The Evolution of Internal Audit's Role in Enterprise Risk Management: Integration of Theoretical Development and Empirical Evidence

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Abstract. Against escalating business complexity and global uncertainty, internal audit's role in enterprise risk management (ERM) has profoundly evolved from a financial compliance watchdog to a strategic risk advisor and integrator. This paper systematically reviews the theoretical evolution of this role and synthesizes cross-country, cross-industry empirical evidence. The findings reveal that internal audit's expanded functions—core assurance, legitimate consulting, and strategic integration—significantly enhance ERM effectiveness, organizational resilience, and governance quality, while reducing operational and financial risk. However, persistent challenges include role ambiguity, competency gaps, resource constraints, and integration barriers across diverse contexts. By providing an integrated framework of this evolutionary path, this study addresses the fragmentation in existing research and offers actionable insights for optimizing internal audit's contribution to modern ERM systems, while identifying critical gaps for future research.

Keywords: Internal Audit; Enterprise Risk Management; Role Evolution; Theoretical Development; Empirical Evidence; Corporate Governance; Risk Governance

1 Introduction

In contemporary business ecosystems characterized by globalization, rapid digital transformation, increasingly stringent regulatory scrutiny, and growing stakeholder expectations, enterprise risk management (ERM) has evolved from a discretionary operational practice to a strategic imperative for organizations seeking long-term sustainability. The 2017 update of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) ERM Framework, titled "Enterprise Risk Management—Integrating with Strategy and Performance," and the Institute of Internal Auditors (IIA)'s International Standards for the Professional Practice of Internal Auditing (Standards) explicitly position internal audit as a cornerstone of effective risk governance, emphasizing its unique role in providing independent assurance and objec-

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tive consulting on ERM processes. Historically, internal audit was confined to post-hoc financial compliance reviews, error detection, and fraud prevention, operating as a back-office function with limited strategic influence. Today, however, internal audit is increasingly embedded in proactive risk identification, strategic risk assessment, ERM process optimization, and even the design of risk management frameworks, reflecting a fundamental paradigm shift in its purpose and scope.

This paradigm shift has sparked extensive academic debate regarding the theoretical rationale, drivers, and empirical validity of internal audit's evolving risk mandate. Over the past four decades, scholarly research on internal audit and ERM has grown exponentially, yet existing studies often fragment theoretical development and empirical evidence. Many studies focus solely on theoretical conceptualization, while others conduct isolated empirical tests in specific contexts (e.g., single industries or countries), with limited cross-contextual integration or synthesis of findings. This fragmentation creates a gap in the literature, as it hinders a holistic understanding of internal audit's evolutionary trajectory and its practical impact on ERM effectiveness across diverse organizational settings. This paper addresses this gap by systematically reviewing the theoretical evolution of internal audit's risk-related roles and consolidating global empirical evidence to verify the performance impacts of this role expansion. By integrating theoretical frameworks and empirical findings into a unified framework, this study aims to clarify the current state, key drivers, challenges, and future directions of internal audit's role in ERM, contributing to both academic literature and practical risk governance[9].

2 Theoretical Evolution of Internal Audit's Role in Risk Management

The evolution of internal audit's role in risk management is a gradual, context-driven process shaped by regulatory changes, organizational complexity, technological advancements, and shifting stakeholder expectations. This section divides this evolution into four distinct phases, each characterized by unique roles, theoretical foundations, and core activities, highlighting the progressive expansion of internal audit's scope and influence in ERM. Each phase reflects the changing needs of organizations as they navigate an increasingly complex and uncertain business environment, with internal audit adapting to become a more integral part of risk governance.

