

EXTENDED THEMATIC LITERATURE REVIEW ON EVOLUTION OF RESOURCES AND CAPABILITIES FOR SERVITIZATION AS BUSINESS MODEL INNOVATION TOWARDS SERVICE NETWORKS

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ABSTRACT

This paper summarizes the relevant literature on resource and competence development in the context of servitization as a business model innovation, considering all relevant research streams. In addition, the current trend toward network formation in the service business is highlighted in detail. For this purpose, the authors conducted a systematic literature review. The goal was to create an interdisciplinary analysis that synthesizes a broad spectrum of publications from the general field of management and organization studies (MOS). The result is a thorough synopsis of resources and capabilities from the perspective of business network theory and dynamic capabilities. The application of this approach identifies knowledge gaps in the literature and supports the identification of critical priorities for future research. This promotes the development of business theory and a more in-depth understanding of servitization business practices. The utilization of an interdisciplinary approach underscores the relevance of a relational multi-actor perspective. As a result, it can be deduced that it is even more imperative to identify the various actors within the servitization network to adequately capture their interactions.

KEYWORDS

Servitization, Service Infusion, Solutions, Business Model Innovation, Service Networks

1. INTRODUCTION

The strategic relevance of services in the business-to-business area (B2B) has long been recognized both in science and in practice. The enrichment of a main product range with service components to generate additional value for customers is often termed "servitization"

(Vandermerwe & Rada, 1988), a "transition from products to services" (Oliva & Kallenberg, 2003) and "service infusion" (Brax, 2005). Kowalkowski et al. (2017) detail the differences between these terms. Servitization is the process of transforming the business model of a manufacturing company from a product- to service-oriented approach. Depending on its characteristics, servitization may involve an incremental or radical change in a corporate strategy. In contrast to the previous focus on the manufacture of goods, servitization places the focus on services or solutions, which are to be understood as a type of customized bundling to solve a specific customer issue. On the other hand, service infusion occurs where a manufacturing company continues to focus on the product but promotes the strategic importance of the service relentlessly. Compared to servitization, service infusion does not represent a radical change in a company's existing business model. Here, the expansion of the service portfolio is intended to strengthen or protect the business's established approach to the product in question.

Servitized companies such as Rolls-Royce, Caterpillar, MAN and XEROX provide some advanced services in which the revenue generated is directly related to customer performance and asset availability outcomes and reliability (Brax & Visintin, 2017). For one solution, advanced service, value is based on availability and output, although this often results in exploitation of the product itself. In practice, however, it is difficult to distinguish between the servitization and service infusion approaches in the initial phase. Complicating matters, the scientific literature uses the two terms interchangeably. The aim of this project is to examine the literature to explain how the competitive advantages related to the resources and capabilities of servitized business models took place, and how this can explain emerging service networks.

The number of publications on these topics has increased significantly in recent years. This project synthesizes the relevant literature regarding resources and competencies relating to the servitization of business models and considers all of the main research streams. Furthermore, this paper examines the current trend of network formation in the service business. Most previous literature reviews have focused on a particular area of research, such as business operations and have adopted the classic focal firm perspective. There is ongoing intensive research into servitization in marketing and service management, general management, and business operations. The four previous literature reviews on the topic (Raddats et al., 2019; Baines et al., 2017; Baines et al., 2009; Lightfoot et al., 2013) focus on business operations and do not account for business network theory.

In their analysis, Raddats et al. (2019) refer to 219 publications from various research disciplines. However, their work only examines resources and capabilities in a general fashion and does not explicitly consider the service network. Baines et al. (2017) build on research that primarily relates to publications from the field of business operations. Of the 232 evaluated publications that Baines et al. refer to, only 4–15% utilize alternative research approaches in general or service marketing. In Lightfoot et al.'s (2013) work, only 17% of the 95 papers they examined came from marketing journals, while 8% were from service management journals. By focusing on one main research approach and excluding further publications, one can assume that the previous research has not comprehensively investigated the topics of capabilities and competencies of service networks. While Baines et al. (2017) and Lightfoot et al. (2013) restrict their research to the topic of business operations, Raddats et al. (2019) identifies the entire range of the existing literature and addresses the servitization business models (Adrodegari and Saccani 2017) and corresponding challenges (Zhang and Banerji 2017).

