (2): 233–44.
- Kouropalatis, Yiannis, Alessandro Giudici, and Oguz A. Acar. 2018. "Business Capabilities for Industrial Firms: A Bibliometric Analysis of Research Diffusion and Impact Within and Beyond Industrial Marketing Management." *Industrial Marketing Management* 83: 8–20.
- Kuismanen, Mikko, Petri Malinen, and Sampo Seppänen. 2019. *PK-Yritysbarmetri Kevät 2019* [Finnish SME-Barometer Spring 2019]. Helsinki: Suomen Yrittäjät Ry.
- Lacity, Mary, Leslie Willcocks, and Andrew Craig. 2015. "Robotic Process Automation at Telefonica O2." *The Outsourcing Unit Working Research Paper Series* 15/02: 1–19. http://eprints.lse.ac.uk/64516/1/OUWRPS_15_02_published.pdf.
- Lacoste, Sylvie. 2018. "From Selling to Managing Strategic Customers: A Competency Analysis." *Journal of Personal Selling & Sales Management* 38 (1): 92–122.
- Lemon, Katherine N., and Peter C. Verhoef. 2016. "Understanding Customer Experience throughout the Customer Journey." *Journal of Marketing* 80 (6): 69–96.
- Lhuer, Xavier. 2016. "The Next Acronym You Need to Know About: RPA (Robotic Process Automation)." *Digital McKinsey*. <http://www.roboticandcognitiveautomation.co.uk/downloads/Digital%20McKinsey%20-%20The%20next%20acronym%20you%20need%20to%20know%20-%20RPA,%202016.pdf>.
- Lockett, Andy. 2005. "Edith Penrose's Legacy to the Resource-Based View." *Managerial and Decision Economics* 26 (2): 83–98.
- Maklan, Stan, and Simon Knox. 2009. "Dynamic Capabilities: The Missing Link in CRM Investments." *European Journal of Marketing* 43 (11&12): 1392–1410.
- Marshall, Greg W., William C. Moncrief, Felicia G. Lassk, and David Shepherd. 2012a. "Linking Performance Outcomes to Salesperson Organizational Citizenship Behavior in an Industrial Sales Setting." *Journal of Personal Selling & Sales Management* 32 (4): 491–501.
- Marshall, Greg W., William C. Moncrief, John M. Rudd, and Nick Lee. 2012b. "Revolution in Sales: The Impact of Social Media and Related Technology on the Selling Environment." *Journal of Personal Selling & Sales Management* 32 (3): 349–63.
- Martínez-López, Francisco J., and Jorge Casillas. 2013. "Artificial Intelligence-Based Systems Applied in Industrial Marketing: An

- Historical Overview, Current and Future Insights.” *Industrial Marketing Management* 42 (4): 489–95.
- Mattila, Malla. 2017. “Coping with Friction During Technology Commercialisation.” *IMP Journal* 11 (2): 251–73.
- Mattila, Malla, Mika Yrjölä, and Hanna Lehtimäki. 2019. “Drivers and Barriers to Networked Commercialization: A Business Model Perspective.” *International Journal of Entrepreneurship and Innovation Management* 23 (5): 479–95.
- Medlin, Christopher J., and Jan-Åke Törnroos. 2015. “Exploring and Exploiting Network Relationships to Commercialize Technology: A Biofuel Case.” *Industrial Marketing Management* 49: 42–52.
- Meire, Matthijs, Michel Ballings, and Dirk Van den Poel. 2017. “The Added Value of Social Media Data in B2B Customer Acquisition Systems: A Real-Life Experiment.” *Decision Support Systems* 104: 26–37.
- Mele, Cristina, and Tiziana Russo-Spena. 2015. “Innomediary Agency and Practices in Shaping Market Innovation.” *Industrial Marketing Management* 44: 42–53.
- Mikalef, Patrick, and Adamantia Pateli. 2017. “Information Technology-Enabled Dynamic Capabilities and Their Indirect Effect on Competitive Performance: Findings from PLS-SEM and fsQCA.” *Journal of Business Research* 70: 1–16.
- Ministry of Economic Affairs and Employment. 2019. *Leading the Way into the Age of Artificial Intelligence. Final Report of Finland’s Artificial Intelligence Programme 2019*. Publications of the Ministry of Economic Affairs and Employment 41. Helsinki. <http://urn.fi/URN:ISBN:978-952-327-437-2>.
- Ministry of Economic Affairs and Employment of Finland. 2018. *Yrityskatsaus: Kasvua rahoituksesta* [Business Overview: Growth through Funding] [online publication]. TEM oppaat ja muut julkaisut 28/2018. <http://urn.fi/URN:ISBN:978-952-327-387-0>.