2.1 Phase 1: Traditional Financial Compliance Auditing (Pre-1980s)

The initial phase of internal audit's development was dominated by financial and compliance-centric roles, rooted primarily in agency theory. During this period, organizations regarded internal audit as a key control mechanism to mitigate managerial opportunism and guarantee the reliability of financial statements. Under the principal-agent framework, shareholders relied on internal audit to supervise managers and avoid financial misstatement or fraud. Risk considerations were narrow and reactive, confined mainly to financial risks, including reporting errors, asset misappropriation, and non-compliance with basic accounting standards, as the business environment was relatively simple with less complex operational and strategic risks. Core activities covered verifying financial transaction accuracy, reconciling accounts, inspecting records for irregularities, and ensuring compliance with internal policies and external regulations. The 1947 IIA definition highlighted it as an independent appraisal activity for accounting and financial operations, clearly reflecting the compliance-focused mandate. Internal audit was perceived only as a defensive function for post-event error detection and correction, not a strategic partner. Agency theory remained the only theoretical basis, emphasizing the monitoring role to align managerial behavior with shareholder interests.

2.2 Phase 2: Risk-Based Control Auditing (1980s–Early 2000s)

The 1980s to the early 2000s saw a major shift from compliance-centric auditing to risk-oriented internal control auditing. This transition was driven by rising organizational complexity from globalization, new operational risks including supply chain disruptions and technological failures, regulatory reforms such as the U.S[6]. Foreign Corrupt Practices Act 1977, and the release of the COSO Internal Control Framework in 1992. The framework established a structured internal control system, strengthened the connection between controls and risk management, and made internal audit central to assessing control effectiveness[11]. Globalization brought cross-border risks like currency fluctuations and regulatory differences, requiring more proactive risk management.

Theoretically, agency theory was expanded with institutional theory, as firms adopted risk-based practices to meet regulatory requirements and gain legitimacy. Contingency theory also took hold, indicating that internal audit adjusts to firm size, industry, and environmental uncertainty. The 1999 IIA definition formally repositioned internal audit as an independent assurance and consulting activity that evaluates risk management, control, and governance. This change officially integrated risk management into its core duties, extending its scope from financial compliance to operational control review and risk mitigation

2.3 Phase 3: ERM-Integrated Strategic Auditing (Mid-2000s–Present)

The post-Sarbanes-Oxley Act (2002) era, combined with the publication of the 2004 COSO ERM Framework ("Enterprise Risk Management—Integrated Framework"), catalyzed the third phase of internal audit's evolution: ERM integration and strategic partnership. The Sarbanes-Oxley Act imposed strict requirements for internal controls and financial reporting, increasing the demand for internal audit's assurance on ERM processes, while the 2004 COSO ERM Framework expanded the scope of risk management to include strategic, operational, financial, and compliance risks, positioning internal audit as a critical integrator of ERM across the organization. The 2017 update of the COSO ERM Framework further emphasized internal audit's role in evaluating ERM framework maturity, providing strategic risk insights, and fostering a risk-aware organizational culture.

Theoretical foundations during this phase expanded to a multi-paradigm framework, integrating several complementary theories to explain internal audit's evolving role: (1) Agency Theory: Extended to include strategic risk oversight, with internal audit monitoring the board and management's fulfillment of risk governance responsibilities, reducing information asymmetry between stakeholders and management. (2) Resource-Based View (RBV): Positioned internal audit's risk expertise, deep organizational knowledge, and independence as valuable, rare, and inimitable resources that enhance an organization's ERM capability and competitive advantage. (3) Institutional Theory: Explained the isomorphic adoption of ERM-integrated internal audit practices, as organizations sought to gain legitimacy with regulators, investors, and other stakeholders by aligning with global risk governance standards. (4) Stakeholder Theory: Emphasized internal audit's role in balancing risk mitigation across diverse stakeholder groups (shareholders, employees, customers, regulators), ensuring that risk management decisions align with broader organizational purpose and stakeholder expectations. The IIA (2009) categorized roles into core (assurance), legitimate (consulting), and prohibited (risk ownership) to preserve independence—guiding modern audit practice.

