

Communication Efficiency in Tourism Enterprises Under the TOE Framework: A Case Study of L Tourism Group



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Abstract

Amid the wave of digitalization, internal audit has become a critical line of defense for corporate governance, risk management, and internal control. This paper takes L Tourism Group as a case study and, grounded in the TOE (Technology-Organization-Environment) framework, examines the determinants of internal audit management communication efficiency in tourism enterprises across three dimensions-technology, organization, and environment-and proposes targeted improvement strategies. The findings are as follows: at the technological level, the adoption of intelligent digital audit tools significantly optimizes information transmission and processing workflows, enhancing the accuracy and transparency of audit information; at the organizational level, optimizing organizational structures and strengthening cross-departmental collaboration help dismantle communication barriers, thereby improving the transparency and interactivity of audit communication; at the environmental level, proactively adapting to external regulatory requirements and technological developments ensures that audit work remains compliant with prevailing standards. The conclusions provide systematic theoretical and practical guidance for the sustained enhancement of internal audit management communication efficiency in tourism enterprises.

Keywords: Internal audit; Management communication efficiency; TOE framework; Digital-intelligent audit; Tourism enterprises

Introduction

As enterprises expand in scale and operational complexity, coupled with an increasingly stringent regulatory environment, internal audit has assumed a progressively more pivotal role within modern corporate governance architectures [1]. Internal audit functions not merely as a gatekeeper against financial risks, but also serve as a critical underpinning for strategic decision-making, internal control, and compliance management. Nevertheless, in audit practice, the issue of inefficient management communication has gradually become salient, emerging as a key bottleneck constraining the realization of internal audit value [2]. According to data from the China Institute of Internal Auditors (CIIA), the 2025 annual internal audit work reports of Chinese enterprises identified a total of 2,186 issues requiring immediate rectification, among which communication inefficiencies were identified as a significant contributing factor to numerous internal audit deficiencies. Furthermore, as digital transformation accelerates, enterprises now demand greater

real-time accuracy and precision in audit information. Traditional audit communication models have proven inadequate to meet the governance requirements of the new era, necessitating systematic improvement and optimization [3].

This contradiction is particularly pronounced in the tourism industry. Taking L Tourism Group as an illustrative case, the conglomerate operates across diverse business segments encompassing travel agencies, scenic spot operations, hotel management, and online travel platforms, serving over 20 million tourists annually. Its internal audit function spans multiple complex domains, including ticket settlement, supply chain procurement, channel commission rebates, and service outsourcing. In fiscal year 2024, the group's internal audit department identified 215 audit findings, of which 43.7% were attributable to communication inefficiencies a proportion significantly exceeding the national average. The group's audit report further reveals that cross-departmental information acquisition required an average

of 4.2 working days, while the average response cycle for audit recommendations extended to 32 days, severely compromising audit timeliness and the function’s decision-support value.

Currently, academic research in internal audit-related domains has yielded fruitful results; however, studies specifically focusing on management communication efficiency remain considerably limited. First, at the theoretical level, existing literature largely treats communication efficiency as an exogenous variable of audit quality, lacking in-depth analysis of its role as an independent factor [4]. Second, regarding empirical research, prior studies have predominantly focused on external audit or public-sector contexts [5], with scant attention paid to for-profit enterprises, particularly within tourism industry settings. Furthermore, extant research has largely examined single-level factors while failing to systematically consider multi-level determinants, making it difficult to reveal the comprehensive influence relationships among multiple factors on communication efficiency improvement. Consequently, enterprises are left without systematic theoretical guidance and actionable practical solutions for optimizing audit communication, thereby constraining the effective performance of audit functions in the contemporary era. As a comprehensive analytical tool [6], the Technology-Organization-Environment (TOE) framework is capable of thoroughly dissecting the multidimensional factors influencing internal audit management communication efficiency in enterprises and is well-suited to the research context of this study.

In conclusion, this study addresses the critical issue of management communication efficiency in internal audit within tourism enterprises. Taking L Tourism Group as a case study and grounded in the TOE (Technology-Organization-Environment) integrative analytical framework, it explores the multidimensional influencing factors and underlying mechanisms of internal audit communication efficiency, and proposes corresponding improvement recommendations. This research not only enriches the theoretical underpinnings of the internal audit value-creation mechanism, but also provides tourism enterprises with actionable strategic recommendations for optimizing audit communication processes and enhancing communication efficiency.

