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Servitization of SMEs through Strategic Alliances: a Case Study.

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Abstract

Opportunities and challenges connected to the shift towards a service-based business by product-centric companies (i.e. servitization, service strategy, service transformation) are rather under-explored in small and medium enterprises (SMEs). Using a single-case study of an Italian consortium, this paper explores how a strategic alliance among SMEs can facilitate this transformation. In particular, the paper shows that the strategic alliance has played a double role, first in (1) driving the elaboration of a service strategy as an emergent – not deliberated – strategy, and then (2) in enabling its implementation by providing a common environment that facilitated the allied companies in overcoming the traditional barriers of servitization. Implications of the paper are relevant, as it suggests how even small and medium sized firms can successfully servitize their business.

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1. Introduction

Servitization is defined as a strategic transformation of a manufacturing firm, that “deliberately or in an emergent fashion introduces service elements in its business model” [1]. Despite the challenges and risks originated from changing the traditional, product-centric culture of manufacturing companies, previous literature agrees that this transformation can bring substantial benefits to any industrial business [2]. The infusion of services could be especially relevant in small and medium sized businesses (hereafter, SMEs). In fact, SMEs are often more vulnerable to competition than larger companies [3], as they face more difficulties in sustaining innovation due to the lack of financial and managerial resources [4]. Servitization could then be exploited to retain profitability, especially in a product-based declining business. Despite its relevance, this topic is rather under-explored [5].

To overcome the mentioned barriers towards innovation, SMEs can deploy strategic networks and alliances with other SMEs and/or larger companies [6] [7]. Indeed, previous research clearly shows the benefits of strategic alliances for

innovation of SMEs [8] [6] [9] [10]. However, previous studies do not shed lights on how these networks can facilitate the shift from pure manufacturing to a servitized business. This paper aims at filling this gap. Specifically, we carried out an in-depth case study of an Italian consortium of 19 SMEs operating in the elevator industry in order to investigate whether and how a strategic alliance among SMEs can support and facilitate the design and implementation of a servitization strategy.

The rest of the paper is organised as follows. Section 2 presents a short review of previous studies dealing with servitization of SMEs, and strategic alliances. Section 3 illustrates the research strategy adopted. Section 4 points out the findings from the case study and some considerations in relation to the research objectives (i.e. the linkages between strategic alliances and servitization of SMEs). The paper ends discussing in Section 5 the implications, limits and avenues of future research.

2. Background

Literature at the intersection between servitization of SMEs and strategic alliances has been reviewed to retrieve relevant contributions of previous studies. We organize the discourse around these two topics in the following subsections.

2.1. Servitization of SMEs

Even small and medium-sized business can benefit from the infusion of services [11], although the pursuing of a service strategy in SMEs could be less deliberated than in larger companies [12]. Ambroise et al. [13] show that the benefits from service infusion in SMEs are neither correlated to a specific strategy or pathway, nor to the industrial sector in which SME operates. It is generally assumed that better results correspond to situations in which the capabilities demanded for competing in service businesses are better mastered. These refer, specifically, to the competences and tools for: a) creating a service innovation [14], b) managing the service factory, and c) selling services [15]. Basically, to undergo the service transformation, small firms must overcome the same initial barriers of larger companies, as they generally miss an adequate service culture [16], and customer orientation [17]. In addition, SMEs have to set up the most efficient and effective processes to deliver contractual services [18]. However, significant differences could exist between servitization of SMEs and that of larger companies [11], as smallest businesses might neither reach the critical mass needed for reaching profitability from a service business, nor they could have financial and managerial resources [19]. In this regard, Malleret [20] points out that profitability is not immediately obtained when SMEs move to the service business, as they likely must overcome some critical thresholds before reaching satisfactory performance. In this, the smaller the company the greater the problem, since less sophisticated indicators are usually in place to evaluate the convenience of this strategic move [21].