- . 2019. *Alueelliset kehitysnäkymät: Kevät 2019* [Regional Development Opportunities: Spring 2019] [online publication]. TEM raportteja 2019:28. <http://urn.fi/URN:ISBN:978-952-327-424-2>.
- Mitrega, Maciej, Sebastian Forkmann, Carla Ramos, and Stephan C. Henneberg. 2012. “Networking Capability in Business Relationships: Concept and Scale Development.” *Industrial Marketing Management* 41 (5): 739–51.
- Moncrief, William C. 2017. “Are Sales as We Know It Dying ... or Merely Transforming?” *Journal of Personal Selling and Sales Management*, 37 (4): 271–79.
- Moncrief, William C., Greg W. Marshall, and John M. Rudd. 2015. “Social Media and Related Technology: Drivers of Change in Managing the Contemporary Sales Force.” *Business Horizons*, 58 (1): 45–55.
- Moore, James F. 1993. “Predators and Prey: A New Ecology of Competition.” *Harvard Business Review* 71 (3): 75–86.

- Moore, Jesse N., Mary Anne Raymond, and Christopher D. Hopkins. 2015. "Social Selling: A Comparison of Social Media Usage across Process Stage, Markets, and Sales Job Functions." *Journal of Marketing Theory and Practice* 23 (1): 1–20.
- Mu, Jifeng. 2015. "Marketing Capability, Organizational Adaptation and New Product Development Performance." *Industrial Marketing Management* 49: 151–66.
- Muzellec, Laurent, Sébastien Ronteau, and Mary Lambkin. 2015. "Two-Sided Internet Platforms: A Business Model Lifecycle Perspective." *Industrial Marketing Management* 45: 139–50.
- Nguyen, Bang, Xiaoyu Yu, T. C. Melewar, and Junsong Chen. 2015. "Brand Innovation and Social Media: Knowledge Acquisition from Social Media, Market Orientation, and the Moderating Role of Social Media Strategic Capability." *Industrial Marketing Management* 51: 11–25.
- Pablo, Amy L., Trish Reay, James R. Dewald, and Ann L. Casebeer. 2007. "Identifying, Enabling and Managing Dynamic Capabilities in the Public Sector." *Journal of Management Studies* 44 (5): 687–708.
- Panagopoulos, Nikolaos G., and George J. Avlonitis. 2010. "Performance Implications of Sales Strategy: The Moderating Effects of Leadership and Environment." *International Journal of Research in Marketing* 27 (1): 46–57.
- Pandza, Krsto, and Richard Thorpe. 2009. "Creative Search and Strategic Sense-Making: Missing Dimensions in the Concept of Dynamic Capabilities." *British Journal of Management* 20: S118–S131.
- Pera, Rebecca, Nicoletta Occhiocupo, and Jackie Clarke. 2016. "Motives and Resources for Value Co-Creation in a Multi-Stakeholder Ecosystem: A Managerial Perspective." *Journal of Business Research* 69 (10): 4033–41.
- Ployhart, Robert E., Anthony J. Nyberg, Greg Reilly, and Mark A Maltarich. 2014. "Human Capital is Dead; Long Live Human Capital Resources!" *Journal of Management* 40 (2): 371–98.
- Rikama, Samuli. 2017. *Pk-yritysten kansainvälistyminen: Syksy 2017* [Internationalization of SMEs: Fall 2017]. TEM-analysejä 82. Helsinki: Työ- ja elinkeinoministeriö. <http://julkaisut.valtioneuvosto.fi/handle/10024/80701>.
- Ritala, Paavo, Vassilis Agouridas, Dimitris Assimakopoulos, and Otto Gies. 2013. "Value Creation and Capture Mechanisms in Innovation Ecosystems: A Comparative Case Study." *International Journal of Technology Management* 63 (3&4): 244–67.
- Ritala, Paavo, Arash Golnam, and Alain Wegmann. 2014. "Coopetition-Based Business Models: The Case of Amazon.com." *Industrial Marketing Management* 43 (2): 236–49.
- Ritter, Thomas, and Hans Georg Gemünden. 2003. "Network Competence: Its Impact on Innovation Success and Its Antecedents." *Journal of Business Research* 56 (9): 745–55.

- Rodriguez, Michael, Haya Ajjan, and Robert M. Peterson. 2016. "Social Media in Large Sales Forces: An Empirical Study of the Impact of Sales Process Capability and Relationship Performance." *Journal of Marketing Theory and Practice* 24 (3): 365–79.
- Rodriguez, Michael, Robert M. Peterson, and Vijaykumar Krishnan. 2012. "Social Media's Influence on Business-to-Business Sales Performance." *Journal of Personal Selling & Sales Management* 32 (3): 365–78.
