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Servitization as business model contestation:

A practice approach

Abstract

In principle, organizations know how to do servitization, but in practice, many struggle to change their business models to include service offerings. To understand this struggle, this paper examines servitization in a large multinational manufacturer within the pulp and paper industry. Utilizing practice theory, the study explicates the servitization process as a contestation of a company's parallel business models—one existing and dominant; one emerging. As business models materialize in organizational practices, and therefore have the potential to frame and organize servitization efforts, the models give rise to contestations in the practices performed by actors in the organization and the ecosystem. The elements of such contestations provide a better understanding of the ways in which practices may be disrupted to support servitization. Contestations can thus be creative instead of problematic. As a result, this paper extends the conceptualization of servitization as a bottom-up, emergent and iterative process of business model contestation.

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1 Introduction

Vandermerwe and Rada (1988) coined the term "servitization" to describe the efforts among B2B manufacturers to develop new services to support their traditional product-based offerings. Servitization can deliver additional product functionality (Martinez, Bastl, Kingston, & Evans, 2010), which provides a competitive advantage that increases manufacturers' sales and profitability (Robinson, Clarke-Hill, & Clarkson, 2002). Researchers discuss servitization in many ways — service growth (Raddats & Easingwood, 2010), service transition (Oliva & Kallenberg, 2003), service infusion (Gustafsson, Brax, & Witell, 2010; Witell & Löfgren, 2013), and service orientation (Bowen, Siehl, & Schneider, 1989; Löfberg, 2014) — all of which incorporate the notion of change. Firms change their offerings, adding more advanced, sophisticated services in order to secure more stable revenues, longer-lasting customer relationships, and market differentiation (e.g. Oliva & Kallenberg, 2003). Servitization also brings related changes to the organizational culture, creating a service culture (Grönroos, 1989) in manufacturing companies (Gebauer, Fleisch, & Friedli, 2005), and to the overall business model (see e.g. Kindström, 2010; Kindström & Kowalkowski, 2014; Rabetino, Kohtamäki, & Gebauer, 2017; Storbacka, Windahl, Nenonen, & Salonen, 2013; Witell & Löfgren, 2013).

Servitization emphasizes a change from product-based to service-based business (Brax & Visintin, 2017), and businesses with "product-centric mental models" for doing business (Kindstrom & Kowalkowski 2014) may indeed face challenges in their servitization efforts. Therefore, this study focuses on business model development in the process of servitization. The business model provides a holistic unit of analysis (Amit & Zott, 2001) and plays a central

role in commercializing new offerings (e.g., Chesbrough & Rosenbloom, 2002). In studying servitization, the business model provides an integrating concept that allows the analysis of key dimensions in which change and challenges may typically occur: network structure, transactions, interaction between revenue models and incentives, and access to capabilities (Spring & Araujo, 2009). Also, the business model allows us to examine the process of servitization not only from within an organization, but also from its ecosystem and market (Ferreira, Proença, Spencer, & Cova, 2013; Mason & Spring, 2011; Palo & Tähtinen, 2013). Therefore, this paper stands with Kowalkowski, Gebauer, Kamp, and Parry (2017, p.7) in its view of servitization as a *process* in which business models are transformed; however, it extends that view to frame servitization as a process in which parallel business models are contested.

Although some research describes servitization as a straightforward, linear process (Oliva & Kallenberg, 2003), other studies and examples from organizations indicate that servitization does not happen top down. What seems to be missing from the discussion is an understanding of the business model as a bundle of practices itself (Mason & Spring, 2011). Change ebbs and flows through everyday practices, both within an organization's different sites and the ecosystem that includes customers and other stakeholders. Therefore, to study such a dynamic, distributed, and emergent phenomenon, a practice approach can provide a useful analytical framework as it allows us to focus on the dynamics, relations, and enactment of change (Feldman & Orlikowski, 2011).

Indeed, business practitioners consider the business model as a key ingredient in their daily practices (Doganova & Eyquem-Renault, 2009). There has been a recent call to study servitization as practice and in practice (Kohtamäki, Baines, Rabetino, & Bigdeli, 2018), and some researchers have made valuable attempts to identify and analyze key organizational practices in the implementation of servitization (Rabetino et al., 2017), delivery of services

(Baines & Lightfoot, 2013), and design and management of business models (Storbacka, 2011). Moreover, companies implementing servitization often must manage multiple business models (e.g., Kowalkowski, Windahl, Kindström, & Gebauer, 2015; Storbacka et al., 2013; Visnjic Kastalli, Van Looy, & Neely, 2013) based on co-existing product and service orientations, which can generate organizational ambivalence and conflict (Lenka, Parida, Sjödin, & Wincent, 2018; Sjödin, Parida, & Wincent, 2016), or "service paradoxes" (Gebauer, Fleisch, & Friedli, 2005; Kohtamäki, Rabetino & Einola, 2018).

Therefore, research must address both the implications of changing business models and the contestations arising between the dominant product-oriented and the emerging service-oriented business models (see Bohnsack, Pinkse, & Kolk, 2014), which frame differing sets of practices (Doganova & Eyquem-Renault, 2009; Mason & Spring, 2011) for and against servitization efforts. This paper answers the call for paradigmatic extensions beyond normative servitization research (see Luoto, Brax, & Kohtamäki, 2017) as it aims to understand how parallel business models may frame and change the organizational practices of servitization. Two fundamental questions guide this research: *What are the contestations of product- and service-based business models within a servitization process? How do these contestations change and stabilize the practices of servitization?*

To answer these questions, we looked at the literature on business model change within servitization and drew upon practice theory to develop an analytical framework for a case study of the servitization process within a large multinational manufacturer within the pulp and paper industry, which produces paper machines and offers additional services. Based on longitudinal data collected over a 10-year period at the firm, our findings show how business models materialize in organizational practices, and therefore have the potential to frame and organize servitization efforts. Business model contestations produce different, contradictory sets of practices performed simultaneously by different actors in the organization and the market,

constituting the process of servitization. This paper elaborates on how the elements of such contestations explain how practices change. As a contribution to the literature of servitization, it takes a practice approach not only to theorize about the change in practices during servitization, but also to understand servitization as the process of business model contestation.

2 Literature Review

2.1 Servitization: A business model perspective

Despite increasing attention to servitization among scholars, there is still room for stronger theoretical foundations and development of the field (Kowalkowski et al., 2017). In their meta-analysis, Luoto et al. (2017) called for more critical studies to examine whether servitization occurs as a planned strategic organizational transformation or as an emergent process. Similarly, Finne, Brax, & Holmström (2013) criticized the dominant view of servitization as a "forward unidirectional" process and argued for looking at not only the internal organizational aspects (managerial and strategic decision making), but also the changing environmental factors that may affect manufacturers' ability to provide services. These calls constitute a powerful motivation for this study.

Several frameworks and strategies outline servitization (Spring & Araujo, 2013). These include, for example, service growth strategies and deservitization (Kowalkowski et al., 2017), a set of operations principles, structures, and processes to deliver service offerings (Baines et al., 2009), and strategy-structure configurations effecting a service orientation of the corporate culture, human resource management, and organizational structures (Gebauer, Edvardsson, Gustafsson, & Witell, 2010). Overall, the defining characteristic of the servitization process is the transition to a service-based business model (e.g. Kindström, 2010; Storbacka et al., 2013; Rabetino et al, 2017). Therefore, the business model provides a powerful and integrating concept to examine both the servitization process (Spring & Araujo, 2009) and the bigger

picture of change and its practical implementation. This perspective can help "visualize how and when changes might occur, which should increase internal transparency, understanding, and awareness of service opportunities and necessary changes" (Kindström & Kowalkowski 2014, p. 106).

