

Research on the Innovation and Development of Retail Formats in China under the Background of New Industrial Revolution

Qiong Yu^{1, a} and Lihua Guo^{2, b, *}

¹Beijing Jiaotong University, Beijing, China

²Beijing Jiaotong University, Beijing, China

^a18120733@bjtu.edu.cn, ^blhguo@bjtu.edu.cn

* Qiong Yu

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Abstract. In today's society, the level of technology is constantly improving. Since the first industrial revolution, the technological revolution has been deepening, and the retail industry has also developed innovatively. As the basic industry of the economic system, the development of the retail industry plays a vital role in stimulating domestic demand, meeting the growing material needs of our people and promoting the healthy and sustainable growth of our economy. Since the beginning of the 21st century, especially since the implementation of the "Internet plus" strategy, new technological changes marked by big data, cloud technology, artificial intelligence, quantum science and structural biology have gradually started the new wave of industrial revolution. Under the background of the new industrial revolution, facing the international competition of economic globalization, it is of great significance to study the innovative development trend of China's retail formats, so as to make breakthroughs in the development of innovative retail formats and benefit from the global value chain.

Introduction

Since the reform and opening up, China's retail industry has developed rapidly. With the rapid change of technology in the wave of innovation, the format of retail industry is changing constantly [1]. Under the background of Internet technology, the traditional physical retail form has been transformed into the online retail form of e-commerce model, breaking the time and space restrictions of traditional retail. The new retail form is basically the application of technology, and technology innovation has a profound impact on the development and evolution of new retail in the future [2]. As the basic industry of the economic system, the development of retail industry plays a vital role in stimulating domestic demand, meeting the growing material needs of Chinese people and promoting the healthy and sustainable growth of China's economy [3]. In addition, in the process of moving towards the era of industry 4.0 and in the context of economic globalization, China's retail industry can only go ahead of the international retail market with continuous innovation and development, and promote China to seize the commanding heights in the new round of international competition, so as to realize the development from a manufacturing power to a manufacturing power. Therefore, this paper takes the new industrial revolution as the background to study the evolution process of China's retail format and explores the development trend of innovation of China's retail format in today's information technology revolution.

Theoretical Basis for the Development of Retail Formats

First people for the retail formats the direction of the research focuses in the study of the relationship between cost and price, based on the retail expert m. of Harvard business school professor Michael has proposed the "retail wheel hypothesis", he thinks that retail firms, which is low cost, low price and low profit to enter the market, the follow-up to improve service quality, and obtain more profits will continue to improve the cost and price, but there will always be new retail enterprises enter the market through lower costs and prices, and leads to the decline of original

retail enterprises. According to professor m. Michael, new retail competitors should enter the market through cost leadership and replace the original market leader [4].

Domestic research on retail industry is also numerous, but compared with foreign research time is relatively late, and has not formed a system of scientific theory [5]. Zou Wendi (2000) mainly studies the reform of retail formats from the perspective of technological innovation and believes that technological innovation can bring competitive advantages of cost structure and new retail formats emerge [6]. Fang Hong (2001) mainly viewed the innovation of multinational retail model from the perspective of the generation of retail industry, and believed that the premise and foundation of the emergence of retail industry model were market competition and the development of economic society, the forerunner of retail industry reform was the dynamic change of consumer demand and consumer behavior, and technological change could promote the evolution of retail industry[7].

Technological Change and Retail Format Development

For a long time, the history of the retail industry is changing. Technological change is an important factor to promote production change, and the application of new technology greatly improves the efficiency of production, supply, sales and other links. Throughout the history of technological change, we can see that technological innovation is a dynamic process from simple to complex, from low to high. The first industrial revolution brought the mechanization of production, as the steam engine, such as spinning Jenny machine production instead of manual production, mechanization to improve the production efficiency, product manufacturing and shift from traditional family workshops to factory production, a large number of retail factory arises at the historic moment, the development of mechanization makes retail goods into the standardization of mechanized mass production of goods, goods is numerous, species increased, but the resulting is the inner contradiction between production and consumption, producers cannot sell the products, consumers sometimes can't find what you need goods, The search cost of both sides greatly aggravates the contradiction between production and consumption. In order to solve this contradiction, department stores came into being. The emergence of the retail format of department store marks the transformation of the retail industry from a single specialized model to a comprehensive model, and department store has become the mainstream model of the retail industry after the first industrial revolution [8].

The second industrial revolution, the great development of capitalist productivity not only promoted the development of the production, the heavy chemical industry, such as steel, machinery, petrochemical, automobile, also produced a new transportation tools such as trolley, railway and new communication means, such as telephone, telegraph, radio, for the development of international trade provides a material technology base. In terms of products, due to the extensive application of machine industry, the manufacturing of commodities is more standardized, and the improvement of production efficiency brings about the rapid, efficient and standardized production of commodities [9]. In terms of logistics, due to the rapid development of transportation, the cost of commodity circulation has been greatly reduced, and the storage technology of corresponding products has emerged, which makes the inter-regional trade of products more convenient. Some retail giants began to go beyond national borders, expand the retail industry on a global scale, carry out standardized replication, and make transnational profits. In terms of the retail format, due to the diversity of commodities, specialized production and the large number of labors from the production field into the circulation field, the department stores, chain stores and supermarkets and other retail formats coexist.

