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Financial performance of servitized manufacturing firms: A configuration issue between servitization strategies and customer-oriented organizational design

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ABSTRACT

The literature posits a positive relationship between servitization and financial performance. However, empirical evidence is inconclusive and notes the enabling role of organization. To contribute to this topic, this work first advocates for a new approach to define the servitization strategy of manufacturing firms based on the nature of their offerings and their impact on the provider-customer relationships. Three categories of strategy are suggested: added services-AS, activities reconfiguration-AR, and business model reconfiguration-BMR. Then, a general framework posits that financial performance stems from the adoption of specific COOD configurations depending on the servitization strategy adopted. Three dimensions of COOD are considered: service culture-SC, customer interface-CI and service delivery system-SDS. Based on a study involving 184 manufacturing firms, the research model provides quantitative support for driver configurations that increase financial performance. The results from both structural equation models and qualitative comparative analysis (fsQCA) confirm that all servitization strategies can lead to increased performance, but only with specific COOD configurations. The findings provide stimulating managerial implications: a company implementing an AS strategy has no incentive to invest in a complex COOD; firms adopting an AR strategy should focus largely on their SDS; and firms choosing a BMR strategy must develop a robust SC.

1. Introduction

The concept of "servitization" refers to the evolution of manufacturing firms toward offering services (Vandermerwe & Rada, 1988) or the process by which a manufacturing company creates value by adding services to its traditional core product offerings (Davies, 2004; Gebauer, Edvardsson, Gustafsson, & Witell, 2010; Oliva & Kallenberg, 2003; Tukker, 2004). Among a plethora of terms, this concept has been interpreted and defined differently by various fields of study aiming to conceptualize this general trend. For instance, the terms "service infusion" (Forkmann, Ramos, Henneberg & Naudé, 2017), "transition from products to services" (Oliva & Kallenberg, 2003), and "service transition" (Fang, Palmatier & Steenkamp, 2008) are commonly used to refer to processes of service growth in manufacturing companies, while "integrated solutions" (Davies, 2004), "product–service systems" (Mont, 2002) and "hybrid offerings" (Ulaga & Reinartz, 2011) are used to describe innovative combinations of goods and services. Today, these terms are frequently used interchangeably with servitization (Kowalkowski, Gebauer, Kamp, & Parry, 2017; Kowalkowski, Gebauer, & Oliva, 2017). In current literature and more generally, servitization is increasingly studied as a process affecting business model dimensions (Baines et al., 2017; Baines, Lightfoot, Benedettini, & Kay, 2009; Forkmann et al., 2017) and potentially firms' profitability (Benedettini, Swink, & Neely, 2017; Gebauer, Ren, Valtakoski, & Reynoso, 2012).

While previous studies have focused on the strategic benefits that services provide to products, managers and researchers have recently shown interest in the direct economic benefits of servitization strategies (Eggert, Hogreve, Ulaga, & Muenkhoff, 2014; Gebauer, Ren, et al., 2012). Theoretically, an implicit positive relationship has been posited between servitization and a firm's financial performance (Antioco, Moenaert, Lindgreen, & Wetzels, 2008; Homburg, Hoyer, & Fassnacht, 2002; Malleret, 2006; Wise & Baumgartner, 1999). As such, in recent decades, manufacturers from a diverse range of industries have committed themselves to service-driven strategies, seeking to increase their share of revenues and profits through services. This shift is not limited to large firms, as many small and medium-sized enterprises (SMEs) are also re-orienting themselves toward services (Gebauer, Paiola, & Edvardsson, 2012). The expected benefits are encouraging

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manufacturers to explore servitization, particularly advanced services (Baines et al., 2017).

However, empirical evidence regarding this trend is quite inconclusive, as empirical results are far from convergent. Therefore, while some manufacturing companies report that servitization delivers ambitious growth and profitability objectives, others appear to struggle to turn a profit from their service businesses (Benedettini, Neely, & Swink, 2015; Fang et al., 2008; Neely, 2008). Empirical studies mention some lower revenues or rates of return than expected (Sawhney, Balasubramanian & Krishnan, 2004). In general, offering more services does not consistently increase a firm's chances of survival (Benedettini et al., 2017).

To understand and explain this situation, Gebauer, Fleisch, and Friedli (2005) posit the "service paradox," asserting that companies make substantial investments to extend service offerings and thereby gain access to other sources of competitive advantage, which incur higher costs. However, these investments do not increase returns as expected. To overcome this paradox, many studies set out to explore barriers and key success factors for services in manufacturing firms (Gebauer et al., 2005; Oliva & Kallenberg, 2003) and suggest that servitization involves the development of a new set of capabilities that requires major changes in structures, processes and organizational systems. They also argue that it requires tapping into the financial and managerial resources previously been dedicated to the development and manufacturing of products (Oliva & Kallenberg, 2003).

