International Journal of Social Sciences and Public Administration
ISSN: 3005-9836 (Print), ISSN: 3005-9585 (Online) | Volume 4, Number 1, Year 2024
DOI: https://doi.org/10.62051/ijsspa.v4n1.05
Journal homepage: https://wepub.org/index.php/IJSSPA/index

The Impact of Digital Economy and Digital Transformation on Corporate Competitiveness

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ABSTRACT

With the deepening development of the digital economy, digital transformation has emerged as a pivotal avenue for enterprises to enhance competitiveness and is also an inevitable choice for a nation to achieve high-quality development. As essential participants in the market economy, enterprises are delving into the comprehensive study of the impact and pathways of digital transformation on competitiveness. This exploration holds paramount significance for the development and decision-making processes of enterprises. In the stage of convergence between digital technology and the tangible economy, digital technology provides enterprises with an effective pathway for enhancing competitiveness. However, the current state of digital transformation in Chinese enterprises remains at a rudimentary stage, encountering challenges such as a low strategic position, inadequate forward planning, and inconspicuous value benefits. These issues severely constrain the enhancement of competitiveness through digital transformation in enterprises. Therefore, a thorough exploration of the current status of digital transformation in China, an analysis of its impact on enterprise competitiveness, and an examination of the effects produced under different company characteristics not only contribute to the sustainable development of enterprises but also hold significant implications for the continued advancement of China's digital economy. This study enriches the research on enterprise digital transformation in the context of the digital economy and supplements the investigation of factors influencing corporate competitiveness. The research provides empirical evidence and a reference basis for government policymaking related to enterprise digital transformation and for enterprises devising strategies in this realm. It holds significant reference value and guiding significance for further advancing digital transformation practices among Chinese enterprises.

KEYWORDS

Digital Economy; Digital Transformation; Corporate Competitiveness.

1. INTRODUCTION

In recent years, with the vigorous development of internet technology and information communication technology, emerging technologies such as big data, cloud computing, artificial intelligence, and blockchain have emerged and evolved. These advancements have propelled the global development of the digital economy. The unprecedented speed, extensive reach, and profound impact of the digital economy are becoming a key force in restructuring global resource factors, reshaping the global economic structure, and altering the global competitive landscape.

In the backdrop of the new era of digital development, countries worldwide are actively striving to advance digital construction. They are implementing strategies for digital transformation, designing plans for the digital development of the next several years or even decades, and introducing relevant policies to support this digital evolution. For instance, the United States has released the "Advanced

Manufacturing National Strategic Plan," Japan has enacted the "Revitalization Strategy," the United Kingdom has launched the "Industrial Strategy for 2050," and France has initiated the "Future Industry Plan." Clearly, the development of the digital economy and the realization of digital transformation have become the trend for future economic and social development. In recent years, China has shifted its focus from pursuing rapid economic growth to achieving high-quality development. The country's economic and social development has entered a "new normal." Therefore, the development of the digital economy holds significant implications for China's pursuit of high-quality economic development.

At the G20 Hangzhou Summit, China, for the first time, provided a clear definition of the digital economy. The communique articulated the definition as follows: The digital economy is a series of economic activities that primarily utilize digital knowledge and information as key production factors, leverage modern information networks as essential information carriers, and employ information communication technology as a significant driving force to enhance work efficiency and optimize economic structures. Digital transformation serves as the microfoundation of the development of the digital economy and represents a strategic choice made by enterprises in response to the rapidly changing environment of the digital economy era. The impact of digital transformation on corporate competitiveness is profound. It has the potential to alter market dynamics, unveil new business opportunities, accelerate innovation, enhance production efficiency, and improve customer experiences. Enterprises must proactively engage in digital transformation to maintain competitiveness and adapt to the ever-evolving market landscape. However, digital transformation also brings forth a series of challenges, including technological implementation, cultural change, and issues related to data privacy.