Influencing Factors of Management Communication Efficiency in Enterprise Internal Audit

Technological dimension

In the digital era, management communication efficiency in internal audit within tourism enterprises is significantly shaped by digital-intelligent technologies and their supporting infrastructure. Digital-intelligent technology tools facilitate the automated generation of audit plans, real-time collection and analysis of audit evidence, and rapid production and distribution of audit reports, thereby substantially enhancing the timeliness and accuracy of information transmission [7]. Furthermore, the application of data visualization technologies enables complex audit findings to be presented to management through intuitive graphical formats, reducing information comprehension barriers and improving communication efficiency. Nevertheless, technology adoption is not accomplished overnight; enterprises face considerable challenges in introducing these tools, including substantial system integration complexities, elevated data security risks, and inadequate technical adaptability among personnel. Should these technological obstacles remain unaddressed, they will severely impede the enhancement of audit communication efficiency.

In the operational practice of L Tourism Group, technological challenges are particularly pronounced. The group has successively deployed multiple information platforms, including a financial audit system, an OTA channel reconciliation system, and a scenic area ticketing system; however, these systems lack unified data interface standards. After extracting data from the ticketing system, auditors often must manually convert formats before importing it into audit analytics software, with each audit consuming an average of approximately 6 working days for data cleansing and preparation. Furthermore, the coverage rate of data visualization tools within the group stands at merely 45%, and most audit reports are still presented to management in lengthy textual formats, thereby hindering the rapid identification of critical information. The following table summarizes the current state of technological application in L Tourism Group’s audit information systems Table 1.

Table 1: Technological Application Status of Audit Information Systems in L Tourism Group (2025).

System/Tool Type	Coverage Rate %	Data Interface Standardization Rate %	Auditor Proficiency 1-5	Average Data Processing Time (Working Days/Audit)
financial audit system	100	55	3.4	2.5
OTA channel reconciliation system	80	40	2.9	4
scenic area ticketing system	75	35	2.7	5.5
Data Visualization Tools	45	70	2.5	N/A
Automated Reporting Tools	30	50	2.2	N/A

Data Source: Joint survey conducted by the Information Management Department and Internal Audit Department of L Tourism Group, December 2025.

Furthermore, the compatibility and integration of internal information systems across the enterprise are also of critical importance [8]. In the absence of effective data interfaces and information exchange mechanisms between systems, auditors must expend considerable time and effort on data conversion and preparation when obtaining data. This not only increases communication costs but may also lead to delays and errors in information transmission. The case of L Tourism Group demonstrates that technological barriers constitute the primary factor constraining the enhancement of audit communication efficiency.

Organizational dimension

Management communication efficiency in internal audit within tourism enterprises is significantly influenced by organizational structure, organizational culture, and personnel quality at the organizational level. Complex hierarchical structures increase the length of information transmission chains, leading to distortion and delays as audit information is relayed upward and downward through multiple levels. Concurrently, departmental silos impede horizontal information flow, making it difficult for auditors to obtain comprehensive and accurate operational data, thereby compromising the relevance and effectiveness of audit recommendations [9]. An open and transparent organizational culture fosters a conducive communication climate, encouraging employees to actively voice opinions and report issues, which enhances the transparency and interactivity of audit communication [10]. Furthermore, the professional competence and communication skills of auditors directly affect the quality of audit information and its transmission effectiveness [11]. The management’s level of awareness and commitment to audit work is also critical; should management lack recognition of the importance of internal audit, audit communication may

be neglected, resulting in recommendations being shelved or inadequately implemented.

L Tourism Group employs a three-tier management architecture comprising Group Headquarters, Regional Centers, and Business Units, resulting in considerable hierarchical depth. When audit information is transmitted from frontline business units to group-level decision-makers, it must undergo multiple stages including consolidation at regional centers and departmental review, consuming an average of 7 working days. Throughout this process, the information distortion rate defined as the proportion of key data or descriptions that deviate from their original accuracy stands at approximately 18%. With respect to horizontal communication, pronounced information silos exist between the internal audit department and other functional departments, including operations, sales, finance, and technology. According to statistics from the group’s Internal Audit Department, formal cross-departmental communication meetings were convened merely twice per month on average in 2025, with content predominantly characterized by one-way reporting and marked by inadequate interactivity. The following table illustrates the specific state of cross-departmental audit communication at L Tourism Group.

As shown in the table, with the exception of the Finance Department, the remaining departments exhibit consistently low communication frequencies with the audit department. Moreover, the audit recommendation feedback rate remains below 50%, and communication satisfaction levels are generally low. These findings indicate that L Tourism Group confronts significant communication barriers at the organizational level, necessitating urgent improvement through structural optimization and cultural reshaping Table 2.

Table 2: Statistics on the Current Status of Cross-Departmental Audit Communication in L Tourism Group (2025).

