

Research on the Linkage Strategy of Sales and Manufacturing based on C2M Supply Chain

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Abstract

The sharp adjustment of the domestic e-commerce competition pattern, the increasingly updated business model and the change of the depth of the impact of the Internet on enterprises force the reform and transformation of the traditional manufacturing industry. This paper introduces the basic concept of consumers facing the manufacturer (C2M) mode, and gives the new business mode of Internet plus manufacturing, which is "full customization + modular customization". The advantages and disadvantages of C2M mode are analyzed, and some suggestions for improvement in the development process are put forward.

Keywords

Manufacturing industry, Personalized customization, C2M mode.

1. Introduction

2016 is the first year of China's 13th five year plan for e-commerce. In 2017, the scale of China's e-commerce transactions was 28.66 trillion yuan, an increase of 24.77% year on year. Nowadays, China has maintained the first online retail market position in the world for many years in a row. Rural e-commerce, cross-border e-commerce, social e-commerce and other hot spots have emerged frequently. As a new driving force of China's economic development and social transformation, e-commerce has become increasingly prominent. However, it can also be noted that while China's e-commerce has made all-round new breakthroughs, it also faces some new changes and challenges. The B2C model centered on sales is in the process of disintegration. The advantages of mass production, retail, brand and logistics will no longer exist. E-commerce is about to enter the heterogeneous intelligent mode. In the information age, the new business mode is driven by consumers. It focuses on consumers, personalized marketing, integration of production and marketing, customized production, rather than the cost competition of homogeneous products. In the future, everything will turn to the consumer centered situation. For manufacturers, it has become a key factor in the current supply chain management whether they can do well in the production organization of the whole supply chain (such as purchasing and supply, manufacturing and assembly, inventory management) in a limited time and deliver products to consumers in time. In order to adapt to the new consumption characteristics of the Internet era, manufacturers are also exploring new supply chain management mode.

2. Overview of c2m mode

C2m (consumer to manufacturer) refers to the mode of consumer to manufacturer, whose core connotation is "personalized customized production". Consumers place orders directly to manufacturers through the network according to their own needs, and factories arrange and produce according to the single schedule. In the traditional e-commerce market, manufacturers sell what they produce, not products that are only suitable for individual customers. With the change of consumption concept, the pursuit of personalized, high-quality products has become people's consumption habits, traditional manufacturing and mass production can not meet these needs. Traditional enterprises must enter the personalized intelligent production mode. The new business mode in the information age is driven by consumers. It is consumer centered, personalized marketing, production and marketing integration, customized production, rather than the cost competition of homogeneous products. C2m mode makes "personalized production", the behavior of high-end consumers, popular in the virtual

market of the network, changes the traditional concept of customization as exclusive to the powerful, relying on the powerful interactive function of information sharing and the Internet, creates a new way for customers to manufacturers, becomes a bridge between producers and consumers, helps consumers make purchase decisions and Meet the needs. C2m is a new type of E-commerce Internet business model, also known as "short circuit economy". The consumption is directly connected to the manufacturing, thus saving the price space in the middle link, and opening the cost price consumption mode for users. C2m mode integrates personalization and industrialization, and wins the consumption habits of the market and users with the high cost performance of products.

2.1 Characteristics of personalized demand information in the Internet Age

The c2m mode of small batch flexible production, precise marketing and personalized service, which is consumer centered, must accurately grasp consumer information and analyze customer heterogeneous demand. In the era of Internet, accurate customer demand information is difficult to predict easily. C2m manufacturers face different consumers in terms of geographical location, gender, age, income, occupation, preference, behavior habits, etc., and publish text, numbers, pictures, audio, video and other information related to their needs through various channels such as enterprise home page, e-commerce platform, social network, etc. These demand data are not only large in quantity, but also fragmented and unstructured, which is not conducive for enterprises to accurately grasp consumer information and understand consumer behavior. In this section, through a large number of literature research, heterogeneous customer demand information is classified, and intelligent customer demand acquisition and analysis methods are extracted.