Research Objectives and Methods: The objective of this study is to comprehensively explore the impact of the digital economy and digital transformation on corporate competitiveness. We will analyze key influencing factors and successful cases of digital transformation while discussing the challenges and opportunities that may arise in the process. The study will employ a comprehensive approach, including literature reviews, case analyses, and on-site investigations, to gain a thorough understanding of the practical implications of the digital economy and digital transformation for enterprises.

Through this study, we aim to provide profound insights for business leaders, policymakers, and researchers. We seek to help them better understand the role of the digital economy and digital transformation in shaping corporate competitiveness and how to address the business challenges of the digital era.

2. BASIC CONCEPTS AND THEORETICAL FOUNDATION

2.1. Fundamental Concepts

2.1.1. Digital Economy

The digital economy refers to the extensive application of digital technology in economic and business activities. It encompasses various domains, including e-commerce, digital payments, big data analytics, artificial intelligence, the Internet of Things, blockchain, and more. The digital economy provides a new impetus for global economic growth and has profoundly disrupted traditional industries and business models.

2.1.2. The Concept of Digital Transformation

Digital transformation is the process through which businesses leverage digital technologies to alter their operational methods, business models, and customer interactions. It is closely intertwined with the digital economy as it serves as a means to achieve digital economic objectives. Enterprises embark on digital transformation to address the challenges and opportunities presented by the digital economy,

adapting to the continually changing business environment. Digital transformation underscores the need for technological, organizational, and cultural changes to realize the goals of the digital economy. The primary objectives of digital transformation include enhancing efficiency, expediting innovation, improving customer experiences, and bolstering competitiveness. The driving forces behind this transformation include technological advancements, intensified market competition, shifts in customer demands, and the emergence of new business models. Digital transformation represents a strategic response by businesses to these driving forces.

2.2. Theoretical Foundation

2.2.1. Information Asymmetry Theory

Information asymmetry theory refers to the situation in economic transactions or decision-making processes where involved parties possess varying levels of information, potentially leading to unfavorable outcomes. This theory underscores how the inequality of information can impact the results of transactions, particularly when there are differences in information between buyers and sellers. In cases of information asymmetry, one party may have more information than the other, which can lead to moral hazard, adverse selection, negotiation problems, and market failures. The key to information asymmetry theory is identifying and understanding how information disparities influence economic activities and taking measures to mitigate the negative consequences of information asymmetry. This may involve enhancing transparency, implementing regulations, and mitigating information asymmetry through contract and mechanism design.

2.2.2. Resource-Based Theory

In 1984, Wernerfelt first introduced the Resource-Based Theory in his work "A Resource-Based View of the Firm." According to this theory, resources that are valuable, unique, and non-replicable can be transformed into capabilities that benefit the development of a firm. Different types of resources, including tangible assets and human capital, as well as intangible assets such as information, reputation, and organizational structure, exhibit heterogeneity. The existence of such heterogeneous resources can lead to a competitive advantage for the firm. Through digital transformation and the application of digital technologies, enterprises can access more detailed information resources. According to information theory, enough information helps companies refine their production and operational decisions, further enhancing competitiveness. Simultaneously, digitization also aids in optimizing the structure of human capital, demanding higher standards for human resources. By elevating the level of human capital, enterprises can acquire high-quality human resources, providing a continuous driving force for achieving a competitive advantage.

2.2.3. Empowerment Theory

The term " Empowerment " in Chinese management has its roots in the Western field of management, and its connotations have gradually expanded over time. Current research predominantly categorizes the empowerment process into three levels: psychological empowerment, resource empowerment, and structural empowerment. Psychological empowerment emphasizes altering the psychological activities of organizational members, providing them with intrinsic motivation and inner drive, subjectively guiding them to enhance personal capabilities. Resource empowerment focuses on the organization's ability to acquire and effectively manage resources, while structural empowerment places emphasis on achieving power distribution by altering the objective and external environment.

