

Analysis of the Integration Model of E-commerce and Traditional Industries Based on Big Data

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Abstract

The era of big data has given birth to many new economic products. E-commerce is a typical "Internet + commodity shopping" model. Taking Wenzhou, Zhejiang Province, the birthplace of e-commerce, as an example, this article first analyzes the current integration status of e-commerce and traditional enterprises. Secondly, it relies on Internet big data to integrate with e-commerce from three aspects, respectively, to transform information production into elements and make all links Networking and digitizing promote the construction of informatization; take customers as the center and establish customer demand-oriented process reengineering; build an information basic platform, broaden upstream and downstream collaboration channels, and promote the transformation of traditional enterprises.

Keywords: E-commerce, Traditional Industry, Integration Model;

1. Introduction

With the continuous development of the digital economy, the country has continuously increased its economic reforms. At the same time, relying on Internet big data, the traditional industrial upgrading and transformation of "online + offline" has been formed^[1-3]. Typical Internet products such as e-commerce are not only prominent representatives of the digital economy in the information age, but also an important platform for the transformation of the country's economic structure and economic growth mode, providing a broad development platform for "mass entrepreneurship and innovation" and becoming an economic and New impetus for social innovation and development^[4-5]. For example, Taobao, JD.com, Pinduoduo and Suning.com under Alibaba have innovated the original buying and selling channels and methods in the form of C2C, B2C, and B2B.

With the development of the digital economy and the advent of the 5G era, the consumption habits of end consumers have changed, the homogeneity of products has intensified, and the invasion of channels has all made the operation of traditional

enterprises into trouble^[6]. Under the impact and collision of new and old business forms, how traditional enterprises face challenges and opportunities, break through development bottlenecks, catch the express train of e-commerce, and realize enterprise transformation and upgrading are problems that many traditional enterprises need to solve urgently. The development of big data represents not only technological progress, but also further affects consumption habits, product characteristics and other factors that are closely related to the operation of retail enterprises, and changes the survival environment of enterprises. These environmental changes make the development of retail enterprises face While facing challenges, it also provides opportunities. Retail companies must actively face the challenges brought by big data and seize the opportunities in order to adapt to the changes of the times and improve their competitiveness.

Taking Wenzhou, Zhejiang Province, the birthplace of e-commerce, as an example, this paper analyzes the current integration of e-commerce and traditional enterprises, and discusses the integration

of e-commerce in three aspects based on Internet big data.

2. Integration mechanism of e-commerce and traditional industries

With the advent of the 5G big data era, companies pay more attention to user experience and smart manufacturing. With the help of online sales data and industry e-commerce transaction data, they can dynamically monitor changes in user preferences and demand characteristics in real time, and extend upward from the sales end to the design end. Guide the design, development and innovation of products; extend downwards, in order to more closely meet the needs of users, companies must focus more on the cultivation of their own advantages, constantly improve the trading platform, logistics system and other supporting facilities, and enhance the

informatization and intelligence of the enterprise Level. First, e-commerce has intensified the specialization of labor and promoted the development of the industry. The development of e-commerce has further expanded the scope of market radiation. Through its unique information gathering function, the characteristics of consumer groups have been highlighted, and the specialization of the industry has been promoted. At the same time, under the influence of increasingly diversified and personalized consumer needs, Enterprises pay more attention to the cultivation of their own core advantages, refine the production links, and tighten the cooperation between upstream and downstream enterprises, which promotes the development of industrial clusters and promotes the continuous integration of traditional industries and e-commerce (as shown in Figure 1).

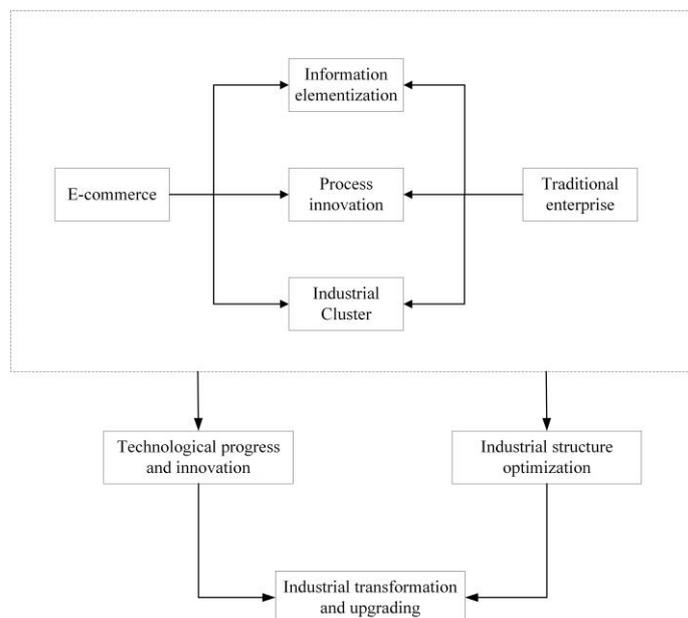


Figure 1. The mechanism of the integration of e-commerce and traditional industries.

