Research on Service Value Chain and Innovations of the Commodity Platform Economy

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Abstract. To help address serious "homogenization" problems and chaotic "financial" issues currently existed in the services delivered under the commodity platform economy, this paper puts forward a strategy with an innovative and integrated service model to help create new competitive advantages. Using the service value chain and innovations of the platform economy and the shared economy as the underlying foundation, and further utilizing the Internet as the modular application interface, the strategy presented in this paper would capture both the economy of scale of the commodities spot trading and the current customized transaction settlement trends. It would then provide customers with a comprehensive and convenient one-stop service experience, and bring higher profits to the company. The Guangxi sugar network, an industry leader and the subject of our case study, created an innovative platform economy by combining these elements: "e-commerce + modern logistics + supply chain financing." This practice provides customers with the most value for the services they receive.

Introduction

From the platform economy perspective, the number of electronic trading platform for commodities has increased from 2 in 1997 to 2021 in 2015 (data published by China Federation of Logistics and Purchasing Commodity Exchange market circulation branch). However, there exist serious "homogenization" problems and chaotic "financial" issues in the services provided by these platforms. In order to cope with the stiff competitions and low profit margins presented by these issues, industry leaders, spearheaded by the Guangxi sugar network, are extending service behavior tentacles both upstream and downstream along its value chain to cover all aspects of the service. With strict adherence to industry standards, this approach combines the unique economy of scale of the commodity spot trading with the current trend of customer individualization. The net effects of this arrangement would be that customers are provided with comprehensive solutions and a convenient one-stop service experience, while service companies achieve higher profit margins. Platform economy is a concrete realization of the pursuit for business innovations in the current "Internet Plus" era; it provides an effective path for companies to expand the market space, to improve transaction efficiency, and to satisfy customers’ needs.

In 2015, Chinese Premier Li Keqiang first proposed to develop an "Internet Plus" action plan in an official government report. National Development (2015) No. 40—"Internet Plus" Action Plan—pointed out that the development of China's economy need to take full advantages of the scale and applicability of the Internet, to expand the Internet from consumers toward the field of productions. It encourages companies in the traditional commodity categories such as energy, steel, and agricultural products to actively develop the platform economy to optimize the procurement and distribution system, and to enhance business efficiency. The state encourages platform integration of market information and the exploration of market segment demand, in order to provide national policy support for the large-scale development of personalized services. To fully implement this "Internet Plus" action plan, the Ministry of Commerce has developed an "Internet plus Circulation Action Plan". With respect to the commodity trading, the document specifies the
need to speed up the deep integration of Internet and the commodity circulation industry, to enhance the commodity circulation efficiency, and to improve laws and regulations for the electronic commodities trading market. This shows that the platform economy will help to produce new formats and promote the transformation and upgrade of the service industry. This paper argues that in this context, commodities trading in the context of platform economy will become one of the huge outlets in the future of the Chinese economy.

Unfortunately, the literature on platform economy is either pure theoretical overview or focused on the field of consumer goods. In other areas, specifically in the commodity trading, not much work has been done with regard to platform economy for the service value chain and innovation. How the platform economy in the commodity areas to play its convergence and clustering effect, to meet the interests of different customer groups represents a great research value.

Research on Service Value Chains and Service Innovations

An Overview of Service Value Chain

Liang XueCheng’s work (2016) is based on the Michael Porter’s value chain theory; it claimed that the service value chain is customer-need oriented and it is to achieve service value and service functions for the purpose of providing services through continuous creation, transmission and extension. This constituted a core competitiveness of an enterprise.\(^1\) Du Yifei, Lin Guangping etc. looked through its structure and stated that companies can make full use of emerging technologies to maximize the commercial value of services to meet customer demand, resulting in competitive edges over its peers.\(^2\) Yuan Yijun’s book (2013) titled "Service Innovation and Service Industry Upgrade and Development," indicated that enterprises use basic and associated supporting activities to create value and dynamic processes, forming of the cycle of a closed chain.\(^3\) Through the analysis of these models, it is clear that the core idea of the chain is customer-oriented, and its internal logic is employee productivity, service value creation, customer satisfaction, customer loyalty, and enterprise profitability and growth ability. To sum up, this paper argues that the chain transmission process for the service value of the commodity platform economy must also concentrate on the value of the service delivered to the customers, and the service value is directly related to the staff professionalism and loyalty. Customer satisfaction is the source of success for value chain services platform, thus service delivery is also essential.