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As part of the work for this project, the researcher carried out a systematic literature review (Barczak, 2017; Tranfield et al., 2003). The intent was to design an interdisciplinary review in order to consider a wide range of publications from the general field of management and organization studies (MOS). The result is a comprehensive overview of resources and capabilities related to servitization business model from the business network theory and dynamic capabilities perspectives. Utilizing this approach reveals knowledge gaps in the literature and helps to identify critical priorities for future research (e.g., own dissertation). This promotes the development of business theory and a better understanding of business practices in the field of servitization.

Using an interdisciplinary research approach highlights the relevance of a relational multi-actor perspective. From this perspective, it is even more important to identify.

2. STRATEGIC MANAGEMENT THEORIES

This chapter discusses the four main concepts of strategic management, which can be used to explain the competitive advantages of a firm. The main principle behind these concepts is that through optimal strategic actions, a firm can influence existing market structures in its favor to secure a competitive advantage as a result. This is essentially the main purpose of servitization as a business model innovation. Evolution theories such as, for example, path dependency and industry evolution, are not considered. These theories provide that a company's strategic decisions cannot influence the survival of a firm within a certain market at all. These strategic management concepts internalize a few key factors to ensure firms a sustainable competitive advantage. Contemporary research recognizes publications that have dealt with strategic decision-making (Barreto, 2010; Teece et al., 1997; Peteraf, 1993). Overall, market forces, also called the market-based view (MBV), the resource-based view (RBV), the dynamic capabilities approach and the relational view are main concepts of strategic management. Based on each of these concepts, one should localize the origin of a firm's competitive advantages, placing the firm on the servitization journey at the center of the discussion. One should place emphasis on theoretical development over time and the current state of research, thereby scrutinizing recent trends in the service network, explicitly.

2.1 The Market-Based View

One of the cornerstones of strategic management is the concept of competitive forces (Porter, 1980). This concept addresses industry structure and has a dominant influence on corporate strategy. According to this concept, only the market structure and market dynamics influence the strategic behavior of a company. Klepper (1996) shows that one can explain a firm's profit based on its position within the examined market, branch, or industry. Porter (1980) sets out the following five key market forces that affect firms: the threat of new entrances, the threat of substitutes, the bargaining power of buyers, the bargaining power of suppliers, and the rivalry between existing competitors. These forces are solely determinative of an industry's potential for success, as well as the firms positioned within that industry. The relevance of the MBV approach lies in its explanation of corporate strategy; MBV, which can be explained through game theory, is useful to defend a firm's market position and influence competitive forces in a firm's favor (Shapiro, 1989). Here, one can use game theory to link the strategic interactions

between the players involved in an economic context. One can assume that the participating firms influence the market structure through their strategic behaviors and actively endeavor to shape the market for their benefit (Shapiro, 1989). The game theory approach provides a better understanding of how competitive advantages emerge (Teece et al., 1997) and explains various business practices, such as predatory prices. Of course, the strategy of a player depends on the game being played, counterstrategies, and the anticipated moves of other players. One can use the game theory perspective to support and explain concepts such as the "first mover advantage" (Gilbert et al., 1982) and "price competition" (Shaked et al., 1982). However, one can only use game theory to determine the actions and counteractions of participants where none of the participants possess a sustainable competitive advantage. Basing their analysis on game theory, Teece et al. (1997) claim that rents arise where those with superior managerial capabilities play a better game than their opponents do. The MBV approach is still widely used within strategic management.

2.2 The Resource-Based View

Contrary to the MBV, the RBV provides that a company's success is due to its heterogeneity and the uniqueness of its internal resources and capabilities (Barney, 1991). Amit et al. (1993) state that the accumulation of strategic assets that are difficult to imitate, substitute, and trade creates a competitive advantage. Barney (1991) defines a company's resources as the sum of all capabilities, processes, information, competencies, and knowledge within the firm. Exploitation of these resources should enable a company to formulate strategies and implement them effectively and efficiently. Accordingly, resources are the input variable underlying a company's production and assets. Regarding resources whose implementation and bundling are essential to achieving a competitive advantage, those resources tend to be valuable, rarely imitable, and non-substitutional (VRIO: Barney, 1995). These are the so-called 'core resources' and 'core capabilities.' Some scholars have approached the RBV critically as it only considers a company's internal resources and neglects the use of external or shared resources (Kraaijenbrink et al., 2010). The RBV concept, which is certainly not without skepticism in the literature, has made a significant contribution to understanding the origin of competitive advantage.