From the viewpoints of resource empowerment and structural empowerment, on one hand, the accumulation of extensive user data assists enterprises in accurately forecasting consumer demands and determining the direction of technological innovation. Innovation is regarded as a key factor for enterprises to sustain long-term competitiveness. On the other hand, the informational advantages of digital technology break down business barriers between departments, fostering the internal flow and sharing of information within the enterprise. This method of integrating internal human resources and

knowledge elements enables enterprises to establish an intelligent, rational, and efficient "information + system" operational management model, thereby elevating the level of competitiveness.

3. KEY FACTORS OF DIGITAL TRANSFORMATION

3.1. The Significance of Technological Infrastructure

The success of digital transformation relies on a robust and reliable technological infrastructure. Technological infrastructure encompasses the hardware, software, networks, and data storage facilities that support digital transformation. It furnishes essential resources for businesses to handle data, support applications, connect devices, and ensure information security. Technological infrastructure delivers critical functionalities for data storage and processing, enabling businesses to efficiently collect, store, and analyze large-scale data.

Technologies such as big data analytics, data mining, and machine learning depend on scalable data storage and processing capabilities. These technologies play a crucial role in optimizing decision-making, improving efficiency, and fostering innovation. Cloud computing is an integral component of technological infrastructure. It enables businesses to access elastic computing resources without the need to establish and maintain their own data centers. Cloud computing provides flexibility and cost-effectiveness, supporting enterprises in addressing rapidly changing demands and driving the development of digital transformation. A robust network infrastructure is fundamental to digital transformation. Reliable infrastructure support is required for high-speed internet connections, IoT devices, and communication networks. These network connections enable businesses to achieve real-time data transmission, remote work, and global collaboration, thereby enhancing efficiency and response speed. Technological infrastructure also encompasses the assurance of information security and data privacy. Businesses must invest in measures such as network security, authentication, and data encryption to ensure that sensitive information is not accessed without authorization. Ensuring security and privacy is a fundamental prerequisite for digital transformation. Technological infrastructure must be scalable and flexible to adapt to ever-changing demands. Enterprises may need to adjust and expand their infrastructure during digital transformation to meet new technological and business requirements.

3.2. Data-driven Decision-making

One of the cores of digital transformation is the ability to effectively collect, analyze, and leverage data to support decision-making. Data-driven decision-making means that businesses rely on data and analytics to guide their strategies, operational processes, and innovation. Data forms the foundation of digital transformation, encompassing both internal and external data, such as customer data, market trends, sales data, operational metrics, and more. The collection and organization of data constitute the first step in digital transformation, providing businesses with insights and materials for decision support. Data analysis is the process of transforming data into useful information. It involves technologies such as data mining, machine learning, statistical analysis, and predictive modeling. Data analysis can reveal trends, patterns, and opportunities, helping businesses better understand market dynamics and customer behavior.

Advantages of data-driven decision-making:

Better Decision-Making: Data-driven decision-making helps reduce subjective decisions and speculation-based risks, improving the quality of decisions.

Rapid Market Response: Data analysis can quickly identify market changes and customer demands, making businesses more flexible and agile.

Personalized Services: By understanding customer needs and preferences, businesses can offer more personalized products and services, enhancing customer satisfaction.

4. THE CORRELATION BETWEEN THE DIGITAL ECONOMY AND COMPETITIVENESS

There is a close connection between the digital economy and corporate competitiveness, encompassing aspects such as innovation, cost-effectiveness, customer experience, and market expansion. The digital economy has become a key factor for businesses to gain a competitive advantage, offering new opportunities for long-term success.

4.1. The Digital Economy is a Source of Innovation

The digital economy serves as today's engine of innovation, bringing limitless possibilities for businesses. Through in-depth data analysis, enterprises can gain more accurate insights into market trends and user demands, inspiring new business models. Disruptive technologies like artificial intelligence and cloud computing provide outstanding tools for businesses, enhancing efficiency and fostering the creation of novel products. The digital economy has also given rise to innovation ecosystems, prompting collaborative innovation among enterprises, partners, and startups, leading to the continuous evolution of business models. Through closer interaction with users, the digital economy further propels the development of personalized experiences, allowing businesses to meet user needs more precisely.

