

Research on Business Model Innovation Based on Big Data Analysis

Jiaqi Wang

Simon Fraser University, Burnaby, Canada

Abstract: With the continuous development of information technology, the network era is gradually coming and has an important impact on all industries, which makes the business model of enterprises have to keep pace with the times to achieve innovation, so as to enhance the competitive advantage of enterprises and promote the healthy development of enterprises. Driven by big data, the pace of business model change is faster. All kinds of data are being produced all over the world in an instant, and this momentum is getting stronger and stronger. Big data is an important ignition point to promote the business model to be updated and reformed, and it is also a key factor to promote the increasingly fierce market competition. Therefore, it is particularly important to strengthen the research on business model innovation driven by big data. Based on the background of the Internet age and computer technology, this paper explores the innovative strategy of business model, so as to promote the innovation of business model and the development of enterprises.

Keywords: Big data, Business model, Market competition.

1. Introduction

The arrival of the Internet era has had a profound impact on the whole economic and social development. In the new environment, the original business model of enterprises is unsustainable, so realizing the innovation of business model has become a key issue for enterprises to consider [1]. Promoting the innovation and development of the Internet era is also constantly promoting the innovation of business models of enterprises [2]. The impact of big data on business models of enterprises is mainly to change the internal and external environment faced by enterprises, increase the competitive pressure of enterprises and create new opportunities for business model innovation [3]. But the innovation of business model is a long-term process and involves many problems. For all enterprises, data is one of the most basic resources, and the arrival of the network era also confirms the continuous development of network technology in China, and provides great convenience for China's social form and daily life [4]. This also leads to the development of China's society and economy becoming more and more inseparable from big data, and makes big data occupy a very important position in the development of China. The research of business model has always been the focus of entrepreneurs' attention. Since the Internet technology has been continuously popularized and its application scope has been continuously expanded, the amount of data and information in various enterprises has also shown an upward trend. Therefore, the business model driven by big data attracts the attention and attention of the industry [5].

The vivid cases of various industries show that the influence of big data on business model innovation and change is beyond doubt, and the potential of big data's business value and its great influence on business model have been widely recognized [6]. Big data is beginning a major transformation of the times, which will bring profound changes to the management and operation concept, business process, marketing decisions and consumer behavior patterns of the commercial service industry, and will inevitably bring about the innovation of the business model [7]. In order to

better adapt to the development of business model in the network age, this paper will analyze the current situation of business model innovation in the network age, the existing problems of business model innovation in the network age, and the business model innovation strategy driven by big data, so as to promote the innovation and development of business model in the network age, promote the transformation of enterprises and improve economic benefits. From the perspective of the Internet age, the main problems in the innovation of enterprise business model are the lack of application of information technology such as big data, the lack of professional talent team, the imperfect competitive strategy and the imperfect innovation system. This paper explores the innovative strategy of business model with the background of the Internet age and computer technology.

2. Elements of Business Model

With the popularization of Internet technology in all enterprises, enterprises have begun to continuously study business models, hoping to find more valuable effects. Therefore, many enterprises define the innovation of business model as the sublimation of value creation, and use the value chain to measure the change of enterprise values and operation mode, and take profit as the purpose [8]. Market, enterprise, customer and profit model are the four elements of modern business model. Business model is the strategic policy of enterprise management and development. Enterprises must keep pace with the times and innovate constantly. From the above four dimensions, an innovative business model suitable for enterprise and social development needs is constructed.

Business model innovation often comes from a variety of changes in constituent elements, taking enterprise development as the foundation, and updating and changing the business model in the vertical and horizontal dimensions [9]. Finally, business model innovation will probably create long-term profitability and competitive advantage for enterprises, and provide sufficient power for the sustainable development of enterprises. Enterprise value refers to the improvement of enterprise production efficiency, and to

ensure that products are in line with market demand, which requires mastering a large amount of market data, including customer information, so as to promote the valuable production of enterprises. In today's economic development situation, enterprises' innovative business model needs to put more emphasis on customers' needs and experiences, put themselves in the position of customers, design products and services that can create more value for customers, and strengthen contact with customers, so as to promote the improvement of enterprises' economic benefits.

