

Research on the Format Structure of New Retail Era From the Perspective of Artificial Intelligence

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ABSTRACT

With the rise of the concept of "new retail" proposed by Jack Ma in 2016, driven by artificial intelligence technology, the new retail format has set off the trend of "intelligent new retail". At present, artificial intelligence technology runs through the new retail supply chain, creating the "unmanned new retail" mode, and realizing cost reduction, efficiency improvement, deepening upgrade and better consumption experience. However, the market sales structure of intelligent new retail formats is mixed with worries, and the development of regional new retail formats is not balanced. In view of this, this paper, based on the artificial intelligence perspective, discusses the wheel of "new retail" driven by artificial intelligence, further analyzes the development pattern of the new retail format structure, and proposes the road to optimize the structure of intelligent new retail format.

Keywords: *Artificial intelligence, new retail, format structure*

1. INTRODUCTION

1.1. Throughout the supply chain, reducing costs, improving efficiency and deepening the upgrade

From traditional retail to e-commerce retail and new retail, many new technologies are applied. The essence of these technologies cannot be separated from artificial intelligence to help realize the goal of intelligent new retail.[1]Artificial intelligence technology can build a logistics network technology platform, intelligently identify and evaluate customer traffic, and make adjustment feedback and operation analysis from intelligent data, so as to improve operation efficiency to a certain extent.Artificial intelligence is deeply involved in the new retail format. Intelligent retailers conduct supply chain and store data management and integration through RFID technology, so as to realize the effective management of commodity display and accurate grasp of consumer interest in intelligent retail stores, and achieve the goal of reducing cost and improving efficiency.Artificial intelligence technology has given birth to modern intelligent stores, intelligent logistics and warehousing, intelligent marketing and experience, intelligent customer service and intelligent virtual experience and other business scenarios, and to a certain extent, improved the work efficiency of new retail.

1.2. Creates "unmanned new retail" model to shape better consumer experience

Artificial intelligence is the driving force of modern new retail technology, creating the "unmanned new retail" mode,

focusing on the evolution of "consumers, scenes and commodities", and reconstructing, integrating and optimizing the payment method and format structure of intelligent new retail.[2]Amazon's "no-man 's-land" and check-out free shopping experience USES computer vision, sensors and deep learning.Amazon, Alibaba and JINGdong purchased or invested heavily in offline smart retail stores in 2017. While expanding new retail marketing channels, they also acquired intelligent and efficient operation big data to build an ARTIFICIAL intelligence retail model and improve the subsequent processes such as intelligent retail, layout, replenishing-stock and production scheduling.Jingdong smart retail consumers, through large data positioning is given priority to with younger, social and diversified consumption scenarios, in just brush face and become members of the store, the background by 3 d camera to bind the body characteristic and the account information for intelligent video analysis, automatic recording consumer product experience, facilitate accurate secondary commodity marketing, strengthen the consumer shopping experience.[3]

2.THE DEVELOPMENT PATTERN OF FORMAT STRUCTURE IN THE NEW RETAIL ERA

2.1."Specialty stores + supermarket" is the main, "convenience stores + department stores" is the auxiliary

Driven by artificial intelligence, the format structure in the new retail era presents some differences. As shown in

Table 1, there are 352 and 32,413 exclusive stores respectively in the dominant format structure, showing a large number of formats. Meanwhile, the total number and total number of supermarkets are 399 and 33,372

respectively, and the number of commercial and supermarket formats is relatively large. From the year-end number of employees and retail business area, the new retail format structure is expanding and balanced.

Table 1. The distribution of new retail business structure in 2016

indicators	the convenience store	the supermarket	department stores	store
head office number	100	399	107	352
the total number office	18588	8584	4987	32413
year-end number of employees(wan)	8	56	26	18
year-end catering area (wan)	162	3369	2738	459
Merchandise sales (hundred million)	422	4963	3897	1992
Total merchandise purchases (hundred million)	327	4332	3224	1536

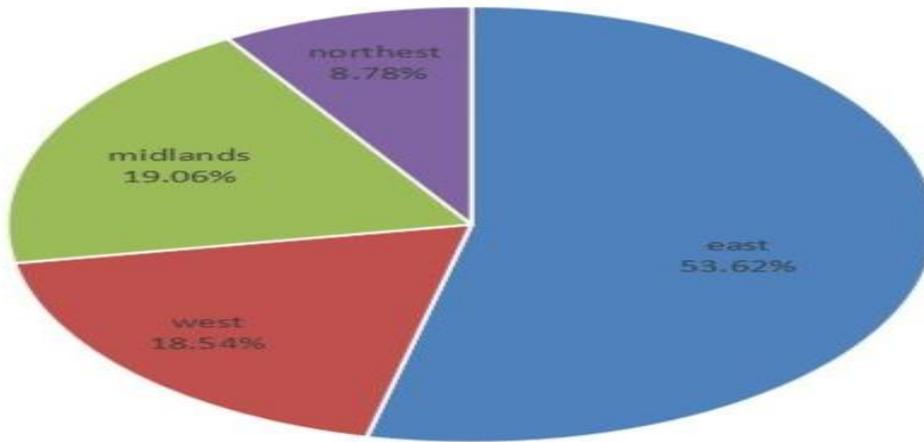


Figure1. The proportion of total retail sales of consumer goods in all regions in 2016