Researchers have begun to examine the change and configuration of business model elements during servitization, both within and beyond the firm, although prior research has not taken our approach of business model contestation. For example, Kindström (2010) found the shift to a service-based business model requires changes in all business model elements, in addition to changes in the "service innovation space," which includes the service offering, process, and position. Forkmann, Ramos, Henneberg, and Naudé (2017) defined service infusion not as an outcome, but as the process of business model reconfiguration in which the dimensions of a business model, including transaction content, structure, and governance are changed. That process is not firm-centric, but also accounts for the external configurational fit between the provider and the customer in the network and the wider market (Ferreira et al., 2013). The extant literature recognizes this network- and market-level view of business model change: Business models are represented and circulated at multiple sites within the wider network of actors whose actions are shaped as they encounter the business model (and vice versa) (Mason & Spring, 2011). Doganova & Eyquem-Renault (2009) considered business models as tools to explore a market and form a network for innovation. Similarly, Storbacka and Nenonen (2011) suggested that a business model is the interface through which actors in the network interact. Business models can explain the formation of market configurations; that is, changes in an actor's business model transfer through market practices to others' business models (Nenonen & Storbacka, 2010). To take a broader view on servitization, this ecosystem aspect of business models and their dynamics is important to acknowledge. Therefore, this paper conceptualizes business models as devices to explore the market (Doganova & Eyquem-

Renault, 2009), to shape, coordinate, and frame action (Mason & Spring 2011) and to address change (Demil & Lecocq, 2010) within the servitization process.

Firms that offer both products and services often have multiple or parallel business models (Markides, 2013; Markides & Charitou, 2004), instead of wholly and radically transforming from one to another, an observation that deepens the value of viewing servitization through a business model lens. As they increase service activities, manufacturers often are concerned about cannibalization of their product business (Visnjic Kastalli et al., 2013); therefore, firms may focus only partially on service activities while building on their product business (Storbacka et al., 2013). Researchers have discussed these challenges as "paradoxes," which in management and organization studies, are defined as "contradictory yet interrelated elements that exist simultaneously and persist over time" (Smith & Lewis 2011, p. 386). Gebauer et al. (2005) introduced the term "service paradox," which refers to a situation in which investments in service business do not yield expected higher returns.

Kohtamäki, Rabetino, and Einola (2018) extended this notion to identify organizational paradoxes in servitization caused by tensions that arise as a company moves from standardized products to customized solutions. According to the innovator's dilemma (Christensen, 2013), a great deal of tension and conflict may exist between the new and the old (Chesbrough, 2010). "Dominant logic" can lead firms to miss potentially valuable opportunities outside the current business model, leading managers to resist experiments that might threaten their ongoing value (Chesbrough, 2010). To explore new paths, Sosna, Trevinyo-Rodríguez, and Velamuri (2010) encouraged companies to employ trial-and-error learning that integrates accumulated knowledge into the routines and practices of the new business model. More research is needed to examine how companies can manage multiple offerings and business models within servitization (Kowalkowski et al., 2017), and resolve contestations between parallel business models both within the firm and in the its ecosystem of customers and other actors.

2.2 Practice approach to the servitization of business models

Poor outcomes of servitization have been linked to its implementation and the related capabilities and practices (Gebauer, 2011; Kohtamäki, Partanen, Parida, & Wincent, 2013; Rabetino et al., 2017; Storbacka, 2011); however, few studies use a practice-based approach (Kohtamäki et al., 2018a), which would allow a more nuanced understanding of the dynamics of change (Feldman & Orlikowski, 2011), the unfolding process of business model development and implementation, and the contestations between models. Practice theory has gained momentum within organization and management studies (e.g., Feldman & Orlikowski, 2011; Lindberg & Czarniawska, 2006; Nicolini, 2011; Whittington, 2006) as a means to study the ongoing and processual nature of work within organizations and their environments. According to this literature stream, practices form and affect several organizational phenomena (Nicolini, 2009; Schatzki, 2006). Practices, defined as routinized ways of thinking and doing things, consist of different interconnected elements: forms of bodily and mental activities, objects and their use, forms of understandings, know-how, emotions, and motivational knowledge (Reckwitz, 2002). A key element of practice is materiality — the use of objects and artifacts (Latour, 1987) to produce organizational phenomena. Innovation of practice (such as servitization) requires the active integration of these elements, some new, some well-established (Shove & Pantzar, 2005). Practices are always performed and situated in a specific space and time, which refer to the sites of the practices (Knorr Cetina, 1997; Nicolini, 2011), such as political practices, cooking practices, recreational practices, and religious practices (Schatzki, 2006). Thus, a practice approach spotlights individuals' work (Kohtamäki et al., 2018a); however, this study uses the approach not primarily to illustrate those actors, but to show the work involved in the contestation of business models.

A practice approach has much offer to answer the call for research to provide a stronger theorization of servitization (Kowalkowski et al., 2017; Luoto et al., 2017). Only recently has

research acknowledged the notion of practices and its potential to explain the process of servitization (Kohtamäki et al., 2018a). In their editorial on value co-creation in B2B systems, Kohtamäki and Rajala (2016) called for an elaboration on the collaborative practices of coproducing service offerings and co-creating value-in-use. Regarding servitization specifically, Kowalkowski et al. (2017) emphasized the evolutionary nature of service growth, including trial and error and experimentation (practices). Rabetino et al. (2017) presented a strategy map for servitization in which they identified key practices in its implementation that contribute to business model transformation. These practices were categorized as cultural management (practices to promote service cultures), internal relationship management (practices to improve internal relationships and information flow between units and across organizational silos), and human resource management processes (practices to equip product-oriented personnel with customer-centric knowledge and skills and to impose related motivational incentives). Storbacka (2011) identified new capabilities and management practices needed to shift towards integrated-solution business models: value research and solutions development, value proposition and solutions availability, value quantification and solution configuration, value verification and solution delivery, strategy planning, management systems, infrastructure, support, and human resources management.

This stream of work is valuable for explicating the process of servitization and the integrated sets of practices across an organization's multiple functions; however, the extant literature falls short in two key ways: First, it does not explicate or theorize on what a practice is, beyond labelling and categorizing practices as sets of normative, managerial practices according to function. Second, the literature does not consider how practices actually become contested and changed in the process of servitization within the organizational boundaries and beyond as a company shifts from selling only products to selling services or product-service combinations. Such a shift is ultimately a change in the business model. As Mason and Spring

(2011, p. 1033) stated, "Business models are not first designed and then implemented, but are more usefully thought of as strategy-as-practice; incrementally emergent and ever-changing," and therefore, managers and scholars must pay attention to the "management practices that perform, realise and evolve the business model as it happens."

To develop this stream of work, this paper looked at the development and contestation of a service-based business model and how it shaped the practices both within the firm and in its network and market. To understand practice change during the process of servitization (of the business model), we analyzed how such practices were dependent on or broke free from the dominant product-based business model.

Figure 1 depicts a framework for studying the practices of servitization and how they change through the contestation of business models. A dominant business model stabilizes business practices (maintenance of practices and their elements), while an emerging business model (servitization) involves disruption of practices and their elements. When a servitization project is introduced, conducted, and evaluated, tensions and contestations between the dominant and the emerging business model occur, resulting in further stabilization, disruption, and/or creation of new practices. The emerging service business model may become dominant, stabilizing a set of new practices before an additional disruption; therefore, this paper conceptualizes servitization as a bottom-up, emergent and iterative process of managing parallel business models practiced at multiple sites by multiple actors.

[Figure 1 about here]

3 Methodology

3.1 A longitudinal case study approach

To understand how parallel business models frame and change the organizational practices of servitization, we chose a qualitative case study approach (e.g., Eisenhardt, 1989;

Merriam, 1998). We selected this approach because it is used for exploratory research (Eisenhardt & Graebner, 2007; Yin, 2003), such as this study in which we sought to understand servitization as constituted of practices, a sparsely researched area.

The case company (referred to as PaperCo), which offers technologies, automation, and services to the pulp, paper, and energy industries, is a multinational company headquartered in Finland with more than 12,000 employees worldwide. PaperCo is a manufacturing firm in a B2B market with a separate service department that has actively developed and offered new services for the past 20 years, and which the company intends to expand continuously. Having worked with the company for a 10-year period, we have been able to collect extensive empirical data and have gained a thorough understanding of the company and its business practices. As a result of this relationship, we have conducted two different servitization research projects in conjunction with PaperCo and have followed their servitization process during these 10 years. The unit of analysis for this study was the firm's business model(s).

