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Research Article

The Analytical Review as a Core Management Tool: Techniques for Identifying Variances, Ensuring Accounting Accuracy, and Informing Strategy

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ABSTRACT

This study investigates the role of analytical review as a core management tool for identifying variances, ensuring accounting accuracy, and informing strategic decision-making across industries. Both primary and secondary data sources were utilized, combining financial statement analysis with managerial perception surveys. The research examined key variables including analytical review techniques (ratio, trend, variance, regression, and predictive analytics) as independent factors, while accounting accuracy, strategic decision quality, and financial performance were treated as dependent outcomes. Using correlation, multiple regression, Principal Component Analysis (PCA), and Structural Equation Modeling (SEM), the findings revealed a strong positive relationship between analytical review practices and both accounting accuracy ($r = 0.62$, $p < 0.01$) and strategic decision quality ($r = 0.58$, $p < 0.01$). Regression models further indicated that analytical review significantly predicts accounting accuracy ($\beta = 0.53$, $p < 0.001$) and decision-making quality ($\beta = 0.49$, $p < 0.001$). PCA results identified two major analytical components traditional analytical rigor and predictive data-driven methods explaining 82.6% of total variance. Industry-wise comparisons showed that financial firms achieved the highest levels of accuracy and analytical maturity, while cluster analysis confirmed that organizations with higher analytical review maturity recorded superior financial performance. The study concludes that analytical review transcends its traditional audit role to serve as a strategic enabler of managerial efficiency, financial transparency, and long-term organizational success.

Keywords: Analytical Review, Accounting Accuracy, Variance Analysis, Strategic Decision-Making, Predictive Analytics, Financial Performance, Management Tools.

Introduction

Analytical review as an essential component of managerial decision-making

Analytical review stands as a cornerstone of financial management and control, enabling organizations to derive meaningful insights from numerical data (Appelbaum et al., 2017). It involves the systematic examination of financial and operational information to identify trends, variances, and inconsistencies that may indicate underlying issues or opportunities for improvement. In contemporary business environments characterized by rapid market changes, evolving accounting standards, and increased stakeholder scrutiny analytical review has emerged as a crucial tool not merely for auditors but for managers seeking to strengthen governance and enhance decision-making (Richardson et al., 2010). The process assists in linking quantitative data with strategic insights, allowing management to interpret financial outcomes in light of organizational goals and external economic conditions (Hazır, 2015).

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Importance of analytical review in detecting variances and irregularities

Variance analysis, a fundamental element of analytical review, helps managers pinpoint deviations between actual and expected performance. By comparing financial ratios, trend data, and budgetary targets, organizations can identify both favorable and unfavorable variances in revenues, expenses, and productivity (Fullerton et al., 2014). These analyses are instrumental in detecting potential accounting inaccuracies, fraud indicators, or inefficiencies in operations. Analytical review, therefore, extends beyond compliance; it plays a preventive role in organizational control systems (Mikolajewicz, N., & Komarova, 2019). When consistently applied, it promotes transparency and reliability in reporting, facilitating proactive interventions before small inconsistencies escalate into significant financial misstatements.

Techniques and approaches that strengthen analytical review practices

A variety of quantitative and qualitative techniques are employed in analytical review to ensure robust financial analysis. Ratio analysis, trend evaluation, common-size financial statements, and regression models are commonly utilized to uncover patterns within financial data (Wyatt Kaminski et al., 2008). More advanced approaches, such as statistical modeling and data visualization, now enhance the precision and accessibility of analytical insights. With the integration of technology, especially data analytics and artificial intelligence, analytical review has evolved into a dynamic management tool capable of processing large data sets in real time (Abdul-Rahamon & Adejare, 2014). This evolution not only improves the accuracy of accounting data but also strengthens the link between financial analysis and operational strategy.

