



Research on Internal Tax Risk Control in Enterprises Under Digital Transformation

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Abstract. With the advancement of innovative technologies, tax authorities have updated policies and tools to adapt to increasingly complex markets and tax environments. How enterprises can leverage digital means to reduce tax risks has become a critical aspect of internal management. This paper analyzes the shortcomings in corporate tax risk control during the big data era and studies how to establish risk management mechanisms by utilizing technological advantages in the digital context.

Keywords: digitalization; enterprises; tax risks; risk management

1 Introduction

With the arrival of the big data era, diverse information and data have become extensively interconnected through digital networks. As taxation constitutes a vital source of national revenue, tax administrations are undergoing a gradual shift from traditional management paradigms to digital transformation, employing technological solutions to monitor taxpayer compliance. At the same time, enterprise tax risk management faces both opportunities and challenges. On the basis of fully understanding the tax obligations that Enterprises should also leverage technological advancements to establish comprehensive tax risk management systems, reducing tax avoidance exposure and protecting their reputational standing.

Currently, most enterprises still face operational issues in tax management, resulting in an increase rather than a decrease in tax risks. For example, Sui Yanna^[1] (2025) highlights that inadequate policy comprehension and inefficient data utilization lead to deviations in tax compliance, placing enterprises in high-risk tax situations. Jia Nengpin^[2] (2025) points out that insufficient attention from corporate leadership toward tax management results in lax adherence to standardized tax risk controls by finance departments, further escalating tax risks. To address these challenges, scholars have proposed improvement strategies: Lu Lin^[3] (2024) suggests that the management of enterprises should heighten their attention, establish a systematic internal control system that incorporates tax risks into enterprise risk management, to enhance risk assessment and mitigation. Guo Feng^[4] (2024) advocates leveraging big data systems to collect and

analyze real-time transactional data, enabling proactive monitoring of tax-related activities and potential tax planning risks. Gao Xiaona^[5] (2024) proposes leveraging intelligent technologies to dismantle interdepartmental information barriers, establishing an integrated financial shared service platform to consolidate internal data and enhance cross-functional communication and collaboration.

2 The Correlation Between Big Data and Corporate Tax Risk Management

2.1 The Application Advantages of Big Data in Tax Management

Big data technology has shattered the data barriers of the traditional tax management model. The scope of tax-relevant data has expanded from solely financial data to encompass enterprise transactional records, supply chain data, external market fluctuations, contractual agreements, social media metrics, and other multi-source information. This transformation enables organic integration of multidimensional heterogeneous data streams^[6]. Through big data computing frameworks, the aforementioned datasets enable terabyte-scale processing of transactional networks, automatically identifying potential tax risk factors—such as related-party transactions and circular trading—with an efficiency improvement of two orders of magnitude compared to conventional corporate tax management approaches.

Simultaneously, big data technologies enable machine learning applications for tax risk monitoring through predictive model construction. For instance, Random Forest algorithm-based models for detecting abnormal VAT invoices demonstrate significantly higher efficiency, accuracy, and comprehensiveness compared to traditional management methods. Furthermore, alternative frameworks and algorithms can facilitate real-time risk control with quantitative assessment capabilities, allowing tax professionals to adjust operations and conduct financial forecasting based on dynamically evaluated risk levels.

Moreover, big data technologies enable systematic integration with tax regulatory authorities through API interfaces, achieving real-time synchronization of policy updates, audit priorities, and other critical compliance information.

2.2 Practical Challenges in the Application of Technology for Tax Management

The use of big data for risk management mainly faces three challenges: data management issues, talent shortages, and internal digital transformation resistance.

In terms of data quality, erroneous or missing entries in invoices and financial records significantly undermine the reliability of analytical results, while large-scale data storage poses security risks and privacy concerns that increase collection and utilization costs.

Compounding these technical difficulties is a severe shortage of interdisciplinary professionals who possess both tax expertise and data science capabilities, as current education systems fail to cultivate such composite skill sets.

Furthermore, most enterprises encounter organizational barriers to digital transformation, where tax management remains siloed within finance departments with disconnected systems that prevent cross-departmental data integration. This systemic fragmentation is exacerbated when attempts to implement digital management models require comprehensive operational changes, often generating internal conflicts and introducing new governance risks that may offset the potential benefits of technological adoption.

3 Analysis of Current Status in Corporate Tax Risk Management and Control

3.1 Enterprises Lack Comprehensive Tax Risk Management Systems

Corporate operational objectives typically prioritize profit maximization, leading most firms to focus management efforts on market expansion, project investment, and other profit-driven initiatives. While companies recognize the tax reduction benefits of effective tax management^[7], they often overlook the potential adverse impacts of tax risks. In the digital era, significant changes in business models and revenue streams, coupled with evolving tax policies driven by economic development and national regulations, necessitate continuous monitoring of policy updates and thorough comprehension of tax guidelines. With the escalation of regulatory requirements such as BEPS 2.0, Country-by-Country Reporting (CbCR), enterprises are compelled to enhance their risk control systems. However, a significant implementation gap persists between policy awareness and operational execution.

3.2 Lack of Digital Transformation in Corporate Tax Management

In the face of the rapid development of information technology, national tax administration systems have integrated big data and digital technologies to enhance efficiency through internet-based tax processing. Enterprises that fail to adapt promptly and establish effective interfaces with tax authorities may experience delayed responses and inefficient handling of tax-related matters, resulting in operational inefficiencies and increased risk exposure. To strengthen tax risk control, companies must align with national digitalization initiatives by accelerating the transformation of internal tax risk management systems and timely complete the continuous upgrading of tax information management system, improve the ability of enterprises to reasonably avoid tax risks.

