

Research on Government Accounting Information Quality from a Big Data Audit Perspective: An Empirical Analysis Based on Yibin City

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Abstract: With the rapid development of big data auditing, issues concerning the quality of government accounting information have become increasingly prominent. Taking the fiscal big data audit practice in Yibin City as a case study, this paper thoroughly analyzes the prominent deficiencies in the reliability, completeness, timeliness, and comparability of current government accounting information. These deficiencies manifest as discrepancies between accounts and actual assets, data silos, information lag, and inconsistent reporting standards. The root causes primarily lie in weak internal controls, lack of data standards, insufficient rigidity in system implementation, and room for improvement in personnel expertise. To address these issues, this paper proposes systematic improvement pathways across three dimensions: technology, management, and talent. Research indicates that big data auditing serves not only as a critical tool for revealing government accounting information quality problems but also as a vital institutional innovation opportunity to drive modernization reforms in fiscal governance. Looking ahead, as big data and artificial intelligence technologies become deeply integrated, enhancing the quality of government accounting information will increasingly depend on systematic and continuous innovation in governance mechanisms.

Keywords: Big Data Auditing; Government Accounting Information Quality; Data Governance; Yibin City.

1. Introduction

Since the dawn of the 21st century, the rapid advancement of information technology has profoundly transformed the approach to government auditing. The shift from traditional sampling audits to big data auditing capable of processing massive datasets has significantly expanded the scope and enhanced the efficiency of audit oversight. Currently, big data auditing technology is further integrating with artificial intelligence, continuously evolving toward intelligent solutions. This evolution enables auditing to transcend the limitations of post-event verification, allowing for more timely and precise monitoring and analysis of fiscal fund flows. However, a noteworthy phenomenon is that the increasing sophistication of auditing tools has instead highlighted numerous inherent issues within government accounting information itself. These manifest as discrepancies between recorded accounts and actual transactions, inconsistent data standards across different departments, delayed information updates, and non-uniform accounting standards. These long-standing problems have been more clearly exposed under enhanced auditing techniques. This indicates that relying solely on technological upgrades is insufficient to fundamentally improve the quality of government accounting information.

Against this backdrop, it is imperative to explore how government accounting information systems should adapt to the intelligent evolution of auditing technologies. Taking Yibin City, Sichuan Province as the case study, this paper systematically analyzes the underlying causes of subpar government accounting information quality by examining specific issues identified during its fiscal big data auditing practices. The research aims to provide insights for strengthening the foundation of accounting information and

leveraging advanced auditing technologies, thereby advancing government fiscal management toward greater transparency, standardization, and modernization.

1.1. Research Background and Significance

The rapid advancement of information technology has propelled big data auditing to become a core tool in government auditing [1-2]. Compared to traditional sampling audits, big data auditing leverages high-performance computing, data mining, and intelligent algorithms to achieve comprehensive, real-time, and systematic scrutiny of fiscal fund flows, budget execution, and accounting practices[3-4]. This transformation not only significantly enhances audit efficiency but also markedly increases the depth and breadth of issue detection. In the realm of government finance, big data auditing is now recognized as a crucial driver for advancing fiscal governance modernization and achieving fiscal transparency.

However, practical application reveals a thought-provoking paradox: improvements in auditing technology have not automatically led to corresponding enhancements in accounting information quality[5-6]. On the contrary, as audit penetration strengthens, a series of long-standing, deep-seated issues have been laid bare with greater clarity. For instance, accounting statements frequently diverge from actual business operations, data across different departments and systems often fails to align effectively, and instances of delayed information updates and arbitrary adjustments are commonplace. These issues not only undermine the credibility of government accounting information but may also misguide macro policy formulation and public resource allocation[7], potentially eroding public trust in governance capabilities. Therefore, how to systematically enhance the quality of government accounting information while

leveraging technological empowerment has become a core challenge requiring urgent resolution in the field of public governance.