4.2. The Digital Economy Also Provides Opportunities to Reduce costs and Enhance Efficiency

The digital economy creates unique opportunities for businesses, enabling them to achieve significant accomplishments in cost control and efficiency improvement. Through the widespread adoption of digital technologies, enterprises can simplify business processes, reduce operational costs, and enhance production efficiency. The adoption of cloud computing technology allows businesses to flexibly adjust computing resources, expanding or contracting based on demand, thereby optimizing cost structures to the fullest extent. Automated and intelligent workflows further increase productivity, reducing the time and resources required for manual intervention. The digital economy also provides the capability for big data analytics, allowing businesses to formulate more precise strategies by gaining in-depth insights into market trends and consumer behavior, thereby avoiding unnecessary waste.

4.3. The Digital Economy Provides Opportunities to enhance Customer Experience

The digital economy has created abundant opportunities for businesses, with an essential focus on enhancing customer experiences. Through the introduction of digital technologies, companies can achieve personalized services, better meeting customer needs. Online platforms and mobile applications make interactions between users and businesses more convenient, strengthening communication and relationships. Big data analytics provides businesses with the capability to deeply understand customer behavior, enabling more accurate predictions of demand and proactive fulfillment of customer expectations. Active engagement on social media platforms offers businesses a direct platform for interacting with customers, listening to their feedback, and quickly responding and adjusting strategies.

4.4. The Digital Economy Enables Businesses to More Easily Enter New Markets, Even on a Global Scale

The digital economy provides businesses with opportunities to overcome geographical limitations, making it easier for them to enter new markets, even on a global scale. Online commerce and electronic payment systems offer businesses the convenience of cross-border transactions, reducing substantial barriers to entry into new markets. Digital marketing and social media enable companies to quickly build brand awareness at lower costs, attracting international audiences. Cloud computing technology allows businesses to deploy and manage operations globally, increasing flexibility and scalability. Digital supply chain management enables more effective collaboration with global suppliers and partners.

5. SUCCESSFUL CASES OF DIGITAL TRANSFORMATION

Digital transformation is a complex process, but many companies have successfully implemented this change and achieved significant accomplishments. The following are some typical examples of successful digital transformation to help readers better understand the practical applications and effects of digital transformation.

5.1. Amazon's Digital Business Model

Amazon is one of the world's largest e-commerce and cloud computing companies, and its digital business model serves as an industry benchmark. Firstly, Amazon's core business is its e-commerce platform, offering a vast and diverse range of products. Through a convenient shopping experience, personalized recommendations, and an efficient logistics system, Amazon attracts and satisfies the needs of users worldwide. Additionally, Amazon has successfully built a powerful cloud services platform known as Amazon Web Services (AWS). AWS provides businesses with flexible and scalable cloud computing solutions, offering efficient and cost-effective IT infrastructure that drives global digital transformation. Amazon leverages digital means to deeply understand customer needs, employing big data analytics to achieve precise personalized recommendations and enhance user experience. Its open marketplace platform and partner ecosystem also provide vast opportunities for third-party sellers and developers to thrive.

5.2. Tesla's Smart Manufacturing

Tesla's smart manufacturing stands as a leading example in the automotive industry, focusing on the comprehensive integration of advanced technologies to achieve a highly automated and intelligent production process. Tesla employs a large number of robots and automated equipment, including intelligent laser welding, machine vision, and automated guidance systems, to achieve automation in multiple stages of car manufacturing. Tesla also extensively applies artificial intelligence technologies, including deep learning and machine learning, throughout the manufacturing process. These technologies are utilized to optimize production efficiency, quality control, and supply chain management. By continuously learning and optimizing, they enhance the intelligence level of the production line. Additionally, Tesla has achieved a high level of integration in digital production, enhancing production efficiency through big data analysis and IoT technology, which monitors the production process. This digital manufacturing process enables Tesla to adjust production plans more flexibly and respond quickly to market demands.