3. The Influence of Network Times on Business Models of Enterprises

3.1. Changed the internal and external environment of enterprise development.

With the continuous development of economy and society, the development environment of enterprises has been in the process of constant change, which has a certain impact on the internal management and business model innovation of enterprises. However, in the network era, the ideas and means of information technology have had an important impact on all industries, which has made the internal and external environment that enterprises are facing change faster and faster, and the external environment is even in a rapidly changing state. The information contained in big data can effectively promote enterprises to study the characteristics of customers' needs and consumption. By collecting the query data of customers' consumption in product clients and sorting out the market research data, we can create business advantages for enterprises from the aspects of customer micro-segmentation, market positioning of products and services, market differentiation and other aspects [10]. With the continuous development of market economy, the number of enterprises in various industries has been increasing, and the phenomenon of oversupply has appeared in the market, which has led to the increasing competitive pressure faced by enterprises. Especially driven by big data, the ability of large enterprises to control the market is constantly strengthened, and most enterprises are facing enormous competitive pressure, thus posing an important challenge to their business development model.

3.2. Provide more opportunities for business model innovation

The innovation of business model must keep pace with the times in order to play its due role. In the network era, enterprises can make full use of modern information technology, strengthen the collection, collation and application of market information, establish a perfect database of business model information, strengthen the analysis of market demand and effectively control internal management, so as to speed up the pace of business model innovation and reduce the risks and losses of its innovation. In many industries, such as retail, consumer goods and so on, modern information technology is used to efficiently analyze and process massive data, so as to obtain effective information and improve or produce new products and services, attract customers' consumption and create new economic benefits for enterprises. The basis of decision-making is changing from structured data to unstructured, semi-structured and structured big data, and big data technology and processing means can make seemingly chaotic and poorly related data become effective information

for service decision-making. When enterprises manage and make decisions, they can also use big data to make better predictions and provide a forward-looking perspective for the survival and development of enterprises. Enterprises with differentiated advantages can occupy a unique market and leave their competitors behind in the fierce industry competition.

4. Business Model Innovation Driven by Big Data

4.1. Strengthen the application of big data and other information technologies

Information technology such as big data has become an indispensable factor in the development of enterprises, so it is necessary to strengthen the application of information technology such as big data in the process of business model innovation. We should pay full attention to the important role of information technology such as big data, and regard it as a necessary condition for business model innovation. In particular, we should pay attention to the publicity of managers and department heads, and create a good application environment, so that they can promote the application of information technology such as big data in their thoughts and behaviors. The user experience level and demand design of commercial websites based on big data clustering are shown in Figure 1.

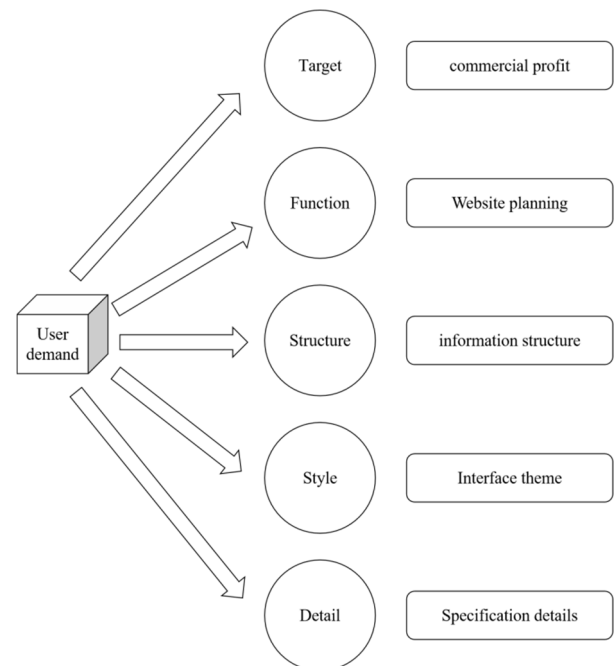


Figure 1. User experience level and requirement design of commercial website

When an enterprise is looking for customer information, if it has a convenient and fast search system, it can improve its work efficiency. Therefore, the enterprise should regularly update and upgrade the customer data processing system, so as to ensure that the query page and the corresponding query function are constantly improved and maintained, thus effectively improving the work efficiency of the enterprise. In the environment of big data, enterprises should constantly innovate their data thinking, so as to set up brand-new data thinking and promote the innovation and reform of their business models.

4.2. And formulate and implement effective competitive strategies

In order to ensure that the enterprise data management work is always in a cutting-edge state, the enterprise leaders should learn from the data management models of other large enterprises, and through this learning method, establish their own enterprise data thinking, so as to ensure the better development and innovation of the enterprise's own business model. Therefore, judging whether an enterprise can keep up with the pace of the Internet age and achieve the goal of rapid development, whether it has established excellent enterprise data thinking is the most direct measure. According to the needs of enterprise business model innovation, enterprises should formulate perfect systems from multiple levels, and fully integrate them into enterprise development and business model innovation in the network era, so as to enhance the advancement and effectiveness of various systems, and then provide comprehensive institutional guarantee for enterprise business model innovation driven by big data. The e-business precision marketing process based on big data analysis is shown in Figure 2.