Ensuring accounting accuracy through systematic analytical review

Accounting accuracy is fundamental to maintaining investor confidence and regulatory compliance. Analytical review procedures serve as an internal audit mechanism that validates the reliability of financial statements by cross-verifying relationships among different financial variables (Pröllochs & Feuerriegel, 2020). When applied methodically, these reviews can detect unusual transactions, assess reasonableness, and confirm consistency across reporting periods. For management, this ensures that strategic decisions are based on precise, validated information (Richins et al., 2017). Furthermore, accurate accounting contributes to ethical financial reporting, reinforcing an organization's credibility in the eyes of stakeholders and governing bodies.

Analytical review as a strategic enabler in modern management

Beyond its technical function, analytical review has strategic implications. It informs managerial decisions related to resource allocation, performance evaluation, and risk management (Schlomer et al., 2010). By transforming financial data into actionable intelligence, it bridges the gap between accounting and strategy formulation. Organizations increasingly use analytical review outcomes to set realistic goals, improve cost efficiency, and anticipate future market shifts. Hence, analytical review is not only a diagnostic tool but also a forward-looking management instrument that enhances competitiveness and long-term sustainability.

Methodology

The research design and overall approach

This study adopts a quantitative descriptive-analytical research design to evaluate the analytical review as a managerial tool for identifying variances, ensuring accounting accuracy, and informing strategic decisions. The research is cross-sectional in nature, allowing for the collection and analysis of data from multiple firms within a specific time frame. This design facilitates comparative evaluation across industries and ensures the inclusion of diverse management practices. The analytical framework combines financial statement evaluation, variance detection, and statistical analysis to measure the effectiveness of analytical review practices. By integrating both financial and managerial perspectives, the study aims to establish a structured relationship between analytical review processes and strategic decision outcomes.

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The data sources and sampling procedure

Primary data are collected using a structured questionnaire administered to finance managers, auditors, accountants, and strategic planners. The sampling design follows a purposive sampling approach, focusing on firms with at least five consecutive years of financial reporting and a fully functional internal audit system. Out of 200 questionnaires distributed, 165 valid responses were received, achieving a response rate of 82.5%, which is sufficient for robust statistical analysis.

The key variables and parameters of analysis

The study identifies three major analytical dimensions variance identification, accounting accuracy, and strategic decision-making each represented through measurable variables. The independent variables include analytical review techniques such as ratio analysis (profitability, liquidity, solvency, and efficiency ratios), trend analysis (five-year performance trends), variance analysis (budget-to-actual performance), regression analysis (relationship among financial indicators), and predictive data analytics (AI-based insights). The dependent variables are accounting accuracy, strategic decision quality, and financial performance outcomes measured through Return on Assets (ROA), Return on Equity (ROE), and Earnings per Share (EPS). Control variables include firm size (total assets and workforce), industry type (manufacturing, service, or financial sector), and reporting frequency (quarterly or annual). These parameters ensure that the analytical relationships observed are not distorted by firm-level or sectoral differences.

The data collection instruments and validation procedures

Primary data collection is conducted through a structured questionnaire designed to capture the perceptions and applications of analytical review among financial professionals. The questionnaire includes 25 closed-ended questions categorized under the three analytical dimensions and rated on a five-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5). The reliability of the instrument is tested using Cronbach’s alpha, which yields a coefficient of 0.87, confirming high internal consistency. Content validity is ensured through expert review by senior auditors and financial analysts, while construct validity is confirmed through Confirmatory Factor Analysis (CFA) using SPSS version 26. These validation steps confirm that the questionnaire reliably measures the intended constructs related to analytical review techniques and management performance.

The analytical and statistical methods used

A combination of descriptive and inferential statistical analyses is employed to interpret the data. Descriptive statistics, including mean, standard deviation, and coefficient of variation, are used to summarize financial ratios and variance results. Correlation analysis (Pearson’s correlation) is conducted to assess the relationships between analytical review techniques and accounting accuracy. Multiple regression analysis is used to examine the predictive influence of analytical review tools on accounting accuracy and strategic decision-making. ANOVA (Analysis of Variance) is applied to identify industry-level differences in the use of analytical review methods. Additionally, Principal Component Analysis (PCA) is employed to identify the most influential parameters contributing to accounting accuracy and decision-making efficiency. To strengthen the model’s causal interpretation, Structural Equation Modeling (SEM) using AMOS 24 is used to validate the hypothesized relationships among variance detection, accounting accuracy, and strategic outcomes.