2.3 Dynamic Capabilities

Teece et al. (1997) elaborate on the concept of dynamic capabilities, noting that competitive advantage is based on a company's dynamic capabilities. By implementing dynamic capabilities, firms can create, integrate, and systematically align internal and external resources and competencies according to the dynamic competitive conditions. Sensing, seizing, and reconfiguration capabilities are company-specific capabilities and organizational processes (O'Reill et al., 2008). As a result, it is not the unique bundling of resources and skills that is decisive in creating a competitive advantage, but rather the dynamic capability of a company to constantly adapt strategically to changing environments in an innovative and effective manner. The concept of dynamic capabilities is primarily aimed at volatile and fluctuating environmental conditions where there are many uncertain factors. Furthermore, dynamic capabilities emphasize the strategic importance of the system approach as a link between a focal firm and its business ecosystem; this is particularly true where reference is made to innovation, organizational learning, or the creation of joint output (Teece, 2007). Lichtenthaler and Lichtenthaler (2009) argue that due to increasing specialization and customization, the system

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approach necessitates processes of open innovation involving customers, suppliers, and intermediaries. Alliances with customers, suppliers, and intermediaries create a unique, innovative, and value-adding constellation, with orchestration and coordination being two of the possible competitive advantages. Contemporary research in the field of dynamic capabilities focuses on the role of technology in generating new dynamic capabilities, on the intercultural aspects of the organization, and on the platform perspective (Vickery et al., 2013).

2.4 The Relational View

Research into the RBV and dynamic capabilities concepts has contributed significantly to the understanding of the emergence of competitive advantages; however, it has not yet addressed the networks in which a company is integrated comprehensively (Dyer et al., 1998). Lavie (2006) describes an internal company network as a key entity to be analyzed and argues that the specific and unique internal network is the source of the competitive advantage. The focus is on generating rent from the internal network perspective. In this context, the research interest in relational exchange, cross-company knowledge exchange, governance methods, and the exchange of rents between the actors are relevant (Dyer et al., 2008). The literature discusses whether instead of a single network, a more global network perspective should be adopted. The relational view approach is since firms can shape cross-company networks as desired, depending on environmental characteristics. The discussion surrounding business ecosystems and supply networks is developing in a similar direction (Choi et al., 2006). In contrast to the RBV, the relational view provides that core resources and competencies are not exclusively confined within a company but can instead permeate beyond firm boundaries. According to Teece et al. (1997), defined network-related dynamic capability is not sufficient to generate relational rents. The relational view is based on and develops the RBV and dynamic capabilities concepts. Scholars have investigated how innovations within relational networks and social capital are formed (Rass et al., 2013).

3. METHODOLOGY

The literature analysis is based on Tranfield et al.'s (2003) multi-stage approach. According to this approach, general project planning takes place in the first phase, and the author of the paper should be the person examining the identified literature. This is because the author has already done research in the field of servitization and is therefore able to identify the gaps in knowledge and extract relevant information. In the subsequent phase, the actual implementation of the analysis is described. This is followed by the reporting phase. This section summarizes the key statements from the evaluated publications and describes the research gaps. The final section offers concluding remarks and details the limitations of the study results.

3.1 Conducting the Review

Based on the author's existing knowledge, the author found relevant literature using a keyword search (Tranfield et al., 2003). The following terms were used: "servitization", "resources", "capabilities", and "service networks". The search was carried out in the Scopus database by performing the keyword search within the "Business, Management & Accounting" section.

