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Impact of Decision-Making Efficiency, Cost Management, and Underwriting Strategies on Insurance Companies' Performance

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ABSTRACT

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This study investigates the impact of decision-making efficiency, cost management, and underwriting strategies on the performance of insurance companies. The research employs a quantitative approach, utilizing survey questionnaires administered to 300 managers from various insurance firms. The key variables—decision-making efficiency, cost management, and underwriting strategies—were analyzed to determine their influence on organizational performance. Decision-making efficiency was found to have the most significant positive effect, highlighting the importance of timely and effective decisions in navigating market changes and optimizing resource utilization. Cost management also played a crucial role, with effective cost control contributing to improved profitability and operational efficiency. Furthermore, robust underwriting strategies, while slightly less influential than decision-making and cost management, were found to be essential for maintaining risk balance and financial stability. The study utilized Structural Equation Modeling (SEM) with Smart PLS software to analyze the data, providing insights into the relationships between the variables. The results confirm that all three management practices significantly impact the performance of insurance companies, with decision-making efficiency emerging as the most critical factor.

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1.0 Introduction

The performance of insurance companies is well associated with the efficiency of management practices that govern the companies. The three areas of decision making, cost and underwriting are critical in determining how these companies are able to respond to market changes and guarantee their future sustainability (Blessing, 2024b). Decision making efficiency is the ability of managers to make timely decisions with the right information especially where circumstances are under pressure and therefore influences the response time of the company (Nchoko & Gitahi). While cost management focuses on the efficient use of resources in order to enhance the overall business performance and profitability through competitive prices. Underwriting strategies are important to control risks that are associated with insurance so that insurance companies can be viable while still meeting the needs of their customers. These three variables individually define the nature of insurance business and thus determine the short term and long-term performance of the insurance companies (Alkanawi, 2024).

This paper aims at examining the link between decision-making efficiency, cost management, and underwriting strategies to show how insurance companies can enhance their performance. Perceived decision-making efficiency alters the pace and caliber of managerial decisions within an organization and determines how well the organization can respond to market fluctuation or customers' needs. Proper decision-making results to proper allocation of resources which is an added advantage in cost management (Matulatuwa, Suhendra, & Sugiharto, 2023). Moreover, the timely decision-making process incorporating the right information system used also help to minimize costs by avoiding wastage and thus increases the profits. Likewise, the successful underwriting methods also rely on two factors, namely decision-making speed and cost control for risk assessment and price quotation to support the financial health of the company. Hence these three variables are related and their integrated influence is significant in determining the performance of an insurance firm. While there is a wealth of research on the effects of decision making, cost management and underwriting, there is little work that examines the relationship between these variables in insurance companies. However, none of the above research has assessed the overall impact of all these factors on the company's performance; especially in the insurance sector which is highly dynamic and competitive (Hassan, 2023). This gap therefore offers a chance to understand how decision making, cost management and underwriting strategies can all work together to enhance the efficiency and profitability of insurance firms.

This research questions aim at filling a gap that has been identified in the literature regarding the relationship between decision making, costs and underwriting in the insurance industry. The research seeks to find out how these key management practices jointly influence performance of a firm and which of these practices is most influential in performance. Thus, addressing this gap, the study will contribute a wealth of knowledge that may be useful in shaping the insurance companies' operations (Ghoniem, 2024). The importance of this study is in the applicability of the findings to decision making within the insurance firms. With the knowledge of the interconnection between decision-making effectiveness, cost control, and underwriting approaches, insurance firms can create better management systems for better results (Mbuya,

2023). It is therefore the purpose of the study to extend the current literature by providing empirical evidence of the total effect of these variables, as well as to give practical recommendations to managers. The following are the objectives of this study. To determine the performance weighting of each factor, to evaluate the overall effects of the factors on performance and to provide managerial implications to insurance industry managers on how best to enhance operational performance through strategic management (Mourmouris & Poufinas, 2023).

2.0 Literature Review

The performance of insurance companies is greatly determined by their internal management practices such as decision making, cost and underwriting. A literature review of the work literature provides a better insight of the interactions of these variables and their effects on performance (K. D. Kumar & Kumar, 2024). Although the theoretical foundations and the empirical evidence on these elements are available in other industries, their applicability to the insurance companies has not been extensively investigated. This section seeks to review the literature on each of the core variables of this study, theoretical frameworks that underpin the study of these variables, as well as synthesis of prior research to support the hypotheses of this study (Abu Al-Haija & Houcine, 2023).

