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Research on the Impact of Digital Economy on Traditional Business and Transformation Strategies

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Abstract: This article focuses on the impact of the digital economy on traditional business and transformation strategies. As the core driving force of economic development in the 21st century, the digital economy promotes the transformation of traditional business from a linear value chain to a networked ecosystem by reconstructing business models, changing consumer behavior, and optimizing industrial chain collaboration. The rapid development of China's digital economy in terms of scale, infrastructure, and industrial integration provides technical support and practical scenarios for the transformation of traditional business. Traditional business faces challenges such as low digitalization levels and shortages of talent and funds during the transformation process. It needs to break through by adopting strategies such as technology sharing, industrial collaboration, marketing adjustments, and model innovation. This study shows that traditional business needs to deeply integrate digital technology and build an ecological development model to achieve sustainable development in the digital age.

Key words: Business model reconstruction, Digital transformation, Industrial synergy, Change in consumption behavior, Transformation strategy

1. Introduction

As a disruptive force, the digital economy is the main engine of economic development in the 21st century, profoundly reconstructing the underlying logic and development paradigm of traditional business, and bringing huge opportunities and challenges to the transformation of traditional business [1]. This article analyzes the multi-dimensional impact of the digital economy on traditional business, combines typical cases and empirical experience, systematically explores the transformation strategies and development paths of traditional business, and provides theoretical references and practical guidelines for the sustainable development of traditional business in the digital age.

2. Digital Economy and Traditional Business

2.1 Overview of the Digital Economy

The digital economy refers to an economic form that achieves rapid optimal allocation and regeneration of resources through big data and realizes high-quality economic development [2]. In other words, it is an emerging business form where data, as a production resource, directly or indirectly participates in production. The digital economy stems from the development and application of information technology. By enhancing the efficiency of the entire information industry and improving the operation mode of traditional industries, it has raised the overall economic level. In a broad sense, the digital economy encompasses both the technical and application levels. The technical level includes emerging industries such as big data, cloud computing, 5G communication, artificial intelligence, and the Internet of Things [3]. The application level encompasses industries that directly or indirectly utilize data to optimize resource allocation and enhance production efficiency, such as intelligent manufacturing and intelligent retail. These industries place greater emphasis on the application of digital and Internet technologies within their sectors.

2.2 Overview of Traditional Business

Traditional business refers to the business form that produces and sells products and services in accordance with traditional models. Enterprises usually have their own production plants or equipment and adopt traditional production processes or methods to produce goods, and sell goods to consumers through traditional channels. In a broad sense, traditional businesses include retail, wholesale, manufacturing and service industries [4].

However, in the current market environment and economic operation, traditional business has some limitations [5-6]. Firstly, the start-up cost and operating cost are relatively high. Enterprises need to establish and maintain supply chains, sales channels, etc., and continuously invest a large amount of funds and resources, which can easily lead to "sunk costs". Secondly, traditional commercial enterprises have weak response capabilities. Today, consumer demands are diverse and there are numerous segmented markets. Traditional enterprises find it difficult to adapt to emerging demands and technologies. In the current rapidly changing market environment, traditional business competition has intensified and they are facing the risk of exit.

3. The Digital Economy is Developing Rapidly

In recent years, China's digital economy has achieved remarkable development accomplishments that have attracted worldwide attention. It has made significant progress in economic scale, infrastructure construction, and industrial integration, providing a powerful endogenous impetus for the sustained and healthy development of the economy and society.

First, the proportion of the digital economy has significantly increased. In 2024, the added value of core digital economy industries such as computers, communication equipment, software development, information technology services, big data services, and Internet of Things services accounted for about 10% of GDP. By the end of November 2024, the number of enterprises in the core industries of the digital economy had reached 4.5741 million, representing a year-on-year growth of 17.99%. In 2024, the digital industry achieved business revenue of 35 trillion yuan, a year-on-year increase of 5.5%, and realized a total profit of 2.7 trillion yuan, a year-on-year increase of 3.5%, which were 3.4 percentage points and 6.8 percentage points higher than the revenue growth rate and total profit growth rate of large-scale industrial enterprises across the country respectively.