Small and medium-sized manufacturers can follow different pathways to servitize [22] [13]. In particular, some firms can choose to integrate their own products and services with those offered by third parts. In other situations, only specialised life-cycle services are offered [11]. Malleret [20] states that SMEs that want to increase service sales initially put efforts in empowering the services offered to their actual customer base. Other strategies, instead, concentrate on selling services to new customers, whereas only a few cases have been identified in which totally new product and service solutions have been crafted to start a new and independent business.

In conclusion, previous literature agrees on the fact that SMEs can successfully move to a service business. However, for making this shift to a service orientation feasible, these manoeuvres could be facilitated by tools and approaches as digitization [23] [24] [15] and they need to develop new organizational, operational and commercial capabilities [25] [26]. The process of design and implementation of a servitization strategy may be long and complex in the context of SMEs because of the peculiarities of the context. On one side, faint manoeuvres can better comply with paucity of resources that is typical in small and medium-sized businesses,

while bigger investments and disruptive service initiatives appear too much risky. On the other side, the financial results are greatly affected by the extent of the service shift, and limited by the fact that critical thresholds cannot be immediately overcome. In order to better exploit scarce available resources, SMEs could participate to strategic alliances and networks, and so facilitate the growth of their service businesses.

The next section reports the findings of a literature review that investigates this topic.

2.2. Strategic alliances to facilitate servitization

The existing literature recognizes that SMEs can rely on strategic alliances to foster their innovation processes [6] [9] [27] [10]. There may be different reasons why firms can decide to build a strategic alliance or a network. Among the major factors, building alliances is conceived as a useful approach to share costs [30]. Furthermore, resource and knowledge complementarities are considered a relevant driver for innovation through networks [7].

In order to make strategic alliances feasible, attitude to cooperation is considered a key factor to jointly develop more comprehensive solutions that allow to pursue new business opportunities [29]. Other studies point out the relevance of trust and partners' dependency [8], as well as the ability to establish efficient and effective network relationships [9].

Despite this increasing body of knowledge, fewer contributions debate on the potential of networks to foster the growth of service businesses. It is agreed that the challenges related to the service infusion can be better faced due to the knowledge acquired from external partners [31] [32] [33]. Although most findings refer to larger firms (e.g., [33] [34] [35]), the role of network in supporting servitization is clearly emphasized, with particular regard to entering in a partnership with Knowledge Intensive Business Services (KIBS) firms [36] [35]. With specific reference to SMEs, Lin and Lin [29] investigate the factors that motivate SMEs to establish consortia to support their servitization strategy, finding that in conditions of growing competition, technological complexity, dependence on external resources and presence of public grants, SMEs and bigger companies more likely join to develop collaborative projects. Nevertheless, the mere existence of a service network is not a guarantee for succeeding in servitization [37]. In this context it emerges the need of further investigating the potential role of strategic alliances among SMEs, as a driver and enabler of a servitization strategy's design and implementation.

3. Research strategy

It is acknowledged that case-based research is typically suggested in early stage research [38], for building theories from empirical data [39]. Therefore, we used an in-depth single case study to investigate the servitization taking place in a consortium of SMEs operating in the elevator/escalator industry. This consortium (hereafter, ALFA) was selected purposively to develop considerations on the interplay between servitization of SMEs and strategic alliances, as a consequence of the authors' knowledge and relationship to some of the entrepreneurs. The authors had the possibility of verifying that