To understand the process of servitization inevitable requires a longitudinal perspective. Holland Thomson, and Henderson (2006) stressed that longitudinal research can reveal how and why change occurs, and therefore, we chose a longitudinal research design to understand how servitization processes are shaped over time. However, longitudinal studies present a practical problem: how to tell when the process begins and ends (Pettigrew, 1990). In our case, we found it hard to state the exact year when the practices of servitization began to emerge. Figure 1 illustrates PaperCo's path in a timeline, but rather than stating the exact years, it provides an overview of the servitization process and its key phases, and the data collected and analyzed in these phases.

3.2 Data collection and analysis

This study builds on in-depth interviews and documentation from PaperCo's service department located at a site in Sweden where the company produces paper machines. We

examined a range of documents to understand the company's history, and we looked at various materials presented to customers and other stakeholders in the market to learn how the firm communicates and represents its business model.

Taking a longitudinal approach, we interviewed service employees during multiple time periods (Pettigrew, 1990) in 2007–2009, 2014, 2016–2017. On multiple occasions between 2007 and 2017, we interviewed a total of 19 employees who held different positions in the company, including service manager, marketing professional, sales manager, senior process engineer, and technician. In these interviews, which lasted between one and three hours, employees were asked to tell about their experiences with the servitization process, and what actions they took, with whom and where. The interviews also included general servitization questions related to key business model elements, such as the organization, service offerings, technology, and customer relationships.

In addition to the interviews, which yielded rigorous empirical material, we conducted two workshops with PaperCo in 2015 and 2016 concerning remote services in the manufacturing industry. Insights from these workshops provided an empirical base of this study and guided our understanding of PaperCo's business model development. The workshops, along with other more or less informal discussions, were an iterative part of the data collection, as we drew upon previous insights to understand the business model development and change over time. This iterative approach is a key aspect in qualitative longitudinal data generation (Carduff, Murray, & Kendall, 2015).

The idea to study the servitization process from the perspective of business model contestation arose from the first workshop in 2015. We learned that the company's servitization ideas had not been achieved after 10 years, and challenges to servitization remained. Therefore, we analyzed the interviews (using Nvivo), focusing especially on business model practices that hindered or enabled servitization efforts (see Table 1), and created codes and categories based

on these aspects (e.g., Miles & Huberman, 1994). As shown in Figure 2, we first mapped PaperCo's servitization process into key phases: 1) the development of the dominant business model, based on production of superior paper machines; 2) the development of a service-based business model, triggered by the recession; and 3) the implementation of this business model, and the challenges and diversions presented by the dominant product-based business model. Although these latter two phases were simultaneous to some extent, we consider them two phases for purposes of presenting our findings.

Next, we analyzed these three phases from a practice perspective, according to our conceptual framework (Figure 1); that is, sets of different and often contradicting areas of practices linked to the dominant product-based and to the emerging service-based business models (stabilized vs. changing practices). This abductive research process of hovering between theory and data analysis is referred to as *systematic combining* (Dubois & Gadde, 2014). In the following sections, we present our findings of the servitization process according to the three key phases, discussing the development of the business model, areas of practices, and actors performing them.

[Figure 2 about here]

4 Findings

This section presents the three key phases that constituted PaperCo's servitization process, as illustrated in Figure 2 and summarized in Table 1. PaperCo's product-dominant business model originated with its development and manufacturing of superior paper machines. The recession in the early 2000s was a crossroads that forced PaperCo to start thinking of new ways to remain competitive in the market: On the one hand, the company wanted to continue with its product focus, but on the other, it began to experiment with service development. Following the recession and as competition increased in the market, PaperCo made a strategic

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decision to develop a more advanced service offering to support its machines (a service-based business model); however, PaperCo encountered multiple challenges to these servitization efforts because of the company's strong product-based business model and the related organizational practices. The development and contestation of these two parallel business models will be elaborated on in the following two sections.

[Table 1 about here]

4.1 Superior paper machines: Formulation of the dominant product-based business model

Founded in the late 1700s, PaperCo prides itself in its more than 200 years of *"industrial history"* (PaperCo history). Over the years, the company has manufactured a range of products from textiles to ships, with paper machines becoming its core offering in the late 1890s and early 1900s. PaperCo experienced an international expansion in the 1800s, founding its production plant in Sweden in 1865 which delivered its first paper machine in 1891 to a paper mill in Finland. The machine received much attention from the Swedish media before making the journey to Finland. This expansion marked the beginning of the company's success with superior paper machines.

Well-known for high quality machines created by engineers with superior technical competence, PaperCo based its business model on the manufacture, sale, and delivery of superior products. This business model structured and coordinated a range of organizational practices, such as the allocation and use of resources in product development, communications with customers and other actors in the machine manufacturing market, interactions with customers who turned to PaperCo for new technology and machines to improve their productivity.

During the 1980s, PaperCo began offering services as well, and late in that decade, the company formed a separate service department. PaperCo had offered repairs for a while, but not until the 1990s did these services start to attract more significant customers. Before this

time, paper machines were more straightforward, and paper mills could do repairs themselves. Because PaperCo's dominant business model was product-based to support the company's product focus, services were subordinate to production. A sales manager pointed out the problem: "Very much knowledge, many possibilities, and this and that, but it's only used to make new products, new machines, and it's not used in the service business." In addition, services had the same required rate of return as products. For example, a sales manager said:

> ... you need to have a long-term perspective if you deal with after-sales services. If you are going to invest in a lathe for three or four million [Swedish Kronor-SEK], you cannot write it off in three years, that is impossible, so it will never happen. Service [department] needs to find another way, which is hard today as we are subordinate production unit.

The company's dominant product-based business model applied the same rules and norms for developing and selling services as it had for products. This business model had gained momentum and had stabilized PaperCo's practices within the ecosystem and market for decades around the development, manufacturing, and sale of products (strong material objects — machines, parts, prototypes), which established a product-oriented mindset and knowledge. However, in the early 2000s PaperCo had to rethink this business model, which had strong implications on its organizational practices.

4.2 Towards a service-based business model

The market demand for paper decreased with the recession in the early 2000s. Also, as customers were no longer able to invest in new machines, after-sales services became more important. A senior process engineer recalled:

> Then these reading tablets became popular, which led to the fact that the paper could not be sold because people had stopped reading newspapers all of a sudden. Due to this there was very little going on in Finland, and this type of machine that we manufactured in Sweden, this production was moved back to Finland. This led to us sitting here, we

who had used to manufacture these machines, and we ended up being moved to the service department, and then we thought: What should we do now?

The company faced a crossroads: Certain organizational practices (strategizing, allocating existing resources and capabilities, moving to Finland) reflected a product focus, even as changes in the wider market and ecosystem (economic conditions, changing consumption practices, customer demand) demanded a service focus. PaperCo had to rethink its business model. The senior process engineer said:

> We have to use our knowledge from production. So, we were a bunch of five or six people ending up in support service and we had to figure out: Well, how can we possibly support our customers?

This group of employees developed the idea for PaperCo's first remote service and played a central role in the development of a service-based business model. Although the recession had forced them to be creative and come up with new ideas, they also felt passionate about their jobs and wanted to improve things. In addition, as automation increased and continues to do so, the service business increased as well. Consequently, the nature of the services offered changed from repair to maintenance and new types of services emerged.

> We started working more with offering process services, not just repair and maintenance, rather we focused on evaluations and recommendations for the customers. We used our knowledge from new machine manufacturing, design, and dimensioning to offer knowledge-based services.

After production of superior machines was relocated to Finland, the Swedish site began to grow its nascent service business, which was not instantaneously profitable. When the Swedish site initiated production of a different type of paper machine, its service business focused on that machine. The senior process engineer explained:

> That was the origin, the preconditions were all set and there were already people that earlier had to deal with situations and do something themselves to keep their job. They have been in the situation where they had to figure out how could I use my knowledge

to generate a product that is salable. If we don't sell, there won't be any income, I won't get paid, and I will have to go home.

