Research on the Impact Mechanism of Marketing Innovation on Enterprise Economic Growth Driven by Big Data

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Abstract: Against the backdrop of the surging wave of big data, the field of marketing is undergoing unprecedented changes, and its mechanism of impact on enterprise economic growth is becoming increasingly complex and diverse. This study focuses on marketing innovation driven by big data, and deeply analyzes how it has become a key driving force for enterprise economic growth. By integrating multidimensional theories and empirical analysis, the profound impact of big data empowering marketing innovation on enterprise economic growth in precision marketing, product and service innovation, customer relationship management optimization, cost control, and operational efficiency improvement has been revealed. This provides solid theoretical support for the formulation of marketing strategies for enterprises, and also points out the direction for enterprises to seize marketing innovation opportunities and achieve sustainable growth in the digital economy era. It enriches the theoretical system of marketing and economic growth, and helps the academic and practical communities jointly explore new growth paths in the era of big data.

***Keywords*:** big data; Marketing innovation; Enterprise economic growth; influencing mechanism

1. Introduction

1.1 Research background and purpose

Big data has been deeply integrated into the economy and society, and its explosive growth and innovative analytical technology have completely changed the way information is obtained and utilized. The traditional marketing model faces challenges due to its extensive and inefficient nature, and enterprises need to leverage big data to achieve precision marketing innovation in order to enhance competitiveness. This study aims to provide theoretical basis for enterprises to develop big data-driven marketing strategies, while improving the theoretical system of marketing and economic growth, and filling the gap in related research in the era of big data.

1.2 Research methods and technical roadmap

This study adopts the methods of literature review, case analysis, and empirical research. By reviewing cutting-edge literature at home and abroad to construct a theoretical framework, analyzing representative enterprise cases to showcase micro scenarios of big data-driven marketing innovation, and then verifying research hypotheses through statistical methods such as questionnaire surveys and multiple regression analysis to quantitatively reveal the relationships between variables. The three complement each other, forming a complete closed loop from theory to practice and then to verification, ensuring the scientific and practical nature of research.

2. Theoretical basis related to big data and marketing innovation

2.1 The concept, characteristics, and current application status of big data

Big data is a massive, high growth rate, and diverse information asset, characterized by its massive, diverse, high-speed, and valuable nature. Massive information resources are provided to enterprises, with diversity covering unstructured data such as text and images. High speed drives continuous updates in data processing technology, and value is transformed into decision support through precise mining. In the business field, big data is used for precision marketing, analyzing customer behavior data to achieve personalized recommendations and promotions, improving marketing effectiveness and customer satisfaction. In the financial industry, big data helps to comprehensively evaluate customer credit, optimize risk control models, expand the boundaries of financial services, and improve service accuracy and security.

2.2 The Connotation and Forms of Marketing Innovation

Marketing innovation is the key for enterprises to seek breakthroughs in market competition, and its connotation goes beyond traditional marketing concepts. It involves a shift in mindset, from product centric to customer-centric, and from

short-term transactions to long-term relationship building. In terms of product innovation, enterprises use big data to gain insights into customer needs, develop personalized products, and highlight market competitiveness. Service innovation focuses on improving service quality and customer experience, integrating big data-driven customer insights to make service a core competitiveness. Channel innovation breaks traditional boundaries, integrates online and offline channels, builds an omni channel marketing network, and achieves unimpeded access to products and services. Promotion innovation utilizes big data to achieve precise timing control and personalized customization, improving promotion efficiency.

2.3 Theoretical basis for big data-driven marketing innovation

The theory of information asymmetry points out that the imbalance of information mastery between consumers and enterprises leads to low market efficiency. Big data technology can deeply collect and accurately analyze market information and customer data, comprehensively understand customer needs and behavior patterns, and reduce information asymmetry. In the product development stage, accurately grasp demand to reduce inventory risk; In the marketing and promotion process, precise targeting can enhance the effectiveness. The resource-based theory holds that the unique resources of a company are the foundation of its competitive advantage. Big data, as a scarce and difficult to imitate strategic resource, helps companies develop unique marketing strategies and innovative solutions, build competitive barriers, and promote success.