3.3 Shortage of Professional Tax Management Teams

The implementation of new tax policies requires enterprises to conduct comprehensive analysis and interpretation to understand reform trends and policy directions, enabling

the development of business strategies aligned with national objectives. These tasks demand specialized tax professionals and dedicated organizational structures. However, most enterprises currently lack independent tax management departments, and employees in conventional management roles often demonstrate insufficient sensitivity to tax policy changes^[8]. This deficiency leads to delayed responses and inaccurate interpretations of policy updates, failure to provide management with timely and precise tax compliance recommendations, and potential misalignment with national policy orientations. Such shortcomings ultimately expose enterprises to substantial tax risks, particularly for those operating across multiple jurisdictions. The absence of specialized tax expertise results in reactive rather than proactive approaches to regulatory changes, adversely affecting both financial performance and regulatory compliance.

3.4 Digital Security Risks in Tax Information

In the era of big data, enterprises face significant challenges in data collection due to the vast quantity and diverse sources of available information. This complexity necessitates the adoption of scientific data acquisition methods and advanced analytical techniques, supported by specialized software tools, to extract valuable business insights from these datasets.

Concurrently, robust cybersecurity measures are imperative to safeguard tax management systems from malicious attacks targeting sensitive corporate data. Enterprises must prioritize network protection throughout their tax administration processes to prevent irreparable financial and reputational damage.

4 Strategies and Recommendations for Enhancing Risk Management in the Digital Context

4.1 Strengthening Tax Risk Management Awareness Among Corporate Management

To establish a sound and comprehensive internal control system for tax risk management, the primary step is to deepen the understanding of corporate management. Enterprises can organize awareness campaigns and training sessions to ensure that management fully recognizes the importance of tax risk prevention and control. They should be made aware of their responsibilities and roles in tax risk management, as well as the significance of a well-functioning tax risk management system. At the same time, management should be encouraged to actively participate in related work and must provide the necessary human and material resources for the internal control management information system to ensure smooth operations. Moreover, Enterprises must establish a robust internal communication and reporting system to ensure tax management personnel across all departments can report to senior management in accordance with established protocols.

4.2 Improving the Enterprise Tax Risk Management and Control Mechanism

A sound and comprehensive tax risk prevention and control system is the foundation for enterprises to mitigate and resolve tax risks. Enterprises should based on their own development stage, operational status, and business characteristics, clarify the responsibilities of each position and standardize operational procedures, establishing a comprehensive and systematic internal control system that aligns with their business development goals^[9].

Additionally, a robust risk assessment system should be established to periodically evaluate potential tax risks. By leveraging big data to create an integrated shared platform, enterprises can enhance information exchange and communication among internal departments, ensuring that relevant information is promptly and accurately conveyed to tax risk management personnel, thereby improving the efficiency of tax risk management.

Furthermore, regular internal audits should be conducted to assess the enterprise's tax risk management status, strengthening the internal supervision system.

4.3 Strengthening Personnel Allocation and Training

Employees with professional tax knowledge and computer application skills are crucial for enterprises implementing a digitalized internal control system for tax risk management. Interdisciplinary tax management professionals can not only analyze, monitor, and assess potential tax risks by establishing frameworks but also respond swiftly upon detecting risks, formulating accurate and efficient tax management strategies to mitigate tax-related losses.

Enterprises should also conduct regular training for employees involved in the tax risk management system. This not only enhances their professional competence and technical skills but also keeps them informed about the latest business transaction models and strategic plans, preventing data inconsistencies in the control information system due to information barriers.

Additionally, enterprises may incorporate professionalism evaluations into the performance assessments of financial risk managers to incentivize higher levels of expertise^[10]. Furthermore, enterprises may collaborate with overseas professional institutions to leverage their specialized knowledge and technical expertise, thereby compensating for their own deficiencies.

4.4 Accelerating Digital Transformation

In the era of big data, digital transformation has become a critical research direction for corporate tax risk internal control systems. Faced with vast and complex market data, enterprises can leverage big data technology to extract valuable insights, establish comprehensive corporate data systems, for instance, enterprises may adopt digital tax management platforms to integrate data sources such as ERP systems, financial systems,

and e-invoice platforms, establishing a unified data hub. By leveraging cloud computing technologies, they can enable multi-institutional collaboration to ensure end-to-end connectivity of tax data, to enhance intelligent business management frameworks as well as tax risk management information systems.

Additionally, big data capabilities enable real-time monitoring and analysis of corporate tax-related information, allowing early warnings for potential tax risks. A dynamic risk monitoring system can also be constructed to mitigate internal compliance risks.

5 Conclusion

For enterprises to attain long-term growth, it is essential not only to focus on operational efficiency but also to mitigate the adverse impacts of potential tax risks. To prevent tax-related risks, corporate management must first develop a profound understanding of the importance of tax risk prevention and control, as well as recognize their responsibility and obligation to establish a robust risk management framework.

In today's rapidly evolving technological landscape, enterprises must align with national development trends by actively pursuing digital transformation. By integrating big data technology into tax risk prevention and control systems more effectively, companies can adopt innovative tax management strategies and enhance their capabilities in digital and intelligent tax planning. This will improve the enterprise's ability to manage and mitigate tax risks efficiently, ultimately achieving the goal of stable and sustainable long-term development.

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