

# Integration Model of Producer Services and Manufacturing Under Value Chains

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## Abstract

The integration of manufacturing and service industries has become the historical symbol of the new industrial revolution. But in China the two industries are somewhat lack of effective integration modes. During the traditional value chain has evolved into value network, the ecological system, the role of the producer service has been evolved and developed different integration model with manufacturing industry. So development of value chains can be very helpful for more effective integration of producer services and manufacturing.

## Keywords

Integration Model, Producer Service, Manufacturing Industry.

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## 1. introduction

Producer service industry refers to the industry which is used to meet the demand of intermediate production and provide intermediate input service to production enterprises and other organizations. The early positioning of producer services is the "glue" (Riddle, 1986) for economic activity. However, the practice of international economic development shows that the function of producer services has actually expanded greatly. Producer service is not only the main force driving the development of service industry, but also the foundation of competitive manufacturing industry [1]. The importance of producer services to the competitiveness of manufacturing, especially technology-intensive products, has been widely recognized [2].

Some Chinese scholars have noticed, because China is in the stage of industrialization, the interaction between manufacturing and service industries is of great significance for the development of producer service industry[3]. The integration of manufacturing and service industries has become the historical symbol of the new industrial revolution. But the direct consumption of China's manufacturing industry is mainly based on its own production. Actually the two industries are lack of effective integration mode. Some scholars are aware that the demand factors that influence the development of modern service industry in China are more noteworthy [4].

## 2. Outsourcing model of producer service

Service outsourcing is the basic mode of the integration of producer services and manufacturing industry. Prof Michael porter, who pioneered value chain management, argues that the core problem of business operations is "positioning the value chain" and "building strategies on unique operational activities". Under the guidance of the value chain management thought, the outsourcing of parts and producer services quickly becomes the common choice of enterprises striving to build a competitive advantage. According to the value chain theory, the enterprise firstly needs to find its unique "strategic

link", then the strategic link of outsourcing, focusing on areas effectively, cultivate the core competitiveness of enterprises.

When more and more companies find it more advantageous to buy from outside than to internalize their own production, these outsourced businesses grow and grow with economies of scale and learning. And the growing industry makes it more economical to buy from outside. In the development process of manufacturing outsourcing, computer and information network services, equipment maintenance and maintenance, logistics, after-sales and advertising, accounting and other professional services have flourished.

Through outsourcing mode, the service industry enters the manufacturing process of manufacturing and becomes part of the value chain system. Seeking to maximize value added companies will also outsource higher-end services such as research and development. Some prominent carmakers have shifted some of their design links to developing countries, and some microelectronics companies have shifted some of their research and development to developing countries. After continuous adjustment, enterprises in developed countries optimize their core competitiveness, and the control and management of brand management and overall value chain is becoming a new target of enterprises.

The vitality of this interaction is influenced by the degree of market-oriented. "the division of labor is generally determined by the division of labor", and the higher the market-oriented degree, the more obvious the interaction effect. The value chain is bound to be limited to the capacity and depth of regional markets. After the 1980's trade liberalization progress as well as the progress of information technology and transportation cost greatly reduced, previously confined to the area of outsourcing for more favorable conditions and expand to the world. The value chain extends to the global value chain. The emergence and development of global value chain has made service outsourcing and global service and trade of goods more dynamic. The global vertical division of labor has been established and consolidated.

The broad application of the rotary kilns in a variety of industrial branches for thermal processing of residual materials with a different origin and mostly for fire treatment of hazardous wastes [2-3]. The rotary kilns were used as rotary dryer to remove moisture and water from solid substances, primarily by introducing hot gases into a cylinder, it act as a conveying device and stirrer.

### **3. The formation of value networks**

Even value chain has evolved under more intense competition. The idea of value chain is surpassed mainly based on the following realistic background: the profit space of linear value chain management is limited. The linear value chain management emphasizes the creation of value for enterprise internal activities. However, the defect is that the enterprise value creation and realization process is regarded as the linear process of converting inputs into products. Profit margins are limited by increasing the value of inputs and passing them on to downstream customers. How to improve customer satisfaction, to meet the needs of customers and create more value and profit then becomes a realistic problem to force enterprises to think. Companies find themselves in a strategic network of customers, suppliers and competitors. The customer becomes the center of the product offering. The hyper-competitive environment has made it impossible for the simple provision of product thinking to meet the demands of rising customers. In this competitive environment, the winning company starts from the customer's needs and is consistent with the customer. It is the manufacturer that creates value with the customer.

The value network maximizes the cooperation between enterprises and improves the value of customer perception and brings greater value to the enterprise. The idea goes beyond the linear thinking of the value chain. How can we improve customer satisfaction and profit? In addition to the products, the company also needs additional value, such as extensive value-added services. These services make full use of external economies of scale and increase the value of "products" in a broad sense. With the diversified services of products, it become the most important strategic complementors of manufacturers. At this point, producer services rely on their own expertise and serve as transmitters of

human capital and intellectual capital. As a strategic alliance, the division of labor between producer services and manufacturing has evolved into a division of knowledge.

The complementarily producer service industry needs to be embedded in the value network of manufacturing enterprises, multi-dimensional social network. This kind of outsourcing differ with the development degree of the structure by the human capital level, technology level and trade environment, the level of division of labor, the trust level of the region. If the network has formed a good trust and cooperative relationship, the relationship among enterprises can achieve the economic effect of increasing remuneration in the premise of reducing transaction costs. In the structural outsourcing activities, the advantages of regional producer services are highlighted again, and industrial agglomeration is also dynamically optimized.