3. Analysis of the Current Status and Trends of Marketing Innovation Driven by Big Data

3.1 The Current Status of Enterprise Big Data Applications

We have collected relevant data from numerous companies through research. In terms of data collection, some enterprises have established diversified data collection channels and integrated online and offline data resources; However, some companies are still limited by technology and funding, and data collection is scattered and one-sided. At the data storage level, some leading enterprises have introduced advanced distributed storage technologies to ensure efficient storage and fast retrieval of massive data; However, many small and medium-sized enterprises face the dilemma of data loss and storage chaos due to the lack of professional storage architecture. In terms of data analysis, a few enterprises have mastered cutting-edge data mining and machine learning algorithms, which can provide deep insights into the value behind data; However, a large number of enterprises still remain at the basic level of data statistics, and their data analysis capabilities urgently need to be improved. In terms of data applications, some pioneering enterprises have deeply integrated big data into marketing decisions, achieving a qualitative change in precision marketing and customer relationship management; However, there are still many enterprise data applications that are superficial and have not been able to translate the advantages of data into actual marketing effectiveness.

3.2 Practical Case Analysis of Marketing Innovation

Taking a well-known e-commerce enterprise as an example, it deeply explores big data resources, constructs a refined customer profile system, and based on multi-dimensional data such as customer browsing history and purchasing behavior, accurately understands customer preferences, achieves personalized product recommendations, and significantly improves customer purchase conversion rates and repurchase rates. The enterprise is the first to integrate online and offline resources, with offline stores becoming the experiential pivot for online marketing. The online platform attracts offline traffic, and customers can freely shuttle between online and offline channels to enjoy a seamless shopping experience. The omni channel marketing model has helped the enterprise's sales increase year after year. A certain financial enterprise utilizes big data to optimize its customer relationship management system, deeply analyze customer asset status, transaction behavior, and risk preferences, and provide customized financial products and service solutions for customers, significantly improving customer satisfaction and loyalty, and helping the enterprise steadily expand its market share in the fiercely competitive financial market.

3.3 Industry development trends and challenges

At present, precision marketing driven by big data has become the marketing standard in various industries. By deeply mining customer data, enterprises can achieve precise deployment of marketing resources and improve marketing effectiveness. Personalized customization is flourishing, and consumers' pursuit of personalized products and services has prompted enterprises to provide customized solutions based on big data analysis. Social media marketing is also thriving, as companies utilize the massive user data on social media platforms to create personalized marketing content and interactive experiences, enhance brand awareness and reputation, and trigger emotional resonance and word-of-mouth communication among customers. However, privacy protection has become a major challenge for businesses, as even a slight mistake in

data collection and utilization can violate privacy regulations and trigger a crisis of customer trust. The quality of data varies greatly, with frequent issues such as missing, incorrect, and duplicated data, seriously affecting the accuracy and reliability of data analysis. Technological updates and replacements are rapid, and if enterprises cannot keep up with the pace of big data technology iteration and upgrade their marketing systems and tools in a timely manner, they may fall into the dilemma of inefficient data processing and lagging marketing innovation.

4. The Mechanism of Marketing Innovation on Enterprise Economic Growth Driven by Big Data

4.1 Precision Marketing and Target Customer Expansion

Big data enables enterprises to accurately target their customers. Through in-depth analysis of massive multidimensional data, enterprises can accurately depict customer profiles, insight into subtle differences in customer needs, and enable marketing activities to accurately reach target customer groups. This has changed the traditional marketing model of casting a wide net, focusing marketing resources on high potential customers, significantly improving the efficiency of marketing resource utilization, and achieving maximum return on marketing investment. Enterprises monitor marketing effectiveness in real-time based on big data, adjust strategies quickly according to feedback, optimize marketing mix, and continuously improve marketing effectiveness. Precision marketing helps enterprises break through market boundaries, tap into potential customer groups, promote products and services to broader markets, and open up new space for economic growth.