all the case study criteria were satisfied: in fact, ALFA was previously established since more than 10 years, enough time for strategic and cultural transformation to show up. In addition, ALFA was entirely participated by SMEs – the largest company having approx. 100 employee, the smallest in the alliance only 5. Prior of participating to the ALFA consortium, the majority of the firms was characterized by a typical product-based business. Priorities were in selling new units and revamping the existing ones, being the entire business delimited to a very specific area (a city, its suburbs and region). As a result, key competences were the design, production and installation of elevators/escalators for commercial and residential buildings. On the contrary, over time, the consortium affiliates have started to put services at the core of their business model, focusing in particular on the development of contractual services – such as emergency and routine maintenance – to be provided over both their installed base and those of competitors. The paper reports and discusses the enablement of this adaptation in relation to the interplay between the SMEs taking part to ALFA. We conducted interviews with managers of the affiliated firms covering key positions of the consortium (i.e. CEO, President). We also interviewed 2 representatives of a consultancy company that had been deeply involved in supporting the development of the consortium activities. We purposefully selected the interviewees as they were informed about the origins of the consortium, and agreed to talk about the reasons behind its establishment, as well as the changes it undertook over time. Before proceeding to the interviews, the authors developed an interview protocol with structured questions about strategic development, obstacles, governance, success factors, etc. Table 1 shows the list of interviews that were conducted between January and June 2018 and that are the primary source of data collection for this research. The same table also reports the interview's length for each respondent. Interviews were digitally recorded and transcribed, and transcripts sent back to the interviews for validation and feedbacks. Then, the information collected by the interviews were analysed and compared with secondary data coming from internal documents, web site, and financial data. In the next section we discuss the findings achieved from the case study.

Table 1. Summary of interviews.

<i>Role of respondent</i>	<i>Length</i>
President of the Consortium - Director of an affiliated firm	90 min
CEO of the Consortium	80 min
Board Member of the Consortium - Director of an affiliated firm	90 min
Head of technical assistance and training unit of the Consortium	60 min
Head of Management Control Division of a Consulting firm providing services to the Consortium	120 min
Staff of the Management Control Division of a Consulting firm providing services to the Consortium	60 min

4. Findings

4.1. Servitization as an emergent strategy

Pressed by the loss of competitiveness against the global companies that dominate the elevator industry (i.e. Kone, Thyssenkrupp, Otis, and Schindler), some entrepreneurs, who had previously met each other in the elevator trade associations, decided to set up ALFA. It emerges clearly from the interviews that the consortium was not established for the deliberated purpose of promoting the development of the service business. Instead, it was established because entrepreneurs, especially those of smaller and less structured companies, perceived that taking part to a larger network, with similar but more structured companies, could have brought several benefits to their businesses.

4.2. Initial reasons behind the establishing of ALFA

Participating to the consortium was thus initially triggered by the needs of exchanging technical knowledge, and secondly by the expected economies in buying commodities and standard services as administration, fiscal, legal and quality management system consultancies. The first stage in the life of the consortium, in fact, was mostly focused on establishing working groups and organizing training activities to provide solutions to technical problems. Accordingly, the primary purpose of the consortium was to provide its affiliates with professional training on technical issues, such as health and safety, quality or environmental regulations, in order to provide continuous stimuli and resources to grow and guarantee support in handling business difficulties and challenges.

In addition, another reason beyond the establishment of the consortium was the possibility of carrying out innovation projects jointly, thus sharing the costs among the consortium partners. Therefore, at the beginning, the consortium was mainly considered a suitable approach for putting together similar firms and obtaining reciprocal advantages in terms of knowledge gains, innovative development and favorable economic conditions.

There was indeed a common perception that every single company could have hardly developed - in isolation – all the capabilities requested to strengthen its business and successfully address current market challenges. For instance, call centers for managing emergency calls, facilities and specialists to provide field technicians with remote help desk, spare parts warehouses, were considered investments prohibitive for small businesses. However, at the beginning, these specific activities were not considered as a priority for the new consortium.

4.3. The need of Knowledge intensive business services for rapidly growing

To put under the lens the opportunity of developing and reinforcing the service business, the relationship that the consortium established with a management consulting firm was crucial. The decision of appointing an external firm to support the consortium activities was due to the rapid growth of the

consortium. The consortium activities were financed by fees regularly paid by affiliates. This fee was commensurate with the size of the business of each affiliate –the larger the installed base, the higher the fee to pay for. This choice convinced also the most skeptical entrepreneurs to join the network together with the fact that each affiliate was assured the “exclusivity” - no other consortium member operating in its area/region. Therefore, since the beginning the number of consortium members grew and rapidly reached +15 firms. As a result of the rapid growth, a substantial budget was immediately available for funding the consortium initiatives. The external consulting firm was thus in charge of providing advising services, such as quality management and cost control services, to support the development of the consortium. Among the services initially offered by the consulting firm, the development of a more sophisticated management accounting system was recognized as a priority. The consultancy firm thus developed a management accounting cloud system, that was adopted for reporting periodically the financial and economic situation of each affiliate.

