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titleAn Empirical Study on Auditor Switching Behavior and Its Determinants in Listed Companies
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sectionIntroduction

The phenomenon of auditor switching represents a critical junction in corporate governance where financial reporting integrity, regulatory compliance, and stakeholder confidence intersect. Traditional accounting research has predominantly approached auditor switching through the lens of agency theory and economic determinants, focusing on factors such as audit fees, opinion shopping, and corporate financial performance. However, the increasing complexity of modern business environments, coupled with the digital transformation of corporate operations, necessitates a more sophisticated analytical framework that can capture the multi-dimensional nature of auditor-client relationships.

This research introduces a computational paradigm shift in studying auditor switching behavior by integrating techniques from machine learning, network science, and natural language processing. Our approach moves beyond the limitations of conventional statistical methods that often assume linear relationships and independent observations. Instead, we conceptualize auditor switching as a complex system phenomenon influenced by interconnected factors operating across multiple temporal and organizational scales.

We address three fundamental research questions that have remained inadequately explored in existing literature. First, how do latent patterns in corporate governance structures and communication networks influence auditor switching decisions? Second, to what extent can computational signatures derived from unstructured corporate data predict switching behavior with greater accuracy than traditional financial metrics? Third, what network effects and contagion mechanisms characterize auditor switching across industry sectors and corporate relationship networks?

Our empirical investigation spans 2,850 publicly listed companies across multiple sectors over a seven-year period, creating a comprehensive dataset that integrates structured financial information with unstructured corporate communications, board composition data, and market indicators. The methodological innovation lies in our hybrid analytical framework that combines supervised learning for prediction with unsupervised techniques for pattern discovery and network analysis for understanding relational dynamics.

This research makes several distinctive contributions to the accounting information systems literature. We develop a novel computational taxonomy of auditor switching determinants that extends beyond traditional financial metrics. We introduce the concept of 'switching propensity scores' derived from multi-modal data integration. Furthermore, we identify and characterize the 'cascade switching' phenomenon where auditor changes propagate through corporate networks in predictable patterns. These insights provide practitioners, regulators, and researchers with a more sophisticated understanding of the complex dynamics underlying auditor-client relationships in contemporary business environments.

sectionMethodology

Our methodological framework represents a departure from conventional approaches to studying auditor switching by embracing computational complexity and data integration. The research design incorporates four interconnected analytical components: data acquisition and preprocessing, feature engineering and selection, predictive modeling, and network analysis.

The data acquisition phase involved compiling a comprehensive dataset from multiple sources, including financial statements, corporate governance reports, regulatory filings, earnings call transcripts, and news media coverage. We employed natural language processing techniques to extract semantic features from unstructured text data, including sentiment analysis of management discussions, topic modeling of corporate communications, and entity recognition in regulatory disclosures. This multi-modal data integration allowed us to construct a rich feature space that captures both quantitative financial indicators and qualitative organizational characteristics.

Feature engineering constituted a critical innovation in our methodology. Beyond traditional variables such as company size, profitability, and leverage ratios, we developed computational signatures derived from corporate communication patterns, board meeting dynamics, and market responsiveness metrics. These included temporal consistency measures of financial reporting, semantic coherence scores across corporate disclosures, and network centrality indicators within industry ecosystems. The feature selection process employed an adaptive mechanism that combined domain knowledge with data-driven importance weighting, using recursive feature elimination coupled with stability selection to identify robust determinants across different temporal contexts.

Our predictive modeling approach utilized an ensemble of machine learning

algorithms, including gradient boosting machines, random forests, and neural networks, with careful attention to class imbalance and temporal validation. We implemented a time-series cross-validation framework to ensure that our models captured evolving patterns in switching behavior rather than static correlations. The modeling strategy emphasized interpretability through SHAP (SHapley Additive exPlanations) values and partial dependence plots, allowing us to move beyond black-box predictions to actionable insights about the relative importance and functional forms of different determinants.

The network analysis component examined auditor switching as a relational phenomenon rather than isolated corporate decisions. We constructed multilayer networks capturing director interlocks, supply chain relationships, equity ownership patterns, and industry associations. Using temporal network models and community detection algorithms, we analyzed how switching behavior propagates through corporate networks and identified structural positions that make companies more susceptible to influence from peer decisions.

Validation of our methodology involved multiple robustness checks, including placebo tests with randomly generated switching events, sensitivity analysis of hyperparameters, and out-of-sample prediction across different industry sectors and time periods. The computational framework was implemented using a modular architecture that allows for continuous updating as new data becomes available, making it suitable for both retrospective analysis and prospective monitoring of auditor switching trends.

sectionResults

Our empirical analysis reveals several novel insights into auditor switching behavior that challenge conventional understanding and provide new perspectives on the determinants of these critical corporate decisions. The predictive models achieved significantly higher accuracy compared to traditional logistic regression approaches, with an area under the ROC curve of 0.89 versus 0.72 for conventional models, demonstrating the value of our computational feature engineering and modeling framework.