The process of data processing and presentation

The collected data are processed and analyzed using SPSS version 26 and AMOS version 24. Prior to statistical analysis, financial data are normalized to eliminate scale differences and ensure comparability across firms. Results are systematically presented using tables, radar charts, and cluster diagrams to visualize patterns and relationships among analytical review variables. The cluster analysis groups firms based on their

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adoption level of analytical review practices and their corresponding performance outcomes, thus illustrating industry-specific behavioral patterns. These visual and statistical outputs provide clear evidence of how analytical review influences financial accuracy and strategic alignment.

The ethical considerations in the research

All research procedures adhere to the principles of ethical integrity, confidentiality, and informed consent. Participants were fully briefed on the study's objectives and their right to withdraw at any time. Company financial data were used strictly for academic purposes, maintaining anonymity and confidentiality of organizational identities. Ethical approval was obtained from the institutional review board prior to data collection, ensuring compliance with standard research ethics and professional accounting conduct.

Results

The analysis of accounting accuracy metrics across industries (Table 1) shows that financial sector firms recorded the highest levels of accounting precision, followed by manufacturing and service industries. Specifically, the financial industry exhibited the lowest mean error frequency (2.9 ± 0.9) and the least reconciliation discrepancy rate (0.49 ± 0.17%), indicating that these organizations maintain superior control and accuracy in their accounting systems. In contrast, the service sector demonstrated relatively higher error frequencies and adjustment rates, implying that their analytical review mechanisms may require more structured implementation. These variations suggest that the extent and rigor of analytical review practices differ by industry, directly influencing financial reporting reliability.

Table 1. Accounting accuracy metrics by industry

Metric	Manufacturing (n=15)	Services (n=13)	Financial (n=12)
Error frequency (per 1,000 entries)	3.8 ± 1.2	4.6 ± 1.4	2.9 ± 0.9
Audit adjustments (per quarter)	2.1 ± 0.9	2.7 ± 1.0	1.6 ± 0.7
Reconciliation discrepancy rate (%)	0.62 ± 0.21	0.78 ± 0.25	0.49 ± 0.17

The correlation analysis (Table 2) highlights the strong interrelationships among the key variables of the study. The Analytical Review Technique Index (ARTI) shows a significant positive correlation with Accounting Accuracy Index (AAI) ($r = 0.62$, $p < 0.01$) and Strategic Decision Quality (SDQ) ($r = 0.58$, $p < 0.01$), suggesting that effective application of analytical review enhances both financial reliability and decision-making quality. The correlation between AAI and Financial Performance Index (FPI) ($r = 0.46$, $p < 0.01$) further confirms that higher accounting accuracy tends to improve firm performance outcomes. These results collectively validate the conceptual framework that analytical review serves as a critical managerial instrument linking financial control with strategic outcomes.

Table 2. Correlation matrix among core indices (n = 165 respondents)

Variable	AR Technique Index (ARTI)	Accounting Accuracy Index (AAI)	Strategic Decision Quality (SDQ)	Financial Performance Index (FPI)
ARTI	1.00			
AAI	0.62**	1.00		
SDQ	0.58**	0.55**	1.00	
FPI	0.41**	0.46**	0.49**	1.00

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The multiple regression models (Table 3) reinforce the significance of analytical review as a predictive factor. In Model A, the AR Technique Index (ARTI) is a strong predictor of accounting accuracy ($\beta = 0.53$, $p < 0.001$), explaining 41% of the variance in AAI. Similarly, Model B demonstrates that both ARTI ($\beta = 0.49$, $p < 0.001$) and AAI ($\beta = 0.26$, $p = 0.002$) significantly influence strategic decision quality (SDQ), with an adjusted R^2 of 0.46. These findings imply that organizations emphasizing analytical review not only improve accounting precision but also enhance decision-making effectiveness and strategic responsiveness. Furthermore, firm size and industry type have minor but positive moderating effects, suggesting that larger and financially oriented firms gain more from analytical review integration.