2.4 Phase 4: Digital and Strategic Risk Intelligence (Emerging)

The fourth phase of internal audit's evolution, which began in the 2020s and continues to unfold, is defined by digital transformation and strategic risk intelligence, driven by advancements in artificial intelligence (AI), big data analytics, cloud computing, and the growing prominence of environmental, social, and governance (ESG) risks. Digital transformation has revolutionized the way organizations manage risk, enabling real-time data collection, predictive risk modeling, and continuous monitoring—capabilities that have reshaped internal audit's role and activities. The rise of ESG risks, including climate change, social inequality, and corporate governance failures, has further expanded the scope of internal audit's responsibilities, requiring it to address non-financial risks that can have a significant impact on organizational reputation and long-term sustainability.

Internal audit now leverages advanced analytics tools to conduct continuous assurance, identify emerging risks (e.g., cyber risks, data privacy risks), and provide predictive insights into risk trends. For example, AI-powered tools can analyze large volumes of transactional data to detect anomalies indicative of fraud or operational inefficiencies, while predictive analytics can forecast the likelihood of supply chain disruptions or market volatility. This shift has transformed internal audit from a reactive function to a proactive, forward-looking strategic risk integrator, aligning ERM with corporate strategy and addressing complex, interconnected risks. Theoretically, dynamic capabilities theory explains its adaptive capacity to address emerging risks, while stakeholder theory expands to include ESG priorities.

3 Empirical Evidence on Internal Audit's Risk Management Role

Global empirical studies validate the positive impact of internal audit's ERM engagement, while highlighting contextual variations and challenges. These studies draw on data from diverse regions and industries, providing a comprehensive understanding of how internal audit's role in ERM translates into practical outcomes.

3.1 Cross-Country Evidence

Alzeban & Gwilliam (2014) conducted a survey of 203 managers and 239 internal auditors from 79 Saudi Arabian public sector organizations, finding that internal auditors engage moderately in core (60.7%) and legitimate (53.1%) ERM roles[1]. Their results confirmed that this engagement significantly improves ERM effectiveness and financial reporting quality, with management support emerging as a key driver of internal audit effectiveness. Jassem (2022) examined the Malaysian transportation industry, a sector with high operational and supply chain risks, and found that internal auditors perform 70% of core ERM roles, enhancing four of the five COSO ERM components (strategy, operations, reporting, compliance)[5]. Allegrini & D'Onza (2003) surveyed large Italian companies, linking internal audit's involvement in risk assessment to stronger internal controls and lower operational risk incidents[2]. Baharom et al. (2024)'s global review, covering 120 empirical papers across 40 countries, confirmed consistent improvements in governance and organizational resilience, with emerging markets lagging in auditor competency and resource allocation[3].

3.2 Determinants of Integration Effectiveness

Key facilitators of effective internal audit-ERM integration include audit committee support, auditor competency, and a risk-aware organizational culture. Audit committees composed of independent directors with risk expertise secure adequate resources for internal audit, ensure unimpeded access to ERM processes, and drive the implementation of audit recommendations. Sarens & De Beelde (2011) and Cohen et al. (2017) both confirmed that strong audit committees correlate with higher levels of integration and better ERM outcomes[4,10]. Auditor competency—including skills in risk management, data analytics, and industry-specific risks—is also critical, as Oussii & Taktak (2018) found that organizations with trained audit teams report higher ERM effectiveness[8]. Barriers include role ambiguity (confusion over core vs. prohibited roles), resource constraints (understaffing, limited budgets), organizational silos, and regulatory fragmentation across global markets.

3.3 Performance Outcomes

Empirical evidence consistently links internal audit's core and legitimate roles to improved organizational outcomes. Baharom et al. (2024) found that firms with integrated internal audit-ERM processes report 30–40% lower risk incidents, particularly in operational and financial areas. These roles also enhance corporate governance by reducing agency conflicts, improving financial reporting reliability, and strengthening board oversight—findings supported by Cohen et al. (2017), who linked audit ERM engagement to fewer financial restatements. Additionally, internal audit's involvement in ERM boosts stakeholder confidence by improving risk disclosure transparency, reducing the cost of capital for organizations. However, overreach into prohibited roles (e.g., assuming risk ownership) compromises internal audit's independence and weakens ERM effectiveness.