Department	Monthly Formal Contacts	Avg. Info. Acquisition (Working Days)	Feedback Rate (%)	Satisfaction Score (1-5)
Finance Department	4	2.5	68	3.3
Operations Department (Scenic Areas)	2	5	42	2.6
Sales Department (Channels)	1	4.5	38	2.5
Technology Department	2	3.5	55	2.9
Hotel Management Department	1	6	30	2.2
Average	2	4.3	46.6	2.7

Data Source: Internal Audit Communication Logs and Questionnaire Survey, L Tourism Group, 2025.

Environmental dimension

At the environmental level, external regulatory requirements, market competitive dynamics, and industry technological developments exert significant influence on communication efficiency. Increasingly stringent regulatory policies demand that enterprises enhance audit transparency and communication

efficiency [12] to satisfy compliance requirements, thereby providing impetus albeit to a certain extent for the optimization of audit communication mechanisms. Concurrently, intense market competition compels enterprises to rapidly identify and respond to risks through efficient audit communication, thereby strengthening market competitiveness [13]. Furthermore, rapid advancements in industry technologies, such as the application

of emerging technologies including big data and artificial intelligence, furnish enterprises with technical means to enhance audit communication efficiency while simultaneously imposing higher requirements on their technological adaptability [14]. Should enterprises fail to promptly adopt and apply these new technologies, they may confront technological obsolescence in audit communication, consequently compromising audit efficiency and quality.

For tourism enterprises, environmental-level influences are considerably more multifaceted. L Tourism Group must simultaneously navigate compliance requirements from the Ministry of Culture and Tourism regarding travel agency data reporting, regulatory policies on scenic area ticket pricing across various jurisdictions, and OTA platform commission settlement standards. In 2024, the group received one public reprimand from regulatory authorities for failing to submit accurate audit data in a timely manner, incurring direct losses of RMB 500,000. Furthermore, leading industry peers have begun applying blockchain technology to conduct real-time audits of ticket agency rebates, whereas L Tourism Group still relies primarily on monthly reconciliation. This technological lag has rendered audit communication deficient in both real-time capability and credibility. Intense market competition also compels the group to enhance audit efficiency: in 2025, the group's gross profit margin decreased by 2.3 percentage points year-on-year, urgently necessitating rapid identification of cost anomalies and channel risks through efficient internal audit; yet current communication efficiency remains insufficient to support this imperative.

Strategies for Improving Management Communication Efficiency in Enterprise Internal Audit

Introduction of digital-intelligent audit tools

Enterprises should prioritize the introduction and application of digital-intelligent audit tools to enhance management communication efficiency. With the rapid advancement of information technology, the deployment of audit management information systems and data analytics tools has become a critical means of improving audit effectiveness. Enterprises can adopt data visualization technologies to present complex audit findings to management through intuitive graphical formats, thereby reducing information comprehension barriers and elevating communication efficiency [15]. Concurrently, automated audit tools should be leveraged to streamline the generation of audit plans, collection of evidence, and production of reports, minimizing errors and delays attributable to manual operations. Furthermore, when selecting and implementing audit technologies, enterprises must give full consideration to technological compatibility and integration, ensuring seamless interfacing and collaborative operation across systems to enhance both the efficiency and quality of audit communication. Additionally, enterprises should

intensify technical training programs to improve the technological adaptability of audit personnel and management, ensuring their proficiency in utilizing intelligent tools. Through these measures, enterprises can not only significantly enhance the transmission efficiency of audit information but also strengthen its accuracy and transparency, thereby providing robust technical underpinning for management communication.

Tailored to the operational reality of L Tourism Group, the following specific measures are proposed: First, establish a unified data middle platform to integrate data interfaces across critical business systems—including the financial system, ticketing system, and OTA reconciliation system—thereby enabling automated data extraction and standardized transformation for audit purposes. Second, deploy data visualization dashboards in phases, with priority accorded to high-frequency audit operations, and present audit results via traffic-light (red-yellow-green) indicators pushed to management mobile terminals. Third, introduce Robotic Process Automation (RPA) bots for highly repetitive, rule-based audit tasks such as ticket settlement and invoice verification, which is projected to compress the relevant audit cycle from an average of 7 days to within 1 day. Fourth, organize comprehensive technical training for all relevant staff, requiring auditors to complete a minimum of 40 instructional hours of digital-intelligent tool operation courses by the end of 2026, and incorporate technical proficiency into annual performance appraisals.

