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Model for Servitization Strategy in Malaysian Manufacturing Industry

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ABSTRACT

Developed countries have shifted their business focus to serving customers rather than merely creating products. Service has become a strategic means for organizations to gain competitiveness and sustainability. "Servitization" is a strategy where companies use service as their core offering and deliver advanced services. This strategy remains relatively new and under-recognized in developing countries such as Malaysia, where companies may offer services without recognizing them as part of a servitization strategy. This study aims to investigate the key factors essential for the servitization strategy and to develop a model for the servitization process in the Malaysian manufacturing industry. Three companies were selected using a case study method to examine and understand company operations. Six key factors of servitization were identified: vision, organizational structure, people management, strategic direction, value chain, and customer. A model describing the transition process was developed based on these factors, with one company chosen for model verification. This study aims to contribute to the service research field and increase awareness of service strategy, ultimately improving service quality within Malaysian businesses and organizations.

Keywords: Manufacturing industry, Process model, Service quality, Service strategy, Servitization.

1. INTRODUCTION

The manufacturing industry is a key enabler of national growth. It significantly contributes to making Malaysia a key player in the global value chain, transforming it into an industrialized nation. According to the Statistics Department and Finance Ministry (2023) [1], the manufacturing industry contributes 23.5% of the country's gross domestic product (GDP), led by the services industry at 59.3%. Despite facing challenges, the Malaysian manufacturing sector is expanding [2], which emphasizes high-value and smart manufacturing industries.

This study investigates whether a servitization strategy could strengthen Malaysian industries, especially the manufacturing sector. Servitization, a transition process toward becoming service-oriented or adopting a service business model, is well-established in advanced technology countries but remains underexplored in Malaysia. This strategy is crucial for developing and enhancing services, particularly for manufacturers that struggle to survive solely through product sales.

The servitization concept, introduced in the late 1980s by Vandermerwe and Rada (1988) [3], has become a strategy for manufacturing industries where traditional practices are insufficient for profitability. Servitization involves offering "packages" or "bundles" of services and products to

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add value, transitioning from product offerings to integrated product-service systems (PSS) [4]. This paper explores servitization in the Malaysian context, aiming to develop a model for the Malaysian manufacturing industry. It also investigates the key factors essential for the servitization strategy.

2. LITERATURE REVIEW

2.1 Overview of Service in Business Context

Service is a broad concept with various definitions and discussions. This research focuses on service in the business context. Researchers from economics, operations, marketing, management, engineering, and other fields have long studied service, with discussions on service marketing, quality, performance, and innovation [5]. A recent shift has been toward service science, transformative service, and advanced service [6].

Since the mid-19th century, service has increasingly dominated company income, with significant components in the economy and quality fulfilment [7]. Today's economic growth relies on innovation, a fundamental driver of business survival and growth, especially in services. Services provide steady income sources, are resistant to economic cycles, and are now central in the global arena, targeting business performance transformation [8].

Service is challenging to define due to its relationship with many entities. In business, service is an act of providing solutions to specific problems with value in return. Vargo and Lusch (2004) [9] described service as a process where entities apply competencies (knowledge, resources) for mutual benefit. Table 1 summarises various definitions of service from a business perspective.

Table 1: Definition of service from the business perspective.

	Authors	Definition	Keywords
1	Judd (1964) [10]	Services are benefits or satisfactions which are offered for sale or provided in connection with the sale of goods.	Benefit provided
2	Rathmell (1966) [11]	Service is an action or process and is produced as they are consumed, and it cannot be inventoried	Process, not inventory
3	Oxford English Dictionary (1999)	Service is described as an economic activity that does not result in ownership of a tangible asset.	No ownership
4	Vargo & Lusch (2004) [9]	Service is an application of specialized competencies of knowledge and skills through deeds, processes, and performances for the benefit of the entity itself (self-service) or another entity.	Beneficial for others
5	O'Shaughnessy et al. (2011) [12]	Services are a particularly necessary condition for a business process to proceed and, as a logical consequence, a sufficient condition for its failure, but this also applies to operand resources.	Logical business process
6	Gustafsson et al. (2005) [13]	Perspective on value creation through the view of the customer	Value creation