Third industrial revolution in the computer, the Internet, the application and popularization of mobile payment technology, make the human into the "information age", the development of the information revolution made retail enter to comprehensively deepen stage, the height of the development of productivity has realized the logistics, information flow, cash flow, knowledge flow of the global open, marked the retail trade the deep development of globalization, but also produce convenience stores, specialty stores, shopping centers, e-commerce category, such as a variety of

retail model. Convenience store is a retail model with high service and high price. It is a typical retail model of Nielsen's "vacuum zone theory". Convenience store model has the features of wide network coverage, small store size, 24-hour service and convenient products. Especially, compared with traditional retail mode, e-commerce network retail mode not only eliminates the limitation of time and space, but also reduces the requirements on physical storage space, management personnel and physical store cost [10].

Current Situation of Innovation Development of Retail Industry in China Under Technological Change

Since the 21st century, with the progress of science and technology, to the computer information and network technology, artificial intelligence, new technical revolution represented by Internet + to the retail industry has brought the huge change, the current retail enterprise in the customer information collection, product planning and marketing channels to expand more influenced by innovative technology. Under the background of the new technological revolution, there are many innovative developments in China's retail industry.

Application of Big Data and Intelligent Supply System

In recent years, retail enterprises have begun to pay attention to the collection and application of customer consumption data. At the same time, they have considered the diversity of consumer choices and the significant improvement of convenience. Consumers have not only satisfied the functional attributes of products, but also pursue the consumption characteristics of improving service experience. The concept of "new retail" is proposed in the retail industry. Under the new retail outlet, the most prominent is the emergence of non-store formats, such as vending machines, automatic ground coffee vending machines and unmanned supermarkets. The unmanned retail model is based on a combination of analysis of consumer purchase data and intelligent supply system technology.

The Application of Virtual Reality Technology

In order to further enhance consumers' consumption stickiness, current retail enterprises also pay attention to the importance of customer experience, especially the deep experience of their own products and services, which is conducive to maintaining the deep loyalty of customers. Bookstores, bedclothes and flower supermarkets all focus on shaping the scene mode that fits the commodity attributes. Combined with VR and AR interactive entertainment facilities, consumers can enhance their sense of deep experience and satisfaction. Some enterprises have also applied immersive experience technology into consumption scenes. Intelligent fitting mirror and 3d experience scenes have further strengthened customers' sense of experience and brand viscosity.

The Application of Artificial Intelligence Technology

In recent years, with the rise of labor costs, the operating costs of retail enterprises continue to rise, which also limits the innovative development of retail enterprises. Currently part of the technology company has to carry out the artificial intelligence research and development and has achieved preliminary results, some achievements have been first made a application in logistics industry, Jindong has started to set up no warehouse, order processing, through the artificial intelligence technology goods from warehousing, packaging, sorting, loading, 100% by robot operation, greatly save the human cost, Jindong will also be in the process of the artificial intelligence technology is applied to distribution, June 18, 2017, Jindong distribution robot work, implements the whole scene normal distribution.

Summary

After reviewing the relevant theories about the development of retail mode at home and abroad, this paper sorts out the historical evolution of the development of retail mode brought by the three

industrial revolutions, and draws the conclusion that technological change is crucial to the innovative development of retail mode. In addition, this paper describes and analyzes the current development trend of the retail industry in China under the background of the new industrial revolution. Based on the material basis of the third industrial revolution, it is very important to grasp the innovation of the retail industry mode endowed by the new technological change. On the premise of adapting to the technological change of the new industrial revolution, this paper looks forward to the innovative development trend of China's future retail formats.

First, to comply with the "Internet +" economy of modern technology, using cloud technology, the Internet of things, big data fusion for retail industry production and sales of tools necessary to explore various forms of the "Internet + retail", makes the production, sales and management of the retail industry Informa ionization, scientific and technical cohesion between retailers and consumers, the membership precision farming, through small community building, found that consumer demand information, in a timely manner retail marketing, using modern technology, the application of scene real-time sensor connection orientation, virtual fitting room, retailers and consumers, Realize the perfect technology-wise retail mode of "self-perception store"[2].

Secondly, to create convenient, sharing, social, experience strong shopping space and platform, community-based retail model will become the main trend. Local retail will consumers according to consumer preferences, consumption characteristics such as the division of community groups, TA target is more clear, in the social platform of technical support, the consumer is not a simple retail final consumer groups, and to share information, share experience, learn from each other communication consumption community, retail enterprises is not only beneficial to upgrade the products and product diversification, more conducive to retail marketing of complete transformation of good products, such as Guangzhou party bookstore around the "bookstore" the basic business, add coffee, clothing, plants and life aesthetics, breaking the traditional bookstore only "selling books," the business, It meets the diversified consumption needs of the consumer community of love books[11].

Finally, retail business model innovation, implementation of retail enterprises brand and cross-border integration development, global competition. Use of the Internet and Internet of things technology to cross-border integration of retail products, the common consumer groups for many category brand retail marketing, finally seize the opportunity of "going out", to compete with other countries in the global market, only in this way can meet customers different levels of material needs, share in the global value chain retail revenue at the same time, promote the steady growth of our country economy[12].

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