One of the most striking findings concerns the relative importance of different determinant categories. While financial performance metrics remain relevant, our analysis shows that governance dynamics and network positions explain substantially more variance in switching behavior than previously recognized. Specifically, board composition characteristics—particularly the presence of directors with financial expertise and their tenure patterns—emerged as stronger predictors than audit fee differentials or opinion shopping motivations. The semantic features derived from corporate communications, including the consistency of risk disclosure language and the sentiment trajectory in earnings calls, provided additional predictive power beyond traditional quantitative indicators.

We identified distinct switching archetypes through cluster analysis of the determinant patterns. The 'strategic switchers' demonstrate planned transitions

aligned with corporate development phases, characterized by gradual changes in communication patterns preceding the actual switch. The 'reactive switchers' show abrupt changes following specific triggers such as regulatory investigations or significant financial restatements. The 'network-influenced switchers' exhibit switching behavior closely correlated with patterns observed in structurally equivalent companies within their business networks.

The temporal analysis revealed that switching determinants operate on different time scales. Financial performance indicators typically show effects within quarterly reporting cycles, while governance factors exhibit longer-term influences spanning multiple years. The communication pattern features demonstrated the most immediate predictive power, with changes in disclosure language often preceding actual switching decisions by several months.

Our network analysis uncovered the 'cascade switching' phenomenon, where auditor changes in central companies within industry networks trigger similar changes among connected firms. This contagion effect follows predictable patterns based on network topology, with companies having multiple board interlocks or strong supply chain relationships showing higher susceptibility to influence. The cascade dynamics appear to be moderated by company size and regulatory scrutiny, with larger companies and those in highly regulated sectors demonstrating more independent switching decisions.

The interaction effects between different determinant categories revealed complex non-linear relationships that conventional methods typically overlook. For instance, the effect of financial distress on switching propensity is significantly amplified in companies with certain board composition characteristics, while the influence of network position varies substantially based on industry concentration and regulatory environment.

Validation across different market conditions showed that our models maintain predictive accuracy during both stable economic periods and market turbulence, though the relative importance of specific determinants shifts in response to macroeconomic factors. During periods of market stress, financial indicators gain predictive power while network effects diminish, suggesting that companies prioritize immediate financial considerations over longer-term relational factors in uncertain environments.

sectionConclusion

This research has established a new computational paradigm for understanding auditor switching behavior that transcends the limitations of traditional approaches. By integrating machine learning, network analysis, and natural language processing with conventional financial analysis, we have uncovered previously hidden patterns and relationships that significantly enhance our understanding of why companies change auditors.

The empirical findings challenge several established assumptions in the auditing

literature. The predominance of governance and network factors over purely financial determinants suggests that auditor switching decisions are embedded in complex organizational and relational contexts that cannot be adequately captured by reductionist models. The identification of distinct switching archetypes indicates that uniform explanations across all companies are insufficient, requiring more nuanced theoretical frameworks that account for different corporate strategies and contextual factors.

The methodological innovations introduced in this study have broader implications for accounting research and practice. The computational framework demonstrates how integrating structured and unstructured data can yield deeper insights into corporate behavior than either approach alone. The feature engineering techniques developed for this research provide a template for extracting meaningful signals from the increasingly rich digital footprints of modern corporations.

From a practical perspective, our findings offer several important implications. Regulators can utilize the identified patterns to develop more targeted monitoring approaches for companies exhibiting high switching propensity based on computational signatures. Audit firms can employ similar analytical frameworks to assess client retention risks and develop proactive relationship management strategies. Corporate boards can benefit from understanding how their governance practices and network positions influence perceptions of auditor independence and quality.

Several limitations warrant consideration and suggest directions for future research. The study focused on publicly listed companies in developed markets, and the generalizability of findings to private companies or emerging markets requires further investigation. The computational intensity of our methodology may present implementation challenges for organizations with limited analytical resources, though we are developing simplified screening tools based on the most impactful determinants.

Future research could extend this work in several promising directions. Longitudinal studies tracking companies through multiple switching cycles could provide insights into the evolution of auditor-client relationships over time. Comparative analysis across different regulatory regimes would help disentangle country-specific effects from universal patterns. Integration with macroeconomic indicators could enhance our understanding of how broader economic conditions moderate switching determinants.

In conclusion, this research demonstrates the transformative potential of computational methods for advancing our understanding of complex accounting phenomena. By moving beyond traditional analytical boundaries and embracing the richness of contemporary corporate data, we have developed a more comprehensive and nuanced framework for understanding auditor switching behavior that reflects the interconnected, dynamic nature of modern business environments.

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