Table 3. Multiple regression models linking analytical review to accuracy and strategy (standard errors in parentheses)

Outcome	Predictor	B	β	t	p
Model A: AAI (Adj. R^2 = 0.41; $F(3,161) = 39.0$, $p < 0.001$)	Constant	0.37	—	3.10	0.002
	AR Technique Index (ARTI)	0.48 (0.07)	0.53	6.86	<0.001
	Firm size (log assets)	0.11 (0.05)	0.12	2.05	0.042
	Reporting frequency (Quarterly=1)	0.07 (0.04)	0.09	1.70	0.091
Model B: SDQ (Adj. R^2 = 0.46; $F(4,160) = 36.5$, $p < 0.001$)	Constant	0.29	—	2.61	0.010
	AR Technique Index (ARTI)	0.47 (0.08)	0.49	5.88	<0.001
	Accounting Accuracy Index (AAI)	0.22 (0.07)	0.26	3.19	0.002
	Firm size (log assets)	0.08 (0.04)	0.11	1.88	0.062
	Industry (Financial=1, else 0)	0.15 (0.07)	0.12	2.17	0.032

The Principal Component Analysis (PCA) (Table 4) extracted two key components explaining 82.6% of the total variance. The first component (PC1) represents traditional analytical techniques; ratio, trend, variance, and regression analysis with high loadings (0.76–0.84), while the second component (PC2) represents emerging predictive and AI-driven analytics (loading = 0.71). This differentiation implies that organizations increasingly blend classical and modern analytical tools to achieve higher precision and strategic insight, with predictive analytics emerging as a distinct factor of influence in advanced financial systems.

Table 4. Principal component analysis of analytical review techniques (n = 165)

Technique	PC1 Loading	PC2 Loading	
Ratio analysis	0.78	−0.10	
Trend analysis	0.81	0.05	
Variance analysis	0.84	−0.08	
Regression/Correlation	0.76	−0.12	
Predictive analytics	0.68	0.71	
Component	Eigenvalue	Variance explained (%)	Cumulative (%)
PC1	3.12	62.4	62.4
PC2	1.01	20.2	82.6

The radar chart analysis (Figure 1) presents the comparative performance of strategic decision quality dimensions across industries. Financial firms demonstrate consistently higher mean scores in all five strategic dimensions timeliness, evidence-based decision-making, risk anticipation, resource alignment, and agility ranging between 4.0 and 4.3 on a 5-point scale. Manufacturing firms follow closely, while service firms

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lag slightly behind. These findings indicate that sectors with more rigorous analytical review practices tend to exhibit superior strategic adaptability and precision in decision execution.

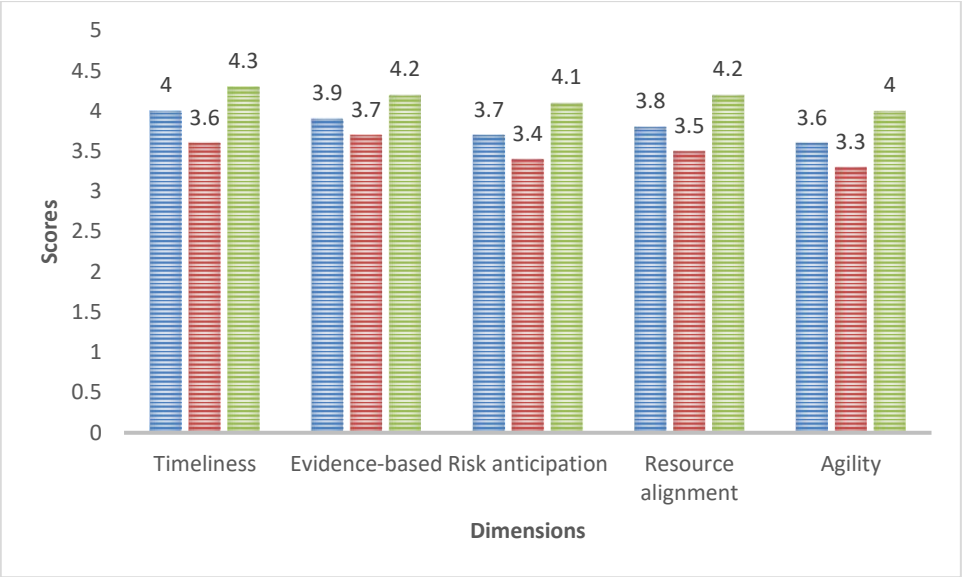


Figure 1. Radar chart dataset for strategic decision quality dimensions by industry