According to Tranfield et al. (2003), one should only analyze those studies that meet all inclusion criteria. The criteria were defined for the present literature analysis. To define a timeframe for the literature review, the author chose to review studies published between 2009–2020. This should ensure that the analysis is comprehensive and reflects the current state of research on the topic. Furthermore, only papers from the Academic Journal Guide (AJG) with a minimum rating of 2* were selected. As a result, publications, conference papers, and books from other disciplines were excluded. Nevertheless, a scientifically accepted threshold value for the quality of the work was defined. The focus of this threshold was on "resources and capabilities" for servitization and "service networks".

The search with the defined categories generated 164 hits. The summaries of these 164 hits were studied. According to Tranfield et al. (2003), it is ultimately a subjective decision by the researcher as to whether a publication should be included or excluded from further analysis. If an abstract was ambiguous, the entire publication was read to determine relevance. Given that the available processing time for this project was limited (06/11/20–10/01/21), only publications with at least 50 citations were considered. To ensure the completeness of the review, the snowball approach (Greenhalgh & Peacock, 2005) was utilized. This should ensure that any relevant references in the original papers were also considered. After the final implementation, 29 publications were identified according to this methodology; 21 of these papers related to the "resources and capabilities" topic, while 8 papers related to the "service networks" topic within the higher-level group, "strategy and structure". The selected publications originate from several disciplines, including marketing, service management, operations, and general management. Most of the papers were published in two journals: Industrial Marketing Management (IMM) and the Journal of Business & Industrial Marketing.

3.2 Review and Writing Process

The selected publications were then subjected to a thematic analysis (Braun & Clarke, 2006). The primary focus was on identifying a publication's specific research question and key messages. The author began the analysis by reading and subsequently categorizing the papers. As much as possible, the coding process was iterative to refine the interpretation of the results (Tranfield et al., 2003). Originally, resources and competencies were treated as separate topics. However, these topics were later joined as the study progressed as some of the papers had overlapping content and corresponding synergy effects.

The analysis revealed three subject areas. First, to servitise the existing business model, manufacturers must continuously improve their resources and competencies. While the development of internal resources and competencies primarily relates to the focal firm, businesses must also remain cognizant of external factors and establish business relationships with suppliers, customers, and intermediaries. Therefore, when designing and delivering solutions, the resources and competencies of customers and suppliers must be considered; this is also the case with offers of preventive maintenance (Forkmann, et al., 2017). Second, through the formation of service networks as part of business strategy and structure, many manufacturers have been able to manage the complexity of the transformation of their business models. At the beginning of their journeys, many manufacturers do not have the necessary servitization resources and competencies to manage their extended service activities. In addition, the development of these resources and capabilities represents a considerable investment of both money and time. As a result, manufacturers are increasingly finding themselves in complex

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service networks that include traditional product-oriented and vertically integrated networks. Third, specific dynamic and operational capabilities are required to create viable networks and use them effectively. While the first topic deals with the resources and capabilities manufacturers require to servitise their business models, the third topic specifically deals with the dynamic resources and capabilities related to the formation and operation of service networks. Consequently, this paper treats these topics separately.

Figure 1 shows the three topics described above and their likely effects on the service offerings for customers and intermediaries. The model also depicts the interactions between the constructs "resource-based perspective", "dynamic capabilities approach", and "relational view" and external factors such as suppliers, intermediaries, and customers.