2.2 Product, Service, and Concept in Business

Business involves exchanging products and services for profit. Products and services, termed "offerings," are value propositions to customers, resulting in value realization through interactions. Vargo and Lusch (2004) [9] contrast goods and services, highlighting service-dominant logic (SDL) over goods-dominant logic (GDL). SDL focuses on customer-centric, market-driven approaches, while GDL emphasizes product-centric approaches. Table 2 compares GDL and SDL.

Table 2: Comparison between GDL and SDL.

	Goods-dominant Logic (GDL)	**Service-dominant Logic (SDL)**
Value driver	Value-in-exchange	Value-in-use or value-in-context
Creator of value	The company often works with input from companies in a supply chain.	Companies propose value through market offerings. Customers continue the value-creation process through the use.
The process of value creation	Companies embed value in "goods" or "services"; the value is 'added' by enhancing or increasing attributes.	Companies propose value through market offerings, and customers continue the value-creation process through the use.
Purpose of value	Increase wealth for the company.	Increase adaptability, survivability, and system well-being through the service (applied knowledge and skills) of others.
Measurement of value	The amount of nominal value is the price received in exchange.	The adaptability and survivability of the receiver system.
Resources used	Primarily operand resources.	Primarily operant resources, sometimes transferred by enclosing them in operand resources-goods.
Role of company	Produce and distribute value.	Propose and co-create value and provide service.
Role of goods	Units of output, operand resources that are embedded with value.	The vehicle for operant resources enables access to the benefits of company competencies.
Role of customers	To 'use up' or 'destroy' the value created by the company.	Co-create value by integrating company-provided resources with other private and public resources.

GDL views products as the core of offerings, focusing on producing and distributing tangible outputs. The value is embedded in products and exchanged in the market. For example, in the automobile industry, value is created during production and exchanged for money or goods.

SDL emphasizes value-in-use, where producers and consumers co-create value through interactions. In SDL, value creation is a collaborative process involving resource integration and competency application. For example, a car's value is co-created by the manufacturer and customer through production and use.

2.3 Servitization

Servitization is an intriguing concept, and various factors are conducive to services forming the backbone of a manufacturer's competitive advantage. Figure 1 illustrates the knowledge paradigm of servitization, highlighting the need for both product and service thinking to achieve

it. Aslam et al. [14] proposed that incremental changes in management and operations must be made by a paradigm shift in the ways of working to attain servitization. Thus, this study focuses on the organizational change factor from pure manufacturing towards service-oriented business to achieve servitization. The core concept of servitization involves transitioning to a service-oriented business model, utilizing various techniques and strategies to enhance service delivery.

Generally, companies provide services at three levels of categories, as described by Baines et al. [15], shown in Figure 2. First, base service (product/equipment provision/spare parts provision), intermediate service (help desk, training, maintenance, repair, overhaul) and advance service (customer support agreements, outcome-based contracts).