3. The integration model of e-commerce and traditional industries

3.1. Current status and characteristics of e-commerce development

E-commerce rooted in Wenzhou's characteristic regional economy has typical Wenzhou characteristics:

(1) Wenzhou e-commerce has a unique advantage of origin. According to relevant statistics, among the

top ten sales categories of Tmall, JD.com, and Pinduoduo, the three major domestic e-commerce platforms, there is a shadow of sheath clothing. Wenzhou has the nationally famous "shoes city" and "hometown of glasses". It has a wide range of product categories, complete supply chain channel construction, and profound brand influence. All these have laid a solid foundation for traditional enterprises to develop e-commerce. According to the

survey, over 70% of the regulated enterprises in Wenzhou, such as shoes and clothing and electrical appliances, have developed supply chain e-commerce. Lighters and clothing have been operating e-commerce in a group, gathering advantages in brand, price and resources.

(2) Due to the influence of Wenzhou's traditional business culture, the main purpose of Wenzhou enterprises to develop e-commerce is to expand sales and sales areas. In the inquiry, it was found that more than 90% of the interviewed companies still only use e-commerce in the marketing field, and have no obvious guiding effect on production organization and management innovation.

(3) There is a lack of e-commerce companies that demonstrate leadership. Although the current Wenzhou e-commerce model is still based on third-party platforms, the development of new retail, cross-border e-commerce, and rural e-commerce is strong. 51 e-commerce industry districts have been established, and group development has formed a cluster of development. effect. However, there are still few companies with a turnover exceeding 100 million yuan, their profitability is generally weak, and the leading demonstration effect is not obvious.

3.2. Model of integration of e-commerce and traditional industries

(1) Comprehensive e-commerce model of "Taobao Village + Cross-border E-commerce"

In recent years, my country's foreign trade has continued to develop. Wenzhou, as a place for the production of light industrial products such as spectacles, auto and motorcycle parts, footwear and clothing, holds in hand the "Zhongtong Shoes City", the "Hometown of Glasses", and the "Capital of Auto and Motorcycle Parts". Such as several national name cards, it has the advantages of natural products and supply chain for the development of cross-border e-commerce. Traditional characteristic industries such as Zhahai Glasses, Lucheng Shoes, Yongjia Educational Toys, and Ruian Automobile and Motorcycle Parts are equipped with cross-border e-commerce platforms to "fly" to buyers from all over the world.

(2) New retail model of "online + offline"

According to the data provided by Wenzhou City Garment Chamber of Commerce, at the beginning of 2019, there were more than 2,300 clothing companies and 2,700 shoe-making companies in the city, producing 10% of clothing and 20% of leather shoes. However, most of these are OEM processing, and their own brand awareness is not high. In addition, in recent years, competition has intensified and demand has decreased. Inventory accumulation has become a sharp edge hanging over the heads of enterprises, and offline entities have been closing stores one after another.

(3) "Industrial cluster + e-commerce industry same + industry leading enterprise" model.

The advent of the Internet digital economy era has changed the growth path of traditional enterprises, and has also forced enterprises to adapt to the current situation to create a new development model. Turban business towels have long been fond of "Bao Tuan" development, and traditional industries are relatively concentrated.

4. Big data provides support for the optimization of the commodity circulation process

4.1. Create new advantages in procurement

Within the company, optimize procurement costs. Traditional retail companies, especially large retail companies, often have regional differences. Each region has different suppliers, product types and procurement plans. Therefore, it is difficult for corporate headquarters to control the financial expenditures of various products in various regions. Cannot effectively manage and optimize the purchase of goods. Outside the enterprise, carry out effective supplier management. First of all, through big data technology, retail companies can obtain more supplier-related information, conduct detailed comparisons of suppliers, and gain the initiative in negotiations, which improves the company's bargaining power.

4.2. Reduce inventory costs

Regardless of the period, retail companies will keep a certain amount of commodity inventory to ensure

the normal operation of the company. However, excessive inventory will not only occupy a large amount of funds for the company, but also increase the management cost of the company. Therefore, it is retail to ensure that a reasonable amount of inventory is retail The eternal subject of the enterprise. At present, many retail companies still find it difficult to find a balance between guaranteeing product supply and inventory. This is mainly caused by the lack of timely communication between the product storage link and other links due to the lag of the information system, although some companies have already used ERP management software , Can collect all kinds of data, but no further analysis and application of the data.