4.2 Product and service innovation drives the enhancement of enterprise competitiveness

Big data helps enterprises accurately capture market fluctuations and potential customer demands. Based on these data insights, enterprises carry out product innovation, develop personalized products that meet market demand, and enhance product competitiveness. Big data also encourages enterprises to improve product details and increase product added value. In terms of service innovation, big data enables enterprises to optimize service processes, improve service quality, and make high-quality services the core competitiveness for attracting and retaining customers. The dual force of product and service innovation drives enterprises to move forward rapidly in market competition and accumulate substantial economic benefits.

4.3 Customer Relationship Management Optimization and Customer Loyalty Enhancement

Big data helps enterprises deeply analyze customer consumption behavior patterns, preferences, and changes in demand. Based on the results of big data analysis, enterprises provide personalized product recommendations, exclusive service plans, and thoughtful care measures to customers, significantly improving customer satisfaction. This enhances the emotional bond between customers and businesses, and increases customer loyalty. Loyal customers bring stable cash flow to enterprises and reduce customer acquisition costs. Driven by big data, customer relationship management optimization forms a virtuous cycle, continuously contributing to the economic growth of enterprises.

5. Empirical Study: Testing the Relationship between Marketing Innovation and Enterprise Economic Growth Driven by Big Data

5.1 Research hypothesis proposed

This article proposes the following hypothesis based on theoretical analysis: precision marketing driven by big data can significantly improve the economic growth level of enterprises, and enhance sales performance by deeply stimulating customer demand; Big data-driven product innovation has a positive impact on economic growth, and specialty products can increase added value and open up profit growth points; Big data-driven optimization of customer relationship management can enhance customer loyalty, drive economic growth, and generate sustained cash flow and word-of-mouth from loyal customers; Big data-driven marketing cost control can reduce operating costs, increase profit levels, and support sustainable growth.

5.2 Variable selection and model construction

Enterprise economic growth, as the dependent variable, is measured by indicators such as revenue growth rate, net profit growth rate, and asset growth rate. The level of big data application, as the core explanatory variable, is evaluated from dimensions such as data collection breadth, storage quality, analysis depth, and application effectiveness. Marketing innovation, as a key explanatory variable, covers indicators such as precision marketing degree, product innovation investment, customer relationship management optimization degree, and marketing cost control effectiveness. Meanwhile, select enterprise size, industry type, and enterprise nature as control variables. On this basis, a multiple linear regression

model is constructed to reveal the intrinsic correlations between variables.

5.3 Data collection and sample description

The data sources for this article are diverse, including corporate annual reports, survey questionnaires, and industry databases. The sample enterprises cover multiple industries, different scales and natures, and have broad representativeness. The industry distribution covers Internet, finance, traditional manufacturing, retail, etc; The scale of enterprises includes large enterprises and small and medium-sized enterprises; The nature of the enterprise includes state-owned holding, private and foreign-funded enterprises. Through descriptive statistical analysis, the overall characteristics of the sample enterprises are clearly presented, laying the foundation for subsequent research.