5.3. Alibaba's Digital Ecosystem

Alibaba has built a vast and comprehensive digital ecosystem, centered around the integration of e-commerce, finance, logistics, cloud computing, and various other fields. Alibaba's e-commerce

platforms, including Taobao and Tmall, offer consumers a wide range of product choices, enhancing the shopping experience through big data analysis and personalized recommendations. Alibaba's payment platform, Alipay, and financial services platform, Ant Financial (now rebranded as Ant Group), have formed a robust financial ecosystem covering multiple areas such as payments, loans, and investments, providing comprehensive financial solutions for users and merchants. In addition, Alibaba Cloud offers cloud computing services for businesses, driving digital transformation, while the logistics platform Cainiao Network optimizes the supply chain and logistics system.

5.4. The Rise of Digital Healthcare

Digital transformation has impacted the healthcare industry, with many healthcare institutions adopting electronic health records, remote medical services, and health monitoring technologies to enhance the quality and efficiency of patient care. Successful cases of digital healthcare include remote patient monitoring, online consultations with doctors, and medical image analysis.

6. CHALLENGES AND OPPORTUNITIES OF DIGITAL TRANSFORMATION

While digital transformation has brought about many opportunities, it is also accompanied by a series of challenges.

6.1. Challenges

Technical Complexity: Digital transformation involves numerous complex technologies and platforms, requiring organizations to invest significant time and resources in understanding and implementing them. The rapid evolution of technology also adds challenges to management and maintenance.

Organizational Culture: Cultural change is often one of the biggest challenges in digital transformation. Companies need to overcome resistance and inertia within traditional cultures, encouraging employees to embrace new digital ways of working.

Data Privacy and Security: With digital transformation, the collection and processing of data become more complex, increasing the risks associated with data privacy and security. Companies must invest in strengthening security measures and complying with data privacy regulations.

Investment Requirements: Digital transformation demands significant capital investment, including technology infrastructure, talent development, and research and development. This may pose a challenge for some small businesses and startups.

6.2. Opportunities

Innovation and Competitive Advantage: Digital transformation can bring about innovation and a competitive edge. By adopting new technologies and business models, companies can continuously provide unique value, attract customers, and stay ahead of competitors.

Cost Efficiency: Digital transformation can enhance efficiency and reduce costs. Through automation and process optimization, businesses can achieve higher productivity and operational efficiency.

Customer Satisfaction: Digital transformation contributes to improving customer experience. Personalized services, rapid responses, and multi-channel interactions can enhance customer satisfaction and loyalty.

Market Expansion: Digital transformation enables businesses to more easily expand into new markets. Through digital technologies, companies can overcome geographical and cultural barriers, facilitating global market expansion.

7. STRATEGY AND IMPLEMENTATION

7.1. Formulating Digital Transformation Strategy

7.1.1. Goal Setting

Companies must define the goals of digital transformation. These goals may include enhancing competitiveness, increasing market share, improving efficiency, or enhancing customer experience. Clearly defined goals help provide direction for digital transformation.

7.1.2. Needs Analysis

Companies need to analyze their current status, identifying existing bottlenecks and opportunities. This includes assessing technological infrastructure, organizational culture, skills of personnel, and market trends.

7.1.3. Formulating Strategic Plans

When formulating strategic plans for digital transformation, companies need to consider technology choices, recruitment and training of personnel, resource allocation, and timelines. Strategic plans should align with business objectives.

7.2. Implementing Digital Transformation

7.2.1. Technological Infrastructure

Ensure a robust technological infrastructure to support digital transformation. This may include cloud computing, data centers, network connectivity, and security measures.

7.2.2. Talent Development

Training and recruiting employees with digital skills are crucial. Talent development may include technical training, fostering digital thinking, and improving teamwork.

7.2.3. Data Management

Establish an effective data management strategy, including data collection, storage, analysis, and privacy protection. The quality and security of data are critical for digital transformation.