4.3. Improve distribution efficiency

The logistics and distribution tasks of retail enterprises are mainly to supply goods in a timely manner based on the sales status of each store to ensure the normal operation of the store. The most important thing in the distribution is to fully communicate with the sales links. In addition, personnel management and route design must be done to ensure the efficiency of the logistics system. The impact of big data on enterprise internal logistics distribution is mainly reflected in:

First, arrange the distribution plan in advance to reduce the distribution time. At present, most of the logistics and distribution activities of retail enterprises are restricted by the sales link, and the distribution is only based on the sales situation, resulting in the failure of the overall capability of the distribution system.

Second, plan the distribution route more reasonably. At present, retail companies have not paid enough attention to the planning of distribution routes. Drivers usually determine the route based on experience, and there is no scientific distribution route. Big data technology can easily collect the basic data accumulated by the distribution vehicle during the distribution process. Moreover, many companies have done a very detailed analysis of instant traffic and weather information, so that route planning has data support. From a static point of

view, companies can plan routes based on historical data collected by delivery vehicles, road usage and accident rates; from a dynamic point of view, real-time data updates and delivery Drivers can learn about the road congestion and weather conditions ahead in time to flexibly change the delivery route and try to avoid untimely delivery caused by unexpected accidents.

4.4. Refined sales strategy

First of all, the application of big data technology can tap the potential needs of customers, allowing companies to achieve "precision marketing" and find consumers more accurately. When companies conduct promotional activities, on the one hand, they can use big data technology to predict and tap potential customers based on customer purchase history. On the other hand, it can analyze the basic attributes of customers, such as age, gender, purchasing power and occupation, classify customers with different standards, and predict customer needs based on the characteristics of each group. Using these prediction results, retail companies can Accurate advertising promotion and product recommendation to avoid the corresponding non-performing asset rate, as shown in equation (1). Secondly, big data technology can also analyze existing customers and tap the deeper purchasing potential of customers based on the analysis results.

$$P=V/T\times 100\% \quad (1)$$

Among them, P is the asset-liability ratio, V is the total liabilities, and T is the total assets.

5. Suggestions on the integration of e-commerce and traditional industries

The innovation of retail enterprise value proposition is the foundation of business model innovation. The value proposition is the description of the true needs of customers and the starting point of business activities. Only when the customer value proposition of the enterprise is clarified, can the corresponding products and services be provided to customers and

satisfy The changeable and personalized needs of customers can improve customer satisfaction and loyalty, expand the number of customer groups, and bring more benefits to the enterprise. A competitive value proposition requires companies to provide customers with unique products and services, to

bring customers a pleasant value experience, to understand customer dynamics in a timely manner, and to have positive interactions with customers. Therefore, the value proposition innovation should start from the following aspects (Figure 2).

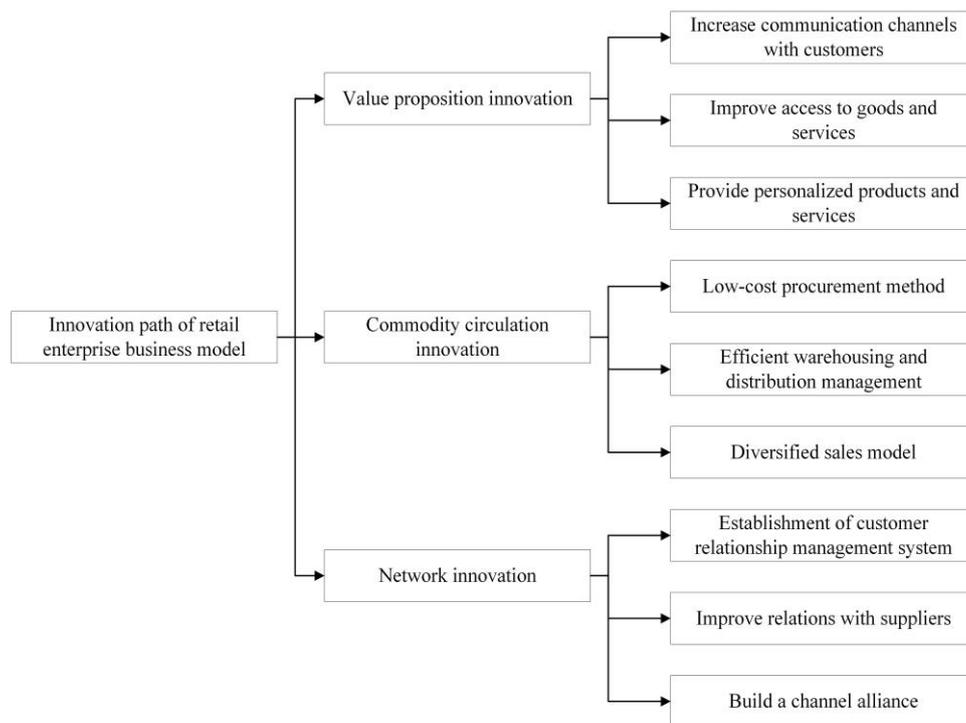


Figure 2. Business model innovation path of traditional retail enterprises.