- Rosenbloom, Richard S. 2000. "Leadership, Capabilities, and Technological Change: The Transformation of NCR in the Electronic Era." *Strategic Management Journal* 21 (10&11): 1083–1103.
- Russell, Stuart J., and Peter Norvig. 2016. *Artificial Intelligence: A Modern Approach*. London: Pearson Education.
- Sandberg, Johan. 2014. *Digital Capability: Investigating Coevolution of IT and Business Strategies*. Research reports in informatics, RR-14.01. Doctoral Dissertation. Department of Informatics, Umeå University. <http://umu.diva-portal.org/smash/get/diva2:717029/FULLTEXT01.pdf>.
- Sher, Peter J., and Vivid C. Lee. 2004. "Information Technology as a Facilitator for Enhancing Dynamic Capabilities through Knowledge Management." *Information & Management* 41 (8): 933–45.
- Sheth, Jagdish N., and Arun Sharma. 2006. "The Surpluses and Shortages in Business-to-Business Marketing Theory and Research." *Journal of Business & Industrial Marketing* 21 (7): 422–27.
- . 2008. "The Impact of the Product to Service Shift in Industrial Markets and the Evolution of the Sales Organization." *Industrial Marketing Management* 37 (3): 260–69.
- Simula, Henri, and Tuomas Ahola. 2014. "A Network Perspective on Idea and Innovation Crowdsourcing in Industrial Firms." *Industrial Marketing Management* 43 (3): 400–408.
- SME Barometer. 2018. *PK-yrittäjät 2018* [SME Barometer Spring 2018]. Suomen yrittäjät ry, Finnvera, and the Ministry of Economic Affairs and Employment of Finland. https://www.yrittajat.fi/sites/default/files/pk_barometri_kevat2018.pdf.
- Statistics Finland 2017. Enterprises, 2017 [online publication]. Website. http://www.tilastokeskus.fi/tup/suoluk/suoluk_yritykset_en.html#enterprises,2017.
- Storbacka, Kaj, and Suvi Nenonen. 2015. "Learning with the Market: Facilitating Market Innovation." *Industrial Marketing Management* 44: 73–82.
- Syam, Niladri, and Arun Sharma. 2018. "Waiting for a Sales Renaissance in the Fourth Industrial Revolution: Machine Learning and Artificial Intelligence in Sales Research and Practice." *Industrial Marketing Management* 69: 135–46.

- Tai, Jeffrey C. F., Eric T. G. Wang, and Hsi-Yin Yeh. 2019. "A Study of IS Assets, IS Ambidexterity, and IS Alignment: The Dynamic Managerial Capability Perspective." *Information & Management* 56 (1): 55–69.
- Taillard, Marie, Linda D. Peters, Jaqueline Pels, and Cristina Mele. 2016. "The Role of Shared Intentions in the Emergence of Service Ecosystems." *Journal of Business Research* 69 (8): 2972–80.
- Teece, David J. 2007. "Explicating Dynamic Capabilities: The Nature and Microfoundations of (Sustainable) Enterprise Performance." *Strategic Management Journal* 28 (13): 1319–50.
- . 2012. "Dynamic Capabilities: Routines Versus Entrepreneurial Action." *Journal of Management Studies* 49 (8): 1395–1401.
- . 2014. "The Foundations of Enterprise Performance: Dynamic and Ordinary Capabilities in an (Economic) Theory of Firms." *Academy of Management Perspectives* 28 (4): 328–52.
- . 2016. "Dynamic Capabilities and Entrepreneurial Management in Large Organizations: Toward a Theory of the (Entrepreneurial) Firm." *European Economic Review* 86: 202–16.
- . 2018. "Business Models and Dynamic Capabilities." *Long Range Planning* 51 (1): 40–49.
- Teece, David J., Gary Pisano, and Amy Shuen. 1997. "Dynamic Capabilities and Strategic Management." *Strategic Management Journal* 18 (7): 509–33.
- Torkkeli, Lasse, Olli Kuivalainen, Sami Saarenketo, and Kaisu Puumalainen. 2016. "Network Competence in Finnish SMEs: Implications for Growth." *Baltic Journal of Management* 11 (2): 207–30.
- Töytäri, Pekka, and Risto Rajala. 2015. "Value-Based Selling: An Organizational Capability Perspective." *Industrial Marketing Management* 45: 101–12.
- Trainor, Kevin J. 2012. "Relating Social Media Technologies to Performance: A Capabilities-Based Perspective." *Journal of Personal Selling & Sales Management* 32 (3): 317–31.
- Trainor, Kevin J., James (Mick) Andzulis, Adam Rapp, and Raj Agnihotri. 2014. "Social Media Technology Usage and Customer Relationship Performance: A Capabilities-Based Examination of Social CRM." *Journal of Business Research* 67 (6): 1201–1208.