Traditionally, knowledge from production was seldom used to develop new services, although this changed as employees were relocated from production to service. Hence, during the 2000s, PaperCo experienced a lot of reorganizations, resulting in differences based on whether managers had a technical or a business administration background.

Beyond the organizational arena, the market has also shaped the development of the service business model to a large extent. New markets mainly in developing countries have influenced growth in PaperCo's service business and the types of services offered. For example, PaperCo's customers had mainly consisted of large companies with competent, knowledgeable in-house staff who had little need for service. Nowadays however, many customers in developing countries are starting up on a small scale and have little knowledge of the industry:

> These customers we are talking about … we have Algeria, Saudi Arabia, and so on. In the beginning, they are talking about a new machine: "Yes, do you have any support also, that can help us to make it (the machine) work as it is supposed to work?" Last time in Turkey, we had a guy [who] had started coloring yarns, and then he realized that now I'm going to start doing tissue because it's a good deal. So, he started from scratch, buys a machine and everything, saying: "Yes, I'm going to hire staff." He walks out on the street and hires staff. How much do they know about tissue? Nothing. Nothing. So, you understand, they need support. And now he has bought four machines. And they are the type of customers who ask for this type of support.

Sales employees tend to foster close relationships with their customers, which is central to creating a responsive service development. PaperCo's customers developed personal relationships with sales staff and were used to contacting "their seller" if any problems arose with their machines. A service manager explained:

> What are the problems that the customers have? We look at those instead and come up with solutions. That's the type of service development that we do now. (...) Before we

offered something that couldn't be sold. But now we work a lot on being out in the market to see what is needed.

Passionate customer-oriented employees would seem to benefit a service focus; however, as PaperCo moved to servitization, the company struggled to alter its business model from "free to a fee." Customers were accustomed to having their contact persons solve problems at no charge. Interestingly, while passionate employees were important actors in disrupting and creating a new service-based business model, contestation simultaneously arose:

> What do you think happens when [customers] call the service department asking something and they reply: "Yes, we can offer this service and it costs 150,000 Swedish kronor"? Oh. Then it's like no, "I [will] call the one I bought the machine [from] and talk a little." Well, and then we're talking: "And you, I've got a problem here." "Well, what is it? … Yes, but we can come over and look at that." So, there is a small contradiction between the service department that wants to coin out this knowledge and sell services, and the capital side who wants to use this knowledge and resources to truly grow the customer contact.

Sales represent a key site of actors and a practice in implementing a service-based business model. PaperCo's standard procedure was that all customer purchases go through salespeople who focus on machines and have less interest in selling services, other than spare parts and service agreements. The company faced challenges to encourage salespeople to push more advanced services, such as process and expert support. A senior process engineer explained:

> It is impossible to get all sales staff to act the same way. It's not just working here. Individual salespeople that have taken notice of what kinds of services we have may work to sell them, whereas others may not have the interest or see the potential these services have for PaperCo.

> That's how it works in this place. A salesperson in such a context has different strategies … he has a personal strategy how he prefers to sell things. Then there are different types of customers also that kind of determines how he must act.

Hence, the service department seemed to rely on individual salespersons' styles. Again, contestation between the two business models occurred in the challenge to develop collective sales practices.

4.3 Implementation of the service business model

Despite the increased focus on service and the development of an advanced support service offering, PaperCo struggled with many aspects of servitization, and implementing and performing a service-based business model through collective organizational practices. The first area of contestation between the emerging service-based business model and the dominant product-based model arose from PaperCo's practice of packing services as products. The company framed everything as products rather than solutions, which was evident in the language used to represent its business model; photos of machines and manufacturing plants in their presentation materials, labelling of target markets (pulp, paper, tissue, board, energy, automation, and service), and positioning of offerings based on strong technology, including "pulp mills, tissue, board and paper production lines, as well as power plants for bioenergy production" (PaperCo Annual Report, 2015).

In addition, PaperCo was very dependent on the sales force to push for its services, but customers had to follow-up separately with the service department. Therefore, a salesperson might suggest a service to a customer during delivery of the machine or when visiting the customer to perform a quality test on the machines, but the customer had to contact the service department to finalize the sale. A company representative stated a scenario:

> Are you interested in getting these reports four times a year over a three-year period? 'Yes, that would be great.' Yes, but then you should turn to the service department, they have a product that can provide you these reports.

Implementation and performing the service business model encountered further challenges at the customer interface. PaperCo's customers tended to be conservative, a

characteristic originated from the 1980s and 1990s when most customers were large actors who did not demand services because they relied on internal knowledge and had cultures of security. In addition, paper machines have an extremely long life, sometimes for as long as 40 years, and customers have been able to manage maintenance and repair themselves. Therefore, they struggle to understand why they should pay for services that they have managed to do without in the past. Also, ordering and buying procedures at the mills have developed slowly, and as recent as just 10 years ago, the most common way to order spare parts was by phone or fax. Hence, customers' rather conservative practices tended to support PaperCo's dominant product-based business model.

Because PaperCo's strong product-based business model has framed its allocation and use of resources, the company faced a lack of resources to implement a service business model, particularly regarding ideas for service innovation. Although the company promoted an innovation culture and implemented structured work procedures in the 2000s to encourage new ideas, challenges arose in developing innovative service offerings because of the organization's large size and the slow decision-making procedures. A service group manager complained:

> ... It's like climbing a mountain all the time, that's what it feels like ... It's a long process as soon as you are going to do something that requires for example machine equipment of some significant amount. Then it's hard.

Similarly, a spare parts manager noted the limited internal personnel resources for service development:

> You can't count on someone else if you have an idea, that it would be someone in the corridor waving "I'll do it!" No. You have to do it yourself to a certain level, that's how it is ... There's another attitude today so it's fine coming up with a lot of ideas and that's absolutely encouraged, but you will have to do it yourself.

No formal service innovation processes seemed to exist, and the ideas that employees came up with tended to be realized only if the employees themselves made sure to develop them (sometimes in their spare time).

Despite these contestations between the product- and service-based business models which arose in the company's organizational practices and in interaction with customers, PaperCo has slowly increased its service business, with 37 percent (majority) of all orders received by the service business line, and 45 percent of personnel in services on a global scale (PaperCo Annual Report, 2017). The senior process engineer noted:

> Well, we've been up and down. For a while we had a great profit on services. Then it went down to almost zero, when we were supposed to sell those additional services. Then we were not profiting; it just covered our costs. Now we're moving up again. Now we are going to earn money on this business.

In the following section, these findings are elaborated on while discussing how the actors overcame these contestations of business models in their practices.

5 A framework of servitization practices shaped by business model contestations

Drawing on our empirical insights, we developed a framework of servitization practices shaped and stabilized by business model contestations (Figure 3). As defined earlier, servitization is essentially a process of business model contestation. The emerging service-based business model challenges and changes as well as creates new sets of organizational practices. However, as business practice and the literature demonstrate (Kohtamäki et al., 2018b; Kowalkowski et al., 2015; Lenka et al., 2018; Storbacka et al., 2013), this process often involves conflicts and contestations due to co-existing, parallel product and service orientations, and essentially, parallel business models. Such business model contestations materialize in organizational practices performed by multiple actors at multiple sites (within and outside the

servitizing firm in their ecosystem). These practices drive change and/or force stability during the servitization process, which explains the challenges and opportunities in the process.

Drawing on the work of Lenka et al. (2018) on organizational ambivalence and co-existing product and service orientations, our framework begins with the parallel product- and service-based business models giving rise to contestations in the practices which those business models frame and organize. These contestations were identified according to the elements of practices — activities, material things, understanding, and knowledge (see Reckwitz, 2002). The findings support our initial thesis of business model contestation; however, we are now in a better position to explicate what constitutes these contestations and how they occur in the practices of servitization.

