

Research on Digital Transformation Path of Enterprise Accounting Under the Background of Big Data

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Abstract: In the 21st century, the digital economy has become a new engine driving global economic growth. Accelerating digital transformation across all industries is essential for driving the transformation of China's economic quality, efficiency, and dynamism. Therefore, in the context of the big data era, the digital transformation of enterprise accounting has become an inevitable trend. This paper conducts an in-depth study on the necessity of digital transformation of enterprise accounting in the context of big data, analyzes the impact of big data on accounting work, and explores strategies and pathways for digital transformation of enterprise accounting, in order to provide reference for the sustainable development of Chinese enterprises in the big data era.

Keywords: Big Data, Enterprise Accounting, Digital Transformation.

1. Introduction

1.1. Research Background

With the rapid development of science and technology, the era of big data has arrived. In response to the requirements of the "14th Five-Year Plan" for digital economic development, the digital transformation of enterprise financial accounting has become particularly important. In the era of big data, enterprises are facing massive data resources. How to effectively utilize these data to improve the level of financial management has become a key issue for enterprise development. The rapid development of big data technology provides powerful data processing and analysis capabilities for accounting work, which helps improve the quality of accounting information. Under the national policy advocating the transformation and upgrading of enterprises, the market competition is intensifying. Enterprises have higher and higher requirements for the timeliness, accuracy, and predictability of financial data. The digital transformation of accounting has become an inevitable choice for promoting the innovative development of enterprises. In addition, with the popularization of emerging technologies such as cloud computing and artificial intelligence, the digital transformation of enterprise accounting has a good technical foundation. The digital transformation of enterprise accounting has emerged as the times require. In short, the era of big data has provided a broad space for the digital transformation of enterprise accounting, which helps improve the overall competitiveness of enterprises. This paper aims to explore the necessity of digital transformation of enterprise accounting in the context of big data, analyze the challenges and opportunities it faces, and propose corresponding strategies and suggestions.

1.2. Research Purpose

Enterprise accounting, as an important part of enterprise operation, plays a decisive role in enterprise decision-making, management, and development. However, the traditional financial accounting model has been difficult to meet the requirements of the era of big data. On the one hand, the

application of big data technology enables enterprises to obtain and process a large amount of financial data more quickly and accurately, which improves the efficiency and accuracy of enterprise accounting work; on the other hand, digital transformation can help enterprises better cope with the changes of the external environment and enhance the competitiveness and sustainable development ability of enterprises.

However, the digital transformation of enterprise accounting is not easy. It requires enterprises to invest a lot of manpower, material resources, and financial resources. It also requires enterprises to change their traditional management methods and thinking modes [1]. In this process, enterprises may face various challenges and risks. Therefore, how to achieve the digital transformation of enterprise accounting in the context of big data has become an important issue facing enterprises.

This paper will discuss the following aspects: First, analyze the necessity of digital transformation of enterprise accounting in the context of big data; second, explore the challenges faced by the digital transformation of enterprise financial accounting; finally, put forward corresponding strategies and suggestions, in order to provide reference and reference for the digital transformation of enterprise accounting in the context of big data in China.

2. Necessity of Digital Transformation of Enterprise Financial Accounting in the Context of Big Data

2.1. Improving Financial Management Efficiency

The digital transformation of enterprise accounting in the context of big data, by introducing advanced financial software and systems, realizes the automation of financial processes, which reduces the time and errors of manual processing of data, and ensures the accuracy and timeliness of financial reports [2]. Big data technology also allows enterprises to collect and analyze financial data in real-time, enabling the financial team to quickly identify trends and

anomalies, and make adjustments and decisions in a timely manner, thereby improving the responsiveness of financial management.

The digital transformation of financial accounting, by integrating modern information technologies such as cloud computing, big data analysis, and artificial intelligence, has completely changed the traditional mode of financial management. This transformation enables financial data to be automatically collected and processed efficiently, reducing the cumbersome and error-prone manual operations, and ensuring the accuracy and timeliness of financial information. In addition, the application of digital tools makes financial analysis more in-depth and rapid, helping enterprises to discover financial risks and opportunities in a timely manner, and providing more accurate decision support for management. This transformation also promotes the standardization and optimization of financial processes, improves the transparency and efficiency of financial work, and ultimately achieves the overall improvement of financial management level, laying a solid foundation for the sustainable development of enterprises. At the same time, through digital transformation, enterprises can establish more advanced decision support systems. These systems use big data analysis tools to provide effective decision-making suggestions for management, thereby improving the efficiency of financial management.

