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Innovative Development Paths of Accounting Information Systems Under the Background of Digital Transformation

Yawen Xu*, Yufan Zhang

Hubei University of Economics, Wuhan 430205, Hubei, China

**Author to whom correspondence should be addressed.*

Abstract: With the breakthrough development of technologies such as big data, cloud computing, and blockchain, enterprises worldwide are undergoing a profound transformation from "informatization" to "digitalization". Digitalization refers to the technical process of applying digital technologies to society, economy, and institutions. Blockchain technology ensures the immutability of transaction data through a distributed ledger, cloud computing technology supports the real-time processing and storage of massive data, and artificial intelligence optimizes financial risk prediction models through machine learning. The report of the 20th National Congress of the Communist Party of China sets the goal of deeply integrating the digital economy with the real economy, and creating a globally competitive digital industrial cluster. Digital transformation involves integrating information, computer, communication, and internet technologies to trigger significant changes in enterprises and improve their operational outcomes. Digital technologies have been integrated into all fields and processes of economic and social development, and digital transformation has become the core driving force for the development of new quality productive forces. With the further innovative development of information technology, the digital transformation and upgrading of Chinese enterprises are deepening. In this context, special attention needs to be paid to changes in the quality of enterprise accounting information, as the quality of enterprise accounting information during digital transformation is directly related to the operational efficiency of the market and the rational allocation of limited internal enterprise resources. How to steadily and orderly control the challenges and risks brought by the transformation of accounting information systems under the background of digital transformation, and actively utilize the new development momentum it brings to enterprises, has become a key focus of current enterprises.

Keywords: Digital transformation; Accounting information system; Innovative development; Technological application; Business-finance integration

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1. Introduction

With the breakthrough development of technologies such as big data, cloud computing, and blockchain, enterprises worldwide are undergoing a profound transformation from "informatization" to "digitalization". Digitalization is the technical process of applying digital technologies to society, economy, and institutions. Digital transformation refers to the process of triggering significant changes in enterprises to improve their operational results by integrating information, computer, communication, and internet technologies. Digital technologies have been integrated into all fields and processes of economic and social development, and digital transformation has become the inherent core driving force for the development of new quality productive forces. With the further innovative development of information technology, the digital transformation and upgrading of Chinese enterprises are deepening. In this context, special attention needs to be paid to changes in the quality of enterprise accounting information, as the quality of enterprise accounting information during digital transformation is directly related to the operational efficiency of the market and the rational allocation of limited internal enterprise resources. How to steadily and orderly control the challenges and risks brought by the transformation of accounting information systems under the background of digital transformation, and actively utilize the new development momentum it brings to enterprises, has become a key focus of current enterprises.

2. The impact of digital transformation on accounting information systems

2.1. Reform of data processing methods

Traditional accounting information systems used by enterprises mainly rely on accounting personnel for manual information entry and processing, which is generally characterized by high error rates and low efficiency [1]. In contrast, digital processing methods can automatically collect data such as production equipment, inventory status, and sales terminals during enterprise production and operation through the Internet of Things (IoT) technology, and automatically store it in the accounting information system through automatic transmission via information systems, fully realizing seamless connection between enterprise operational data and accounting financial data [2].

2.2. Improvement of information real-time performance and accuracy

After traditional enterprises undergo digital technology transformation, they can use technologies such as IoT and cloud computing to record various daily production and economic activities in real time. The accounting system can achieve second-level updates of financial data, providing senior and middle management with transparent, comprehensive, and real-time specific information on enterprise production and operation [3]. At the same time, enterprises can comprehensively analyze real-time financial data generated through big data and artificial intelligence technologies, thereby reducing information processing errors and insufficient information mining caused by accounting personnel's subjective factors [4]. This improves the accuracy of enterprise operational information and data, which plays a positive role in promoting scientific decision-making during enterprises' daily production and operation.

2.3. Transformation of accounting functions

After enterprises' digital transformation, the daily work focus of accounting personnel will gradually shift from traditional manual bookkeeping, accounting, and reporting to higher-level functions such as financial data analysis, financial decision support, and financial risk management. The accounting information system will no longer merely serve as a tool for recording enterprise financial transactions but will become an important decision-

making basis for enterprises' daily production and operation management.

3. Innovative development paths of accounting information systems

3.1. Technological application innovation

3.1.1. Introduction of artificial intelligence technology

With the release of ChatGPT 4.0 by OpenAI, artificial intelligence has entered a new era. It can help enterprises achieve automated processing of accounting business at low cost and high efficiency, such as automatic identification of enterprise invoice information, automated processing of financial books, and automated generation of financial statements [5]. By using artificial intelligence technology, enterprises can simulate accountants to handle financial work. It can not only perform regular processing of repetitive work but also provide decision-making opinions through self-analysis of complex information [6]. It can help enterprises conduct real-time information data collation, prediction, risk identification, etc., providing strong supporting decision-making opinions for enterprise development.