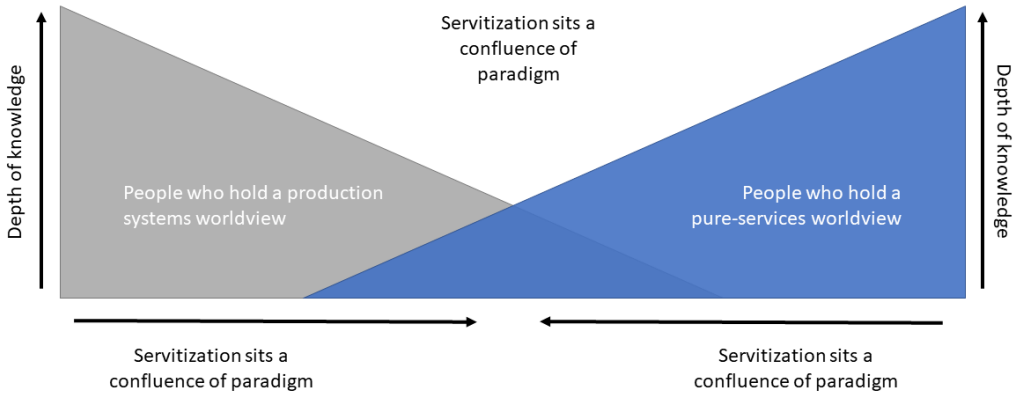

Figure 1: Servitization paradigm.

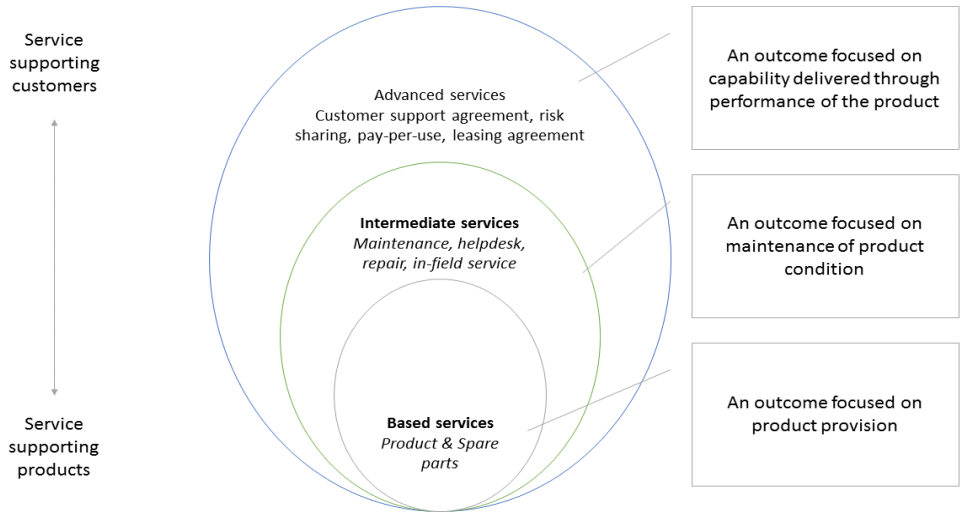

Figure 2: Servitization radar diagram illustrating the types of services source.

Integrating services and products results in a bundled offering that enhances customer value. Manufacturing companies seeking to differentiate themselves in competitive markets increasingly adopt this approach [16]. Servitization represents a shift from traditional product-based models to hybrid models where services are central to value creation.

3. METHODS

This study employs a case study method to examine and understand the operations of selected Malaysian manufacturing companies. The case study approach allows for an in-depth exploration of servitization processes and factors. Three companies were chosen based on their relevance and willingness to participate. Data collection involved semi-structured interviews. The analysis focused on identifying key factors and developing a servitization model.

Table 3: The background of the selected companies for this study.

No	Companies	Business focus	Product/service offer
1	Company A	B2B, B2C	Ceramic Tiles manufacturing, custom design, installation, training academy and maintenance.
3	Company B	B2B	Ceramic Tiles Manufacturing
4	Company C	B2B	Wafer manufacturing, CMOS design

Company A is classified as an SME because it has fewer than two hundred employees. Company A manufactures ceramic and customizes tiles for suppliers, consumers, contractors and OEM partners. Company A offers various services for customers, from design and installation to training and maintenance. Company B is a tile manufacturer that provides tiles for OEM partners and suppliers. Company B focuses primarily on tile production, with less emphasis on service offerings for customers and partners. Company C is a wafer fabrication foundry, a very service-oriented business due to its active involvement with customers. Company C is involved in technical design, wafer fabrication and testing.

