

Drivers Helping Embrace Servitization in Indian Manufacturing Sector

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Abstract—*Purpose – Servitization is a shift from selling products to selling an integrated combination of products and advanced services that deliver value in use. The concept embraces service-led competitive strategy, providing an increased revenue stream and profit margins, and an opportunity to differentiate from products originating from lower-cost economies. The purpose of this paper is to elaborate on the concept of factors that encourage adoption and Implementation of Servitization in Indian Manufacturing Sector. The study also categorizes these drivers. We shall study the Factors affecting the adoption and implementation of Servitization in Indian manufacturing sector and will also categorize these drivers on the basis of Strategic, Operational and Tactical drivers.*

Findings – The findings will focus on Servitization Drivers. These findings will contribute to our understanding of the transformation processes that Indian manufacturers have been through to compete through Servitization in market.

Practical implications – Major research work on Servitization has been done in the UK and US. This paper will study and prioritize the drivers with context to Indian manufacturing sector

Future Scope – There is a growing interest in understanding how Servitization is affected by various factors, what could be various drivers that encourage Product companies to join the bandwagon of Servitized product manufacturers in this process. The Indian manufacturing sector offers a vast scope of research.

Keywords: *Servitization, Drivers, product-service system, operations management.*

1. INTRODUCTION

Globalization, new technologies, and increased environmental concerns are changing human behavior and our expectations of the products we buy ((Vandermerwe & Rada, 1988)). The traditional separation of economic activity is changing. It used to be possible to categorize organizations into sectors like agriculture, manufacturing, and services and identify distinct differences in the kind of activity taking place there. More important, the nature of innovation would be different, with manufacturing focused on the development and delivery of product innovations while services focused more on the processes required creating a service experience.(Benedetti,

Neely, & Swink, 2015) But there has been considerable convergence in recent years and for many manufacturing businesses the shift towards a much stronger service orientation has become a key component of developing competitiveness.

In the manufacturing industry, the focus has been on product development. In order to be successful effort has been put on cost reduction and efficiency. However, globalization is making it harder for the western world to have cost competitive. (Neely, Benedetinni, & Visnjic, 2011)The market increasingly demands products that are customized, yet available with short delivery times. Consequently, the business focus is shifting from designing and selling physical products to supplying a system of products and services that are jointly capable of fulfilling customers ‘demands, while also reducing total life-cycle costs and environmental impacts. What creates value for the customer is not only the physical product but the experience of using it, the services and software that are connected to it and the trust of quality and availability. This means that the companies not only need to develop their products, but also services, software, and business models that enhance value for customers and users. The interaction with customers can be maintained through services, and the follow up of the product through its lifecycle can provide valuable knowledge for new products and services.

But an increasing number of manufacturers are fundamentally changing their approach as providing good service to customers has always been a success factor – also undertaking business model innovation around a service orientation; this process is named as ‘**Servitization**’. It represents a complete rethink of the offering and how it is created and delivered, moving away from one of ‘we design and sell products’ to ‘we work with customers to create value for them’. Servitization as a word has been around the late 1980s. The most frequent source article is cited as

(Vandermerwe & Rada, 1988) Servitization is completely reinventing the manufacturing business model. With increasingly complex, high-tech equipment, customers rely on their equipment dealers for service expertise more than ever.

Instead of focusing solely on selling a product, manufacturers are redeveloping their strategy to match the increasing needs of customers. To cope up with the competition Their solution is, to sell an entire field service support system around a product.

2. SERVITIZATION EXPLAINED

Companies such as Rolls Royce, Xerox, Kone, Michelin and many more have gained customer mindshare and increased revenue and profits by adopting Servitization and moving from being a product-focused to a service-focused business.

Here are some salient drivers which are motivating manufacturing companies to adopt Servitization:

Strategic drivers: By adopting Servitization, unique and innovative propositions are created. (T. S. Baines, Lightfoot, Benedettini, & Kay, 2009)This helps in gaining a competitive edge over other market players. A very good example is Michelin’s “pay by mile/km” service, where it provides “tires as a service” to its customers (trucking, retail, and management companies). Customers pay Michelin based on miles/km covered by the trucks or fleet. They don’t have to purchase tires and worry about maintenance and repairs as it is covered under the contract of such services This establishes Michelin not only as tire manufacture but as tire-related solutions provider. It also provides Competitive Opportunities and Advantages by increasing scalability of the product. (T. S. Baines et al., 2016)

Marketing drivers: Servitization helps manufacturers to build brand image through continuous efforts of providing new, innovative and reliable service offerings. Meeting stringent SLAs in case of performance-based and usage-based service lead to increase customer satisfaction and customer retention. (T. Baines et al., 2010)Customer satisfaction ranks highest among the objectives of after-sales services, as companies are realizing that after-sales hold an important lever to shape customer experience and awareness

Financial drivers: Manufacturers across the globe are experiencing shrinkage in product-led revenues. Services-led revenues are growing at a faster pace. Services are more profitable than a product. Servitization emphasizes that manufacturers focus on building long term relationships with customers, allowing better cross-sell and up-sell of service offerings. (Neely, 2007)This is a win-win situation for both manufacturers as well as their customers. This increases revenue stream and profit margins. Cost savings remain high on the agenda, especially in high tech industries.