5.1. Increase communication channels with customers

Increasing communication with customers can help retail companies to accurately segment the market, position customers accurately, tap the potential needs of customers, and better realize the value proposition. Retail companies can establish their own social networks through the Internet and allow customers to express their evaluation of goods or services anytime and anywhere through the network platform. This is not only conducive to understanding customer needs, but also has a certain supervision effect on the supervision of the company, so that the company can Improve related products and services in a timely manner. On the other hand, retail companies can also provide customers with different marketing information in real time through social networks, so that customers can keep abreast

of the latest trends in the products they care about. Social networks will become the emotional bond between retail companies and customers, and maintain a large number of loyal customers for the company. This way of online communication and sharing can increase the trust between customers and between customers and companies, and enhance the company’s presence in customers. It’s a unique value experience that makes it easy for customers to realize that the company values themselves.

5.2. Improve the way to provide goods and services

The way of providing goods and services has a great influence on customer satisfaction. The basic requirements for the location of traditional retail enterprises are good geographical location and convenient transportation to facilitate customers' shopping. The store has modern business facilities, the goods are neatly displayed, and the shopping

environment is clean and tidy, creating a good shopping atmosphere for customers. The service attitude and communication skills of the service staff in the store will also affect the customer's perception of the purchase process. In addition, retail companies can use some special product combinations or product display methods to meet the individual needs of customers. For example, in a survey of shopping habits, Wal-Mart found through big data analysis that when young dads buy diapers, they always buy a few bottles of beer to reward themselves. Therefore, Wal-Mart decided to display the diapers and beer in the store together. As a result, sales of both products have increased. It can be seen that through big data analysis to determine the shopping behavior and shopping habits of customers, and based on the results to improve the product display, shopping environment, and personnel services in the store, it will ultimately increase customer satisfaction and bring more profits to the company.

5.3. Provide personalized goods and services

The most basic requirement of customers for retail companies is a complete range of products, so that they can select products that they are satisfied with through full comparison. But on this basis, if retail companies provide customers with products on their shelves that their competitors do not have to meet the diverse needs of more customers, it will make the company more competitive. This requires companies to understand consumer psychology at any time, accurately and quickly respond to consumer needs, and even potential needs. This is the key to providing customers with personalized products and services. Different retail companies have their own strategies for attracting and retaining customers. For example, Wal-Mart has seized the tendency of customers to low prices and proposed a strategy of "low prices every day". Gome integrates the manufacturer's service resources into its own value Chain, a series of services in the whole process of commodity sales are called "Rainbow Service" strategy. All of these provide customers with a new personalized experience and a unique

value proposition.

Possessing massive data processing and analysis technology will become a powerful weapon for companies to understand customer needs. Amazon uses a huge e-commerce website to collect data on clicks, visits, comments, recommendations and other data left by consumers in the process of purchasing goods on a large scale, accurately predicting consumers' interest points, and launching new products and services in the shortest time. Eliminates the need for complicated research, analysis, and discussion steps, and uses big data technology to analyze data such as clicks and visits to evaluate whether the product is satisfactory. After years of development, traditional retail companies have accumulated a large amount of customer buying habits, purchasing tendencies and other related data, and the development of science and technology has provided companies with many new channels to understand customers. In the era of big data, the primary task of retail companies is to use advanced technology to organize and analyze these data, understand the true needs of customers, tap potential needs, and truly form a customer-centric strategy to provide customers with personalized products and services.

6. Conclusion

The implementation of e-commerce to promote the transformation and upgrading of traditional industries is inseparable from the government's policy guarantee. From the government's point of view, first of all, it should speed up the construction of informatization, promote the application of enterprise informatization, and at the same time improve supporting facilities and improve the supporting service system of e-commerce. Secondly, by increasing financial support and providing guarantees, we will guide traditional high-quality products to build an Internet brand. Finally, it is necessary to take traditional industrial clusters as the lead, increase the cultivation of e-commerce service enterprises and talents such as platform development, operation planning, distribution design, etc., and

transform the "low and small" e-commerce into a modern service enterprise with complete facilities and advanced management. Transformation to provide support services for SMEs to develop e-commerce.

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