[Figure 3 about here]

The first area of contestation concerns the bodily and mental activities labelled here as service development, sales, and delivery activities. Our findings clearly indicate that a dominant product-based business model contests such activities. Service development is a key area of practices in servitization. Ideally, service development activities become routine throughout the organization and the customer interface; however, in our case, service ideation and development were heavily dependent on employees who were eager to coming up with new solutions and had the energy to drive the change during their "coffee break." As a result, service innovation took advantage of existing possibilities (for example, to use a technical solution already in the machine for another purpose).

Sales and delivery activities are clearly another essential area for transformation of an offering and implementation of its business model; however, in an organization and a market that are used to selling and buying products, the sale of services can encounter several challenges: the sales force's unwillingness to sell services because they lack incentives, and customers' unwillingness to pay for service they have received for free. On the other hand, the

sales force may act as a crucial actor in this transformation, shaping customer preferences and needs (see Geiger & Finch, 2009), and thus, advancing servitization.

The second area of contestation centers around the use of material "things" in development, sales, and delivery activities. As Reckwitz (2002, p. 253) said, "Carrying out a practice very often means using particular things in a certain way." There is an important shift at the level of materiality as a company moves from products to services; at the core of a dominant product-based business model is the machine, while at the core of a service-based business model, is the value of the machine in its use (e.g., Storbacka, 2011). Therefore, the value proposition is different and is materialized differently. Instead of value materialized in the machine (product), the value of service is materialized in value calculations, customer references, or service contracts. In our case, although PaperCo had an innovation culture and decided to invest in service development, service ideas were not realized because the company lacked material service development processes to follow.

Third, an overall understanding of the meaning of service is at the core of the service-based business model and its implementation in practice. In the case of PaperCo, the product-based business model was dominant, although the company tried to add some service elements when suitable. Consequently, services were very much treated as products in terms of pricing, packaging, and revenue targets. In contrast, when the meaning of service is shared and circulated through material representations (see Doganova & Eyquem-Renault, 2009) to visualize change (Kindström & Kowalkowski, 2014), a service-based business model has the potential to survive, to grow, and to support all areas of practice discussed above.

The final area of contestation concerns the element of practice labelled as knowledge — the competencies, skills, and know-how needed to do things (Shove & Pantzar, 2005). In servitization, a dominant product-based business model emphasizes technical, product-related competencies, which on one hand tend to hinder service business development, while on the

other hand, are crucial for developing relevant, value-creating service offerings. Also, customers' competencies and resources are important to understand as well — large business customers may have the necessary know-how to repair and maintain machines themselves and smaller scale customers may not. However, automation is challenging knowledge levels in all companies, which creates opportunities to develop knowledge-intensive and technically complex services.

Knowledge is also involved in the restructuring and relocating of employees in manufacturing and service units (e.g. Oliva & Kallenberg, 2003). Companies can easily make mistakes in such reorganizations. PaperCo relocated the manufacture of a particular machine from Sweden to Finland during the recession, yet employees at the Swedish site had knowledge purely in working with machines and were challenged to work on service development. As a result, the service department relied on employees with strong product-focused backgrounds, often engineers, to develop its business. In a worst-case scenario, product-focused employees may lose their jobs if they cannot find a new way to use their knowledge for a new offering.

The process of servitization is nowhere straightforward or linear (Finne et al., 2013), but occurs as an iterative, emergent, and bottom-up process through organizational practices shaped and framed by the business models in play. For servitization to occur, a dialectic must exist between maintaining stabilized practices and changing and/or creating new ones, which arises through the elements of practices (activities, materials, understandings, and knowledge). These elements are interconnected, and therefore, a change in one element has implications for the others (see Shove & Pantzar, 2005). In addition, for change to occur within the firm and its market, these practices must be collective. In the following section, the implications of these findings on the extant understanding of servitization and, in particular, the development of service-based business models are discussed.

6 Conclusions

6.1 Theoretical contribution

This paper examined the servitization of business models from a practice perspective, and followed the efforts of a large, established manufacturer to develop its service business to support its superior products and to provide a new sustainable source of revenues. The study yielded interesting and insightful empirical insights on the contestations between a dominant product-based business model and an emerging service-based business model as materialized in practices hindering and facilitating the servitization process.

This work contributes to the growing body of research on servitization in three key ways. First, this paper extends the conceptualization of servitization by defining it as a bottom-up, emergent, and iterative process of business model contestation. We have shown that servitization is not so much about transforming "a" business model, or shifting from one to another (Kowalkowski et al., 2017), but rather most often involves duality: the management of parallel business models. Therefore, this paper extends the work on paradoxes in servitization (Gebauer et al., 2005; Kohtamäki et al., 2018b). According to the Oxford English Dictionary, a paradox is "a paradoxical phenomenon or occurrence, specifically one that exhibits some contradiction or conflict with preconceived notions of what is reasonable or possible." The term incorporates contradiction and persistence (Smith & Lewis, 2011), whereas we prefer to use contestation to refer to "the action of struggling together as adversaries" (Oxford English Dictionary), the act of contesting including both contradicting and resolving. Hence, this goes beyond identifying "paradoxes" or "contests" within servitization and their management and explicates the process and work of contestation between parallel business models as practice change and stabilization. This approach has important implications on understanding servitization — essentially business model contestation instead of plain transformation; such contestations generate new disruption and innovation-generating "service innovation spaces"

(Kindstrom, 2010) where multiple ideas, beliefs, and norms are contested and collided (Stark, 2011). Hence, contestations and tensions can be creative rather than problematic.

Second, this research contributes to an understanding of how business models can be powerful tools in framing and organizing servitization practices. This builds on the work of Mason and Spring (2011) and Doganova and Eyquem-Renault (2009) who proposed that it is more useful to conceptualize business models as the practices through which they happen. Used this way, business models can frame and organize actions for and against servitization. We have demonstrated that it is not the business models as independent entities that contest each other, but rather their performation and materialization in the practices of actors. This finding has important implications on the literature on servitization of business models (Kindstrom, 2010; Kindstrom & Kowalkowski, 2014), which has mostly assumed business models are transformed and implemented as configurational structures of elements. Rather, our study explicates how business models are developed, transformed, and implemented through everyday practices of a range of actors from the bottom up, not by changing the elements of a business model from the top down.

Third, the study contributes to the limited work on servitization as practice (Kohtamäki et al., 2018a; Rabetino et al., 2017; Storbacka, 2011) by explicating the parallel and contradicting practices in servitization and their stabilization and change through business model contestation. Theorizing servitization as consisting of practices (see Feldman & Orlikowski, 2011; Nicolini, 2011; Whittington, 2006) allows a focus on the act of change rather than only the objects of change, and thereby enables a more nuanced understanding of this complex phenomenon.

Servitization is ultimately a change in business practices performed by actors in the organization and its ecosystem. We have shown that it is not enough for single individuals (e.g. service engineers, salespeople) to change their practices of service development or sales and

delivery. Change must be collective; that is, the entire service and sales departments, the organization and its customers must engage in collective practices, and/or align their practices accordingly. Kohtamäki et al. (2018a) proposed that a practice approach allows the examination of routinized micro-level practices and behavioral foundations. This paper argues it allows more than that in two key ways: First, because servitization is a change process, a practice approach helps us understand ways in which routinized behaviors are challenged, changed, and stabilized through interplay between the elements of practices — bodily and mental activities, use of material things, understanding, and knowledge (Reckwitz, 2002). Second, a practice approach allows us to zoom in and out, as Nicolini (2009) suggested, beyond micro-level activities. The focus is on the doings (work of servitization), and individuals are only carriers of practices (Reckwitz, 2002). We have shown that for practice change (and servitization) to occur, the change must be collectively performed, and then stabilized into routine action. This process starts with the details of practice (elements of a practice), followed by associations between practices (e.g. from sales to customer purchase behavior) to appreciate the wider texture of the phenomenon, the servitization of the ecosystem (Nicolini, 2009).