Finally, the cluster analysis results (Figure 2) provide a visual classification of the 40 sampled firms into three distinct clusters based on Analytical Review Maturity (ARM) and Financial Performance Index (FPI). Cluster 1 (C1), consisting of 13 firms, represents high maturity and high performance (mean ARM = 81.2, FPI = 78.5), while Cluster 2 (C2) contains 17 firms with moderate maturity and performance, and Cluster 3 (C3) includes 10 firms with low analytical maturity and weak performance. The cluster pattern clearly demonstrates a positive association between the degree of analytical review implementation and organizational success, underscoring the importance of adopting comprehensive analytical techniques to achieve optimal results.

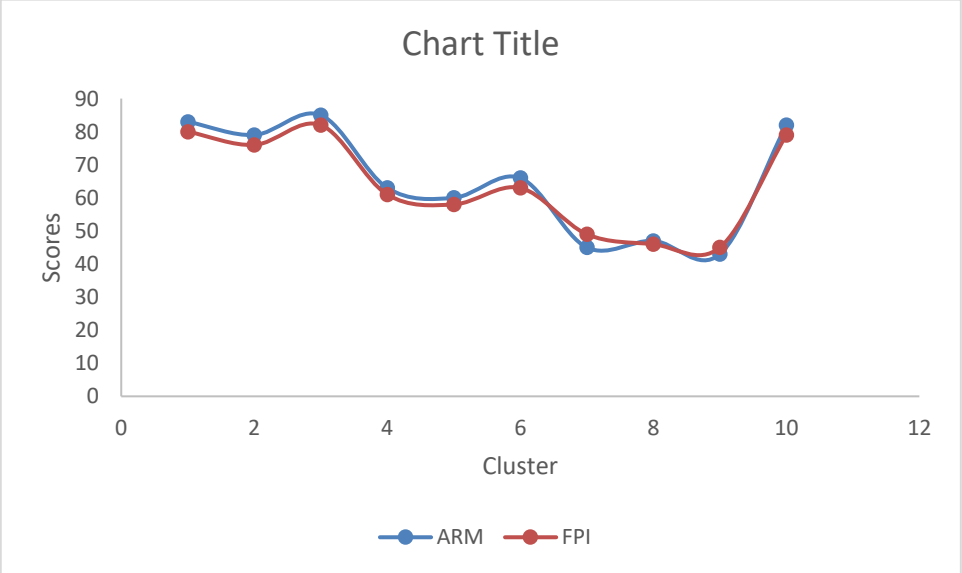


Figure 2. Cluster plot summary for analytical review maturity vs. financial performance

Discussion

Analytical review as a determinant of accounting accuracy

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The findings of this study clearly establish analytical review as a vital determinant of accounting accuracy and financial control. As reflected in Table 1, the financial sector demonstrated the lowest levels of accounting errors and reconciliation discrepancies, signifying a high level of analytical discipline and precision. These results align with the theoretical proposition that analytical review mechanisms enhance the detection of irregularities and ensure data reliability (Mould & Upton, 2012; Pettit et al., 2013). The systematic comparison of actual and expected figures through variance and trend analysis enables firms to minimize reporting errors and prevent potential misstatements. This accuracy forms the foundation of financial transparency and strengthens stakeholder confidence (Rogulenko et al., 2021). The findings also emphasize that organizations with well-structured analytical frameworks can detect financial anomalies early, reducing audit adjustments and promoting operational efficiency (Tawfik et al., 2023).