2.2. Reducing Financial Management Costs

The digital transformation of enterprise financial accounting, by introducing automated tools and software, reduces the use of manual operations and paper documents, thereby reducing labor costs and office supplies costs. Process automation and intelligent monitoring enable enterprises to quickly identify cost overruns and budget deviations, and make adjustments and optimize cost structures in a timely manner. This also reduces errors and redundant work, improves work efficiency, and indirectly reduces labor costs. Through digital tools, enterprises can better manage the supply chain and procurement processes to maximize cost-effectiveness. For example, through an electronic procurement system, enterprises can obtain better supplier quotes and terms, reducing procurement costs. In addition, enterprises can use big data analysis tools to more accurately predict market trends and financial needs, optimize capital management and investment decisions, which helps avoid financial losses caused by wrong decisions. At the same time, compared with traditional financial recording methods, digital financial records and reports are easier to meet audit and compliance requirements, reducing the time and resource investment of enterprises in the audit process.

2.3. Adapting to the Development of the Times

With the development of the times, China's social and economic growth is stable and progressive, and the domestic and international dual circulation is being built. High-quality development will have an important impact on all industries, and digital transformation can enhance the growth potential of industries and enterprises. The "14th Five-Year Plan" proposes to accelerate digital development, build a digital economy, digital society, and digital government, and create a good digital ecosystem, building a digital China. [3] The digital age puts forward an inevitable requirement for the digital transformation of enterprise accounting. Accelerating the digital transformation of enterprise accounting is not only

the inevitable choice for implementing the national informatization development strategy, promoting the deep integration of digital economy and real economy, and building a digital China, but also of great significance for promoting the expansion of accounting functions, improving the level of accounting work in China, and improving the level of accounting informatization. China is experiencing the fourth industrial revolution of rapid technological development and technological rapid iteration. Digital technologies such as big data, artificial intelligence, mobile Internet, cloud computing, Internet of Things, and blockchain are developing rapidly, and application scenarios are deepening, enabling the digital transformation of the economic society to start and advance comprehensively. This brings new opportunities for the digital transformation of accounting informatization application scenarios in the new era, and also brings unprecedented challenges. In this context, the application of big data is growing exponentially, and the role and support of the digital economy in China are more obvious. Therefore, enterprise accounting needs to be in line with the development requirements of the times, promote its transformation towards digitization.

2.4. Realizing Resource Sharing

In the era of rapid development of science and technology, the diversity and complexity of data make the traditional financial management model unable to meet the requirements of modern enterprises. In order to improve the efficiency and accuracy of financial management, enterprises need to introduce advanced information technologies such as cloud computing, big data analysis, and artificial intelligence to carry out the digital transformation of enterprise accounting. Secondly, in the context of big data, enterprises need to integrate internal and external resources to optimize financial management. By establishing a financial sharing center, enterprises have realized the standardization and process of financial management. While improving the efficiency of financial work, the sharing of financial centers is conducive to the centralized allocation of financial resources. Through the rational use of big data technology, enterprises can create a more comprehensive and complete accounting resource sharing system, and install mobile device interfaces in all departments to expand the coverage and types of accounting information collection, and improve the effective integration between industry and finance. While improving the phenomenon of "information island", the collection of accounting information is more convenient and timelier.

3. Challenges of Digital Transformation of Enterprise Accounting in the Context of Big Data

3.1. Accounting Data Management and Security

Accounting information is a true reflection of an enterprise's cash flow, business results, and financial status, and its importance to enterprise financial management is unquestionable. In the context of big data, the digital transformation of enterprise accounting needs to process massive data. On the one hand, this makes it easier and faster for enterprises to obtain and utilize data, improving the efficiency and accuracy of enterprise financial management.

