

Intelligent Transformation of Internal Control and Audit in Central Enterprises: Evidence from State Grid

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Abstract

Driven by digital economy advancement and state-owned enterprise reform, artificial intelligence has emerged as a core driver for renovating the internal control and audit systems of central state-owned enterprises. Conventional internal control frameworks are plagued by slow risk response and unsatisfactory audit efficiency, urging enterprises to resolve governance challenges via digital and intelligent transformation. As a benchmark of digital and intelligent governance among energy central enterprises, State Grid boasts typical research value in its practice of empowering internal control and audit with artificial intelligence. Taking State Grid as the research subject, this paper explores the intelligent transformation path of internal control and the impact mechanism of artificial intelligence on audit effectiveness. By sorting out the construction practices of intelligent internal control platforms, AI audit models and penetrating supervision systems, it analyzes the inherent mechanism of technology-driven corporate governance. Research shows that firstly, artificial intelligence effectively transforms internal control from ex-post compliance supervision to full-process dynamic management, greatly improving the accuracy and timeliness of risk identification. Secondly, intelligent audit upgrades traditional sampling inspection to full-coverage intelligent screening, which significantly cuts labor costs and enhances the identification efficiency of audit doubtful items. Thirdly, the data-driven supervision system establishes a management mechanism integrating risk early warning and evidence closed-loop, and strengthens the penetration of internal control supervision. The study also identifies prevailing obstacles including incomplete data infrastructure and shortage of interdisciplinary talents, and puts forward targeted improvement strategies correspondingly. In summary, State Grid's practical experience offers valuable references for peer central enterprises to advance digital and intelligent governance. It also sets a solid benchmark for applying AI to corporate management and promoting interdisciplinary integration.

Keywords

Artificial Intelligence, Internal Control, Internal Audit, Penetrating Supervision, Digital and Intelligent Transformation, Governance Effectiveness