A Summary Research on Service Innovations

Xu Qingrui's research on service innovations shows that the focus of the market competition for service innovations has shifted from the original price-oriented position to a value-oriented one. The key to service innovations is to improve the quality and efficiency of existing services.\(^4\) Lin Lei (2005) pointed out that today there is a new "integrated research" approach in the academia, that is, creating innovations from the perspective of resources allocation with emphasis on customer interactions.\(^5\) More service enterprises are beginning to integrate "scale" and "customer-orientation" into a single modular system, and to use the "modular" approach to develop new services and production. Therefore, the innovation model for integrated commodity services proposed in this paper is a synthesis of prior research results, which aims to provide an innovative value-added service in the value chain of the platform economy with respect to spot goods. This is illustrated in Figure 1 below:
An Integrated Procurement Service Program for the Commodity Platform Economy

To create maximum service value for customers

This integrated procurement program would provide the buyers with tremendous amount of savings in terms of time and cost, and the fulfillment of their demand for differentiated commodities. As for the sellers, a good sales path is ever present under this program. Programs like this one help reduce the phenomenon of homogeneity existed in the electronic trading platform services for commodities; they also help achieve the optimal allocation of resources, thus creating the maximum service value for customers.

The flow diagram of the Service value chain

In actuality, for this procurement program to function properly, the system needs to collect buyer's requests in real-time on the one hand, it must also establish and maintain an updated suppliers’ database. The database shall include such information as the brands, specifications, available qualities, prices, delivery schedule and location, and any other deviations. Starting with the demand information from the buyer, the system then uses big data’s searching and matching techniques to locate the best trading partners, and finally generates electronic trading contracts to secure the agreement between the two parties. The innovative part of this program design lies in its emphasis on the interactions among customers. Figure 2 shows the flow chart of this procurement service program.
A Case Study on the Guangxi Sugar Network

The Guangxi sugar network is China's largest B2B e-commerce platform and centers for trading, pricing, logistics, and distribution for the sugar industry. According to data published by the China Electronic Commerce Research Center. In 2015, Guangxi sugar network’s volume reached 3 million 680 thousand tons while membership financing was at 2 billion 600 million RMB. The Guangxi sugar network utilizes the e-commerce framework, modern logistics facilities, in addition to the integration of capital flow, information flow, technology flow and logistics to upgrade the traditional sugar trade. It aimed to provide customers with sugar purchase and sale, financial settlement, logistics and distribution needs, supply chain financing, information services, and other comprehensive support services. In short, the Guangxi Sugar Net is one of the better platforms and a typical representative of the commodities with high customer satisfaction and loyalty. Therefore, this paper will provide an in-depth discussion of its service value chain and innovations as to serve a reference point for future developments of the commodity industry.

Service innovation in the transaction module

The innovation here is the use of an integrated transaction model that is to take a variety of trading patterns, such as general transaction, negotiated listing transaction, spot listing transaction, online shopping mall, and other trading patterns. It adopted a special "Zhou contract transaction", which has its unique characteristics and is a practical transaction mode.

Service innovation in the financial module

The Guangxi sugar network provides network financial services to the sugar raw material suppliers, sugar traders, production of matching suppliers, bulk sugar users, sugar companies, sugar processors and even farmers. Services currently available are online payments, online settlement and financing. By then most of the financing business will not only be online but also real-time, giving the Guangxi sugar network full advantages for its service value chain.

Service innovation in the logistics module

The Guangxi sugar network has more than 200 distribution warehouses in the country's major sugar production and distribution regions, and a total storage in excess of 100 million square meters to provide sugar quality inspection, warehousing logistics and settlement tax receipts and other services for enterprises. Through the innovation of modern logistics and related information
infrastructure, it realized the integration of e-commerce and logistics. It offers efficient configuration of sugar source, the on-demand scheduling, and advanced distribution, truly achieved "online transactions, same-day delivery, and nearest delivery." This created a new sugar buying and selling pattern with an enhanced logistics and distribution model, while significantly reducing the cost of circulation.

Service innovation in the information module

The Guangxi sugar network is actively using advanced technologies in the areas of the Internet, cloud computing, Internet of things, and big data to achieve the full online business management activities. Resources integration, time and space mismatch and large data analysis are used to solve the information asymmetry; asymmetries of buying and selling demand, of trade credit, and of goods and money. It realized the dynamic management of "electronic business platform + IT system monitoring + business closed loop". At the same time The Guangxi sugar network attaches great importance to the interactions among customers; it provides fast collection, response, and feedback of customers’ demand for information, and the customer satisfaction is very high.

Summary

The research on service value chain and innovations presented in this paper is of great significance in the area of overcoming the serious homogeneity issue faced in the current electronic commodity trading platform. In this era of platform economy, it’s vital for the platform to incorporate the Internet framework and intelligent innovations to integrate all available resources, to increase added value for the four-flow service, and to develop a comprehensive service model. This service model can improve its total-factor productivity via better overall service ability, leading to the realization of the full economic effect of the services provided by the electronic commodity trading platform.

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