As a prefecture-level city with relatively rapid economic development in western China, Yibin's exploration in fiscal big data auditing holds significant representativeness nationwide. Analyzing this case study can vividly reflect the common characteristics of accounting information quality issues in local governments. Therefore, this research selects Yibin as its subject to gain a deeper understanding of the practical effectiveness of big data auditing and provide a realistic reference for exploring pathways to enhance government accounting information quality.

The significance of this research manifests on three levels: Theoretically, it bridges the gap in domestic research by integrating big data auditing with government accounting information quality under a “government perspective” and “big data context”; At the practical level, it delves into the root causes of information distortion through case study and proposes targeted countermeasures, offering actionable guidance for local government departments to optimize data governance. At the policy level, the research findings can inform central authorities such as the Ministry of Finance and the National Audit Office in refining relevant policies and standards, thereby advancing the modernization of China's government accounting system and fiscal governance framework.

1.2. Literature Review and Theoretical Foundations

Academic research on accounting information quality has a long history, with early studies primarily focusing on the truthfulness and reliability of corporate financial reporting. Foreign scholars such as Watts and Zimmerman (1986) noted in *The Theory of Active Accounting* that accounting information is significantly influenced by managers' self-interest motives, with its distortion closely tied to principal-agent problems[8]. Domestic research similarly emphasizes the drivers of accounting information distortion in enterprises, such as earnings management and capital market pressures. However, research in the field of government accounting has lagged behind[9].

In recent years, with the deepening of government accounting reforms and the rise of big data, scholars have begun to turn their attention to the quality of government accounting information. Existing research indicates that distortions in government accounting information primarily manifest as inconsistencies between budget execution and final settlement data, outdated accounting methods, and barriers to cross-departmental information sharing[10]. While these studies reveal surface-level issues, they lack in-depth analysis of underlying mechanisms within the specific context of big data auditing. This paper addresses this research gap by linking problems identified through big data auditing to government accounting information quality, systematically exploring their causes and governance strategies.

In terms of theoretical underpinnings, this paper primarily draws upon agency theory and institutional theory. Agency theory reveals that in fiscal management processes, government departments acting as “agents” may exploit their informational advantage to create moral hazard, thereby distorting accounting information. Institutional theory, meanwhile, indicates that accounting information quality

depends not only on individual behavior but is also profoundly constrained by institutional design and enforcement effectiveness. Therefore, comprehensively understanding the distortion of government accounting information requires simultaneous analysis at both the individual motivation and institutional environment levels.

1.3. Research Approach and Methodology

This paper employs a case study approach, focusing on the core accounting information quality issues exposed during the fiscal big data audit practice in Yibin City. The research follows a logical sequence of “problem identification—root cause analysis—countermeasure formulation”: First, by examining typical issues in the Yibin case, this study identifies deficiencies in the reliability, completeness, timeliness, and comparability of accounting information. Second, drawing on principal-agent theory and institutional theory, it explores the underlying causes of these problems. Finally, it proposes systematic improvement pathways across three dimensions—technology, management, and talent—to enhance the quality of government accounting information. Data collection primarily relies on publicly available government audit reports, relevant policy documents, academic literature, and related news reports, striving for integrated analysis and theoretical refinement based on objective materials. This study does not aim for exhaustive coverage but seeks to use Yibin as a representative sample to reflect broader issues, achieving a “small entry point, broad perspective” research effect.