Decision making has been described as a critical element of organizational success in many fields. In the insurance companies, the decision-making efficiency is one of the major factors that defines the speed of managers' reaction to the internal and external factors. Because insurance markets are quite competitive, insurance companies have to respond to the changes in the market, technological advancements, and changes in customers' needs (S. Kumar). In his book, "Administrative Behavior" published in 1979, Simon explained that decision-makers base their decisions on limited information and time. This theory holds that although managers are aware of the need to make efficient decisions, they use heuristics, or rule-of-thumb approaches, given these limitations. This could be seen in the insurance sector in the fast identification of the risk factors, underwriting and claims management since these are areas that demand proper decision making to produce the best results (Inyang, Etuk, & Effiom, 2024).

There is considerable evidence from the literature on the importance of decision-making efficiency in insurance companies. For instance, Hmieleski and Baron (2009) studied the correlation between decision making and business performance and established that firms that made swift decisions to adapt to market changes were likely to generate higher profit (S. Kumar). In the same vein, Sull (2003) observed that fast-cycle time decision making is an important factor that influences the performance of companies in fast moving industries, because companies that can make quick changes in response to changes in the environment will be more profitable than their competitors (Chakladar, 2023). In insurance, decision-making efficiency is critical to how a company can handle claims, manage premiums, and deploy resources when the market changes. Hence, increasing decision making effectiveness is likely to raise the company's performance, particularly when managers can make proper decisions at the right time and in a way that supports the company's strategic plans (Blessing, 2024a).

Cost control, another key aspect of insurance company efficiency, is the approach and

technique used in the efficient use of funds to avoid wastage. This paper aims to explain how cost management helps insurance companies to remain profitable even if the premiums change, the claims are unpredictable, and the economy is volatile. A theory that is closely related to the cost management is the Resource-Based View (RBV) of the firm which asserts that the firms can gain competitive advantage by proper management of resources (Barney, 1991). In the insurance industry, this can be translated as how to effectively use financial, human and technological assets in order to enhance operational effectiveness and reduce inefficiency. The RBV focuses on the concept of internal resources and capabilities, of which the insurance companies are their financial management, claims handling and underwriting.

Scholarly literature supports the proposition that cost management is a critical enabler of organizational performance. For example, Healy and Palepu (2001) established that companies that had strong cost management systems delivered better results than those with weak cost management systems especially during periods of economic volatility. This paper will discuss why cost management is important in insurance to not only increase profitability but also to ensure that resources are properly divided between claims, underwriting, and customer service. A proper cost management ensures that the insurance companies are in a position to offer favorable premiums rates and at the same time ensure that they are financially stable to withstand the long-term challenges of the industry. Moreover, the improvement of cost management practices can lead to the fact that insurance companies will be able to direct more funds to innovation and customer acquisition, which will also improve performance (Mereddy, 2023).

Underwriting strategies are basic to insurance companies because they establish how risks are evaluated and handled. A proper underwriting process help insurance companies to set right premium rates for policies, to stay solvent, and to avoid high loss ratios. The theory which can be used to explain moral hazard in underwriting was first put forward by Arrow (1963) and has been built upon by others (Chand, Chandel, Tiwari, & Chauhan, 2024). This is a problem for insurance companies because they need to create their underwriting policies taking into consideration that moral hazard may happen and at the same time, the company should be on the right position in the market. This paper will argue that in the context of insurance, underwriting strategies need to be carefully crafted in order to meet the dual challenge of ensuring that the industry remains profitable while not putting off potential customers (Furqan et al., 2023).

Numerous researchers have found that good underwriting is one of the most important factors that determine the success of insurance companies. A general study conducted by Cummins and Phillips (2005) revealed that; insurance companies that have adopted elaborate underwriting methods including risk evaluation and predictive analysis were able to outperform those that had not adopted such strategies. These companies were in a better position to price policies more appropriately hence minimizing on adverse selection and moral hazard. Furthermore, good underwriting techniques enable insurance firms to manage and respond to risks in the legal framework and customers' behavior changes, which are critical to the performance of the firm. The use of data analytics and artificial intelligence in underwriting is growing as they help insurers to identify the risks more accurately and set premiums that reflect these risks (Ahmad & Abbas,

2024).

Although the effects of decision making, cost and underwriting on the performance of an insurance company have been discussed extensively, the relationships between these variables and the overall effects on the organization have not been explored. While many papers have looked at these factors individually, none has assessed how they interact to affect organizational outcomes. This gap forms a good area for further research especially in an effort to determine how these management practices can be combined in a way that would enhance overall performance. However, most of the prior work has been conducted with large, global insurance firms and the consideration of the small or regional insurer has been relatively scarce. To this end, this study posits that decision making, cost, and underwriting are performance determinants of insurance firms. In particular, the most significant impact on performance is expected to be made by decision-making efficiency that allows for the fast response to market shifts and proper resource management. Cost management is proposed to act as the second order factor which would help to utilize resources wisely and maintain the financial health of the company. Last but not the least, underwriting strategies are expected to support performance through risk management and sustainability of competitive advantage. The cumulative impact of these three variables is expected to enhance organizational performance where decision making efficiency will have the greatest impact (Kaur & Singh, 2023).