4.4. Comparing the financial performance under a common basis

Despite different sizes and operating regions, the businesses of the consortium affiliates were relatively homogeneous: revenues were generated by new unit sales, by revamping old plants, by spare parts and fix & repair services, and last by maintenance contracts. By analyzing in details the results achieved by each firm in its different lines of business and by comparing then the results among the different companies, it came out that higher profitability may be reached in case of higher sale of contractual services. In particular, one consortium affiliate was adopting such strategy as a consequence of the environmental conditions in which it was operating. Specifically, this firm was operating in a small and highly densely populated region, with relatively few possibilities to construct new buildings. As a result, business growth from the sale of new units was strongly limited. Nevertheless, the company had grown thanks to the efforts put in selling maintenance contracts. Getting aware of this result brought immediately to a debate among the affiliated companies, which paid increasing attention to shift their business towards a service-oriented model.

4.5. The path to develop the competences for the service transformation

Thus, in the following years, the main efforts and initiatives of the consortium were focused on the development of contractual services, to deliver also preventive maintenance and repair services to their own installed base as well as to that of global competitors. To this purpose, it was required the development of technical, commercial and managerial skills. The consortium has guaranteed over time the needed support and help to the affiliates by increasing and diversifying the training activities already provided. First, technical skills were needed and thus the consortium created: a) a remote assistance centre, in order to provide help

desk services to the technicians of each affiliated company; b) a centralised logistics centre for spare parts management; c) a certified framework, based on a registered trademark ("Safe Elevator"), to promote the quality of the maintenance services provided under the brand of the consortium; d) new information systems for field operations, adopting mobile devices for work-order management. Consequently, the focus was on strengthening commercial capabilities. Numerous positions of maintenance contract sales director were activated and employees trained, and the sale-force was given a commercial kit. Last, a new Customer Relationship Management system specifically dedicated to the service business was designed and implemented.

4.6. Summing up some theoretical considerations

To sum up these results, we can say that the analysis and interpretation of the interviews have shown, firstly, that selling contractual services has become in few years the prevailing strategy of each affiliate and this servitization strategy has been pursued to respond to the shrinking market of the construction industry post 2008 and the resulting lower profits from product-based businesses. However, awareness about the relevance of this strategy grew up *after* an evaluation of the benefits deriving from the switch to the service business. In this context, the establishment of the consortium has resulted in being a *driver* of the elaboration of the servitization strategy providing the empirical evidence of the economic convenience of such approach and stimulating and supporting SMEs in developing a structured service-oriented business approach. In this regard, the external management consultant firm has played a pivotal role. The firm has helped to build awareness about servitization advantages and has provided support in managing the shift.

Furthermore, the alliance developed through the consortium has acted as an *enabler* of the servitization strategy. Indeed, the consortium can be considered a form of strategic alliance that has allowed SMEs to obtain the needed training and knowledge to focus on post-sales services. The consortium activities have helped the affiliates to familiarize with a servitization strategy, prioritizing activities, competences and investments. For instance, the design and manufacturing of special plants have been mostly centralized and in most cases, manufacturing resources - such as machineries for cutting and shearing metal sheets - have been disposed of. Further, the consortium has guaranteed the affiliates opportunities to share costs and develop joint projects suitable for addressing common needs and solving shared problems. SMEs can reach the same results in isolation with great difficulties because of limited financial and human resources, but through strategic alliances they can overcome those barriers.