6.2 Managerial implications

A central understanding is that a change such as servitization happens not only from top down, but through everyday practices of an organization's various parts, as well as of customers and other stakeholders in the ecosystem. A prerequisite for developing practices that support such a change initiative, is to create shared understanding, knowledge, capabilities, rules, and goals. Managers should understand that changing from product-based to service-based practices implies a change of mental models among all employees about how a firm shall be run, such as how resources shall be integrated and used in new and different ways, how the company's routines and processes should be updated, and what norms and values must permeate the company. This change cannot happen overnight, and it will most likely affect the

entire network surrounding the company. Trust and commitment among network partners are critical.

Second, in addition to analyzing and projecting changes to the business model, managers must acknowledge that business models play an active role in servitization efforts. Their implementation is an ongoing, iterative process that is not separate from their development. In addition, servitizing firms rarely can start with a clean page, but most often have in place a dominant, product-based business model along with an emerging service-based model. Contestation between co-existing business models is not necessarily a hindrance but can be a creative crucible of new ideas and innovations for servitization. However, such contestations must be managed and appreciated. Front-line employees who regularly meet customers, such as the salespeople, are an important asset in a successful servitization process. They know customers' needs and requirements and often have ideas about how to facilitate and create value. Therefore, companies must pay attention to passionate employees and provide them with the necessary resources to develop service ideas and to translate them into innovative service offerings.

However, if the aim is to break free from a dominant product-based business model, managers should infiltrate the company with new types of knowledge and skills. In some cases, managers may need to look outside the company rather than rely on current employees, who may be stuck in current norms and rules and may become a barrier to taking a service-focused path.

6.3 Limitations and future research

More in-depth studies are needed to understand the process of servitization. This study is among the first to explicate this process of business model change from a practice perspective, but much more work is needed. Our research has been conducted from the perspective of the servitizing organization and its encounters and interactions with other actors in the ecosystem.

To gain a more holistic, broader view, empirical research should be conducted at multiple sites. Servitization is not a firm level phenomenon, but shapes and is being shaped by markets. Broader studies could yield a better understanding of chains of practices among actors and business models.

Although this research was longitudinal, it lacks a strong temporal notion regarding the role of time (past, present, future), particularly how the past may influence current and future decision making, and more importantly, how expectations of the future may shape the servitization journey. Another area for future research regarding the notion of time and its performativity is path dependency and its critique. One could argue that path dependent practices and business models hinder and challenge servitization, and ways to overcome this need attention.

Methodologically, other types of firms and industries could add to the understanding of the servitization process. Our single case study approach has obvious limitations. More cases are needed for comparison, and therefore, a multiple case study approach could be fruitful. A similar study in other cultural contexts also could be interesting and may illustrate possible differences in hindering or supportive mechanisms in servitization.

References

Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic Management Journal*, *22*(6-7), 493–520.

Baines, T., & Lightfoot, H. (2013). Servitization of the manufacturing firm: Exploring the operations practices and technologies that deliver advanced services. *International Journal of Operations & Production Management*, *34*(1), 2–35.

Baines, T., Lightfoot, H., Peppard, J., Johnson, M., Tiwari, A., Shehab, E., & Swink, M. (2009). Towards an operations strategy for product-centric servitization. *International Journal of Operations & Production Management*, *29*(5), 494–519.

Bohnsack, R., Pinkse, J., & Kolk, A. (2014). Business models for sustainable technologies: Exploring business model evolution in the case of electric vehicles. *Research Policy*, *43*(2), 284–300.

Bowen, D. E., Siehl, C., & Schneider, B. (1989). A framework for analyzing customer service orientations in manufacturing. *Academy of Management Review*, *14*(1), 75–95.

Brax, S. A., & Visintin, F. (2017). Meta-model of servitization: The integrative profiling approach. *Industrial Marketing Management*, *60*, 17–32.

Carduff, E., Murray, S. A., & Kendall, M. (2015). Methodological developments in qualitative longitudinal research: the advantages and challenges of regular telephone contact with participants in a qualitative longitudinal interview study. *BMC Research Notes*, *8*(1), 142.

Chesbrough, H. (2010). Business model innovation: Opportunities and barriers. *Long Range Planning*, *43*(2–3), 354–363.

Chesbrough, H., & Rosenbloom, R. S. (2002). The role of the business model in capturing value from innovation: Evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change*, *11*(3), 529–555.

Christensen, C. (2013). *The innovator's dilemma: When new technologies cause great firms to fail.* Cambridge, MA: Harvard Business Review Press.

Demil, B., & Lecocq, X. (2010). Business model evolution: In search of dynamic consistency. *Long Range Planning*, *43*(2), 227–246.

Doganova, L., & Eyquem-Renault, M. (2009). What do business models do? Innovation devices in technology entrepreneurship. *Research Policy*, *38*(10), 1559–1570.

Dubois, A., & Gadde, L. E. (2014). "Systematic combining" – A decade later. *Journal of Business Research*, *67*(6), 1277–1284.

Eisenhardt, K.M. (1989). Building theories from case study research. *Academy of Management Review*, *14*(4), 532–550.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, *50*(1), 25–32.

Feldman, M. S., & Orlikowski, W. J. (2011). Theorizing practice and practicing theory. *Organization Science*, *22*(5), 1240–1253.

Ferreira, F. N. H., Proença, J. F., Spencer, R., & Cova, B. (2013). The transition from products to solutions: External business model fit and dynamics. *Industrial Marketing Management*, *42*(7), 1093–1101.

Finne, M., Brax, S., & Holmström, J. (2013). Reversed servitization paths: a case analysis of two manufacturers. *Service Business, 7*(4), 513–537.

Forkmann, S., Ramos, C., Henneberg, S. C., & Naudé, P. (2017). Understanding the service infusion process as a business model reconfiguration. *Industrial Marketing Management, 60*, 151–166.

Gebauer, H., Edvardsson, B., Gustafsson, A., & Witell, L. (2010). Match or mismatch: Strategy-structure configurations in the service business of manufacturing companies. *Journal of Service Research, 13*(2), 198–215.

Gebauer, H., Fleisch, E., & Friedli, T. (2005). Overcoming the service paradox in manufacturing companies. *European Management Journal, 23*(1), 14–26.

Gebauer, H. (2011). Exploring the contribution of management innovation to the evolution of dynamic capabilities. *Industrial Marketing Management, 40*(8), 1238–1250.

Geiger, S., & Finch, J. (2009). Industrial sales people as market actors. *Industrial Marketing Management, 38*(6), 608–617.

Grönroos, C. (1989). Defining marketing: A market-oriented approach. *European Journal of Marketing, 23*(1), 52–60.

Gustafsson, A., Brax, S., & Witell, L. (2010). Setting a research agenda for service business in manufacturing industries. *Journal of Service Management, 21*(5), 557–563.

Holland, J., Thomson, R., & Henderson, S. (2015). *Qualitative longitudinal research: A discussion paper*. (Families and Social Capital ESRC Research Group Working Paper No. 21). London South Bank University.

Kindström, D. (2010). Towards a service-based business model: Key aspects for future competitive advantage. *European Management Journal, 28*(6),479–490.

Kindström, D., & Kowalkowski, C. (2014). Service innovation in product-centric companies: A multidimensional business model perspective. *Journal of Business & Industrial Marketing, 29*(2), 96–111.

Knorr Cetina, K. (1997). Sociality with objects: Social relations in post-social knowledge societies. *Theory, Culture & Society, 14*(4), 1–30.

Kohtamäki, M., Baines, T., Rabetino, R., & Bigdeli, A. Z. (2018a). Practices in servitization. In M. Kohtamäki, T. Baines, R. Rabetino, & A. Z. Bigdeli (Eds.), *Practices and tools for servitization*, (pp. 1–21). Springer International Publishing AG.

Kohtamäki, M., Partanen, J., Parida, V., & Wincent, J. (2013). Non-linear relationship between industrial service offering and sales growth: The moderating role of network capabilities. *Industrial Marketing Management, 42*(8), 1374–1385.