2. Case Background and Analysis of Accounting Information Issues

2.1. Overview of the Fiscal Big Data Audit Environment in Yibin City

Located in southern Sichuan Province, Yibin City stands as a major industrial and commercial hub in western China. And its economy has maintained steady growth, with fiscal revenue continuously expanding lately. In recent years, Yibin City has achieved rapid economic growth by leveraging its three pillar industries: liquor, new energy, and equipment manufacturing. From 2021 to 2023, the city's general public budget revenue grew at an average annual rate of 8.5%, with fiscal expenditures continuing to expand. Key areas such as industrial development, infrastructure construction, and livelihood security accounted for over 65% of total expenditures. This surge in economic scale and increasingly complex fiscal expenditure structure have placed higher demands on the efficiency of government financial management and oversight. Against this backdrop, traditional auditing approaches face three major challenges: First, the sheer volume of funds and numerous transaction stages make sampling audits insufficient to cover all risk points. Second, the complexity of business types—particularly the implementation of new fiscal tools like industrial subsidies and special bonds—increases audit difficulty. Third, the high demand for timeliness requires more prompt and precise oversight of fiscal funds. These factors collectively drive the transformation and upgrading of Yibin's fiscal audit model. To address the challenges posed by large-scale fiscal fund flows and complex business operations, the Yibin municipal government has progressively built a fiscal big data platform since 2019. This platform integrates subsystems including budget formulation, centralized treasury payments,

departmental accounting, and asset management under unified management. By 2022, Yibin had achieved preliminary “end-to-end digitalization” of fiscal operations and pioneered the adoption of big data auditing methodologies in its audit processes.

Yibin City's big data auditing primarily relies on its fiscal information platform, significantly expanding audit coverage through data scraping, cross-referencing, and intelligent early warning mechanisms. For instance, during budget execution audits, the system automatically cross-references information across departmental budgets, fund disbursements, contract fulfillment, and asset accounting. Any discrepancies in reporting standards, mismatched amounts, or temporal inconsistencies trigger alerts, prompting auditors to intervene for verification. This approach overcomes the limitations of traditional manual sampling, enabling rapid scanning and precise identification of issues within vast fiscal datasets. Consequently, it significantly enhances audit efficiency and problem-detection capabilities.

However, with the explosive growth of data volume and accelerated comparison frequency, numerous issues that were once “masked” have been collectively exposed: certain report data severely deviates from actual business operations, rigid “data silos” have formed between different systems, and information transmission suffers from delays and inconsistent definitions. These phenomena indicate that increased informatization does not automatically enhance the quality of accounting information. Instead, centralized data processing has laid bare existing deficiencies more thoroughly. This reflects a disconnect between the application of technological tools and management systems, as well as personnel capabilities. Without a supporting governance framework, mere technological upgrades struggle to achieve their intended outcomes.

2.2. Big Data Auditing Reveals Accounting Information Quality Issues and Analysis of Their Causes

Leveraging the comprehensive, penetrative review capabilities provided by the aforementioned technical platform, Yibin City's fiscal big data audit has transcended the limitations of traditional auditing methods, systematically revealing deep-seated issues in the quality of government accounting information. Through integrated analysis of early warning signals, anomaly flags, and subsequent manual verification results generated during the audit process, it is evident that current quality issues in government accounting information manifest primarily in three interconnected aspects: lack of reliability at the information generation source, lack of integrity in the information flow process, and lack of timeliness and comparability in the information output results. These issues not only reflect technical deficiencies in accounting information systems but also reveal deeper weaknesses in relevant management systems and implementation mechanisms. The following sections will analyze each of these three problem categories using specific cases identified during audit practice, further exploring their institutional, managerial, and technical root causes.

(1) Lack of Reliability: Discrepancies Between Reported Data and Actual Business Operations

During the audit process, it was discovered that the financial statement data of some government departments showed significant deviations from actual economic transactions. For example, in the utilization of a certain

education special fund, the report indicated an expenditure completion rate of 98%. However, by cross-referencing procurement contracts, payment vouchers, and conducting on-site verification, it was found that some expenditures had not actually occurred. They were merely prematurely recognized or duplicated entries, leading to inflated figures in the financial statements. Another typical issue emerged in asset management: while fixed asset reports claimed full alignment between book records and physical assets, audit sampling revealed that some scrapped equipment remained on the books, creating a “discrepancy between accounts and physical assets.” The root causes of these issues primarily stem from ineffective internal control mechanisms, deliberate manipulation (such as embellishing performance metrics to meet assessment targets), and deficiencies in real-time oversight. In environments lacking effective checks and balances, the generation of accounting information becomes susceptible to non-operational influences, ultimately undermining the fundamental function of data to reflect economic substance.