- Trainor, Kevin J., Adam Rapp, Lauren Skinner Beitelspacher, and Niels Schillewaert. 2011. "Integrating Information Technology and Marketing: An Examination of the Drivers and Outcomes of e-Marketing Capability." *Industrial Marketing Management* 40 (1): 162–74.
- Tripsas, Mary, and Giovanni Gavetti. 2000. "Capabilities, Cognition, and Inertia: Evidence from Digital Imaging." *Strategic Management Journal* 21 (10&11): 1147–61.

- Vargo, Stephen L., and Robert F. Lusch. 2016. "Institutions and Axioms: An Extension and Update of Service-Dominant Logic." *Journal of the Academy of Marketing Science* 44 (1): 5–23.
- Verbeke, Willem, Bart Dietz, and Ernst Verwaal. 2011. "Drivers of Sales Performance: A Contemporary Meta-Analysis. Have Salespeople Become Knowledge Brokers?" *Journal of the Academy of Marketing Science* 39 (3): 407–28.
- Verganti, Roberto, and Åsa Öberg. 2013. "Interpreting and Envisioning: A Hermeneutic Framework to Look at Radical Innovation of Meanings." *Industrial Marketing Management* 42 (1): 86–95.
- Von Krogh, Georg. 2012. "How Does Social Software Change Knowledge Management? Toward a Strategic Research Agenda." *The Journal of Strategic Information Systems* 21 (2): 154–64.
- von Leipzig, Tanja, M. Gamp, D. Manz, K. Schöttle, P. Ohlhausen, G. Oosthuizen, D. Palm, and K. von Leipzig. 2017. "Initialising Customer-Orientated Digital Transformation in Enterprises." *Procedia Manufacturing* 8: 517–24.
- Wamba, Samuel Fosso, Angappa Gunasekaran, Shahriar Akter, Steven Ji-fan Ren, Rameshwar Dubey, and Stephen J. Childe. 2017. "Big Data Analytics and Firm Performance: Effects of Dynamic Capabilities." *Journal of Business Research* 70: 356–65.
- Wang, Gang, In-Sue Oh, Stephen H. Courtright, and Amy E. Colbert. 2011. "Transformational Leadership and Performance across Criteria and Levels: A Meta-Analytic Review of 25 Years of Research." *Group & Organization Management*, 36 (2), 223–70.
- Wang, Yichuan, Shih-Hui Hsiao, Zhiguo Yang, and Nick Hajli. 2016. "The Impact of Sellers' Social Influence on the Co-Creation of Innovation with Customers and Brand Awareness in Online Communities." *Industrial Marketing Management* 54: 56–70.
- Wang, Zhan, and Hyun Gon Kim. 2017. "Can Social Media Marketing Improve Customer Relationship Capabilities and Firm Performance? Dynamic Capability Perspective." *Journal of Interactive Marketing* 39: 15–26.
- Warner, Karl S. R., and Maximilian Wäger. 2018. "Building Dynamic Capabilities for Digital Transformation: An Ongoing Process of Strategic Renewal." *Long Range Planning* 52 (3): 326–49.
- Wedel, Michel, and P. K. Kannan. 2016. "Marketing Analytics for Data-Rich Environments." *Journal of Marketing* 80 (6): 97–121.
- Winter, Sidney G. 2003. "Understanding Dynamic Capabilities." *Strategic Management Journal* 24 (10): 991–95.
- Xu, Zhenning, Gary L. Frankwick, and Edward Ramirez. 2016. "Effects of Big Data Analytics and Traditional Marketing Analytics on New Product Success: A Knowledge Fusion Perspective." *Journal of Business Research* 69 (5): 1562–66.

- Yoo, Youngjin, Richard J. Boland, Jr., Kalle Lyytinen, and Ann Majchrzak. 2012. "Organizing for Innovation in the Digitized World." *Organization Science* 23 (5): 1398–1408.
- Yrjölä, Mika, Hannu Saarijärvi, and Henrietta Nummela. 2018. "The Value Propositions of Multi-, Cross-, And Omni-Channel Retailing." *International Journal of Retail & Distribution Management* 46 (11&12): 1133–52.
- Zahra, Shaker A., Harry J. Sapienza, and Per Davidsson. 2006. "Entrepreneurship and Dynamic Capabilities: A Review, Model and Research Agenda," *Journal of Management Studies* 43 (4): 917–55.
- Ziggers, Gerrit Willem, and Jörg Henseler. 2009. "Inter-Firm Network Capability: How it Affects Buyer-Supplier Performance." *British Food Journal* 111 (8): 794–810.