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Servitization: Origins and examples from Sweden and Japan

1. Servitized economy

The field of services research emerged from the marketing field in the 1960s, when the tertiary sector's share of GDP continued to grow to over 70% in developed countries. The services sector has been advancing on three fronts: production, labor, and households, and services research has progressed in step with this trend. However, economic activity has begun to transcend categorization into goods and services, manufacturing and services. Consumers do not purchase goods and services for the purpose of owning themselves, but use them as a means to solve some problem. It is no longer a question of goods or services, but how those resources are combined to provide a solution.

In practical terms, the boundaries between industrial classifications have blurred, and businesses such as the sharing or platform businesses that utilize the resources of physical goods, labor, knowledge, and skills that customers own have begun to proliferate. To handle the changing structural shift in the economy, the new concept of service dominant logic emerged in 2004 in academia¹. According to this logic, services research shifted its focus from focusing on the characteristics of intangible goods to the resource integration process, including consumers.

2. The position of Servitization in the service research

Within services research, the field of servitization of manufacturing is a relatively new area. It is important to mention the background behind the emergence of this field. One is the need to review the cycle of production, consumption, and disposal of excess material goods due to the worsening environmental problems. The emphasis is being placed on providing services that will ensure long-lasting use, regardless of whether they are provided by public or private institutions. Second is the limitation of technology. According to one study, even if a stimulus becomes stronger, people's perception of it does not increase linearly, but gradually weakens². In some categories of the manufacturing industry, excessive addition of functions and excessive quality that are not required by consumers have progressed, and technologies that do not contribute to differentiation but are costly have become commoditized as a result. Also, strongly related to the above two points, consumers' needs are shifting from ownership of goods to intellectual and emotional experiences.

¹ Vargo, S. L., and Lusch, R. F. (2004). Evolving to a new dominant logic for marketing, *Journal of Marketing*. 68(1): 1–17.

² Fechner, G. T. (1860). *Elemente der Psychophysik*. Breitkopf und Härtel: Leipzig. (Translated by Adler, H. E. (1966). *Elements of psychophysics, Vol. 1*. Holt, Rinehart and Winston: New York)



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3. Research issues addressed in the Servitization

Against this backdrop, what topics are being addressed in the study of the servitization of manufacturing? First, I would like to illustrate how this new field is organized. According to Raddats et. al (2019)³, there are three major research groups. The first is a group with a management perspective, focusing on services marketing, with themes such as theoretical research, strategy, customer attitudes and behavior, marketing mix 7P, value co-creation, and service ecosystems. The second group, Product Service Systems (PSS), is based on design engineering, and its main theme is service design from an engineering perspective. The last is Service Science (SS). This relatively small group, based at IBM Research Laboratories, is strong in practical aspects such as management, service system, network analysis.

3.1 Differences in profit structure from traditional manufacturing

The scope of the research is broad: prior to S-D Logic, it was conducted as a study of tertiary and intangible goods within marketing, so services marketing has inherited almost all of the issues that marketing has covered. In addition to that, the difficulty of quality evaluation derived from the intangible nature of service based on the old definition, customer participation, and the simultaneity between production and consumption have been addressed. After the emergence of S-D Logic, which is the foundation in a large part of current service research theory, research was not limited to intangible goods, but shifted to resource integration, service ecosystems, and value created by services, and the transformation of the manufacturing industry also became a target. This is the field known as servitization.

In terms of servitization of manufacturing, strategies, barriers, typologies, design methods, and service ecosystems have been covered.

SCANIA is a global company headquartered in Sweden with a wide range of transportation-related businesses. Truck sales plummeted when Lehman Brothers collapsed in 2007, and it has taken several years to recover. In the meantime, maintenance services had been rising moderately. The service business does not end with a sellout, but has long-term sustainability, which mitigates the effects of external factors such as economic fluctuations.

3.2 Customer participation in the production process

The challenges in servitization of manufacturing industries focus on the differences between conventional business and service business. For example, various issues can arise due to differences in profit structures, production processes, and value creation. While sales of

³ Raddats, C., Kowalkowski, C., Benedettini, O., Burton, J., & Gebauer, H. (2019). Servitization: A contemporary thematic review of four major research streams. *Industrial Marketing Management*, 83: 207-223.