(2) Lack of Integrity: System Fragmentation and Data Silos

The audit further revealed significant data silos between various fiscal systems in Yibin City, with inefficient information-sharing mechanisms. For instance, allocation records in the budget management system failed to synchronize promptly with the treasury payment system, resulting in missing information for the same transaction across different systems. Furthermore, discrepancies in data definitions between the finance department and state-owned asset management departments resulted in asset acquisition expenditures being recorded in the finance system but not synchronized into the asset management system, creating a broken data chain. Simultaneously, the phenomenon of “multiple entries for the same transaction” exacerbated data redundancy and information gaps. This issue primarily stemmed from the absence of unified data standards, fragmented system development, and inadequate cross-departmental collaboration mechanisms and shared platforms. Departments often prioritize internal management convenience when advancing informatization, neglecting the construction of an integrated data ecosystem. This results in data integrity being compromised at its source.

(3) Lack of Timeliness and Comparability: Process Lags and Inconsistent Standards

The audit revealed significant timeliness issues in Yibin City's fiscal information. While payments for certain projects were completed in 2021, their expenditure data was not entered into the system until mid-2022. This resulted in severe accounting information delays, compromising the accuracy of final accounts and undermining the timeliness of decision-making. Simultaneously, differing classification standards for similar economic transactions exist across departments. For instance, “information technology construction expenditures” are categorized as either “equipment purchases” or “software services,” creating inconsistent data definitions that severely undermine the comparability of information. This phenomenon primarily stems from non-standardized personnel operations, lack of rigid enforcement mechanisms for regulations, and inadequate accountability systems. Accounting personnel may delay processing transactions due to work inertia or interpretive discrepancies, while institutional frameworks lack mandatory assessments for information processing timeliness. Combined with the absence of unified business classification guidelines across

departments, these factors collectively result in diminished information quality across both temporal and spatial dimensions.

The accounting information quality issues exposed in Yibin City are not isolated; they are highly representative among prefecture-level cities in western China. Compared with Mianyang City, also in Sichuan Province, both cities face similar challenges in “data silos” and “information lag.” This stems from a common problem: when the provincial unified fiscal information platform is rolled out to cities and counties, it often fails to integrate sufficiently with existing local systems. However, Yibin's prominent issues with “discrepancies between accounts and actual assets” (particularly in the asset sector) are more pronounced than those in Mianyang, which focuses on technology industries. This disparity may be linked to Yibin's large-scale traditional industrial assets, lengthy management chains, and numerous historical legacy problems. Compared to a developed coastal city in eastern China (such as Ningbo), Yibin's gaps in “data standard uniformity” and “system interoperability” are even more evident. Through early top-level design, Ningbo established a unified citywide public data platform, mandating that all finance-related systems interface according to standardized protocols. This approach significantly mitigated data fragmentation at the technical level. This demonstrates that disparities in economic foundations and technological investment directly influence the starting point and effectiveness of data governance.

From a governmental hierarchy perspective, accounting information quality issues exhibit a gradient pattern characterized by “greater precision at higher levels and coarser at lower levels, faster at higher levels and slower at lower levels.” Provincial governments exhibit more standardized fiscal management, higher levels of information system integration, and face more frequent oversight from the National Audit Office's local offices. Their information quality issues are primarily concentrated in policy implementation deviations and the complex tracking of transfer payment funds. County-level governments, especially those in less developed regions, face more fundamental challenges: insufficient professional capacity among personnel, outdated information systems (with some processes still relying on manual ledgers), and ineffective internal controls. For instance, audits uncovered a county simultaneously recording the same special bond funds as both revenue and expenditure in both its general public budget and government fund budget accounts, artificially inflating fiscal revenue. Such issues are rare at the municipal level. Therefore, improving government accounting information quality requires a tiered, categorized governance strategy: focusing on “optimization and deepening” at the provincial level, while “catching up and strengthening foundations” at the municipal and county levels. A one-size-fits-all solution is not viable.