Therefore, the literature on the performance of insurance companies shows that decision making, cost control and underwriting are critical determinants of organizational performance. Although each of these factors has been investigated separately, the question of how they affect each other within the context of insurance organizations remains of interest. Through filling this literature gap, this study seeks to contribute to the understanding on how these variables interact and how they influence the performance of insurance firms (Varadarajan & Kakumanu, 2024). The research outcomes of this study will be useful in the formulation of strategic plans and management of the insurance industry in order to enhance the productivity and profitability of the industry.

3.0 Methodology

The research used quantitative research design to analyze the effects of decision-making efficiency, cost management and underwriting strategies on the performance of insurance firms. The quantitative approach was adopted to enable the generation of numerical data that was needed to test the stated hypotheses on the relationships between the variables. The research design was therefore developed with a view to determining the impact of these management practices on the performance of insurance firms through a survey research data collection technique. In order to make the study sample more representative, the study used simple random sampling. This sampling method was used because it provided every member of the population with an equal probability of being included in the study thus reducing bias and increasing the validity of the findings. The population for this study included managers in insurance companies who had the power to give information regarding decision making, cost control and underwriting of the firms. The selection of simple random sampling was to make the sample to represent the broader

population of insurance managers and make conclusions about effect of these management practices on organizational performance.

The target population for this study was selected through a statistic power analysis, and 300 participants were recruited for the study so as to achieve a high level of statistical power while at the same time making the study feasible in terms of data collection. A larger sample size provided better estimates and the analysis was more reliable when examining the inter-relationships between several variables. To ensure that the management practices under study are well covered, the respondents were chosen from different insurance companies. This sample size was sufficient to obtain statistically representative results and to guarantee the generalizability of the study to the whole insurance sector. The data were collected by means of a structured questionnaire which was developed from existing scales in the literature. The survey instrument was used to measure the respondents' knowledge on the major factors that are decision making, cost control, underwriting processes and organizational performance. The questions were derived in a way that was most appropriate for the insurance organization so as to get real life experiences from the managers. The data was collected using a self-administered questionnaire which used a Likert scale, a scale that is widely used in questionnaires to measure attitudes and perceptions on a five-point scale from strongly agree to strongly disagree. This format facilitated accurate assessment of the variables and facilitated statistical comparison of the responses.

The collected data was analyzed using Structural Equation Modeling (SEM) and the software used was Smart PLS 3.0 (Partial Least Squares). SEM is a statistical tool that enable the researcher to model the inter-relationships between several variables in one model. It is especially helpful in hypothesis testing of theoretical constructs such as decision making, cost control and underwriting plan. Smart PLS was used for data analysis because it enables analysis of large datasets and gives accurate results even if there are interrelations between variables. This analysis method enabled the assessment of both the direct and moderated impacts of the management practices on insurance company performance, which gave the whole picture of the relationship between these variables. The Smart PLS SEM analysis involved two main stages: the measurement model and the structural model. To confirm that the questions in the questionnaire measured the intended variables, the validity and reliability of the constructs in the measurement model were analyzed.

4.0 Findings and Results

4.1 Reliability Analysis

Table 4.1: Reliability Analysis

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Cost Management	0.702	0.704	0.807	0.505
Decision Making Efficiency	0.725	0.746	0.796	0.507
Insurance Companies Performance	0.81	0.821	0.856	0.528
Underwriting Strategies	0.728	0.754	0.819	0.58

Table 4.1 highlights the reliability analysis for four constructs: Efficiency in Cost Management, Decision Making, Insurance Companies Performance, and Underwriting Strategies. All constructs have good reliability levels as evidenced by the Cronbach's Alpha coefficients which are all above the recommended minimum of 0.7. Composite reliability values also support high reliability of the constructs under study since they are all above the recommended minimum of 0.7. The AVE values are greater than 0.5 for all the constructs which confirm that all the constructs have good convergent validity since all the indicators explain more variance in their respective construct than the variance they share with other constructs. In summary, the current study supports the proposed measurement model as reliable and valid.

Table 4.2 Validity Analysis (HTMT)

	Cost Management	Decision Making Efficiency	Insurance Companies Performance	Underwriting Strategies
Cost Management	0	0	0	0
Decision Making Efficiency	0.441	0	0	0
Insurance Companies Performance	0.392	0.426	0	0
Underwriting Strategies	0.533	0.433	0.39	0

In table 4.2, the Heterotrait-Monotrait Ratio (HTMT) is used to determine the validity of the constructs Cost Management, Decision Making Efficiency, Insurance Companies Performance, and Underwriting Strategies. The HTMT values between constructs are less than 0.85, which is the threshold for discriminant validity, therefore the study has good discriminant validity. This shows that each of the constructs is different from the others and captures different attributes of the study. This analysis provides support for the suitability of the constructs for further analysis in the structural model.