7.2.4. Monitoring and Evaluation

Digital transformation is a continuous process. Companies need to establish monitoring and evaluation mechanisms to understand whether the strategies are achieving the intended goals and make adjustments when necessary.

8. CONCLUSION

Through the research presented in this paper, we have delved into the correlation between the digital economy, digital transformation, and corporate competitiveness. We have examined key factors, success cases, and challenges in this field. The following are the main conclusions and insights derived from our study:

This paper underscores the significance of the digital economy and digital transformation for corporate competitiveness. With the rapid development of digital technologies, businesses not only need to keep pace with technological trends but must proactively adopt digital transformation

strategies to maintain competitiveness. The digital economy offers opportunities for innovation, efficiency, and market expansion for businesses, with digital transformation being the key to realizing these opportunities.

This study has identified key factors in digital transformation, including technological infrastructure, data-driven decision-making, organizational culture change, and strategic planning. These factors collectively drive the success of digital transformation. Businesses need to consider them as integral parts of an overall strategy to ensure the smooth implementation of digital transformation.

This paper presents several successful cases, including Amazon, Tesla, Alibaba, among others, demonstrating how they have achieved competitive advantages in innovation, cost efficiency, customer satisfaction, and market expansion through digital transformation. These cases provide practical experiences, showcasing the potential and value of digital transformation.

Digital transformation is not without its challenges, as this study has clearly outlined challenges such as technological complexity, organizational cultural challenges, and issues related to data privacy and security. However, digital transformation also brings opportunities in terms of innovation, cost efficiency, customer satisfaction, and market expansion. Businesses need to recognize these factors and formulate comprehensive strategies to overcome challenges and leverage opportunities.

The fields of the digital economy and digital transformation will continue to evolve, and future research can further explore how emerging technologies such as artificial intelligence, blockchain, and the Internet of Things are reshaping the landscape of digital transformation. Businesses will continuously adapt to new challenges and opportunities, aiming to maintain competitiveness and achieve success in this ever-changing environment.

In conclusion, the digital economy and digital transformation have profound implications for corporate competitiveness. This field is full of opportunities but also comes with challenges. Businesses need to define clear goals, formulate comprehensive strategies, and continually adjust to adapt to the ever-changing business environment. Digital transformation has become an essential path for businesses on the road to success, and it will continue to shape the future development of the business landscape.

REFERENCES

[1] Rohani M, Shahrasbi N, Gregoire Y. Dynamic capabilities and firm performance: the rise and fall of Charles Schwab[J]. Journal of Financial Services Marketing, 2021, 26(3): 144-159.

[2] Rohani M, Shahrasbi N, Gregoire Y. Dynamic capabilities and firm performance: the rise and fall of Charles Schwab[J]. Journal of Financial Services Marketing, 2021, 26(3): 144-159.

[3] Farzaneh M, Ghasemzadeh P, Nazari J A, et al. Contributory role of dynamic capabilities in the relationship between organizational learning and innovation performance[J]. European Journal of Innovation Management, 2021, 24(3): 655-676.

[4] Deng P, Liu Y, Gallagher V C, et al. International strategies of emerging market multinationals: A dynamic capabilities perspective[J]. Journal of Management & Organization, 2020, 26(4): 408-425.

[5] Delbari S A, Ng S I, Aziz Y A, et al. An investigation of key competitiveness indicators and drivers of full-service airlines using Delphi and AHP techniques[J]. Journal of Air Transport Management, 2016, 52: 23-34.

[6] Kim K W, Park J J, Kimjoonyup. A Study on the Promotion of Digital Transformation for Micro Enterprises: Focusing on the Factors Influencing Digital Transformation[J]. Korea Business Review, 2020, 24: 131-150.

[7] Gomez-Trujillo A M, Gonzalez-Perez M A. Digital transformation as a strategy to reach sustainability[J]. Smart and Sustainable Built Environment.