In summary, big data auditing has clearly exposed core deficiencies in the quality of current government accounting information across dimensions such as reliability, completeness, timeliness, and comparability. These issues demonstrate that relying solely on technological means cannot automatically guarantee information quality. They reflect systemic problems including weak institutional enforcement, inadequate data governance systems, and insufficient professional competence among personnel. Therefore, the significance of big data auditing extends beyond the technical tool itself. It provides a crucial

opportunity to address these deep-seated issues and drive systemic reform. The true value of big data auditing lies in how the problems uncovered through auditing compel the optimization of management mechanisms, the standardization of data, and the reengineering of business processes.

3. Policy Recommendations for Enhancing the Quality of Government Accounting Information

To fundamentally improve the quality of government accounting information, a systematic improvement framework must be established through coordinated efforts across three dimensions: technology, management, and talent.

(1) Technical Approach: Establishing a Unified and Efficient Data Governance System

First, local accounting data standards and specifications should be formulated. A citywide unified coding system and classification criteria should be established, with precise definitions for budget items, asset categories, and other elements. A dynamic update mechanism should be implemented to ensure data consistency and comparability across departments and systems, providing a high-quality data foundation for big data auditing. Second, a “data quality monitoring middle platform” embedded within business processes should be developed. Leveraging big data and artificial intelligence technologies, this platform enables end-to-end management encompassing pre-event logical validation, real-time anomaly monitoring, and post-event automated issue tracking. This shifts quality assurance to earlier stages, transforming reactive error correction into proactive prevention and in-process control. Finally, vigorously promote the interconnectivity of cross-departmental information systems. Government accounting can fundamentally eliminate information silos and ensure data integrity by establishing a fiscal data sharing platform, breaking down departmental barriers, and exploring blockchain technology to guarantee the immutability and transparent traceability of data flows. This requires top-level design and strong promotion at the municipal level, along with the formulation of data sharing responsibility lists and assessment methods.

While building a unified data governance system, it is imperative to establish corresponding data security and privacy protection barriers. It is recommended to embed a “data security middle platform” within the fiscal big data platform to implement classified and tiered data management. For information involving personal privacy, trade secrets, and sensitive projects, encrypted storage, data anonymization, and dynamic access control should be enforced. Leveraging blockchain technology, establish a “proof-of-evidence chain” at critical nodes of cross-departmental data sharing. Any retrieval, usage, or modification of data must undergo multi-party consensus and be recorded on the chain, ensuring the shared process is auditable, traceable, and non-repudiable. This approach promotes data flow while reinforcing security foundations.

(2) Management Approach: Strengthening Institutional Rigidity and Closed-Loop Accountability

The breakthrough in management hinges on establishing an effective closed-loop system of constraints and incentives. The primary task is to create a mechanism for tracking audit

rectifications and utilizing their outcomes. Audit findings should be compiled into a checklist with clearly defined responsibilities and timelines, supplemented by rigorous reviews to prevent “paper rectifications.” Simultaneously, linking rectification results to departmental performance evaluations and fiscal fund allocations will create a powerful incentive mechanism. Secondly, the rigidity of institutional enforcement must be reinforced. Strictly enforce unified accounting standards, clearly assign responsibility for violations, and impose penalties. Improve internal control systems to ensure multi-level verification during data entry and report preparation. Consider introducing third-party independent assessments to enhance the objectivity of oversight. Finally, directly incorporate data quality metrics into performance evaluation and accountability systems. Establish quantifiable indicators such as data timeliness, accuracy, and rectification completion rates, linking them directly to the performance of officials and financial personnel to assign clear individual responsibility for data quality. By leveraging the steering role of evaluations, guide departments and personnel at all levels to proactively focus on and enhance information quality.