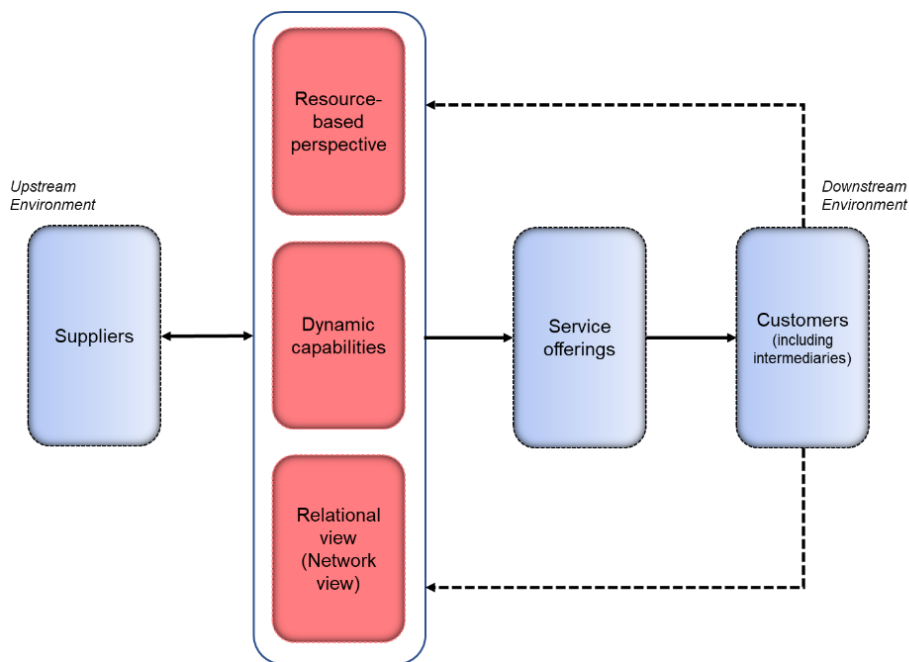


Figure 1. Actors involved with servitization as a transformation process

The three topics (i.e., the resource-based perspective, dynamic capabilities approach, and relational view) have some thematic overlaps. For instance, the resources and capabilities of a manufacturer have an influence on the type of service network in which the manufacturer is involved, as well as on the specific characteristics of the manufacturer's dynamic and operational capabilities. Despite some minor interactions, this paper treats these three topics as being independent. Therefore, one should analyze each topic comprehensively to generate a corresponding increase in knowledge.

3.3 Descriptive Analysis of the Field

Following Tranfield et al.'s (2003) descriptive analysis, Figure 2 and Figure 3 show the chronological development of the field of literature on this topic, based on the publications on the subject areas examined for this paper.

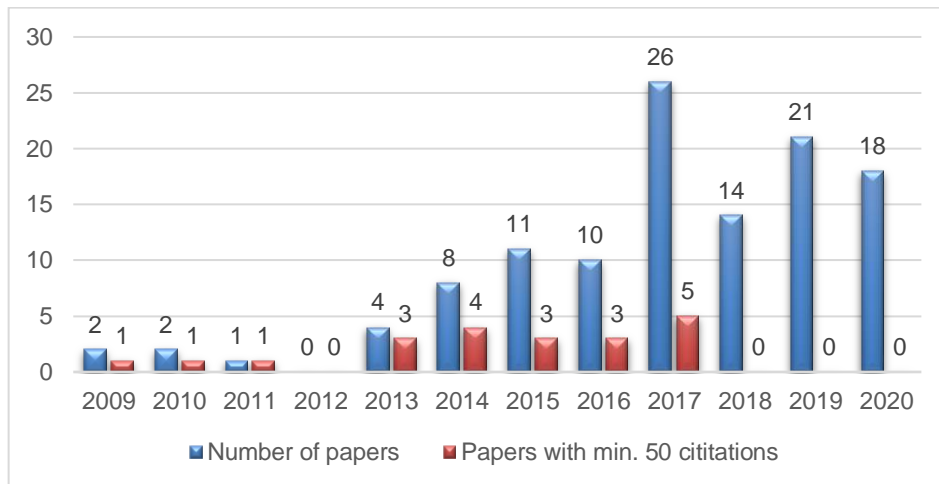


Figure 2. Coverage by “resources and capabilities” during the review sample period (2009–2020)