Data were analyzed using thematic analysis to identify recurring themes and factors. Six key factors were identified: vision, organizational structure, people management, strategic direction, value chain, and customer. These factors informed the development of a servitization model tailored to the Malaysian context. One company was chosen for model verification, ensuring practical applicability.

4. RESULTS AND DISCUSSION

4.1 Respondent Background

The respondents chosen are among the top management in the organization. The top management plays a critical role in an organization. According to Schein (2010) [17], top managers drive the organization and strive to shape behaviour by developing a culture of shared beliefs. Thus, top managers hold an organization's responsibility and information, which will help the researcher gather critical and correct information about the company. Moreover, the experience and overall information regarding the entire business are needed for this study. The data reliability is strong and convincing because the respondent is familiar with the company's overall business structure and operations. Lastly, respondents also have the power to change and drive towards servitization and service-dominant logic thinking.

Table 4: Respondents' Background.

Company / Respondent	Respondent Designation	Years of employment
Respondent A	Managing Director	10
Respondent B	Executive Director	4
Respondent C	HR Senior Manager	25

Respondent A is the co-founder and managing director of Company A. Respondent A has worked in the tiles industry for over 20 years. Respondent A has successfully transformed the tile industry into a world-class tile manufacturing company and is recognized as an innovative entrepreneur. Respondent A believes that company A aims to deliver happiness to the people, the employees, customers, and the community. Respondent A has fostered a distinct working culture within Company A, attracting considerable talent to work with the company, despite the tiles industry's lesser popularity. Respondent B is an independent director and board member of company B. Respondent B has been appointed to the director position since 2014. Respondent B has a vast knowledge of domestic and international business. Respondent B is also a board member of two large corporations in Malaysia. The experience and viewpoint of respondent B is a big contribution to this study. Respondent C is a human resource manager at Company C. Respondent C has worked for more than 20 years at Company C. Respondent C's role is to ensure that the company runs with the right employee skills and expertise. Respondent C has excellent experience and knowledge of company C's operation. Respondent C manages employment, employee activities, employee development, and community programs.

4.2 Background of the Companies

From the interview, Company A and Company B share the same background in the tiles industry. Company A produces tiles under its own brand but does not manufacture them in-house. Meanwhile, company C is a tile manufacturer that produces tiles for itself and other tile companies, such as company A. Both are product-based companies. Despite the company, A focuses more on a service business. This shows that company A is more likely a product-service system (PSS) company, offering a tailored product bundle with service for the customer. The customer is not purchasing the tiles directly but instead pays for all the services provided by company A. Meanwhile, Company C is a service-based manufacturer because it allows for the technology and know-how to manufacture customer products. Company C is not selling its own product, but rather the product it manufactures.

Table 5: Company Background.

Background	Company A	Company B	Company C
Year of establishment	2002	1965	1995
Industry	Tiles Retailer	Tiles manufacturer	Semiconductor foundry
Size	SME (<200)	Large (<1000)	Large (<2000)
Value proposition	Exclusive buying experience and tile design, Luxurious lifestyle, healthy tiles, happiness	Exclusive tiles	Quality products, total customer solution
Main business	Tiles design, manufacturing, retailing and installation	Tiles design, manufacture and retailing	Manufacture an integrated chip
Support business	Consultation, Training, interior design, maintenance	Trading 3rd tiles	Consultation, IC design, inspection analysis, testing, training
Service Offering	Customer shopping experience	Customer support	IC design,
Employees	200	700	1500
Customers	Developers, Contractors, Wholesalers, Retailers	OEM Partners, Developers, Contractors, Wholesalers, Retailers	Electronics Appliance, Mobile device manufacturer

Figure 3 shows the level of service offered based on the product service continuum model adopted by Oliva & Kallenberg (2003) [18]. Company B operates in a product-oriented business model, focusing on products and providing basic service support to customers. Company C is considered service-oriented as it does not manufacture its own products and instead provides service support to customers. In contrast, Company A is service-oriented, offering its own products with high service value and advanced services to customers.