While strengthening institutional rigidity and accountability, it is essential to avoid excessive blame that could lead to frontline personnel becoming overly cautious in data reporting or causing data to become rigid due to fear of making mistakes. It is recommended to explore establishing a “data quality improvement points system.” Units and individuals who proactively report their own data errors, propose process optimization suggestions, and achieve tangible results should be awarded positive points. These points can be used for commendations or exchanged for training resources. Simultaneously, a list of acceptable errors should be clearly defined for technical or operational mistakes made “without subjective intent and without causing significant losses,” creating a relatively relaxed environment for reform and innovation. Only by combining rigid accountability with flexible incentives can endogenous motivation be stimulated.

(3) Talent Development Path: Cultivating Multi-Skilled Financial Audit Professionals

Talent serves as the foundation for all transformations. First, targeted skills training should be implemented. Regular specialized training in information system operations and big data thinking should be organized, with training outcomes linked to job promotions and compensation incentives to enhance accountants' modern business capabilities. Second, promote a transformation in accountants' role perception. Through publicity and institutional design, guide them to evolve from traditional “bookkeepers” into “data stewards” and “information quality guardians,” reinforcing their sense of primary responsibility. Finally, focus on building a team of composite talents combining finance, information technology, and auditing. This can be achieved through university-local government collaborations to offer relevant courses, cross-departmental secondments for personnel development, and clear promotion and compensation incentives for composite talents. These measures will cultivate core human capital to sustainably improve government accounting information quality. This team will become the backbone driving the digital transformation of government accounting.

Measures in technology, management, and talent are interdependent and mutually reinforcing, collectively forming a systematic improvement framework. Only through

coordinated advancement can a fundamental enhancement in the quality of government accounting information be achieved. The implementation of technology requires safeguards from management mechanisms and proficient application by talent; the optimization of management necessitates support from technological means and alignment with talent capabilities; and the cultivation of talent demands guidance and incentives from the technological environment and management systems. Only when these three elements converge can a healthy, sustainable ecosystem for government accounting information be established.

4. Discussions and Outlook

4.1. Institutional Constraints on Big Data Audit Effectiveness

Yibin City's practice demonstrates that big data auditing plays a significant role in identifying accounting information quality issues, yet its effectiveness is markedly constrained by the existing institutional environment. While audit systems can identify numerous data anomalies, these issues often stem from flawed business processes, unclear departmental responsibilities, or poorly enforced internal controls. For instance, systems can swiftly detect “inconsistent amounts for the same project across different systems,” but resolving this problem hinges not on technical solutions, but on establishing cross-departmental collaboration mechanisms and unified data management accountability systems.

This phenomenon reveals a prominent contradiction currently at play: while audit technology has advanced to a relatively mature stage, the institutional framework supporting its effective operation has yet to keep pace. Future development of audit technology must be coordinated with institutional improvements. On one hand, when designing and introducing new audit tools, relevant business processes, division of responsibilities, and performance evaluation criteria should be simultaneously assessed and optimized to ensure seamless integration between technological tools and management systems. On the other hand, institutional design should also anticipate technological needs. For instance, accounting standards should incorporate provisions for electronic vouchers and structured data reporting, while internal control frameworks should clarify system access management and data quality accountability. Furthermore, as artificial intelligence assumes an increasingly significant role in auditing, it is imperative to proactively address algorithmic review and ethical frameworks. This ensures transparency and fairness in the decision-making processes of intelligent audit systems, thereby mitigating systemic risks stemming from data biases.

4.2. Systemic Issues in Enhancing Accounting Information Quality

The case of Yibin demonstrates that accounting information quality issues extend beyond mere financial or technical concerns, reflecting broader governance deficiencies. Enhancing information quality requires addressing systemic challenges across multiple dimensions:

In organizational and collaborative aspects, persistent departmental silos and operational fragmentation are primary causes of data isolation. There is a lack of deep integration mechanisms based on business processes and data sharing among finance departments, development and reform departments, state-owned asset management departments,

and various spending units. Future improvements should go beyond simple data integration and move toward process optimization and organizational collaboration based on shared business objectives (such as end-to-end management of major project implementation), making high-quality data production a natural outcome of cross-departmental collaboration.