Regarding the question about the levers of success in servitization strategies, the literature notes that the proper alignment between the servitization strategy and organizational design components has a crucial influence on financial performance (Böhm, Eggert, & Thiesbrummel, 2017; Neu & Brown, 2005). Servitization is also considered to be closely related to a market- and customer-focused approach (Vandermerwe & Rada, 1988). Indeed, focusing on service activities involves potential important changes to industrial customer-provider relationships and new ways to collaborate. As noted by Böhm et al. (2017, p. 9) in their conclusion, "additional research could analyze whether the successful implantation of specific service types requires the presence of different organizational characteristics."

In line with these assertions, this research aims to demonstrate that a proper fit between the implementation of a specific servitization strategy and an adapted customer-oriented organizational design (COOD) is likely to improve the overall profitability of a manufacturing firm. In other words, this work intends to define which optimal combinations of servitization strategies and COOD lead to improved firm performance. Thus, it makes two major contributions to the academic literature on servitization. First, it advocates for a new approach to defining the servitization strategy of manufacturing firms based on the nature of their offerings and their impact on four key aspects of the provider-customer relationships: transfer of ownership rights and risks and impact on customer's activity chain and business model. In turn, three categories of servitization strategy are suggested: added services (AS), activities reconfiguration (AR), and business model reconfiguration (BMR). This taxonomy goes beyond traditional classifications, which are mainly founded on the technical characteristics of the service offerings, without considering the global influence of servitization transition on industrial customer-provider relationships and the interrelated chain value.

Second, this study provides quantitative support for sets of conditions (i.e., configurations of COOD) that increase financial performance according to each servitization strategy evoked. Based on a study involving face-to-face interviews with the company directors of 184 French manufacturing firms and on data extracted from a financial database, the research model considers the COOD of each firm across three dimensions: service culture (SC), customer interface (CI) and service delivery system (SDS). Through both structural equation models (PLS) and qualitative comparative analysis (fsQCA), the results confirm that a proper configuration of the COOD for a given servitization strategy fosters manufacturing firms' financial performance. The findings serve as a relevant source of ideas and guidance that managers of manufacturing firms can use to organize and implement the strategic and organizational changes resulting from the servitization. In summary, a company that proposes an AS strategy has no incentive to invest in a complex COOD; firms that adopt an AR strategy should focus largely on their SDS; and firms that choose a BMR strategy must develop a robust SC.

The remainder of the article is structured as follows. The next section (Section 2) presents a literature review, questions the existing classification of servitization strategies and notes the need for more empirical studies to overcome the well-known financial "service paradox" in the context of servitization. Section 3 provides a conceptual framework that describes the evolution of servitization strategies from a product-based perspective to a relational perspective and explains the key role of a customer orientation in servitized manufacturing firms. This section concludes by presenting a conceptual research model and formulating research proposals. After describing the methods (Section 4), we provide and discuss our detailed findings (Section 5). In the conclusion (Section 6), we propose the main theoretical and managerial implications of the study, as well as the limitations and directions for future research.

2. Literature review

Servitization is considered to be a strategic response to decreasing product differentiation and competitiveness (Malleret, 2006). It is a way to improve product innovation, cope with the maturity phase of the product lifecycle and escape the product commoditization trap (Kowalkowski et al., 2017). Servitization plays a particularly powerful role in building brand or corporate equity in business markets and industries in which it is difficult to maintain competitive product differentiation (Gebauer, Gustafsson & Witell, 2011). Therefore, this strategy represents a prerequisite for growth, particularly in a low-cost competition context, due to the competitive advantage provided (Gebauer, Ren, et al., 2012).

From a marketing perspective, servitization improves responses to customers' needs and thus ensures customer satisfaction and loyalty (Eggert et al., 2014). In business-to-business (B2B) or industrial markets, scholars observe that customers increasingly express a demand for services (Baines et al., 2009). Depending on the firm's industry and strategy, these services can take various forms, ranging from supporting products to supporting customers (Mathieu, 2001). Offered services can also be categorized into basic (e.g., goods and spare parts), intermediate (e.g., help desks, training, maintenance, repairs) and advanced services (e.g., customer support agreements and outcome contracts) (Baines et al., 2009). Therefore, different classifications have emerged in the literature, ranging from basic services that are merely added on to products (maintenance and support) to integrated and customer-centric combinations of goods and services (Gebauer, 2008; Mathieu, 2001; Tukker, 2004). This variety reflects that, in today's business environment, manufacturing providers need to balance elements of both product and service logics, as well as to manage the increased customer-supplier interdependencies entailed by integrated solutions (Vargo & Lusch, 2004). For example, when services are co-produced with the customer, customers are involved as operant resources in the co-creation of a specific and difficult-to-imitate value (Tuli, Kohli, & Bharadwaj, 2007; Vargo & Lusch, 2004), and in turn, providers increase their involvement and responsibility within the customer activity chain (Gebauer, Edvardsson, et al., 2010). A consequence of this growing interconnection is a need for a strong customer-oriented organization (Salonen, 2011).

Facing this evolution, a servitization strategy must be considered to be a global managerial approach including the characteristics of the firm's offering but also the pattern of relationships the provider sustains with its customers (Hakanen, Helander and Valkokari, 2017). This new