Kohtamäki, M., Rabetino, R., & Einola, S. (2018b). Paradoxes in servitization. In M. Kohtamäki, T. Baines, R. Rabetino, & A. Z. Bigdeli (Eds.) *Practices and tools for servitization* (pp. 185–199). Springer International Publishing AG.

Kohtamäki, M., & Rajala, R. (2016). Theory and practice of value co-creation in B2B systems. *Industrial Marketing Management, 56*, 4–13.

Kowalkowski, C., Gebauer, H., Kamp, B., & Parry, G. (2017). Servitization and deservitization: Overview, concepts, and definitions. *Industrial Marketing Management, 60*, 4–10.

Kowalkowski, C., Windahl, C., Kindström, D., & Gebauer, H. (2015). What service transition? Rethinking established assumptions about manufacturers' service-led growth strategies. *Industrial Marketing Management, 45*, 59–69.

Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*. Cambridge, MA: Harvard University Press.

Lenka, S., Parida, V., Sjödin, D. R., & Wincent, J. (2018). Towards a multi-level servitization framework: Conceptualizing ambivalence in manufacturing firms. *International Journal of Operations & Production Management, 38*(3), 810–827.

Lindberg, K., & Czarniawska, B. (2006). Knotting the action net, or organizing between organizations. *Scandinavian Journal of Management, 22*(4), 292–306.

Löfberg, N. (2014). *Service orientation in manufacturing firms: Understanding challenges with service business logic*. Karlstad, Sweden: Karlstad University Studies.

Luoto, S., Brax, S. A., & Kohtamäki, M. (2017). Critical meta-analysis of servitization research: Constructing a model-narrative to reveal paradigmatic assumptions. *Industrial Marketing Management, 60*, 89–100.

Markides, C. C. (2013). Business model innovation: What can the ambidexterity literature teach us? *The Academy of Management Perspectives, 27*(4), 313–323.

Markides, C., & Charitou, C. D. (2004). Competing with dual business models: A contingency approach. *Academy of Management Executive, 18*(3), 22–36.

Martinez, V., Bastl, M., Kingston, J., & Evans, S. (2010). Challenges in transforming manufacturing organisations into product-service providers. *Journal of Manufacturing Technology Management, 21*(4), 449–469.

Mason, K., & Spring, M. (2011). The sites and practices of business models. *Industrial Marketing Management, 40*(6), 1032–1041.

Merriam, S.B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.

Nenonen, S., & Storbacka, K. (2010). Business model design: Conceptualizing networked value co-creation. *International Journal of Quality and Service Sciences, 2*(1), 43–59.

Nicolini, D. (2011). Practice as the site of knowing: Insights from the field of telemedicine. *Organization Science, 22*(3), 602–620.

Nicolini, D. (2009). Zooming in and out: Studying practices by switching theoretical lenses and trailing connections. *Organization Studies, 30*(12), 1391–1418.

Oliva, R., & Kallenberg, R. (2003). Managing the transition from products to services. *International Journal of Service Industry Management, 14*(2), 160–172.

Palo, T., & Tähtinen, J. (2013). Networked business model development for emerging technology-based services. *Industrial Marketing Management, 42*(5), 773–782.

Pettigrew, A. M. (1990). Longitudinal field research on change: Theory and practice. *Organization Science, 1*(3), 267–292.

Rabetino, R., Kohtamäki, M., & Gebauer, H. (2017). Strategy map of servitization. *International Journal of Production Economics, 192*, 144–156.

Raddats, C., & Easingwood, C. (2010). Services growth options for B2B product-centric businesses. *Industrial Marketing Management, 39*(8), 1334–1345.

Reckwitz, A. (2002). Toward a theory of social practices: A development in culturalist theorizing. *European Journal of Social Theory, 5*(2), 243–263.

Robinson, T., Clarke-Hill, C. M., & Clarkson, R. (2002). Differentiation through service: A perspective from the commodity chemicals sector. *Service Industries Journal, 22*(3), 149–166.

Schatzki, T. R. (2006). On organizations as they happen. *Organization Studies, 27*(12), 1863–1873.

Shove, E., & Pantzar, M. (2005). Consumers, producers and practices: Understanding the invention and reinvention of Nordic walking. *Journal of Consumer Culture, 5*(1), 43–64.

Sjödin, D. R., Parida, V., & Wincent, J. (2016). Value co-creation process of integrated product-services: Effect of role ambiguities and relational coping strategies. *Industrial Marketing Management, 56*, 108–119.

Smith, W. K., & Lewis, M. W. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. *Academy of Management Review, 36*(2), 381–403.

Sosna, M., Trevinyo-Rodríguez, R. N., & Velamuri, S. R. (2010). Business model innovation through trial-and-error learning: The Naturhouse case. *Long Range Planning, 43*(2–3), 383–407.

Spring, M., & Araujo, L. (2009). Service, services and products: Rethinking operations strategy. *International Journal of Operations & Production Management, 29*(5), 444–467.

Spring, M., & Araujo, L. (2013). Beyond the service factory: Service innovation in manufacturing supply networks. *Industrial Marketing Management, 42*(1), 59–70.

Stark, D. (2011). *The sense of dissonance: Accounts of worth in economic life*. Princeton, NJ: Princeton University Press.

Storbacka, K. (2011). A solution business model: Capabilities and management practices for integrated solutions. *Industrial Marketing Management, 40*(5), 699–711.

Storbacka, K., & Nenonen, S. (2011). Scripting markets: From value propositions to market propositions. *Industrial Marketing Management, 40*(2), 255–266.

Storbacka, K., Windahl, C., Nenonen, S., & Salonen, A. (2013). Solution business models: Transformation along four continua. *Industrial Marketing Management, 42*(5), 705–716.

Vandermerwe, S., & Rada, J. (1988). Servitization of business: Adding value by adding services. *European Management Journal, 6*(4), 314–324.

Visnjic Kastalli, I., Van Looy, B., & Neely, A. (2013). Steering manufacturing firms towards service business model innovation. *California Management Review, 56*(1), 100–123.

Whittington, R. (2006). Learning more from failure: Practice and process. *Organization Studies, 27*(12), 1903–1906.

Witell, L., & Löfgren, M. (2013). From service for free to service for fee: Business model innovation in manufacturing firms. *Journal of Service Management, 24*(5), 520–533.

Yin, R. K. (2003). *Case study research: Design and methods.* Thousand Oaks, CA: Sage.

Figure 1. Conceptual framework of servitization as business model contestation

Emerging business
model (service)

Tension and
contestation

Disruption

Practice maintenance
(bodily and mental
activities, use of material
things, understandings,
and knowledge)

Practice change
(bodily and mental
activities, use of material
things, understandings,
and knowledge)

