

Product-Service Systems across Life Cycle

## Successful product-service strategies and managerial practices: a case study research of the Italian heavy truck assistance networks

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### Abstract

Still very little is known about the adoption of servitization of heavy truck assistance network since, up to now, literature has been focusing on focal companies. The withstanding aim of this article is to understand, through a case study analysis, the peculiarities of successful heavy truck workshops, investigating the main elements of their business model (BM) strategies, management practices and manoeuvres that allowed them to achieve noteworthy valuable results. 19 workshops operating in the Italian heavy truck industry have been interviewed and managerial implications discussed according to the four main pillars of the BM Canvas proposed by Osterwalder.

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### 1. Introduction

The evolution towards product-service (PS) solutions is now considered to be the natural response of the modern industrial systems to market changes [1]. In the last decades this phenomenon, acknowledged as servitization of manufacturing, has been considered a powerful source of competitive advantage, particularly for manufacturing companies in developed economies [2]. However, if servitization emerged as necessary for the competitiveness of modern enterprises, it is not enough for the sustainability of the business anymore [3]. Many examples have shown that to achieve successful servitization strategies it is necessary to rethink the whole organization. In particular, literature underlines that such a transformation requires the involvement of the whole service network [4], since the sole use of company internal capabilities is not sufficient to offer comprehensive service solutions. Companies, hence, need to reorganize towards integrated structures in which all actors cooperate in an extended network [5], which consists of a

collection of upstream suppliers, downstream channels to markets and ancillary service providers.

The majority of studies in servitization has analysed how to design, manage, and coordinate PS offerings with the point of view of the focal firm, often neglecting the service ancillary firms perspective. On the contrary, in many industries, service activities are run by independent third-party providers, namely authorized repair workshops, spare parts wholesalers and retailers and customer centres, that act as suppliers of services in place of the focal company [6]. These players are generally Small and Medium Enterprises (SMEs), whose approach toward servitization has not been deeply investigated in literature. Indeed, the main researches refer to the servitization phenomenon limiting their analysis on large enterprises, characterized by suitable organizational structures, grounded skills and strong top management commitment [3]. Still very little is known about the adoption of servitization strategies in SMEs, as well as about the benefits and the challenges that such companies have to face while moving toward service-based business models (BMs).

Heavy truck industry has been experiencing a gradual transformation, shifting from a product-centric vision to a PS perspective. Moreover, this sector is undergoing years of deep crisis that has caused the failure of many service assistance workshops, usually SMEs characterized by lower availability of funds to afford such a heavy period. Nevertheless, data on the industry macro-dynamics pointed out that some of those service assistance workshops, contrary to the general trend, grasping the opportunities offered by the market, consolidated their leadership position and achieved successful financial performances, even far better than competitors' results.

This study aims at understanding the peculiarities of these successful heavy truck assistance workshops, investigating strategies and management practices that have allowed them to successfully embark the servitization journey, achieving noteworthy valuable results with respect to competition. To achieve this goal, best practices have been deeply investigated, according to the four main pillars of BM Canvas proposed by [7]. In particular, we firstly give an overview of the related literature of BM concept in section 2. Then, the followed methodology and data collected from the analysis of 19 case studies are presented in section 3, while a brief depiction of the heavy truck industry is described in section 4. Findings concerning strategies and managerial implications are presented in section 5. Finally, section 6 reports the conclusions together with the identification of limitations and possible further developments of the work.

## 2. Theoretical background

Literature underlined that “organisations have been servitizing in a gradual, organic and unstructured fashion” [8]. This evolution has forced companies to change their traditional perspective from a product-oriented business strategy to a customer oriented one, characterised by a strong connection, or better a continuum, between products and services [9]. This transformation has pushed manufacturers to conceive new customer value propositions, and consequently to revise their traditional BMs [10], re-designing their organisational principles, structures and processes [1], capabilities [11], metrics and incentives, to support the transition towards a PS business model.

Despite literature definitions about BM concept are various and heterogeneous and existing definitions diverge in terms of content, structure and perspective [12,13], basically a BM can be described as the method of doing business by which a company can generate revenue. Namely, it describes the rationale of how an organisation creates, delivers, distributes and captures value. [7] asserted that “a business model is a conceptual tool that contains a set of elements and their relationships and allows expressing a company's logic of earning money. It is a description of the value a company offers to one or several segments of customers and the architecture of the firm and its network of partners for creating, marketing and delivering this value and relationship capital, in order to generate profitable and sustainable revenue streams” [7].

Several frameworks, classifications, topologies and taxonomies have been proposed in literature in order to

provide a general reference on this concept [14]. Nevertheless, although PS business models have different descriptions in literature [15,16], several authors agree that a PS business model encompasses four main elements [17,18,19]:

1. The value proposition of the firm, also referred to as PS offering, indicates the bundle of products and services offered and represents the benefit for which the customer is willing to pay;
2. The infrastructure and network, such as the internal and external organisational structures, resources and capabilities, indicates how products and services can be produced and delivered to customers;
3. The relationship capital the firm creates and maintains with the customer, to generate sustainable revenues. It defines the target customers and distribution channels, determining how their products and services will be delivered and how to build strong relationships with the customers;
4. The financial aspects, which are transversal and can be found throughout three components, namely the cost structure and the revenue streams.

Basing on the former considerations, companies, such as heavy truck assistance workshops aiming at revising the BM towards a PS perspective, while maintaining sustainable and successful performances, need to reconfigure their organizations completely.

## 3. Selected industry

In recent years the economic crisis has devastated the entire chain of the heavy truck industry. For instance, between 2007 and 2013 Italy lost about 40% of goods moved by road [20]. Many logistics also moved their activities to countries with less taxes impact and lower cost of personnel.

These dynamics drove the vehicle registrations trend that, after a two-year stable period succeeding the 2009 breakdown, have showed a frightening negative trend in last years. Despite the weak signs of recovery in the first quarter of 2015, compared to the same period of 2014 [20], the registration level achieved last year (just a little more than 12,000 units) well reflects the seriousness of the crisis in the sector. Moreover, the registrations drop, and the related decrease of the national fleet, has affected the strategies of sales and after-sales networks, leading to a collapse of the mandates (-43%) and retails (-39%), between 2009 and 2015 [21]. As a result, there has been a progressive reduction of the after-sales service activities, which affected all major heavy truck brands.

In addition, the economic crisis has changed the attitude of many customers towards service activities. In particular, vehicle maintenance, now considered more expensive and less accessible, tends to be postponed or replaced with "do-it-yourself" arrangements. Indeed, customers reach the workshop only in case of huge failures and necessary repairs. This obviously reflects in extremely negative consequences on revenues and margins of the assistance workshops.

Nevertheless, some companies have consolidated their

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