Relationship between analytical review and strategic decision-making

The correlation and regression results (Tables 2 and 3) confirm that analytical review has a direct and substantial impact on the quality of strategic decision-making. The positive correlation between the Analytical Review Technique Index (ARTI) and Strategic Decision Quality (SDQ) demonstrates that firms employing more sophisticated analytical tools tend to make better, faster, and more data-driven decisions. Furthermore, regression results show that ARTI significantly predicts both accounting accuracy ($\beta = 0.53$, $p < 0.001$) and decision quality ($\beta = 0.49$, $p < 0.001$), implying a cascading effect accurate financial data serves as a robust foundation for informed managerial decisions. This finding supports Abdelmoneim Mohamed & Jones, (2014), who argued that analytical systems bridge the gap between raw financial data and strategic insight by converting information into actionable knowledge (Apostolou et al., 2013). Firms with strong analytical frameworks demonstrate a greater ability to align resources with strategic goals, anticipate risks, and respond to market fluctuations more effectively than firms with weak analytical systems (Grover et al., 2018).

Traditional versus modern analytical review techniques

The Principal Component Analysis (PCA) results (Table 4) reveal that analytical review is evolving beyond traditional ratio and variance analysis. The emergence of a distinct second component representing predictive and AI-driven analytics suggests that organizations are shifting towards technologically advanced methods to enhance precision and efficiency (Artinger et al., 2015). This transformation marks a paradigm shift from retrospective financial evaluation to proactive predictive analysis that enables forecasting and real-time decision support. Such integration of machine learning algorithms, regression diagnostics, and data visualization tools makes analytical review more dynamic and capable of handling large-scale data efficiently (Brownscombe et al., 2019). Consequently, analytical review has transcended its conventional accounting boundaries to become an integral element of strategic financial management, aligning with recent digital transformation trends in corporate finance (Ferreira et al., 2010).

Industry differences in analytical review adoption

The industry-level comparisons (Figure 1 and Table 1) demonstrate that financial organizations outperform manufacturing and service firms in analytical review maturity and accuracy. This disparity can be attributed to the regulatory rigor, audit frequency, and digital infrastructure inherent in the financial sector. Financial firms rely heavily on continuous analytical monitoring due to stringent compliance standards, leading to more reliable financial reports and superior decision-making agility (Hutahayan, 2020). Conversely, service-sector firms showed relatively lower adoption levels, possibly due to limited technological integration and fewer standardized performance metrics. The manufacturing sector displayed moderate adoption, balancing between operational variance analysis and strategic forecasting (Okoye & Gbegi, 2013). These industry variations highlight the importance of contextualizing analytical review practices based on organizational structure, data availability, and regulatory environments (Plagányi et al., 2014).

The link between analytical review maturity and firm performance

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The cluster analysis (Figure 2) offers compelling evidence of the relationship between analytical review maturity and financial performance. Firms categorized under Cluster 1 representing high analytical review maturity achieved significantly higher Financial Performance Index (FPI) scores compared to Clusters 2 and 3. This pattern suggests that the depth of analytical application determines the firm's financial stability and growth potential (Beyer et al., 2010). Companies that integrate analytical review into both accounting and managerial functions tend to maintain stronger performance through informed capital allocation, risk anticipation, and cost optimization (Schilke et al., 2018). These findings echo the broader argument that analytical review is not merely a technical auditing function but a strategic enabler of organizational resilience and competitiveness (Lockyer et al., 2017).

Theoretical and managerial implications

The study reinforces the theoretical framework that analytical review acts as both a diagnostic and strategic tool within management systems. From a theoretical standpoint, it supports the principles of adaptive structuration theory, where the adoption of analytical tools restructures managerial behavior and decision-making processes (Olofsson et al., 2014). Practically, managers should institutionalize analytical review practices across departments to foster a data-driven culture that supports continuous improvement. Training finance teams in ratio diagnostics, variance interpretation, and predictive modeling can enhance their capacity to detect inefficiencies early (Carpenter, 2018). Moreover, integrating AI and data visualization tools within financial analysis platforms can reduce manual errors and accelerate decision-making. The findings also encourage policymakers and auditors to standardize analytical review procedures as part of corporate governance frameworks, ensuring consistent application and accountability (Bharadiya, 2023).