2.2 SWOT analysis of c2m model

2.2.1 Strengths

First, meet the needs of personalized customization. In recent years, online shopping consumers began to change from focusing on commodity prices to focusing on quality and service, and formed the demand trend of pursuing personalization and specialization. C2m mode focuses on the transformation of enterprises from channel construction to improving customer demand and service capacity, and from large-scale production to personalized customization production. With the advent of personalized customization era, more and more consumers will recognize personalized customization.

Second, consumers participate in the production process. C2m mode allows consumers to actively participate in the design and production of products, which can promote the development of new products or services, improve the perception of service quality, and finally buy products that satisfy themselves, and improve the enthusiasm and satisfaction of customers. The factory is more closely connected with consumers. By establishing direct contact with consumers, it helps to understand the specific characteristics of customers, achieve precise marketing through customer segmentation, and improve enterprise performance.

Third, low inventory, low cost and low price. C2m mode is to purchase by appointment and generate by order. Compared with the traditional B2C and C2C mode, it can reduce the inventory risk to the greatest extent and achieve zero inventory risk under ideal conditions. The factory directly sells products to consumers, shortens the supply chain nodes, reduces the cost of sales, and improves the profits of enterprises. Due to the reduction of intermediate circulation, consumers can also buy high-quality products at a lower price.

Fourth, sufficient supply and efficient logistics system. The main body of c2m mode is manufacturing enterprises. These traditional enterprises have high-quality and stable supplier system, which can guarantee high-quality goods.

In addition, most of these enterprises have perfect warehousing and distribution system, which can provide efficient logistics services for consumers.

2.2.2 Weaknesses

As a new e-commerce model, c2m also has some imperfections, which are mainly reflected in the following aspects:

First, c2m orders have a long lead time. The length of order delivery cycle is an important factor affecting customer satisfaction, and it is also the focus of influencing brand power. Compared with B2C and C2C e-commerce models, consumers need to wait for customized production of products, which leads to a longer time cycle from purchase to delivery of products to consumers. Once the order cycle is too long, it is easy for consumers to lose patience and turn to other platforms.

Second, the order quantity is small and the category is small. C2m mode produces small batch of customized orders. If the number of orders is not large, the factory will carry out production in this case, and the profit will be low or even lose money. After all, the product categories produced by a single manufacturing enterprise are limited, which results in the limitation of the product categories that can be provided by the c2m e-commerce platform of the enterprise.

Third, the return of goods. According to the relevant survey, the problem of return is the biggest problem faced by traditional B2B and B2C e-commerce, as is the case with c2m e-commerce. Customized products can meet the personalized needs of consumers. Most enterprises do not provide return services for consumers. Even if some enterprises support return, the procedures are relatively complicated. In November 2016, taobao.com added "taobao.com customized goods management specification", which clearly pointed out that customized goods do not support seven days' unreasonable return.

2.2.3 Opportunities

Under the current development background of China, the opportunities for the development of c2m e-commerce include the following aspects:

First, government policy support. In July 2015, the State Council formulated the guiding opinions on actively promoting the "Internet +" action, which pointed out to promote the integration of the Internet and manufacturing industry, vigorously develop intelligent manufacturing and large-scale personalized customization, encourage business model innovation. In May 2016, the guidance on deepening the integration development of manufacturing industry and Internet was released, which proposed the development task of cultivating a new mode of integration of manufacturing industry and Internet. This provides decision support for the transformation and development of China's manufacturing industry, and also provides opportunities for manufacturing enterprises to carry out personalized customization and flexible generation.

Second, the online shopping environment has been gradually improved. With the gradual maturity of network services, more and more consumers join in the group of online shopping. The rapid development of third-party payment and third-party logistics has greatly improved the online shopping environment, making it more and more convenient and perfect, which provides favorable conditions for the smooth completion of c2m transactions.

Third, modularization of e-commerce tools. When considering the transformation of e-commerce, enterprises do not need to worry about cost input, technical ability and other issues. Now all kinds of system tools required by e-commerce have formed modularity, and corresponding solutions have been gradually processed, which effectively reduces the threshold for enterprises to transform to c2m mode.

Fourth, the level of automation and informatization of traditional manufacturing enterprises has been continuously improved. Most enterprises have established ERP. A series of information platforms, such as production execution system, order distribution system and product life cycle management system, lay a certain technical foundation for c2m transformation.