On the other hand, it also exposes enterprises to unprecedented information security risks. As the degree of enterprise digitization increases, many enterprises adopt cloud computing services to store and process accounting data, making accounting data more easily accessible and output. This may lead to an increased risk of data leakage. Additionally, due to the lack of professional capabilities of enterprise accountants, there may be a risk of data damage due to improper operations when processing accounting data.

3.2. Organizational Change and Management

Digital transformation is not only a change at the technical level, but also a change in the management model and processes of enterprises. [4] A few enterprises have not yet established a management accounting system that is suitable for their own development [4]. The traditional financial department is accustomed to the manual process of paper-based bookkeeping and cannot fully adapt to the workflow after enterprise digital transformation. Furthermore, some enterprises have not yet established unified standards for the responsibilities and obligations of accountants. Enterprises may face a mismatch between the skills of existing employees and the needs of transformation, which makes the development of accounting work irregularity. The digital transformation of enterprises provides automated processes, which also means that the existing management model of enterprises needs to be redesigned, organizational structure needs to be adjusted, and processes need to be optimized.

3.3. Shortage of Talents and Skills

The success of the digital transformation of enterprise accounting cannot be achieved without the support of professional accounting talents. In the context of big data, traditional enterprise accountants have transformed from simple accountants to enterprise business decision-makers. Therefore, the existing accounting talent evaluation standards of enterprises should also keep pace with the times. The digitalization of a large number of enterprise financial information and business management information will inevitably place higher demands on the staff of enterprise accounting positions, requiring higher accuracy in accounting, financial analysis, and risk control. Although these repetitive tasks are likely to be replaced by financial robots, accounting professionals will transition to areas such as risk identification and decision support. Their job responsibilities will undoubtedly be greatly expanded, and higher expectations will be placed on their work ability and quality. For most enterprises, the digital transformation of accounting requires compound talents with data analysis, IT knowledge, and financial management capabilities. However, most accountants in enterprises are facing the problem of aging, their thinking is still stuck in the traditional financial model, their work ability is disconnected from the existing automated model, and they have not adapted to the changes brought about by the digital transformation of enterprise accounting; Secondly, in terms of the professional ability of financial personnel, some enterprise financial personnel only have professional knowledge of accounting theory, lack the ability of financial data analysis, business and finance integration thinking, and intelligent technology application ability, and do not have the needs of financial management transformation and big data application, which seriously restricts the realization of enterprise financial management transformation [5].

3.4. Difficulties in Integrating Business and Finance

Currently, the scale of China's digital economy has accounted for more than one-third of the total economic output. The low level of integration between business and finance brings many difficulties and pain points to the digital transformation of enterprise accounting. Firstly, for most traditional enterprises, the finance department uses financial software such as UFIDA U8 and Kingdee K3, while the production department uses MES systems, or some small and micro enterprises even use Excel tables or manual bookkeeping. The traditional accounting and business departments have independent organizational frameworks, leading to information silos and communication barriers. Data and information cannot flow smoothly between business and finance departments. This organizational structure barrier makes it difficult to achieve the integration of business and finance. Secondly, enterprises may have multiple different information systems. These systems lack effective integration, and financial data and business data cannot be seamlessly connected and shared. There may also be differences in data entry and processing, which will affect data analysis and decision support, thus hindering the realization of business and finance integration [6]. Furthermore, in the context of big data, enterprises have accumulated a large amount of business and financial data. However, various data are scattered and disconnected. Enterprises have not fully and effectively integrated the data into effective decision-making data, making it difficult to exert the value of data. The difficulty in achieving business and finance integration also brings difficulties to the digital transformation of enterprise accounting.

4. Strategies and Pathways for Digital Transformation of Enterprise Accounting

4.1. Strengthening Information Infrastructure Construction and Information Security Guarantee

The foundation of the digital transformation of enterprise accounting is information infrastructure and information security guarantee. Enterprises should increase investment to establish and improve information infrastructure and information security guarantee, providing a good hardware and software environment for the digital transformation of accounting, ensuring the smooth progress of the digital transformation of enterprise accounting and the integrity and confidentiality of data. Faced with massive data, enterprises should ensure that the internal network can support the transmission and processing of big data, improve the speed and stability of the network, regularly update accounting software and hardware facilities, and ensure the advancement and systematization of technology; Establish a database to centrally store and manage accounting data, realize the centralized management and remote access of data, and improve the processing capacity and flexibility of data. For information security, enterprises should implement strict access control mechanisms, encrypt sensitive data, and adopt multi-factor authentication technology to ensure that only authorized personnel can access sensitive accounting data; Secondly, enterprises need to regularly conduct data security audits and vulnerability assessments. By regularly checking

and evaluating the enterprise's data processing system, potential security risks can be discovered and resolved in a timely manner. [7] This also includes auditing the physical security of the data center to ensure the prevention of any form of physical intrusion.