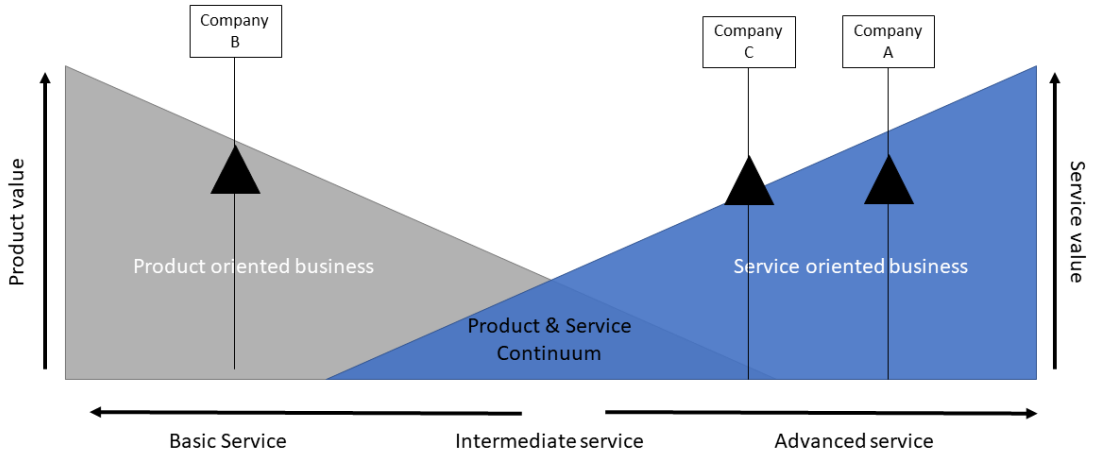

Figure 3: Comparison of companies' servitization level based on a product-service continuum.

4.3 Key Factors for Servitization Process

The analysis of the case studies revealed six key factors essential for successfully implementing a servitization strategy in the Malaysian manufacturing industry. These factors are vision, organizational structure, people management, strategic direction, value chain, and customer orientation. Each factor plays a crucial role in the transition process from a product-oriented to a service-oriented business model.

4.3.1 Vision

The vision of an organization sets the foundation for its strategic direction. In the context of servitization, a clear and compelling vision emphasizing service excellence and customer value is crucial. The case studies revealed that companies with a strong servitization vision were more successful in implementing service-oriented strategies.

4.3.2 Organizational Structure

The organizational structure needs to support service integration. Companies must adapt their structures to facilitate communication and collaboration across different departments. This often involves creating dedicated service units or teams responsible for service development and delivery.

4.3.3 People Management

Effective people management is essential for building a service-oriented culture. This includes training employees in service skills, fostering a customer-centric mindset, and providing incentives aligned with service objectives.

4.3.4 Strategic Direction

A clear strategic direction that aligns with the servitization vision is vital. This includes defining service goals, identifying target markets, and developing service offerings that complement the core products.

4.3.5 Value Chain

The value chain needs to be adapted to support service delivery. This involves rethinking supply chain management, logistics, and customer support to ensure seamless service provision.

4.3.6 Customer Orientation

Understanding and meeting customer needs is at the heart of servitization. Companies must engage with customers to identify their needs and tailor services accordingly. This requires a customer-centric approach across all levels of the organization.

These factors collectively contribute to the successful implementation of a servitization strategy. The next section discusses the development of a servitization model based on these factors.

4.4 Model development

Figure 4 shows the model of the servitization process. The factors can be sequentially allocated as a process towards servitization. First, the vision is the main one, followed by the organization, because it drives the organization. Second is the whole organization structure, which determines the company's operation and communication. Next, the company's people management aligns with its organizational structure and strategic plan, establishing a business model that directs the company towards its goals and objectives, all based on a service-oriented approach. After that, the value chain positioning involves the whole supply chain, collaboration, adding value along the chain, shared value and product co-creation process. Lastly, the company should prioritize the customer, whether a business or a consumer, and continually enhance the relationship. The customer focus leads to new opportunities for service offerings, longer contracts and strong retention.