Structural optimization and enhanced collaboration

Enterprises should optimize organizational structure and enhance cross-departmental collaboration to improve audit communication efficiency. Complex hierarchical structures and departmental silos constitute significant contributors to inefficient audit communication. Enterprises can reduce management layers and establish a flattened management model, thereby shortening information transmission paths and minimizing information distortion and delays. Concurrently, enterprises should strengthen cross-departmental collaboration mechanisms, dismantle departmental silos, and facilitate information sharing and exchange. By establishing cross-departmental communication platforms and regular communication meetings, auditors can obtain comprehensive and accurate operational data in a timely manner, while management can respond more rapidly with feedback on the implementation status of audit recommendations [16]. Furthermore, enterprises should cultivate an open and transparent organizational culture, encouraging employees to actively voice opinions and report issues, thereby fostering a conducive communication climate. Through these measures, enterprises can fundamentally improve the organizational environment for audit communication, enhance its transparency and interactivity, and thereby promote the effective conduct of internal audit work.

L Tourism Group proposes to implement the following organizational optimization measures: First, compress the existing three-tier architecture—Group Headquarters, Regional Centers, and Business Units—into a two-tier structure comprising Group Headquarters and Business Units, with the Group Audit Department directly interfacing with audit liaisons stationed at each business unit. This restructuring is expected to shorten the information transmission chain by over 50%. Second, establish a Cross-Departmental Audit Communication and Coordination Committee, chaired by the Vice President overseeing audit affairs, to convene monthly joint meetings for on-site coordination and closed-loop tracking of audit findings. Third, develop an internal audit communication digital platform to achieve full-process online traceability for audit task assignment, data requests, and recommendation feedback, targeting a reduction in average information acquisition time from 4.3 days to within 1.5 days. Fourth, promote audit culture training programs by incorporating “open communication” into the Group’s core values performance indicators, and encourage front-line employees to report risk-related leads through anonymous channels.

Adaptation to regulatory and technological developments

Enterprises should proactively adapt to external regulatory requirements and technological developments to enhance audit communication efficiency. As regulatory policies become increasingly stringent and market competition intensifies, enterprises confront heightened demands for audit transparency and communication efficiency. Enterprises should closely monitor changes in external regulatory policies, promptly adjust audit communication mechanisms, and ensure that audit work remains compliant with regulatory requirements. Concurrently, they should actively introduce emerging technologies—such as big data, artificial intelligence, and blockchain—to elevate the technical sophistication of audit communication. These technologies can not only improve the processing efficiency of audit information but also enhance its security and credibility. Leveraging big data analytics enables auditors to rapidly identify risk areas, providing more precise informational support for audit communication, while blockchain-based solutions can ensure the immutability and traceability of audit information. Through these measures, enterprises can better adapt to changes in the external environment, improve the efficiency and quality of audit communication, and thereby maintain competitive advantages in an intensely competitive market.

L Tourism Group’s specific response strategies include: establishing a dynamic regulatory policy monitoring mechanism, under which the Legal and Internal Audit departments jointly form a policy research taskforce to update the compliance requirements

inventory on a quarterly basis and accordingly adjust audit report templates and data submission formats. Concurrently, the Group will pilot the deployment of a big data analytics platform to model tourism business data over the past three years, automatically identify anomalous fluctuations, and generate risk alerts, enabling auditors to directly communicate and verify with relevant departments based on such alerts and thereby transforming ex post auditing into in-process early warning. Furthermore, the Group will explore the application of blockchain technology in channel rebate reconciliation by recording ticket agency contracts, sales records, and rebate payment records on the blockchain for distributed storage and verification, ensuring the immutability of audit evidence, reducing reconciliation disputes, and enhancing communication efficiency.

Conclusion and Future Research

Grounded in the TOE framework, this study took L Tourism Group as a case to examine the influencing factors of management communication efficiency improvement in tourism enterprise internal audit across technological, organizational, and environmental dimensions, and proposed corresponding strategies. The main conclusions are as follows: at the technological level, introducing intelligent audit tools significantly optimizes information transmission and processing workflows, enhancing the accuracy and transparency of audit information; at the organizational level, structural optimization and strengthened cross-departmental collaboration dismantle communication barriers, foster a favorable organizational culture, and improve the transparency and interactivity of audit communication; at the environmental level, proactive adaptation to external regulatory requirements and technological developments ensures that audit work complies with prevailing standards, while leveraging emerging technologies to enhance the quality and efficiency of audit communication. These multi-level strategies work in concert and reinforce one another, providing systematic theoretical and practical guidance for the continuous improvement of management communication efficiency in enterprise internal audit. They not only enhance internal audit effectiveness but also strengthen overall operational efficiency and market competitiveness, laying a solid foundation for sustainable enterprise development.

Going forward, L Tourism Group will continue to advance the aforementioned measures and conduct regular assessments of audit communication efficiency. Meanwhile, as a single-case exploratory study, this research can be extended to comparative studies across multiple tourism enterprises in future work, or quantitative methods can be employed to examine the interaction effects among factors at various levels within the TOE framework, thereby developing a more generalizable theoretical model.

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