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goods are recorded once at the point of sale, in the case of service, small sales continue over a long period of time in the form of subscriptions or pay-per-use. Service businesses, which take time to reach the break-even point, need to shift to a long-term business valuation, because if short-term business valuation is conducted based on the same criteria as for goods, the service business will be judged as a failure and closed. In reality, many servitization projects have been terminated for this reason.

Customer participation is diverse and varies greatly depending on business practices, corporate and national cultures, and other factors. For example, IKEA, which operates a furniture business in Scandinavia where co-creation with customers is key, once entered the Japanese market in the 1970s, but withdrew from the market after about 10 years because it was not accepted in Japan, which did not originally have DIY customs and was in the midst of mass consumption in the bubble economy. In 2005, when people's lifestyles changed and simple design and low cost became more acceptable, IKEA reentered the Japanese market and has been successful.

In the production process, unstable resources such as human resources, which are difficult to control, are invested in the production of service, unlike stable natural resources for goods. Many manufacturers have invested a lot of effort in stabilizing quality, and tend to dislike this instability caused by customer participation because the outcome would be uncontrollable. Manufacturers face the new challenges of managing an inexperienced and unstable resource, recovering from the mistakes that inevitably occur when diverse people are involved, and educating customers to prevent mistakes. It will also be necessary to change the corporate culture of many manufacturing companies that pursue the creation of perfect products through technology.

3.3 Cocreation values and KPIs

The types of value differ, and the point in time at which value is generated also differ. In contrast to exchange value, where the value embedded in a product is exchanged for the customer's money, the focus in services is on the value-in-use that is created when the customer uses the product or service. For this reason, the use of IT and other measures are being taken into consideration to engage in value co-creation in the customer's use of the product after it has left the company's hands. In the manufacturing industry, there are many cases where the manufacturer is not directly involved in the customer's use of the product because the sales agent acts as an intermediary, but in such cases, it is necessary to align with the agent or partner company. Manufacturers will understand these service-specific tactics and promote the shift to services while putting in place the necessary resources and internal



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structures. In other words, starting out in the dark, thinking of it as an extension of their existing business, will likely end in failure.

Yamaha Motor is a transportation equipment manufacturer headquartered in Japan. Although best known for its motorcycles, its main source of revenue is from marine engines. After the bursting of Japan's bubble economy, the pleasure boat market was in danger of collapsing due to the loss of wealthy and corporate customers. As a leader, Yamaha Motor began the pleasure boat rental business. Involving marinas throughout Japan, which had previously been sales agents, the company switched from the business of renting boat moorings to the rental business. To this end, Yamaha Motor offered substantial discounts and set up a system that allowed marinas to sell used boats after three years of rental use, thereby protecting their profits. The marinas' sense of urgency at the collapse of the market prompted 140 marinas to respond, contributing to the general public's participation in the marine leisure activity of boat cruises, which had once been a pastime for the wealthy.

It is necessary to set new KPIs that take into account the above-mentioned characteristics of servitization, or in other words, to reconsider the type of value to be generated and the time axis. In the past, economic value generated in the short term was considered important in business, but in a servitized business, it is necessary to evaluate knowledge value and emotional value (Toya, 2015⁴) generated through a long-term co-creation relationship with customers and other stakeholders. These values can be converted into economic value in the long term, i.e., company sales, but the time horizon may vary depending on the type of business. In any case, it is necessary to establish a scale for measuring knowledge and emotional value, which has not been measured so far, at an early stage and start measuring it. As the analysis will be verified after waiting for the accumulation of data, we have to start collecting data as soon as possible.

4. Summary

The above is an overview of the historical flow of service research, as well as the reasons why manufacturing servitization research is currently attracting attention, research groups, research contents, and issues. From the viewpoint of maintaining the global environment, research on the servitization of the manufacturing industry is expected to become more important in the future. The key to success in this field will be to share the knowledge accumulated by different fields, such as business administration and engineering, and apply it to research.

⁴ Toya, K. (2015). A model for measuring service co-created value. MBS Review, 11: 29-38.



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Author:

Dr. Keiko Toya,

Professor, Graduate School of Global Business, Meiji University, Japan

(i.ktoya@gmail.com, ktoya@meiji.ac.jp)

Visiting professor, European Institute of Japanese Studies, Stockholm School of Economics

Contact:

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