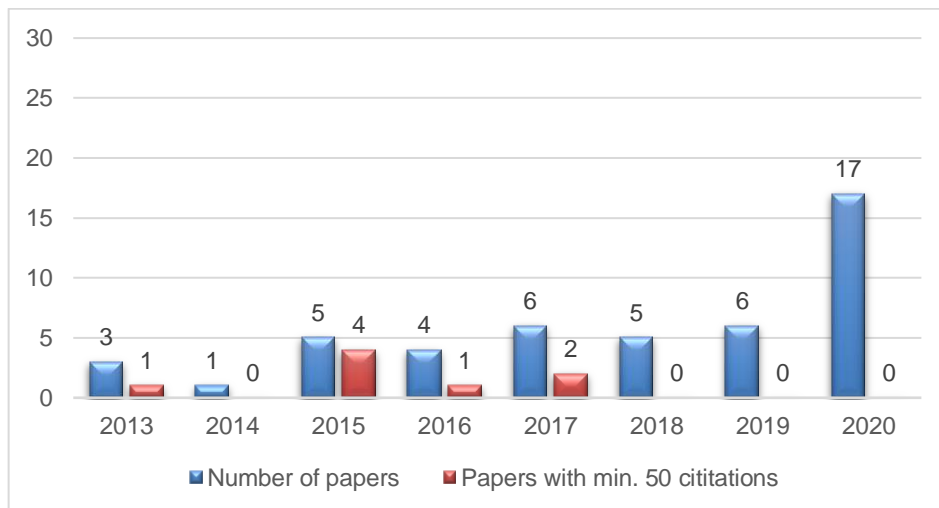


Figure 3. Coverage by “service networks” during the review sample period (2009–2020)

An examination of the number of publications in both the resources and capabilities and service network subject areas depicts an increasing publication frequency within the review period. While nine papers were published between 2009–2013 on the resources and capabilities subject, an additional 69 papers on the topic were published between 2014–2018. Between

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2019–2020, a further 39 publications on the topic were published. During this period, a total of 21 papers that included more than 50 citations were published. In the period from 2013–2016, a total of 13 papers were published on the topic of service networks; between 2017–2019, there were an additional 17 publications on the topic. In 2020, 17 papers have already been published on service networks, including a total of 8 papers with more than 50 citations. The growth in literature on service networks began four years after the growth in resources and capabilities literature. One can observe a significant increase in the literature on both subject areas beginning in 2017, which suggests that more firms are interested in sterilizing their business models and developing their resources and competencies within service networks, and that digitisation is playing an increasingly strategic role in business management. The most-cited publications on the topic of resources and capabilities are Ulaga and Reinartz (2011), Cova and Salle (2008), and Neu and Brown (2005). The most-cited papers on the topic of service networks are Ostrom et al. (2015), Reim et al. (2005), and Gebauer et al. (2013). By using the citation analysis, one can identify the most influential works in the examined subject area. At the same time, however, one should mention that this type of analysis is biased towards older publications (Zupic & Čater, 2015). The results of the analysis show that most research papers on servitization use empirical (i.e., qualitative, and quantitative) and not conceptual methods. In empirical research, the qualitative approach is the predominate approach in the literature. However, there is a growing trend towards quantitative research in contemporary publications.

4. SERVICITIZATION WITH RESPECT TO STRATEGIC MANAGEMENT

According to Transfield et al. (2003), the third and final phase of a literature analysis should include the summary of relevant key statements from the literature. From a relational view, the research on the selected topics – resources and capabilities and dynamic and operational capabilities within service networks – is based on the publications selected in the previous analysis step. However, this selection is not limited to the papers gathered in the research process. Therefore, the author made references to older publications on a case-by-case basis to provide a comprehensive background on the topic. The analysis concludes with a summary of the core statements from the papers under study. The author identified a research gap and offers a corresponding assessment regarding future research. This process step clarifies the scope of current knowledge on the topic and determines where there is still a need for future research. Finally, the analysis should demonstrate how the resources and capabilities relating to servitization have developed over time and make clear what the basis of sustainable competitive advantages is from this perspective.

4.1 Resources, Capabilities, and Service Networks

As Eloranta and Turunen's (2015) literature review shows, the use of the RBV perspective dominates in explanations of competitive advantages flowing from serviced business models. In addition to committed and service-motivated executives (Alghisi & Saccani, 2015), the development of specific key performance indicators (KPIs) to evaluate customer benefits (Barquet et al., 2013), service-oriented employees (Santamaría, et al., 2012), and innovative technologies (Baines et al., 2013) has been a core resource. Visnjic et al. (2013) points out the

importance of the critical service ratio and claim that companies can only generate a profitable service business when they reach a certain threshold value. These studies define the focal firm as the unit one must investigate and assume that the focal firm controls, owns, or can acquire or develop all the necessary resources and processes within a reasonable period.