The model was verified using one of the selected companies, demonstrating its practical applicability. The verification process confirmed that the model provides a structured approach to servitization, helping companies navigate the complexities of this strategic transition.

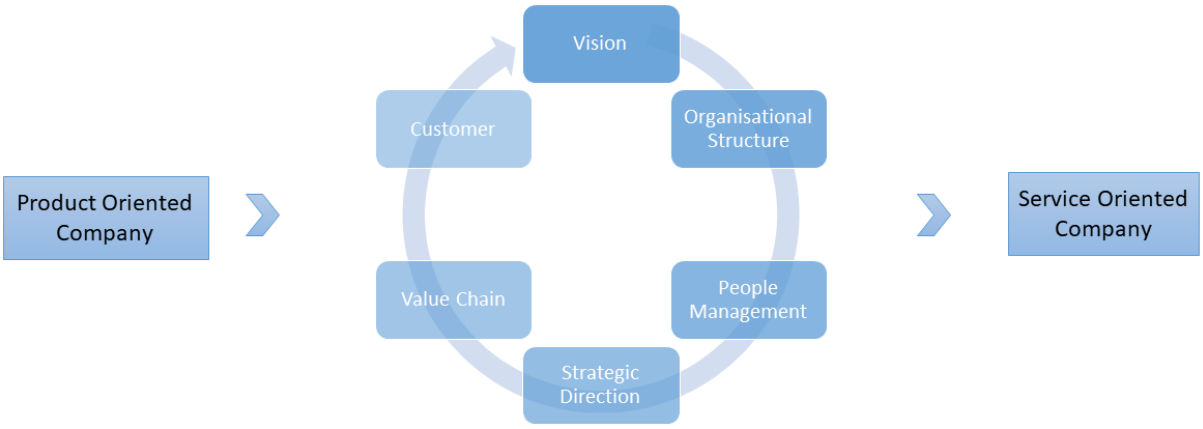

Figure 4: Model of Servitization Strategy.

5. DISCUSSION

The findings and model development highlight several critical insights into the servitization process for Malaysian manufacturing companies. First, the importance of a clear vision and strategic direction cannot be overstated. Companies that articulate a compelling servitization vision are better positioned to align their resources and efforts towards achieving it.
Second, organizational structure and people management are crucial in facilitating service integration. Companies must adapt their structures and invest in employee development to build a service-oriented culture. This involves technical training and fostering a customer-centric mindset across the organization.

Third, the adaptation of the value chain to support service delivery is essential. This requires rethinking traditional supply chain management practices and ensuring that all value chain elements contribute to seamless service provision.

Finally, customer orientation is at the heart of successful servitization. It is critical to engage with customers, understand their needs, and tailor services to meet them. Companies that prioritize customer feedback and continuously refine their service offerings are more likely to succeed in their servitization efforts.

These insights have significant implications for the Malaysian manufacturing industry. By adopting the servitization model developed in this study, companies can enhance their competitiveness and sustainability in a rapidly evolving market.

6. CONCLUSION

This study aimed to investigate the key factors essential for successfully implementing a servitization strategy in the Malaysian manufacturing industry and to develop a model to guide this process. The findings identified six key factors: vision, organizational structure, people management, strategic direction, value chain, and customer orientation. Based on these factors, a servitization model was developed and verified using a case study. The model provides a structured approach for Malaysian manufacturing companies to transition from a product-oriented to a service-oriented business model. By following the model, companies can enhance their service capabilities, improve customer satisfaction, and achieve long-term competitiveness. Future research should focus on further refining the model and exploring its applicability in different industries and contexts. Additionally, studies could investigate the impact of servitization on company performance and customer satisfaction in greater detail.

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