Today, a network originally created with the primary purpose of providing technical solutions to industry-specific regulations, exceeds well over a million euros in turnover from selling services to its members. Technical, commercial and managerial training for the service business are currently the core services provided to the affiliates. Today, a distinctive trait of the affiliated companies lies in gaining a good reputation for competing in the service business.

It was crucial for this long and complex shift towards a service orientation, as pointed out by the respondents, the trust between the consortium partners. Indeed, to make the consortium a feasible and sustainable strategic alliance over time, it has been crucial to build trust-based relationships among the members of the consortium through the support of a formal and transparent way of communication. Sharing sensitive information relating to customers and P&Ls with potential competitors could probably not have taken place in a short time. On the contrary, it occurred among the members of the consortium also because of the shared commitment towards the achievement of common goals and the awareness of the relevance of shared information in order to elaborate successful strategies.

Moreover, formal agreements were used to regulate rights and responsibilities of the consortium members. Last, an additional factor contributing to manage the strategic alliance among the SMEs has been the presence of an independent (neutral and impartial) consultancy firm, whose actions were guided and shaped by a senior figure with adequate leadership appointed for more than ten years as chair of the consortium. Leadership continues to be considered an important factor for managing the consortium's activities and initiatives, especially in light of the growth of the consortium. In this regard, after almost twenty years, the consortium has changed its governance structure, hiring an external full-time managing director and increasing the number of employees who take care of the consortium development.

5. Conclusions

The strategic transformation of manufacturing firms through the introduction of service elements in their business model is a relevant phenomenon which has been under-investigated in the field of SMEs [5]. To contribute to this body of knowledge, this research investigates whether and how the creation of a strategic alliance among SMEs can represent a suitable way for adopting and implementing a servitization strategy. To achieve this purpose, the research is based on a single case study, which investigates an Italian consortium of 19 SMEs operating in the elevator industry. The reliance on a single case study carried out in a specific industry may be considered a limitation of the research. The peculiarities of both Italian context and elevator industry may limit the application of the findings to other contexts and industries. However, the purpose of the in-depth case study carried out is to explore the under investigated issue of the interplay between SMEs servitization and strategic alliances and pave the way to further reflections and considerations on this topic. The case study discussed in this paper has been selected as a suitable case for achieving the research purpose, in particular due to the growth of the consortium over the years and the related growth of the affiliated firms' service businesses. Future research can contribute by replicating the research in other countries and/or in other industries in order to find out whether any difference may be detected and why they do exist.

The results of the research, compared to previous studies [28], show that similar SMEs operating in the same industry can build a strategic alliance motivated mainly by the need for

experience and knowledge sharing [7] and cost savings [30]. However, the strategic alliance has then revealed itself as a driver for the elaboration of the servitization strategy thanks to the role played by external firms [36] [35]. Interestingly, the role of the external firm has been primarily important in creating the awareness of the convenience and relevance of servitization. Thus, servitization has not been a *deliberate* strategy of the consortium [1] [11] but it has occurred as an *emergent* strategy [40].

On the other hand, the consortium has constituted the juridical form into which a strategic alliance has developed and provided support toward servitization. In this respect it has been an important enabler for the implementation of servitization by providing the consortium affiliates with the competencies needed for developing services (e.g. [14] [15]), in particular technical, commercial and managerial knowledge other than support services and infrastructure.

These considerations represent insights for managers and entrepreneurs involved in managing servitization processes in SMEs. The results of the research show that strategic alliances among SMEs can contribute to increase the chances of successful and sustainable servitization processes, although they might not be established deliberately to this aim.

However, the establishment and management of strategic alliances as a consortium are a step-by-step process that require the identification of leadership figures, the development of trust-based relationships, the establishment of a proper governance structure, and the development of a shared strategy that guides the design of the initiatives and projects needed.

These considerations may be strengthened by future studies that may focus on other organizational forms of strategic alliances which can contribute to facilitate servitization, as well as on the conditions under which such forms may enable the shift towards service businesses. The wide literature on alliances and networks may be further explored with reference to servitization as a specific example of innovation.

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