3.4 Contextual Variations

Internal audit's ERM role varies significantly by industry, firm size, and institutional context. Financial services firms exhibit deeper integration due to high regulatory intensity and complex interconnected risks (e.g., credit, market, cyber risks). Manufacturing firms focus more on operational and supply chain risks, with internal audit evaluating production processes and supply chain controls[12]. Large listed firms have more mature audit-ERM integration, with dedicated resources and specialized staff, while SMEs face resource constraints, limiting internal audit to basic compliance reviews. Emerging markets (e.g., Saudi Arabia, Malaysia) adopt ERM rapidly due to regulatory pressure but lag in auditor competency and technology adoption. Cultural factors, such as power distance and collaboration norms, also shape audit roles—collaborative cultures enhance integration, while hierarchical cultures limit strategic influence[7].

4 Integrated Framework and Future Research Directions

4.1 Integrated Framework

Synthesizing the theoretical evolution and empirical evidence, we propose an integrated framework with five key components: (1) Antecedents: Regulatory changes, digital transformation, institutional pressures, and organizational complexity drive the expansion of internal audit's risk roles. (2) Evolutionary Phases: The four phases (compliance, risk-based control, ERM integration, digital risk intelligence) with corresponding theoretical foundations. (3) Role Categories: IIA's core, legitimate, and prohibited roles, which guide practice and preserve independence. (4) Mediators/Moderators: Auditor competency, technology adoption, organizational culture, audit committee support, and contextual factors shape integration effectiveness. (5) Outcomes: Enhanced ERM effectiveness, improved corporate governance, better organizational performance, and increased stakeholder confidence. This framework addresses research fragmentation and highlights internal audit's dynamic, adaptive role.

4.2 Future Research Directions

Based on identified gaps, future research should focus on six key areas: (1) Digital transformation's impact on internal audit roles, including AI and big data analytics applications in continuous assurance and predictive risk modeling. (2) Internal audit's role in ESG risk management, exploring how audit practices can address climate, social, and governance risks. (3) Cross-cultural and institutional comparisons, identifying factors driving role adoption and effectiveness across diverse contexts. (4) Balancing internal audit independence and ERM integration, developing safeguards for consulting roles. (5) SME-specific solutions for audit-ERM integration, addressing resource constraints. (6) Longitudinal studies on how internal audit's evolution affects organizational resilience over time.

5 Conclusion

Internal audit's role in enterprise risk management has evolved dramatically over the past four decades, from a narrow financial compliance function to a strategic ERM partner and digital risk intelligence provider. This evolution is theoretically grounded in a progression of frameworks—from agency theory to dynamic capabilities theory—reflecting shifting organizational needs, regulatory pressures, and technological advancements. Empirical evidence from global studies confirms that internal audit's core assurance and legitimate consulting roles significantly enhance ERM effectiveness, corporate governance, and organizational performance, while also reducing risk exposure. However, challenges such as role ambiguity, resource constraints, and competency gaps persist, highlighting the need for ongoing improvement in internal audit practices.

This study contributes to the academic literature by providing a comprehensive, integrated review of internal audit's evolutionary trajectory, addressing the fragmentation of existing research and proposing a unified theoretical-empirical framework. For practitioners, the findings emphasize the importance of investing in auditor competencies, technology, and cross-functional collaboration, while upholding clear role boundaries to preserve independence. For policymakers, the study supports the development of regulatory frameworks that promote ERM-integrated internal audit practices, enhancing risk governance across industries. As risks grow more complex, interconnected, and digital, internal audit will continue evolving toward real-time, strategy-aligned risk governance, solidifying its role in organizational resilience and long-term sustainability.

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