Stabilization
(Business as
usual)
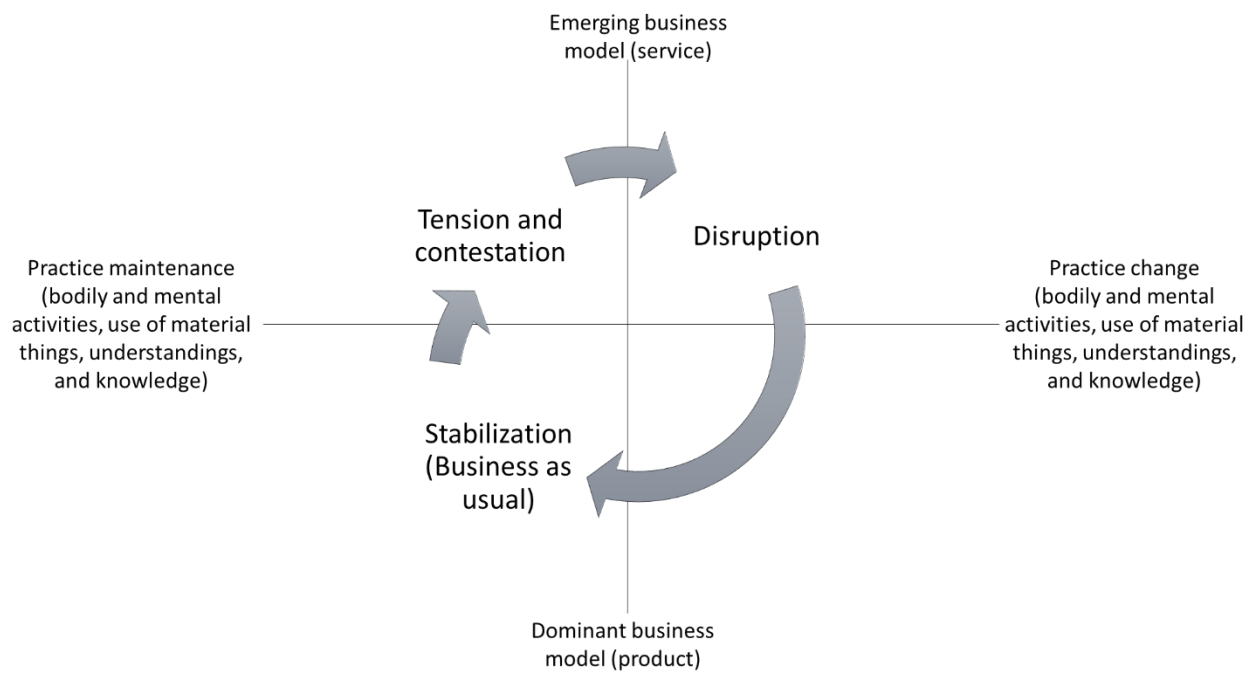
Dominant business
model (product)

Figure 2. PaperCo's servitization process with data sources.
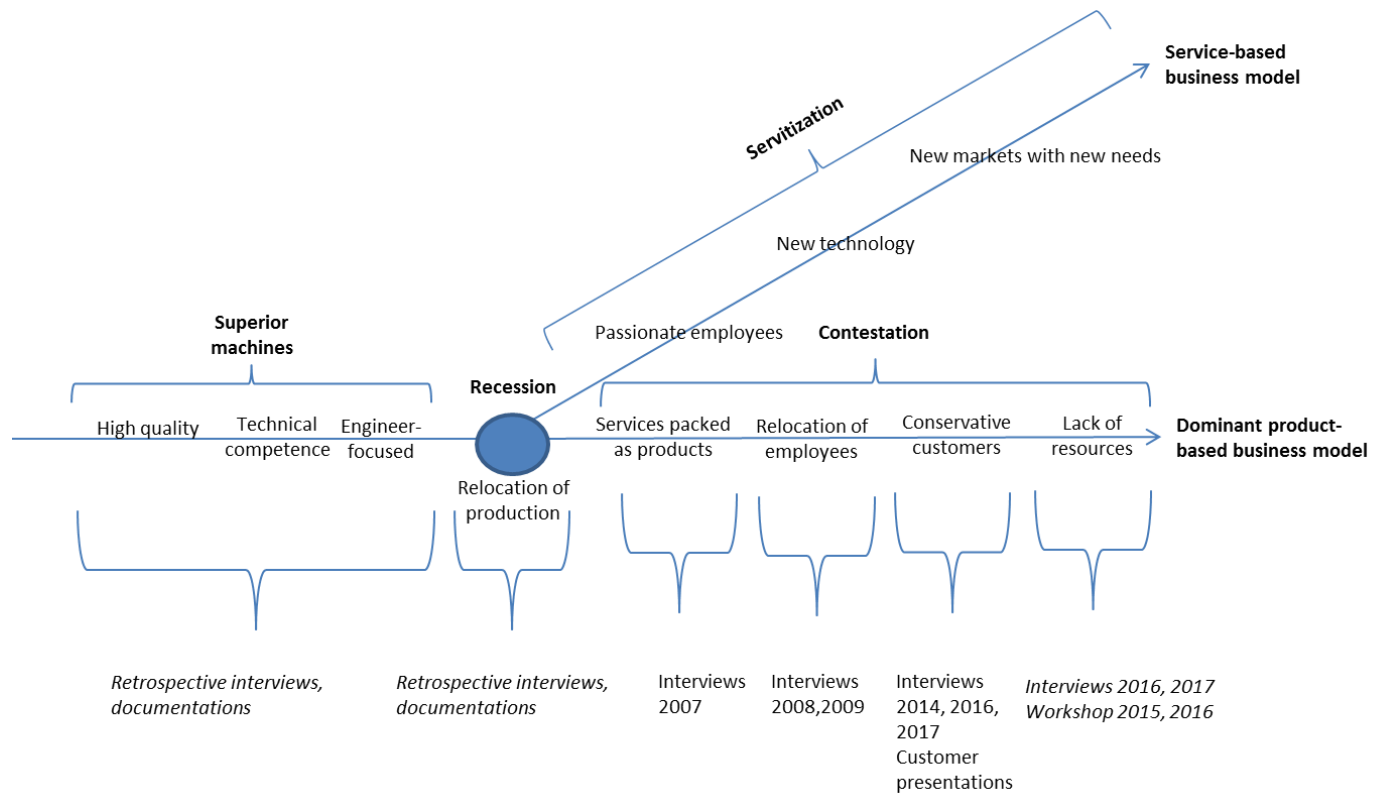
Table 1. Summary of key phases in PaperCo's path.

Analytical themes:	PaperCo's business model development phases:		
	Superior paper machines at the core	Increased focus on services due to recession	Implementation of the service business model
Business model	• Engineers in focus • Superiority of technological competence • Known for high quality machines	• New markets with new needs • New technology (digitalization, automation) • New service offerings (after sales, maintenance, remote)	
Practice change	• Situating paper machine production in Sweden • Production and delivery of the first machine to Finnish paper mill • Representation of the machine in media	• Relocation of production and employees • Refocus in mental and bodily activities (manufacturing to service development) • Need for creativity • Lack of materiality in service development	
Practice maintenance	• Development, manufacturing, and sales of machines • Product mindsets and knowledge • Material objects as core of the practices	• Passionate employees and salespeople • Close interaction with customers	• Representation of their business model (communications about their offering and expertise) • Customers accustomed to buying products and maintaining machines themselves
Contestation	• Services subordinate production • Services expected to have same rate of return	• Free support for customers • Collective sales practices	• Services packed and communicated as products • Lack of resources to realize ideas • Conservative customers • Relocation of employees
Sites and actors involved in practices	• PaperCo's Swedish and Finnish sites • PaperCo's customers	• Paper market • PaperCo's Swedish and Finnish sites • PaperCo's customers	• Paper market • PaperCo and its customers

Figure 3. Framework of servitization practices shaped by business model contestations.

Dominant product-based and emerging service-based business models frame and organize practices in different and contesting ways

PRODUCT –BASED BUSINESS MODEL MATERIALIZED IN PRACTICES:	AREAS OF CONTESTATION AND CHANGE:	SERVICE-BASED BUSINESS MODEL MATERIALIZED IN PRACTICES:
Unwillingness to sell services; motivation to sell machines; lack of communication to sales force on the strategic importance of service business	Service development, sales and delivery activities	Sales force as actors in driving and shaping customer preferences to buy services; driving service development by eager and passionate employees
Value proposition is based on material artefacts/products; material prototypes in product development; lack of formal, material service development tools, processes and support	Materiality	Value proposition is based on service; material objects become secondary in key activities (service development, sales, and delivery)
Product orientation is dominant and applied to services; e.g. pricing of services as products, packing services as products; service as subordinate production	Understanding of service	Circulation and sharing of the meaning of service to develop an organization-wide understanding of service business model and its translation into practice
Importance of technical knowledge and competences (e.g. when meeting customers); customer competencies in-house; product-focused background of employees in the service department	Knowledge	Input of technical and product related knowledge and competencies on service business development; customers' lack of competence; use of knowledge on manufacturing and design of machines to develop expert services on machines

STABILIZED PRACTICES	PRACTICE CHANGE

Management of parallel business models involves the maintenance and change of collective practices