Second, the infrastructure of the digital economy has been continuously improved. By the end of 2024, the total number of 5G base stations in China had reached 4.251 million, accounting for 60% of the global total. 207 gigabit cities had been built, and the total computing power had increased by 16.5% compared with the end of the previous year, providing a solid foundation for the development of the digital economy. The total volume of data production in China increased by 25% year-on-year. The data element market has been continuously expanding new space, and the advantages of data as a new type of production factor have been fully exerted. China has built the world's largest fiber-optic and mobile broadband networks. The length of optical cable lines has increased from 14.79 million kilometers in 2012 to 72.88 million kilometers by the end of 2024, a growth of 3.92 times. A total of 4.25 million 5G base stations have been built and put into operation, and the number of 5G users has exceeded 1 billion, with a penetration rate of over 71%, accounting for three quarters of the global total.

Third, the digital transformation of industries has been continuously advanced. Digital technology is widely applied in all walks of life. The deep integration of the digital economy and the real economy has significantly enhanced production efficiency and product (service) quality. By the end of 2024, over 30,000 basic-level smart factories, more than 1,200 advancy-level smart factories, and over 230 outstanding smart factories had been built across the country. Additionally, over 4,000 5G factories had been established. The penetration rate of digital tools in industrial enterprises was 84.1%, covering over 80% of major manufacturing industries. The average product development cycle of factories was shortened by 28.4%. The average production efficiency increased by 22.3%, the average defect rate decreased by 50.2%, and the average carbon emissions decreased by 20.4%. The scale of the national online retail market has ranked first in the world for nine consecutive years, growing from 8 trillion yuan in 2012 to 46.83 trillion yuan in 2023, with an average annual growth rate of 20.3%.

4 The Multi-dimensional Impact of the Digital Economy on Traditional Business

4.1 Business Model Deconstruction and Value Chain Reshaping

Digital technology has given rise to new business forms such as platform economy, sharing economy and intelligent delivery,

providing new development paths for traditional business and promoting the transformation of traditional linear value chains towards networking and ecologicalization. The traditional "end-to-end" business model of production - transportation - delivery has changed, and the "network-to-network" model is emerging. Through online platforms, transaction activities have broken through the limitations of time and region. Traditional businesses can extend to broader markets, and the market boundaries have expanded from a certain point in the past to the global market [7]. Transactions that were previously difficult to achieve in the physical market can now be easily realized. By building a new digital logistics center, Yongning County in Ningxia has achieved a 100% coverage rate of township trade centers, a 100% delivery rate to villages, and a 100% coverage rate of rural e-commerce. In 2024, the county's total retail sales of consumer goods reached 2.738 billion yuan, and the e-commerce transaction volume was as high as 6.97 billion yuan. It is precisely because of the integration of existing resources that the superimposed advantages of "online ultra-large-scale data" and "offline ultra-large-scale market" can be formed, reshaping the "networked" value chain and greatly expanding the market scale.

4.2 Changes in Consumer Behavior and Upgrading of Demands

In the digital age, the connection between the consumption process and the production process is becoming increasingly blurred [8-9]. Consumers' personal participation in product design and creation has become a new trend, driving consumption behavior towards personalization, experience, and socialization. Consumers are paying more attention to diverse demands, and unique shopping experiences and after-sales services have also become hallmarks of personalization. Social media has become the main channel for consumers to obtain information and evaluations about goods and services, and consumers rely on social media to make consumption decisions. In addition, consumers also pay attention to the connotations contained in the products and services themselves. The unique cultural and tourism connotations have become a powerful "engine" for consumption. The "village supermarkets" in Guizhou have greatly driven the development of multiple traditional businesses such as tourism and catering in Rongjiang County. During the competition period, local life service orders in Rongjiang County increased by 3.4 times year-on-year, catering and leisure entertainment orders increased by more than 3 times, and hotel orders soared by 164 times. The 2025 Jiangsu City Football League quickly went viral online. During the competition, the total number of tourism orders in Jiangsu Province increased by nearly 10% year-on-year, among which the orders for air tickets, hotels and scenic spot tickets rose by 9%, 10% and 19% respectively. Anhui Andeli Group has created an "agriculture + retail" business model, developing consumption formats such as picking gardens, farmhouses, and rural homestays, making the production process itself a part of the consumption experience.