	Revenue mix of product and service of a few leading companies	
1.	BAE systems	50% product 50% services
2.	Rolls Royce	50% product 50% services
3.	Xerox	46% product 54% services
4.	Alstom Power	60% product 40% services

Source: Tim Baines, Aston University Research

Environmental factors

Global resource scarcity, Energy prices, CO2 reduction, design for disassembly, take-back systems are a few of the concerns of the environmental factors. They help manufactured look for greener methods of production.

Technology: Digitalization: is a strong driver of these combinations.(T. Baines & Shi, 2014) Regarding methodological designs of future studies, the common view is that empirical and even explorative service infusion research would benefit from rigorous quantitative approaches.(*Internet of Things: Manufacturing will be one of the largest beneficiaries* | InvestinOntario, n.d.) Internet of Things/Connectivity: Incorporation of sensors and actuators in machines to provide remote maintenance and continuous information.(Wince-Smith et al., 2013) Big Data Analytics: Making sense and analysis of the vast amount of field data Additive manufacturing (3D Printing): Displacement of inventory and spare parts by installing 3Dprinters at the customer’s site

3. DRIVERS OF SERVITIZATION

We can define the categories of drivers broadly into three parts:

Strategic Drivers: These drivers can be defined as those critical factors that determine the success or failure of an Organizations strategy. Strategies don’t happen in a vacuum. They are influenced by a variety of external and internal strategic drivers (forces that shape an organization's strategy. Strategies that fail to adapt to forces such as technological change, competition and regulations may face failure in long run.(T. Baines & H.Lightfoot, 2013) Factors that are important and critical for achieving business goals and organizational effectiveness, they influence other linking factors and provide a benchmark for Servitization. Top management, commitment, leadership

Tactical Drivers: Tactical drivers are supposed to be supporting and critical for Servitization implementation. (Hosono, Numata, & Shimomura, 2016)They support Servitization, and further lead to methods and actions to achieve the expected benefits.

Operational Drivers: Those factors which are consequences of implementation and visible in shorter positive correlation with organization performance. (T. Baines, 2015)

Categorization of various factors under the three defined Definitions

Table 1: Drivers Categorized

Strategic Drivers	Tactical Drivers	Operational Drivers
Culture and Willingness	Product	Relationship and Satisfaction
Costs	Visibility	Operational Costs

Capitalization	Application	Performance Management
Government Policies	Contracts	Support

Support	Confidence that their organizational capabilities for service delivery are effective and efficient	Confidence that the manufacturer has the organizational capabilities to deliver the contract
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We can broadly classify the explained drivers under the three categories as per table 1

We can broadly explain the drivers categorized as given in table 2 as Tim Baines explained in his book, Made to Serve. (T. Baines & H.Lightfoot, 2013)

Table 2 Drivers Explained

Drivers	Manufacturer Perspective (likely/may offer advanced services when they get)	Customer Perspective (may/likely adopt advanced services when they get)
Culture and Willingness	A customer who will use the product correctly and within the terms of a contract	Culture and willingness to focus on their own main business activities
Costs	Thorough understanding of current costs incurred by the customer and likely future costs for themselves	Thorough understanding of current and likely future costs for themselves
Capitalization	Access to financial arrangements enabling product acquisition	A manufacturer who can offer financial arrangements for funding product acquisition
Product	A broad platform of reliable products suitable for any application	A manufacturer who can demonstrate a broad platform of reliable products suitable for any application
Visibility	A capability that provides visibility of the health, performance, and usage of the product as it is operated	A manufacturer who can offer and share visibility of the performance and usage of the product as it is operated
Application	Customer’s application where there is repeatability in the location and the way the product is used	A manufacturer who can demonstrate a broad platform of reliable products well suited for the application
Contracts	Appropriate risk and revenue sharing contracts between themselves, their customers and their supply partners	A manufacturer who develops a reliable risk and revenue sharing contract
Relationship and Satisfaction	Reliable and trustworthy relationship between themselves/their customers/and their supply partners	Reliable and trustworthy relationships between the manufacturer/ themselves/ and their own customers

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