Ulaga and Reinartz (2011) developed the pure resource-based approach to analyze a firm's capabilities. They assert that competitive advantages result from the unique combination of a company's internal resources and the capabilities resulting from those resources, whereby different internal company processes are considered. In a corresponding analysis, Storbacka (2011) points out the need for the strategic coordination of internal resources for firms to achieve competitive advantages. As a result, Storbacka proposes a solution framework using abductive methods. Additionally, there is also research that examines firms' ability to change culture and affinity for innovation and implementation of that innovation (Rönnerberg et al., 2016). Ceci and Masini (2011) postulate that the use of business intelligence is of strategic relevance and is one of the core capabilities of firms. Salonen and Jaakkola (2015) also underline the necessity of modular solutions as part of the bundle of offers.

However, by means of exploratory (qualitative) research, Matthyssens and Vandenbempt (2008) found that a significant number of the companies they examined were not able to develop the resources and skills required for disposal on their own. This also highlights the strategic importance of external resources and capabilities. Other scholars have postulated that the establishment and intensification of business relationships function as a core capability for servicing of a firm's business model (Tuli et al., 2007). Parallel research is generally in agreement about the strategic importance of business relationships; however, some scholars claim that it is not the mere establishment of business relationships, but the resulting capabilities of all actors involved, that allows for the establishment of a sustainable competitive advantage (Kindström, 2010). Story et al. (2017) direct focus on the simultaneous consideration of customer and supplier resources and on the resulting unique servitization capabilities.

From a servitization point of view, the establishment of relationship management should not be seen solely as a procedural instrument for servitized companies (Karatzas, et al., 2016). Instead, relationship management necessitates answering questions as to whether relationship management is a purely internal company process or whether firms can achieve strategic competitive advantages through the inclusion of all actors. Paiola et al.'s (2013) empirical research provides that the composition of resources and the capabilities derived from them range from exclusively internal to exclusively external in the VUCA word (volatility, uncertainty, complexity, ambiguity). Story et al. (2017) state that the coordination or orchestration of the composite bundle of a firm's internal and external resources and capabilities is significant to achieving a competitive advantage. Kreye (2017) questions the RBV's fundamental assumptions (Barney, 1991) and calls dynamic capabilities (Teece, 2007) into question. Kreye points out the need to broaden the dyadic system's perspective as a source of competitive advantage.

The current trend in the literature is to build on network actor theory (Jaakkola & Hakanen 2013) and relate the theory with companies on a servitization journey who are developing networks to create shared unique capabilities. The networks within servitized companies emphasize the strategic importance of actors within the value chain (Barquet et al. 2013). Other research explicitly contends with individual relationships within a network, such as manufacturer-supplier, manufacturer-customer, and manufacturer-intermediary customer relationships. Gebauer et al. (2013) argue that value co-creation emerges from a unique combination of capabilities of the actors involved in these endeavors and the new

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capacities resulting from these processes. Although the trend towards network formation regarding the bundling of actors' capabilities has been investigated in a relatively fulsome manner, there are only a few studies which detail exactly how the corresponding bundling processes ought to be designed. According to Huikkola and Kohtamäki's (2017) work, the ability to use an established network strategically poses the greatest challenge for the actors involved. Factors such as reliability, trustworthiness of shared leadership among network actors, and a reduction in the degree of control play significant roles.

5. CONCLUSIONS

This literature review shows a significant evolution of resources and capabilities from the perspective of strategic management in relation to servitization as a business model innovation. Over time, theory relating to the creation of sustainable competitive advantages has evolved.

5.1 Theoretical Contributions

This literature review summarizes the key statements from the body of research and defines the corresponding research priorities. Möller et al. (2007), with reference to the relational view, point out the relevance of the interaction between several actors within the network. The advanced offerings must therefore be designed in such a way that they simultaneously account for the risk probabilities of all actors. Accordingly, capabilities regarding trustworthiness must also be developed. The consideration of external resources and capabilities to generate growth in the serviced business model requires that one recognize the merge and acquisition strategy as part of a firm's overall corporate strategy. The network actor theory shifts the focus from the capabilities of individual serviced companies to the capabilities of all actors involved in the market. However, one must determine the best approach to orchestrate all capabilities in the market and determine how bundling works, how the network can be used, and how difficulties caused by these interactions can be addressed.