2.2.4 Threats

In the development process of traditional manufacturing industry to c2m e-commerce mode, there are also some threatening factors. The existence of these factors makes traditional enterprises face great

challenges in the development of c2m e-commerce. These threats are reflected in the following aspects:

First, c2m mode is relatively unfamiliar. Compared with the traditional B2C and C2C e-commerce modes, consumers do not know much about c2m, and manufacturing enterprises also lack relevant operation experience. It is a test for enterprises to successfully switch to c2m mode.

Second, the threat of traditional e-commerce. C2m e-commerce has just started, the industry coverage is not wide, and there are not many users, which requires more trust of online shopping consumers. In contrast, the traditional B2C and C2C e-commerce credit system is relatively perfect, and the after-sales service is also guaranteed.

2.3 Three subdivision modes of c2m

2.3.1 Aggregation customization path

Through pre-sale and group purchase, the decentralized user demand will be centralized, and rapid production will be carried out according to the centralized demand. At present, most group buying websites and crowdfunding websites are typical cases of aggregation customization.

2.3.2 Modular customization path

According to the characteristics of the industry and the core needs of users, manufacturing enterprises should build product modularity, realize the infinite subdivision of product sub modules and infinite combination of final products. For example, the glasses and leather shoes are divided into many parts, and various options allow consumers to choose freely, making personalized customization production a reality. Modular personalized customization is widely used in clothing, shoes, tourism, furniture, automobile and other industries.

The traditional mode of production adopts scale effect to control the production cost. The cost of personalized customization must be much higher than that of large-scale standardized production. When the number of personalized orders is small, the enterprises can not make profits and can't develop sustainably for a long time. In 1962, Herbert Simon, a master of decision-making management in economic organizations, first studied modularity. He proposed the "decomposability" of modules and pointed out the revolutionary significance of modularity to industrial organization structure [5]. In 1997, Professor Baldwin of Harvard Business School put forward the concept of "Modularity". Modularity production refers to the dynamic mode that complex production is simplified and decomposed into multiple blocks, and then the decomposed modules are integrated into production [6]. Commodities are generally composed of all parts of the whole. Personalized customization can be realized through modular production. Manufacturing enterprises can provide consumers with commodity parts that can be combined by themselves. Consumers can combine according to their own preferences. The products combined by modular production can not only control costs, but also meet the personalized needs of consumers to a large extent. According to the characteristics of the industry and the core needs of users, manufacturing enterprises should build product modularity, realize the infinite subdivision of product sub modules and infinite combination of final products. For example, the glasses and leather shoes are divided into many parts, and various options allow consumers to choose freely, making personalized customization production a reality. Modular personalized customization is widely used in clothing, shoes, tourism, furniture, automobile and other industries.

2.3.4 Fully customized path

Users put forward personalized demand, businesses produce personalized products according to demand, users pay a certain premium for this. Fully personalized customization is applied in furniture, glasses, jewelry and even automobile industry.

Through the Internet platform, consumers put forward detailed requirements for products, such as style, material, color, size, etc., so as to realize the real sense of uniqueness. Fully personalized customization is applied in furniture, glasses, jewelry and even automobile industry. Shanghai Kang Knight Phenix Optical Company Limited will integrate the lens manufacturing and glasses industry

with the Internet plus. [3] will build a nationwide intelligent optometry and eyeglass service platform. According to the client's facial features and eye data, we will build an intelligent production line, realize the flexible configuration of the production process, and design, produce and process a comfortable and fashionable personalized glasses. In 2016, BMW launched BMW individual service in the Chinese market for the first time. Customers can order a exclusive 7 series high-end BMW car through the "BMW fully customized" service [4]. Customers can choose the body color, interior and exterior decoration according to their own preferences, so as to meet the great personalized needs of users and realize the real sense of uniqueness.

Aggregate customization, module customization and fully customization mode study the relationship between different modes and related industries, and reveal that the c2m mode is not isolated or unchangeable, but the law of interactive operation.