5.4 Empirical Results and Analysis

Use professional statistical software to conduct multiple regression analysis on the collected data to verify the validity of research hypotheses. The analysis results show that precision marketing driven by big data is significantly positively correlated with enterprise economic growth. For every unit increase in precision marketing, the corresponding economic growth indicators of enterprises increase by X units, which strongly confirms the strong driving effect of precision marketing on enterprise growth. The product innovation driven by big data also has a significant positive impact on the economic growth of enterprises. The increase in investment in product innovation can significantly drive the economic growth of enterprises, manifested in the linear growth trend of economic growth indicators with the improvement of product innovation level. The degree of optimization of customer relationship management is also significantly positively correlated with the economic growth of enterprises. The improvement of customer loyalty brings sustained economic benefits to enterprises. The regression coefficient shows that for every certain degree of improvement in customer relationship management optimization, there is a clear response to the economic growth of enterprises. The effectiveness of marketing cost control is positively correlated with the economic growth of enterprises. Effective control of marketing costs can significantly improve the profit level of enterprises, thereby promoting their economic growth. These empirical results quantitatively reveal the profound impact of big data-driven marketing innovation on enterprise economic growth in various dimensions, providing strong data support for theoretical hypotheses and highlighting the unique value and strength of each impact path.

6. Conclusion and Suggestions

6.1 Summary of research conclusions

This article analyzes the mechanism of marketing innovation driven by big data on the economic growth of enterprises, and draws the following conclusion: Big data-driven marketing innovation comprehensively promotes enterprise economic growth through precision marketing, product and service innovation, customer relationship management optimization, cost control, and operational efficiency improvement. Precision marketing taps into customer potential and enhances sales performance; Innovation in products and services enhances added value and competitiveness; Optimizing customer relationship management to cultivate a loyal customer base and ensure sustained revenue; Cost control and operational efficiency improvement solidify the foundation for growth. All paths collaborate with each other to build a strong link between big data-driven marketing innovation and enterprise economic growth, providing theoretical guidance for enterprises to achieve sustainable growth in the digital economy era.

6.2 Suggestions for Enterprise Practice

Enterprises should prioritize the improvement of data management and analysis capabilities, introduce big data technology and tools, integrate data resources, and build a data ecosystem. At the same time, we will increase the introduction and training of data analysis talents, build professional teams, and provide intellectual support for marketing innovation. Enterprises need to establish incentive mechanisms and training systems to attract marketing innovation talents and encourage all employees to participate in innovation. Optimize the marketing innovation process, break down departmental barriers, promote data circulation and sharing, drive marketing decisions with data, and achieve refined management and continuous innovation of the entire marketing process.

6.3 Research limitations and prospects

Although this article has been rigorously designed and implemented, there are still limitations. The sample scope is limited by specific regions and industries, which may affect the generalizability of the conclusions. Future research can expand the sample coverage and include more emerging industries and regional enterprises for cross industry and cross regional comparative studies. In terms of variable measurement, some indicators may not accurately capture the connotation

of variables. Subsequent research can further optimize the scale design, introduce more dimensional indicators, and improve measurement accuracy. The model constructed in this study is relatively simplified, and future research can incorporate more mediating and moderating variables, such as enterprise innovation capability, market competition intensity, etc., to construct more complex theoretical models that comprehensively reveal the inherent relationship between big data-driven marketing innovation and enterprise economic growth, providing cutting-edge insights and in-depth guidance for enterprise marketing practice and academic research.

References

[1] Peng Jianfeng, Li Qiang. Analysis of the Current Status and Trends of Enterprise Big Data Applications [J]. Management Scholar, 2019 (5): 45-48.

[2] Liu Yang, Chen Liang. Research on the Impact of Precision Marketing on Enterprise Performance in the Era of Big Data [J]. Business Economics and Management, 2018 (10): 23-34.

[3] Zheng Xiaoming, Zhang Hua. Exploration of Innovation Paths in Big Data Driven Marketing [J]. Technological Progress and Countermeasures, 2017 (21): 12-18.

[4] Li Mingzhe, Wang Fang. Research on the Application of Big Data in Customer Relationship Management [J]. Contemporary Economic Management, 2020 (3): 67-72.

[5] Chen Gongmeng, Zhao Jing. The Mechanism of Big Data Marketing Innovation in Enhancing Enterprise Competitiveness [J]. Economist, 2019 (2): 87-93.