Story et al. (2017) point to the increasing importance of the business relationship between the servitized manufacturer and its suppliers. Furthermore, the strategic relevance of intermediaries, such as digitization and big data analysis experts, is increasing. As a result of increasing digitization and the development of new sales channels (Coreynen et al., 2017), the interaction between the actors in a network can also be redefined, thus generating a more comprehensive understanding of value co-creation. Digital servitization offers a significant new dimension within the transformation process. Despite the assumed positive effect of digitization on servitization, the more precise mechanisms relating to value contribution are largely unexplored (Kamp et al., 2017). In their literature reviews, Raddats et al. (2019), Eloranta and Turunen, (2015) Baines et al. (2009), and Lightfoot et al. (2013) point to the increasing tendency towards a multi-actor perspective. However, Eloranta and Turunen (2015) justify this development based on the relational view. Baines et al. (2017), working within the framework of value co-creation, go one step further. They define the co-designing of advanced services in cooperation with customers and the development of unique capabilities from the network perspective.

The findings in Kamp et al. (2017) require future research; studies should consider the service maturation process and its effect on the entire value chain within a network. In addition,

there is currently an increasing scientific focus on external networks under the relational view (Friend et al., 2016). Kowalkowski et al. (2017) examine the development of a company's service culture. It is becoming apparent that future research must always consider the effects of servitization on all relevant actors.

5.2 Managerial Implications

The findings of this literature review on the evolution of resources and capabilities within servitization as part of the business model transformation process can have important effects on management. This explains the so-called "service paradox" (Gebauer et al., 2005) from the perspective of resources and capacities. If one does not view servitization from the inclusive network perspective of all relevant actors, instead viewing it exclusively from the perspective of the manufacturing company in question, this might explain why a servitized company fails to meet the complex and heterogeneous needs within a network. Furthermore, it may explain why a manufacturing firm ultimately fails to create a unique value proposition for its customers. As a result, such a manufacturer engaged in servitization cannot generate the desired outcome. One can therefore state that a sustainable competitive advantage can only be achieved by including all network actors under consideration of respective service maturity levels.

The results of this literature review also suggest that there may be several trajectories for the development of unique resources and capabilities that lead to success. One of the possible strategies here could relate to mergers and acquisition, where the manufacturer relies on radical innovation in the service business rather than organic growth. One should also view the development of unique resources and capabilities from a macroeconomic perspective. The body of contemporary research provides indications that servitization is more likely to be successful if customers expect greater process integration from a manufacturer, if the product or the solution offered is complex, and if a competitor undertakes similar transformation efforts. In this context, managers should be encouraged to determine which solutions are particularly valuable to customers. Here, services supporting the supplier's product (SSPs) can act as gateways to more profitable services supporting the customer's actions (SSCs). Accordingly, managers must decide whether to invest in SSP- or SSC-related resources and capabilities. Managers must formulate service strategies and issue directives about the deployment of external resources and the interactions of those resources with internal capabilities.

Both the creation and the provision of advanced services (i.e., solutions) require intensive and permanent interactions with the customer. Therefore, managers should ensure that the appropriate capabilities are developed to extract and strategically integrate customer input into the offered solution. For this to occur, sales personnel must have the appropriate mindset. Finally, one should mention that digitization and innovative technologies can radically change the servitization business model. However, managers should carefully weigh the benefits and risks of using these technologies and avoid stepping into the "digitalization paradox" (Gebauer, et al., 2020).

5.3 Limitations

The present analysis has a few limitations, including the method of literature selection. The author only accounted for publications of the MOS research directions, cognizant of the fact that the topic is also being discussed in engineering management literature under the term

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“product-service system” (PPS). The scope for the selection of publications in this literature review did not include any papers with a rank of 1 * or less. Furthermore, no books or conference papers were included in the selection.

Finally, the author carried out the analysis alone and over a limited time period. Consequently, the author could not discuss the results with a research team, which limited the possibilities for interpretation and analysis. One can therefore assume that the identification of both the core statements and the implications of the research were subject to the author's perspective and biases. Lastly, given the time frame, only a limited number of publications could be considered. This study therefore does not exhaustively review all of the literature on this topic.

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