2.2. The market sales structure is both happy and worried, and diversified business forms coexist development

In terms of new retail formats market sales structure, specialty stores, convenience stores and department stores, such as commodity sales growth trend, and supermarkets formats market sales, commodity purchase and The total amount of goods purchased and the total amount of goods purchased for unified distribution showed a slight downward trend. However, from 2016 to 2018, driven by artificial intelligence, the new retail format presents the pattern of multiple formats co-development. Most retailers are no longer confined to one format. In addition to the steady development of the dominant format, they have made a reasonable combination of auxiliary formats.

2.3. The development of regional business form is not balanced, show more than west less echelon structure

The format structure in the new retail era is usually related to the level of local economic development. [4]The eastern coastal areas have more new retail resources than the central and western regions and the northeast regions, while the western regions have scarce and backward retail resources. From figure 1, 2016 east high of 50% the proportion of total retail sales of social consumer goods structure are mainly concentrated in north to guangzhou, tianjin and other cities, fast increase in the number of stores, or more types of structure, and especially in department stores and intelligent unmanned retail stores ahead of other regions, business prosperous city of new retail format is plural. Remote western region, however, relatively backward economy, business development is relatively developed areas is poor, even the traditional department store formats also lags behind

that of the east, in the field of artificial intelligence application new retail display is insufficient, the east west less echelon structure more, also explains the economic base determines the new retail format development level, need to further strengthen and balanced.

3. OPTIMIZATION OF FORMAT STRUCTURE IN THE NEW RETAIL ERA FROM THE PERSPECTIVE OF ARTIFICIAL INTELLIGENCE

3.1. Adjust the proportion of the business structure to achieve mixed operation of multiple businesses

From the perspective of artificial intelligence, it is necessary to adjust the proportion of business structure to realize the mixed operation of intelligent retail. In 2018, JD Group plans to open more than 300 retail experience stores, reshaping the smart retail pattern, upgrading consumers' experience, and creating an integrated online and offline intelligent system. Jingdong has set up more than 1 million jingdong convenience stores nationwide, 50% of which are in rural areas. Its retail layout is Tmall in second-tier to sixth-tier cities and even the western county-level cities. It has a large number of outlets, which is easy to evaluate the retail channels and population value. The two leading formats have driven the development of the new retail industry and gradually adjusted the proportion of each format structure, which has a great impact on the adjustment of the intelligent new retail and multi-format mixed business model in the whole industry, making the structure of the new retail format rationalize.

3.2. Rebuild consumption supply and enrich the market sales structure of online businesses

Driven by artificial intelligence, artificial intelligence technology needs to be further used to drive the reconstruction of consumption supply. [5] Ma Xian "box" consumer groups focus lies in the pursuit of quality, and low price sensitivity, so will be made into small package goods, make modern traffic retail, provide a lot of semi-finished products and finished products for intelligent offline and online sales, and through the interaction between fans marketing channel, enhance the brand loyalty of consumers. In addition, driven by artificial intelligence technology, new specialty stores or specialty department stores are turning to the development of multi-format mixed operation, and the smart supermarket retail market is segmented according to the consumption level, so as to enrich the market sales structure of online retail and improve the consumption convenience and experience upgrading.

3.3. Innovate a three-dimensional, multi-tiered structure of business demand and implement differentiation strategies

We will innovate the demand structure of multi-dimensional and multi-tiered retail formats, make it easier to adjust the balance of the structure of new retail formats in various regions, and improve the competitiveness of new regional retail markets. Domestic artificial intelligence new retail format structure because of regional differences in characteristics of present different forms, the eastern region is no convenience store, smart retail clusters, suning stores in eastern wisdom retail since September 2018 proprietary coffee over 100 online in nanjing, a lot of office buildings in Beijing are also in a lot of open shelves with qr code into the diversified forms into smart store. Artificial intelligence, new retail format structure appear differentiation, a second-tier cities of new retail formats is greater than the villages and towns, the eastern part of new retail formats is greater than the western region, different new retail formats differentiation strategy, realize the coordinated development of regional new retail format structure, outstanding management localization, reshape the intelligent core competition of retailing forms "potluck".

4. CONCLUSION

Artificial intelligence technology runs through the new retail supply chain to shape better consumer experience, and the format structure in the new retail era presents a diversified development situation. New retail development in artificial intelligence, of course, will face a certain development bottleneck, besides with the help of outside forces, such as government support, also need to further adjust the structure of the new retail formats, refactoring consumer supply and demand structure of "ecological" multi-level three-dimensional innovation forms, intelligent hybrid business model of retailing forms, rich online retail formats market structure, and according to different new retail formats differentiation strategy, smart new retail format structure efficiency.

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