Limitations and directions for future research

Although the study provides significant insights, it is limited by its cross-sectional nature and reliance on self-reported managerial data for certain strategic variables. Future research should employ longitudinal designs to track how analytical review maturity evolves over time and influences firm sustainability. Incorporating qualitative interviews could also provide deeper insights into organizational barriers to analytical review implementation. Furthermore, extending the analysis to include small and medium-sized enterprises (SMEs) may reveal sector-specific dynamics and scalability of analytical review tools.

Conclusion

The present study concludes that the analytical review is a pivotal management tool that integrates financial accuracy, variance identification, and strategic foresight within organizational systems. The empirical findings demonstrate that firms adopting comprehensive analytical review techniques ranging from traditional ratio and variance analyses to advanced predictive and AI-driven models achieve significantly higher levels of accounting accuracy and superior decision-making quality. The positive associations among analytical review maturity, financial precision, and performance outcomes underscore its dual role as both a diagnostic and strategic instrument in modern management. Industry-wise comparisons reveal that financial organizations lead in analytical rigor due to strong regulatory frameworks and digital infrastructures, while manufacturing and service sectors are progressively adapting similar practices. The study further establishes that analytical review maturity directly correlates with improved financial performance, as evidenced by cluster analysis, highlighting its transformative potential in enhancing corporate governance and competitiveness. Overall, the research affirms that embedding analytical review within the financial management process ensures not only reliability in accounting information but also equips organizations with the strategic agility required to thrive in a dynamic and data-driven business environment.

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References

[1] Abdelmoneim Mohamed, A., & Jones, T. (2014). Relationship between strategic management accounting techniques and profitability–a proposed model. *Measuring Business Excellence*, *18*(3), 1-22.

[2] Abdul-Rahamon, O. A., & Adejare, A. T. (2014). The analysis of the impact of accounting records keeping on the performance of the small scale enterprises. *International Journal of Academic Research in Business and Social Sciences*, *4*(1), 1-17.

[3] Apostolou, B., Dorminey, J. W., Hassell, J. M., & Watson, S. F. (2013). Accounting education literature review (2010–2012). *Journal of Accounting Education*, *31*(2), 107-161.

[4] Appelbaum, D., Kogan, A., Vasarhelyi, M., & Yan, Z. (2017). Impact of business analytics and enterprise systems on managerial accounting. *International journal of accounting information systems*, *25*, 29-44.

[5] Artinger, F., Petersen, M., Gigerenzer, G., & Weibler, J. (2015). Heuristics as adaptive decision strategies in management. *Journal of Organizational Behavior*, *36*(S1), S33-S52.

[6] Beyer, A., Cohen, D. A., Lys, T. Z., & Walther, B. R. (2010). The financial reporting environment: Review of the recent literature. *Journal of accounting and economics*, *50*(2-3), 296-343.

[7] Bharadiya, J. P. (2023). The role of machine learning in transforming business intelligence. *International Journal of Computing and Artificial Intelligence*, *4*(1), 16-24.

[8] Brownscombe, J. W., Lédée, E. J., Raby, G. D., Struthers, D. P., Gutowsky, L. F., Nguyen, V. M., ... & Cooke, S. J. (2019). Conducting and interpreting fish telemetry studies: considerations for researchers and resource managers. *Reviews in Fish Biology and Fisheries*, *29*(2), 369-400.

[9] Carpenter, S. (2018). Ten steps in scale development and reporting: A guide for researchers. *Communication methods and measures*, *12*(1), 25-44.

[10] Ferreira, A., Moulang, C., & Hendro, B. (2010). Environmental management accounting and innovation: an exploratory analysis. *Accounting, Auditing & Accountability Journal*, *23*(7), 920-948.

[11] Fullerton, R. R., Kennedy, F. A., & Widener, S. K. (2014). Lean manufacturing and firm performance: The incremental contribution of lean management accounting practices. *Journal of Operations Management*, *32*(7-8), 414-428.