Regarding incentives and accountability, traditional evaluations have primarily focused on the compliance of fund usage and project progress, while paying insufficient attention to the accuracy, timeliness, and consistency of the data itself. This has led to a widespread phenomenon of “prioritizing operational processing over data quality.” It is essential to effectively incorporate data quality metrics—such as error rates, submission timeliness, and data consistency—into government performance management and cadre evaluation systems. These metrics should be linked to budget allocations, commendations, and other incentives to establish a “data quality accountability loop,” transforming abstract data responsibilities into concrete management constraints.

Culturally and cognitively, governments must shift from a task-centric culture to a data-driven management culture. This requires managers and staff at all levels not only to operate systems but to understand data's critical value as a governance element, gradually developing habits of decision-making, management, and reporting based on accurate data. Cultivating this culture demands sustained leadership advocacy, exemplary role models, and long-term training guidance.

4.3. Future Research Directions

This study conducted an in-depth analysis using Yibin City as a case example, but the applicability of its conclusions to broader regions requires further validation. Future research could explore the following directions:

First, comparative studies could be undertaken by selecting representative cities from eastern developed regions, central transition regions, and western developing regions for comparative analysis. The focus should be on examining differences in the types and priorities of issues revealed by big data auditing, as well as variations in pathways to improve information quality, under different fiscal capacities, digital foundations, and governance models. This would enable the formulation of more targeted policy recommendations.

Second, conduct long-term tracking studies. Implement sustained, multi-year observations in regions like Yibin that have adopted big data auditing. By comparing changes across annual audit reports, the effectiveness of corrective measures, and shifts in key quality indicators, objectively evaluate the actual impact of various improvement initiatives. This will clarify which measures yield short-term effects and which deliver lasting improvements.

Third, expanding research perspectives by incorporating theories such as “digital governance” and “collaborative governance” allows for examining accounting information quality issues within the broader context of modernizing national governance and building digital government systems. Research should focus on how high-quality government accounting information serves as a critical data element to support macroeconomic monitoring, social policy evaluation, and risk early warning. It should also explore how data sharing and operational collaboration can establish a comprehensive and effective integrated fiscal governance system.

Enhancing the quality of government accounting information is a systemic endeavor involving multiple dimensions—technology, institutions, organization, and culture. Big data auditing serves as both a vital tool for advancing this process and a catalyst for raising standards in related work. Only by embracing a systemic approach and implementing multidimensional, sustained, and comprehensive governance can we solidify the digital foundation of fiscal management, thereby better serving the overarching goals of modernizing fiscal systems and governance capabilities.

5. Conclusion

Big data auditing, as a product of deep integration with information technology, is profoundly reshaping the production, oversight, and utilization of government accounting information. Through analyzing the case of Yibin City, this study finds that while auditing technical capabilities advance rapidly, deficiencies in the reliability, completeness, timeliness, and comparability of government accounting information become increasingly apparent. This stems from the combined effects of multiple factors, including internal controls, data standards, system implementation, and personnel competence. The tension between technological empowerment and management lag represents the primary contradiction at this stage.

Based on this, this paper proposes a systematic improvement pathway. At the technical level, efforts should focus on establishing a unified data governance system. This involves laying a solid foundation for data quality through standardization, building intelligent middle platforms, and ensuring system interoperability. At the management level, an effective incentive and constraint mechanism must be formed by establishing a closed-loop rectification process, strengthening the rigidity of institutional rules, and implementing data quality performance evaluations. On the talent front, continuous improvement requires core momentum through skill training, role transformation, and the cultivation of versatile professionals. These three interconnected dimensions are indispensable, collectively forming a holistic solution to enhance the quality of government accounting information.

Yibin City's practice profoundly demonstrates that big data auditing not only uncovers issues but also further drives institutional innovation and governance modernization. In the future, with the continuous evolution of big data technology and the ongoing refinement of the national governance system, exploration into the quality of government accounting information will inevitably deepen. Its successful experience will also provide valuable insights and inspiration for advancing fiscal governance modernization nationwide.

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