From caring about the customers to caring about the value, enterprises can never be satisfied, staying in the original resources and capability advantage, must constantly discover new competitive advantage source, building new value creation mechanism. In this time, traditional sources may lose revenue function, and the productive service of information and knowledge can bring additional benefits and extremely valuable advantage. Growth in services has been replaced by structural changes. There is a strong market demand for services such as communications, finance, business services and management services.

#### **4. Comprehensive integration model of producer services and manufacturing**

After the continuous development of the value network compiled by the manufacturing and service industry, the producer services and manufacturing industries in developed countries have some new models of comprehensive integration. The common characteristics of these new models are the internalization of manufacturing and services in the same enterprise. On the basis of dynamic resources and potential market demand, the integration in enterprises formulate strategic development goals, to keep competitive advantage in the changing society through readjustment and optimization of the internal organization system.

##### **4.1 New model aimed at providing comprehensive solutions**

The basis of servicification manufacturing is that the manufacturing has entered the standardized operation era, and the profit of the products comes from the service parts. The value of invisible assets such as design and brand value of the enterprise has increased, and the development of enterprises has been driven from commodity dominance into service leading.

After the first computing science in the 1950s, IBM came up with the concept of "service science" (SSME). Nike and Adidas are engaged in "service activities" such as design, marketing and distribution. Huawei, which has long established a foothold in communications equipment manufacturing, is the main source of revenue overseas to provide customers with the "services" of project contracting. And does apple offer goods or services? Since January 2007, apple computer company changed its name to apple describes its new strategy for the company to focus on providing customers with innovative products and solutions, thereby improve their digital lifestyle and working conditions ". To achieve the positioning of the digital life solution provider, Apple actively build a system including customers, storage hardware, electronic products OEM, software provider, application software development group, book publishers, telecommunications service providers, network advertising providers and so on. Manufacturer eventually needs to be transformed into a service and solution provider. An enterprise that becomes a provider of services and solutions can be called a servicification manufacturing enterprise. Their feature is to provide customers with a holistic solution to "service + products". The service is the essence of this new mode of manufacturing and the competitiveness of the enterprise

## 4.2 Internal vertical integration

It is the opposite trend that exists in the service sector. The retailer SPA is a typical representative of the burgeoning vertical integration. The Specialty Store Retailer of Private Label Apparel is commonly referred to as "Private Label Specialty Retailer". The new business model was first used in 1986 by American apparel giant GAP inc. Retailers' own brand monopoly SPA business is the enterprise with the manufacture of products such as clothing, design and sales functions, realize the integration by up streaming and down streaming textile fabrics and clothing industry sales channels. It is an extension of retailers from sales to production field. Japan's Uniqlo, Spain's fast fashion brand ZARA, Sweden's H&M are all well known for using this innovative business model to succeed.

This model has the following characteristics: first, the high vertical integration business model. A complete SPA learn from the supply chain (SCM) the thought of horizontal extension, namely, raw material supply, demand analysis, product design, manufacturing, planning and logistics of the whole supply chain are controlled or managed by an enterprise. Second, value network within the enterprise boundaries. SPA mode generally includes four modules: retail network, production system, commodity planning and logistics information system. Through the enterprise strategic alliance, gather the advantages of all parties, reach the operating standard of zero inventory. Third, link customers and suppliers effectively. By innovating the supply chain process and the supply system, the rapid response to the market can be achieved. See figure 1.

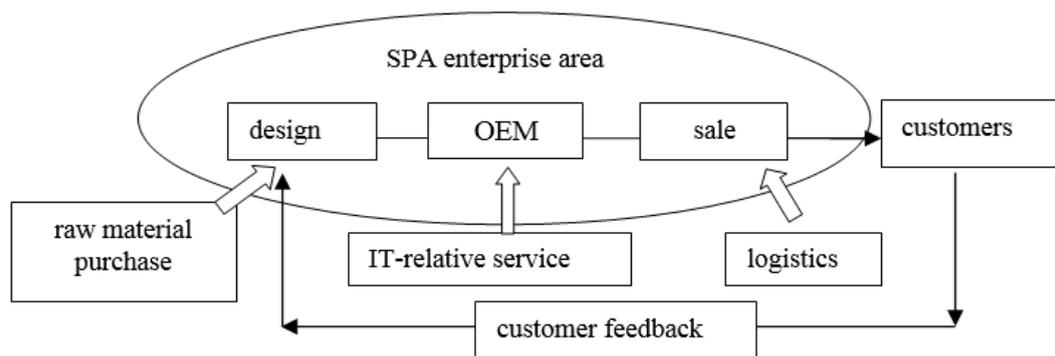


Fig. 1 SPA enterprise and the supply chain

The integration of post-industrial industries has made it difficult to tell whether companies provide customers with products or services. Service products are increasingly taken in physical form, while services in the physical products become important and their value is likely to be more dependent on additional services. The high integration of industries between manufacturing and service industries brings new challenges to the concept of service industry and the division of industries. As Stigler (1956) pointed out 50 years ago, the definition of the service industry may not have an authoritative consensus.

## 5. Conclusion

The change of world economy with competitive environment and technological innovation, the value chain management has been greatly expanded and enriched in practice. Based on the continuous evolution of the value chain, the status of producer service industry has been developed from the process industry which promoted the growth of other sectors, and developed into the leading role of economic activity in the post-industrial economy. In the traditional value chain, value network, the value of the evolution of the ecological system, the role of the producer service industry has been evolved. From one of the value chain suppliers, to the leader in industry progress of strategic transformation, producer services' functions has been strengthening. But in developing countries, the characteristics of producer services in value chains are still not evident.

The development of producer service industry, especially the development of modern service industry, is one of the important elements in China's industrial structure. To solve this problem, we should pay attention to the construction of the dynamic value network and the ecological system. With changing market trends, entrepreneur only pay more attention of "service" function of modern industry, then can make their manufacturing more competitive.

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