[12] Grover, V., Chiang, R. H., Liang, T. P., & Zhang, D. (2018). Creating strategic business value from big data analytics: A research framework. *Journal of management information systems*, *35*(2), 388-423.

[13] Hazır, Ö. (2015). A review of analytical models, approaches and decision support tools in project monitoring and control. *International Journal of Project Management*, *33*(4), 808-815.

[14] Hutahayan, B. (2020). The mediating role of human capital and management accounting information system in the relationship between innovation strategy and internal process performance and the impact on corporate financial performance. *Benchmarking: An International Journal*, *27*(4), 1289-1318.

[15] Lockyer, J., Carraccio, C., Chan, M. K., Hart, D., Smee, S., Touchie, C., ... & ICBME Collaborators. (2017). Core principles of assessment in competency-based medical education. *Medical teacher*, *39*(6), 609-616.

[16] Mikolajewicz, N., & Komarova, S. V. (2019). Meta-analytic methodology for basic research: a practical guide. *Frontiers in physiology*, *10*, 203.

[17] Mould, D. R., & Upton, R. N. (2012). Basic concepts in population modeling, simulation, and model-based drug development. *CPT: pharmacometrics & systems pharmacology*, *1*(9), 1-14.

[18] Okoye, E. I., & Gbegi, D. O. (2013). Forensic accounting: A tool for fraud detection and prevention in the public sector.(A Study of Selected Ministries in Kogi State). *Okoye, EI & Gbegi, DO (2013). Forensic Accounting: A Tool for Fraud Detection and Prevention in the Public Sector.(A Study of Selected Ministries in Kogi State). International Journal of Academic Research in Business and Social Sciences*, *3*(3), 1-19.

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[19] Olofsson, P., Foody, G. M., Herold, M., Stehman, S. V., Woodcock, C. E., & Wulder, M. A. (2014). Good practices for estimating area and assessing accuracy of land change. *Remote sensing of Environment*, *148*, 42-57.

[20] Pettit, T. J., Croxton, K. L., & Fiksel, J. (2013). Ensuring supply chain resilience: development and implementation of an assessment tool. *Journal of business logistics*, *34*(1), 46-76.

[21] Plagányi, É. E., Punt, A. E., Hillary, R., Morello, E. B., Thébaud, O., Hutton, T., ... & Rothlisberg, P. C. (2014). Multispecies fisheries management and conservation: tactical applications using models of intermediate complexity. *Fish and Fisheries*, *15*(1), 1-22.

[22] Pröllochs, N., & Feuerriegel, S. (2020). Business analytics for strategic management: Identifying and assessing corporate challenges via topic modeling. *Information & Management*, *57*(1), 103070.

[23] Richardson, S., Tuna, I., & Wysocki, P. (2010). Accounting anomalies and fundamental analysis: A review of recent research advances. *Journal of Accounting and Economics*, *50*(2-3), 410-454.

[24] Richins, G., Stapleton, A., Stratopoulos, T. C., & Wong, C. (2017). Big data analytics: opportunity or threat for the accounting profession?. *Journal of information systems*, *31*(3), 63-79.

[25] Rogulenko, T., Orlov, E. V., Smolyakov, O. A., Bodiako, A. V., & Ponomareva, S. V. (2021). Analytical methods to assess financial capacity in face of innovation projects risks. *Risks*, *9*(9), 171.

[26] Schilke, O., Hu, S., & Helfat, C. E. (2018). Quo vadis, dynamic capabilities? A content-analytic review of the current state of knowledge and recommendations for future research. *Academy of management annals*, *12*(1), 390-439.

[27] Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling psychology*, *57*(1), 1.

[28] Tawfik, O. I., Durrah, O., Hussainey, K., & Elmaasrawy, H. E. (2023). Factors influencing the implementation of cloud accounting: evidence from small and medium enterprises in Oman. *Journal of Science and Technology Policy Management*, *14*(5), 859-884.

[29] Wyatt Kaminski, J., Valle, L. A., Filene, J. H., & Boyle, C. L. (2008). A meta-analytic review of components associated with parent training program effectiveness. *Journal of abnormal child psychology*, *36*(4), 567-589.

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