3.1.2. Application of big data technology

Big data technology can help enterprises summarize, organize, and extract key points from massive information, conduct structural analysis in large and complex data, and quickly provide useful information as decision-making support for enterprise development [7]. Specifically, through the analysis of customer consumption information, repayment records, and other data, it provides a basis for enterprises' accounts receivable management. Moreover, through the analysis of enterprise cost components, it identifies key factors for controlling enterprise costs, providing decision-making basis for enterprise cost optimization management [8].

3.1.3. Exploration of blockchain technology

Blockchain technology inherently possesses characteristics such as immutability, traceability, and decentralization. Its application in enterprise accounting information systems can help enterprises build distributed financial books through blockchain, record various financial data of enterprises in real time during production and operation, and fully ensure the completeness and authenticity of enterprise financial data [9]. At the same time, blockchain technology can help enterprises achieve credit sharing and risk summary among upstream and downstream enterprises.

3.2. Functional expansion innovation

3.2.1. Strengthening business-finance integration functions

Traditional accounting information systems require financial personnel to link business and financial information, which naturally creates information barriers, preventing enterprises from obtaining comprehensive and true financial information. Digital technologies can help enterprises achieve the integration of business operations, ensuring efficient interconnection between business data and financial data [10]. Specifically, when a sales business occurs, the sales system will transmit order information, shipping information, etc., to the accounting information system in real time, automatically generating accounting vouchers for accounts receivable and revenue recognition. In the meantime, the enterprise's financial department can conduct real-time cost accounting and profit analysis through these data, providing real-time operational decision-making suggestions for the enterprise.

3.2.2. Improving risk management functions

Under the background of digital transformation, enterprises will face complex risks that pose significant threats and challenges to their daily production and operation [11]. By establishing a digital risk early warning model, real-time monitoring of enterprise operational risks and financial conditions can be ensured, enabling automated control of enterprises' credit risks, liquidity risks, exchange rate risks, etc. Enterprises only need to set risk thresholds, and the risk early warning model will issue alerts when the set thresholds are triggered, assisting senior and middle management in taking corresponding risk response measures.

4. Implementation strategies for the innovative development of accounting information systems

4.1. Formulating a strategic plan for digital transformation

In building accounting information systems under the background of digital transformation, enterprises should fully combine their own business needs and development strategies to clearly formulate strategic and tactical plans for the digital transformation of accounting information systems. Guided by goals, enterprises should clarify the steps, timeline, and objectives during transformation to determine the focus and direction of technological application in accounting information systems. At the same time, full consideration should be given to the enterprise's technical capabilities, factor endowments, resource status, etc., to ensure the sustainability and feasibility of the transformation of accounting information systems under the background of digital transformation.

4.2. Increasing technological investment and talent training

The digital transformation of accounting information systems requires large-scale capital investment for the procurement of relevant equipment, research and development of related technologies, and system construction. Enterprises need to increase technological investment in accounting information systems through reasonable budget arrangements. Simultaneously, enterprises should attach great importance to the training of relevant talents to ensure that there are corresponding talents to use the digital accounting information system after its establishment. Enterprises can cultivate a team of compound talents who understand both accounting knowledge and information system-related technologies through a combination of internal training and external introduction [12].

4.3. Promoting the optimization and reengineering of business processes

Enterprise accounting information systems do not exist independently of daily business processes but are crucial inherent factors within them. For the transformation and development of enterprise accounting information systems, enterprises need to comprehensively sort out existing business processes, identify nodes and links incompatible with the digital transformation of accounting information systems, and conduct comprehensive optimization and targeted improvements. Specifically, enterprises need to simplify traditional cumbersome approval processes to remove obstacles for automated approval [13].

4.4. Strengthening cooperation with external partners

In the process of digital transformation of enterprise accounting information systems, enterprises are not required to independently develop digital systems. They can fully leverage the strength of external partners and achieve the construction of their own systems in a short time through close cooperation with enterprises related to digital transformation [14]. For instance:

(1) Cooperate with software suppliers to jointly develop accounting information systems that meet enterprise development requirements;
(2) Cooperate with consulting companies to obtain professional digital transformation information services in the industry, helping enterprises formulate specific implementation plans and strategies for digital transformation;
(3) Conduct exchanges and cooperation with enterprises in the same industry to share experiences during transformation and jointly explore innovative development paths for the establishment of accounting information systems [15].

5. Conclusion

The digital transformation of enterprise information systems has brought enormous opportunities and challenges for enterprises' sustainable development in the digital era. Empowered by new technologies, accounting information systems can help enterprises achieve accurate processing of complex information, systematic collection of massive financial data, and real-time feedback and analysis of existing data at low cost, high efficiency, and low application thresholds. To better adapt to and grasp the digital transformation of accounting information systems, enterprises should continuously increase technological investment and related talent training, and realize the reengineering and optimization of business processes according to development needs, so as to achieve systematic changes in the digital transformation of accounting information systems and further enhance their competitiveness in social development.

Disclosure statement

The authors declare no conflict of interest.

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