4.3 Industrial Chain Synergy and Efficiency Revolution

Digital technology has driven the industrial chain to shift from one-way transmission to real-time collaboration [10]. The real-time sharing of production systems and consumer big data has made large-scale customized production a reality. By integrating the artificial intelligence visual recognition system with 5G communication technology, millisecond-level comprehensive inspection of products on the production line can be carried out. In addition, the transportation and retail industries can also utilize digital technologies to achieve more efficient commodity turnover rates and internal operational efficiency. Through digital transformation, the hot rolling workshop of Tangsteel Company of Hebei Iron & Steel Group has seen a 20% increase in production efficiency and a 15% decrease in energy consumption. The collaboration between upstream and downstream has been enhanced, significantly improving the response speed and efficiency of the supply chain and enhancing the efficiency of resource allocation. Jd.com has utilized big data analysis to optimize inventory management, reducing inventory overstock and local stockouts.

5. Traditional Business Transformation Strategies

The rapid development of the digital economy has had a huge impact on the market share and profit margins of traditional industries. If they fail to integrate with the digital economy in a

timely manner, traditional economies will face the risk of market exit. The first is to impact the traditional retail industry. The rise of e-commerce platforms such as JD.com and Pinduoduo has put the traditional retail industry under tremendous competitive pressure. Many brick-and-mortar stores have seen a significant decline in sales and even been forced to close down due to their inability to compete with the convenience and price advantages of online platforms. The second is to impact the traditional advertising industry. The Internet has become the main source for people to obtain information, and the advertising revenue of traditional media such as newspapers and television has been greatly eroded by online advertising. In 2024, the market size of Internet advertising in China reached 758.36 billion yuan, up 6.1% year-on-year (). Thirdly, it affects traditional manufacturing industries: The advancement of intelligent manufacturing has posed challenges to traditional production methods. Enterprises need to introduce advanced production technologies and information management systems to achieve intelligent and automated production, and improve production efficiency and product quality.

However, traditional businesses are facing several difficulties [11]. One is that the digitalization level of traditional business forms is generally low. Due to high costs, traditional businesses, especially in county-level areas, are unable to build highly digitalized infrastructure, such as automated warehousing and smart logistics. Most traditional businesses remain at the primary stage of scanning codes for payment. The second is the bottleneck of talent and funds. Traditional enterprises generally lack professional teams with the capabilities of data analysis and platform operation. The third point is that the pressure on transformation funds is huge. The digital transformation ecosystem of traditional business is not perfect, and most enterprises have limited financial resources, which leads to digital shortcomings in traditional business.

5.1 Technology Sharing Strategy

By introducing digital intelligent devices provided by suppliers, the problem of insufficient investment by individual enterprises can be effectively solved. This model is particularly suitable for the group of small and medium-sized enterprises with limited funds [12]. Traditional businesses can introduce new technologies such as intelligent manufacturing, big data, and cloud computing, integrate them with existing production and services, optimize production processes, enhance efficiency, and achieve the intelligence and automation of products and services. After Xianyang Pharmaceutical Industry Group introduced AGV automatic guided vehicles and WMS systems, its logistics efficiency increased by 30%, labor costs decreased by 20%, and the entire process of material transportation was traceable. Through the construction of a smart weaving factory, Zibo Hairun Silk has increased its production capacity by 30%, improved product quality by 15%, and reduced raw material consumption by 25%. These cases prove that the digitalization of the production process is the core entry point for the transformation of traditional businesses. Enterprises can also take the management link as the entry point to achieve real-time sharing and efficient transmission of information. They can utilize the ERP system to integrate and share internal information within the enterprise, thereby enhancing management efficiency.