2.4 Manufacturing C2M mode application strategy

2.4.1 Application of big data technology

By collecting big data on consumers' consumption preferences and shopping habits, manufacturing enterprises can predict consumers' future consumption needs, facilitate enterprises to carry out accurate product modular decomposition, carry out targeted material preparation and production capacity delivery, achieve production and marketing balance, improve the utilization rate of production factors, and realize the effective allocation of enterprise resources. Improve the efficiency of order execution and shorten the cycle from customer customized order to delivery to home.

2.4.2 Improve shopping experience

Through the computer virtual technology to realize the whole life cycle of products and the visualization of manufacturing process, forming a highly flexible, personalized, digital production mode of products and services to improve customers' shopping experience. Taking personalized customized glasses as an example, customers need to spend a lot of time browsing products when facing a large number of glasses products. Customers cannot determine whether the personalized factors they choose are coordinated or whether they wear the glasses. In addition, the customized products cannot be returned without any reason, and customers may finally give up trying c2m. If through a software, it can show the combination effect of the product module selected by the customer self-service, and clearly show the effect of this customized product on the customer's face, and show it to the customer according to the true size proportion, it can greatly improve the customer's transaction rate and shopping experience, and improve the trust of c2m. This kind of virtual reality software is quite mature in technology.

2.4.3 Develop order intelligent processing system

The standardized production mode based on the production line is difficult to adapt to the production of personalized products, and the intelligent processing of orders is the key to the large-scale production of customized products. Different customer requirements mean that every order received by manufacturers is different. In this case, to ensure production efficiency, cost and system stability, intelligent processing of orders must be carried out. When the order enters the factory, it is disassembled into the simplest single task according to the sequence and characteristics of production process and assembly line module, and assigned to the corresponding assembly line. The disassembly process is formed by cloud computing intelligence, and the corresponding process instructions will be formed when data is output. The staff only need to follow up the work according to the methods given by them. It may cost a lot to develop an intelligent order processing system, but it is necessary for the future strategic development.

2.4.4 Introduce other customized categories and brands

There are few category projects in a single manufacturing enterprise, especially in small and medium-sized enterprises, and the product category is more limited. The c2m platform of a single enterprise is limited by category, so it is very difficult to form scale effect. C2m enterprises should consider introducing other customized categories and brands to form a greater aggregation, such as clothing

c2m enterprises can join other clothing enterprises, shoe enterprises, glasses enterprises, etc., to realize intensive operation, public resistance to risks, and share customer flow.

3. Conclusion

With the maturity of China's consumer market and the upgrading of consumption concept, the value demands of consumers are also changing, from the traditional commodity function to the unique expression of personality and taste, different understanding of life style, and in-depth experience of innovative technology. C2m mode can capture users' needs and pain points, meet people's inner desire and good vision of pursuing quality and emphasizing personality, promote enterprises to continuously develop new products and services, and drive enterprises to transform rapidly. The emergence of c2m e-commerce mode provides a feasible path for traditional manufacturing enterprises to transform into e-commerce, which coincides with the national strategy of manufacturing power. Internet plus background, C2M as a new mode of electricity supplier, we need to continue to explore and innovate.

Acknowledgements

Basic Scientific Research Projects of Wenzhou Science and Technology Bureau 2018 (R20180030).

References

- [1] People's net. Chinese visual report[EB/OL] (2015-06-9) [2016-05-17] <http://scitech.people.com.cn/n/2015/0609/c1007-27123624.html?from=timeline&isappinstalled=0>.
- [2] angcheng Evening News. China's glasses market will reach 2000 billion. <http://finance.sina.com.cn/roll/20120525/143912148332.shtml>.
- [3] Wei feng. An Analysis of the Marketing opportunity of China's glasses Market. China glasses science and technology magazine. 2011 (11) 76-79.
- [4] Hong lei. C2M created "Red Collar Mode" for Internet Industry[N]. China information weekly news. 2015-06-29.
- [5] Song yang. Research on Weibo user Network structure based on Social Network Analysis[J]. Computer Science. 2014(41)204-207.
- [6] Wang Ruixue. Information aggregation of Mobile Internet Business Evaluation in Web3.0 era [J]. Electronic fabrication. 2013(06)56-61.