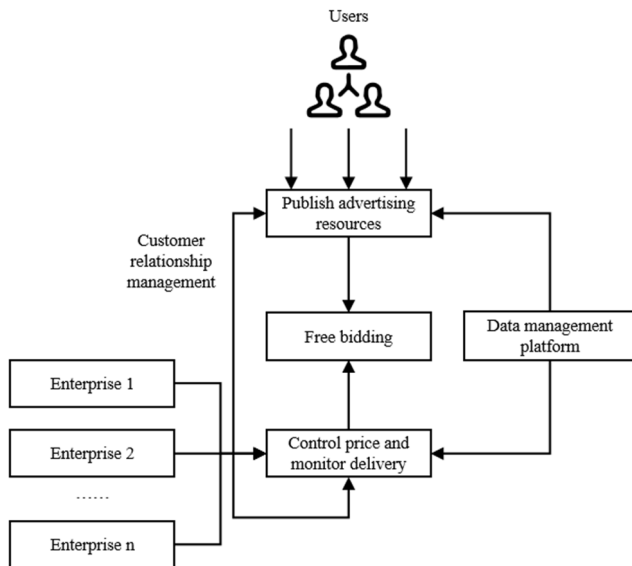


Figure 2. E-business precision marketing process based on big data analysis

With big data thinking, enterprises can continuously optimize business operation processes, reduce costs and create more economic benefits for enterprises. Only by constantly improving the market competitive advantage can we survive and develop in the fierce market competition, and we can implement the innovation of business model. Therefore, driven by big data, enterprises must comprehensively formulate and implement effective competitive strategies. To implement effective competitive strategies from multiple levels, enterprises should fully improve their human resource management, financial management, marketing management, strategic management and other mechanisms driven by big data, so as to form a strong competitive strategy and provide guarantee for business model innovation driven by big data.

5. Conclusions

The current society has entered the era of rapid

development of Internet technology, and the Internet itself has been integrated into all walks of life and even people's daily life. At present, the most important marketing method is Internet marketing, which has become the main development trend. Therefore, more and more enterprises begin to transform into Internet sales, which can not only effectively change their own marketing models, but also innovate their own business models. The innovation of enterprise business model driven by big data plays a vital role in promoting enterprise development. However, it is necessary to fully realize the difficulties and problems of business model innovation, and on this basis, make full use of the trend of the Internet age to accelerate the pace of business model innovation. The future research on business model driven by big data should focus on the prototype design, creative destruction mechanism, and empirical research on the impact of business model on enterprise performance in the network era. More importantly, the research on big data business model based on China situation will be more enlightening and guiding. Business model innovation has different connotation characteristics in different times. Enterprises should combine the background of the times, seize opportunities, innovate business models, and provide power for the long-term development of enterprises.

References

- [1] Zeng Qiang. Research on big data-driven business model innovation [J]. Science of Science Research, 2019, 37(6):11.
- [2] Yang Qian. Research on business model of big data and intelligent transportation enterprises [J]. Modern Radar, 2021, 43(11):2.
- [3] Jiang Juan, Yang Qixing, Chen Jiachun. Exploration of innovative path of retail business model based on big data [J]. Business Economics Research, 2018, 757(18):13-15.
- [4] Tang Bin, Lu Yanqiu, Ye Ying Ping. Research on knowledge creation model of platform enterprises from the perspective of big data capability [J]. Information Theory and Practice, 2020, 43(7):7.
- [5] Huang Wei, Liu Xia, Wei Qiang, et al. Innovation of enterprise product crisis management model based on big data [J]. Management Review, 2019, 31(7):8.
- [6] Wang Bingcheng, Yan Xiaofei, Zhang Shiqiang, et al. Construction and mechanism of business model innovation process: research based on grounded theory [J]. Management Review, 2020, 32(6):11.
- [7] Tian Jian, Xu Jiabin. Research on the driving factors of business model innovation of platform-based enterprises [J]. Science Research, 2020, 38(5):12.
- [8] Zhang Jingjing, Liu Lu, Li Jianling. Research on new energy vehicle business model innovation from the perspective of ecological consumption [J]. Ecological Economy, 2020, 36(3):6.
- [9] Wang Zhiping, Qi Yawei. Business model innovation of strategic emerging industry path breakthrough [J]. Reform and Strategy, 2018, 34(7):7.
- [10] Jiang Junfeng, Shang Yanying. Data empowerment drives the path of manufacturing enterprise service [J]. Scientific Research Management, 2022, 43(4):10.