5.2 Strategies for Coordinated Industrial Development

Relying on traditional enterprises to carry out digital transformation on their own not only incurring huge costs but also leading to redundant construction and waste of resources. For industries with a large number of enterprises, an industrial coordinated development strategy can be adopted: First, strengthen cooperation with upstream and downstream enterprises. Establish a digital supply chain platform to achieve information sharing and business collaboration, and enhance the response speed and efficiency of the supply chain. For instance, mobile phone enterprises can establish a digital supply chain platform with component suppliers to achieve real-time order transmission and collaborative inventory management. They can also promote collaborative innovation in the process of collaborative production and technology sharing, thereby enhancing the overall competitiveness of the industrial chain. The second is to optimize the industrial chain layout. Mergers and reorganizations are important means to reduce ineffective competition in industries and improve resource

utilization. Traditional businesses can utilize digital technologies to optimize and restructure industry resources such as production capacity and orders, achieving efficient collaboration within the industry and optimal resource allocation, and promoting the industry to become a high value-added industry.

5.3 Adjust the Marketing Strategy

For traditional businesses that focus more on sales, big data technology can be utilized to collect consumers' consumption habits, interests and hobbies, etc., for in-depth analysis, so as to accurately identify target customers, expand online sales channels, achieve the integration of online and offline, and adapt to the digital economy era [13]. First, enhance brand influence and user stickiness through new channels such as social media and e-commerce platforms. For instance, an increasing number of brands have begun to join social media platforms such as "Xiaohongshu" and "Bilibili" to interact with consumers, publish attractive, high-quality and valuable content, offer personalized marketing services, and convey brand stories and values. This not only enhances brand awareness but also increases user stickiness. The second is to conduct personalized marketing through consumer profiling. Produce personalized products and services based on consumer profiles, establish close contact with consumers, respond to consumers' inquiries and feedback in real time, and promptly carry out subsequent iterations and upgrades of products and services based on the feedback. The third is to launch on e-commerce platforms. Through e-commerce platforms and mobile applications, a convenient shopping experience is provided. Combined with big data analysis, precise marketing can be achieved. It can also realize the model of online traffic diversion and offline consumption, improving the consumer experience. Marketing and brand building.

5.4 Model Innovation Strategy

The government can also promote the digital transformation of traditional businesses [14-15]. First, the government can promote the construction of digital platforms to attract users, partners and third-party developers, jointly create value and form an ecosystem. By optimizing the operation mechanism of the platform and providing efficient services and support, the healthy development of the platform can be ensured. The second is to improve the data element market system. We will advance the reform of the data property rights system and establish a classified and graded rights confirmation and authorization system for public data, enterprise data and personal data. For instance, Xianyang City has joined forces with 31 enterprises to form an industrial digital transformation service alliance and launched a special action for the "intelligent transformation and digital transition" of small and medium-sized enterprises, aiming to reduce transformation risks through institutional innovation. The third is to build an innovative data ecosystem. The "government guidance - enterprise leadership - public participation" three-dimensional linkage framework constructed by Zhongcheng Wanqi has formed a digital foundation covering all elements of the county. This platform achieves a qualitative change of county-level data from dormant resources to liquid assets through a data value closed loop of "elementized collection - productized processing - assetization rights confirmation - securitization circulation". In the pilot program in Yunnan, more than ten innovative business forms have emerged, such as the "Digital Culture and Tourism Consortium" and the "Smart Logistics Community".

6. Conclusion

The digital economy has a profound impact on traditional business. Enterprises need to actively respond to challenges, seize opportunities, and achieve digital transformation, enhance competitiveness, and realize sustainable development through technological innovation, industrial collaboration, talent cultivation, adjustment of marketing strategies, and optimization of management models.

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