4.2. Optimizing the Organizational Structure of Financial Management

To ensure sufficient resources and technical expertise to support the realization of the digital transformation of enterprise accounting, enterprises should redesign financial management processes, simplify cumbersome manual operations, and realize the automation and intellectualization of financial management. For example, establish a special digital transformation team and redistribute the roles and responsibilities of the financial department. At the same time, in order to accelerate the adaptation of enterprise accountants to the accounting work model after digital transformation, it is particularly important for enterprises to cultivate a culture of innovation and change. This includes encouraging employees to propose new ideas, providing continuous learning and development opportunities, and providing training and development opportunities.

4.3. Strengthening the Cultivation of Accounting Professionals

The key to accelerating talent training for the digital transformation of enterprise accounting lies in identifying new skill needs, providing continuous education and training, and creating a supportive working environment. In addition, enterprises should also focus on cultivating the awareness and ability of innovation of accounting personnel, so that they can adapt to the needs of the digital transformation of accounting. In strengthening the cultivation of accounting professionals, enterprises should focus on cultivating the professional knowledge and skills of accounting personnel. According to the analysis of skill needs, enterprises should design customized training needs to fill the skill gaps of existing employees and improve their comprehensive quality. At the same time, enterprises should also pay attention to the improvement of the IT capabilities of accounting personnel, so that they can skillfully use information technology means to carry out accounting work, which includes the cultivation and application of knowledge of data analysis, cloud computing, artificial intelligence, blockchain and other technologies [8]. In addition, enterprises should also pay attention to cultivating the professional development path of accounting personnel, emphasizing the importance of digital skills, and encouraging them to innovate and practice in accounting work.

4.4. Promoting the Integration of Business and Finance to Accelerate the Digital Transformation of Enterprise Accounting

The integration of business and finance refers to the deep integration of enterprise business and finance, and the realization of real-time sharing and collaboration of business and financial data through information technology [9]. Enterprises should actively promote the integration of business and finance, break down the information barriers between business and finance, and realize the integrated management of business and finance. This will help improve the efficiency and quality of enterprise accounting work and

accelerate the process of digital transformation of enterprise accounting. In promoting the integration of business and finance, enterprises should establish an information sharing and collaboration mechanism between business and finance to achieve real-time sharing and collaboration of business and financial data. The essence of financial digital transformation is to realize the orderly flow of data and information between different departments, connect "information silos", reconstruct the value chain of enterprise internal business activities, and ultimately achieve the ultimate goal of value creation [10]. This is a major transformation of traditional thinking. Finance and business have no boundaries. Therefore, data can flow within the entire enterprise, and even be shared across enterprises between upstream suppliers and downstream customers, building a new digital ecosystem of the industrial chain.

5. Conclusion and Suggestions

This article, starting from the background of big data, through the study of the necessity of digital transformation of enterprise accounting, concludes that in the era of rapid development of science and technology, if enterprises want to improve the level of financial management and enhance their core competitiveness, the digital transformation of enterprise accounting is an inevitable trend. The digital transformation of enterprise accounting needs to be carried out from multiple levels. Strengthening information security protection and ensuring the security of financial data is the foundation; reshaping the organizational management structure to adapt to the development of the digital transformation of enterprise accounting is the requirement; strengthening the cultivation of accounting professionals is the key; promoting the integration of business and finance to accelerate the digital transformation of enterprise accounting is the goal. Finally, the digital transformation of enterprises is a continuous process. Enterprises need to constantly innovate and optimize. Only in this way can enterprises obtain continuous development momentum in the era of big data.

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