Table 4.3 Outer Loading

	Cost Management	Decision Making Efficiency	Insurance Companies Performance	Underwriting Strategies
CM1	0.45			
CM2	0.84			
CM3	0.814			
CM4	0.788			
CM5	0.426			
DME1		0.419		

DME2	0.67		
DME3	0.495		
DME4	0.543		
DME5	0.524		
DME6	0.571		
DME7	0.563		
DME8	0.446		
DME9	0.694		
ICP1		0.513	
ICP2		0.608	
ICP3		0.639	
ICP4		0.695	
ICP5		0.718	
ICP6		0.659	
ICP7		0.685	
ICP8		0.691	
U3			0.5
US1			0.731
US2			0.729
US4			0.785
US5			0.684

Table 4.3 outlines the outer loadings for items across four constructs: Costing, Decision Making, Insurance Companies Performance, Underwriting Practices. The majority of the items have reasonable loadings suggesting that these items are closely related to the constructs, especially for Cost Management, CM2, CM3, and CM4, and for Underwriting Strategies, US1, US2 and US4. Nevertheless, there are some items which have the lower loadings, for example, CM1 and CM5 under Cost Management and DME1 and DME8 under Decision Making Efficiency.

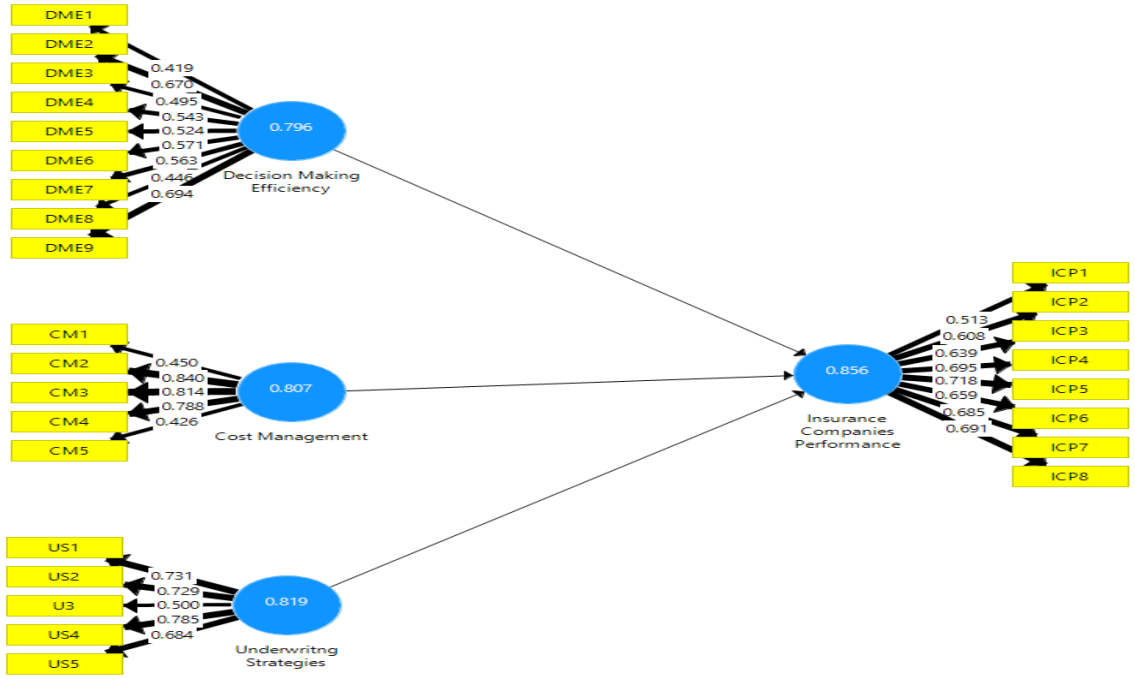

Figure 4.1: Reliability Analysis

4.2 Structural Equational Model

Table 4.4 Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Cost Management -> Insurance Companies Performance	0.15	0.152	0.027	5.612	0
Decision Making Efficiency -> Insurance Companies Performance	0.286	0.292	0.04	7.093	0
Underwriting Strategies -> Insurance Companies Performance	0.158	0.144	0.034	4.609	0.001

Table 4.4 below shows the results of hypothesis testing in the structural equation model, which examines the link between Cost Management, Decision Making Efficiency, Underwriting Strategies and Insurance Companies Performance. All the three paths are significant at .05 level having low p values which supports the proposed relationships. The path linking Decision Making Efficiency to Insurance Companies Performance has the strongest relationship, and the path from Underwriting Strategies ranks the second. Cost management has a reasonable but not very strong effect on the Performance of Insurance Companies. The T-statistics of all paths are greater than 1.96 that indicates research hypotheses are valid in this case.

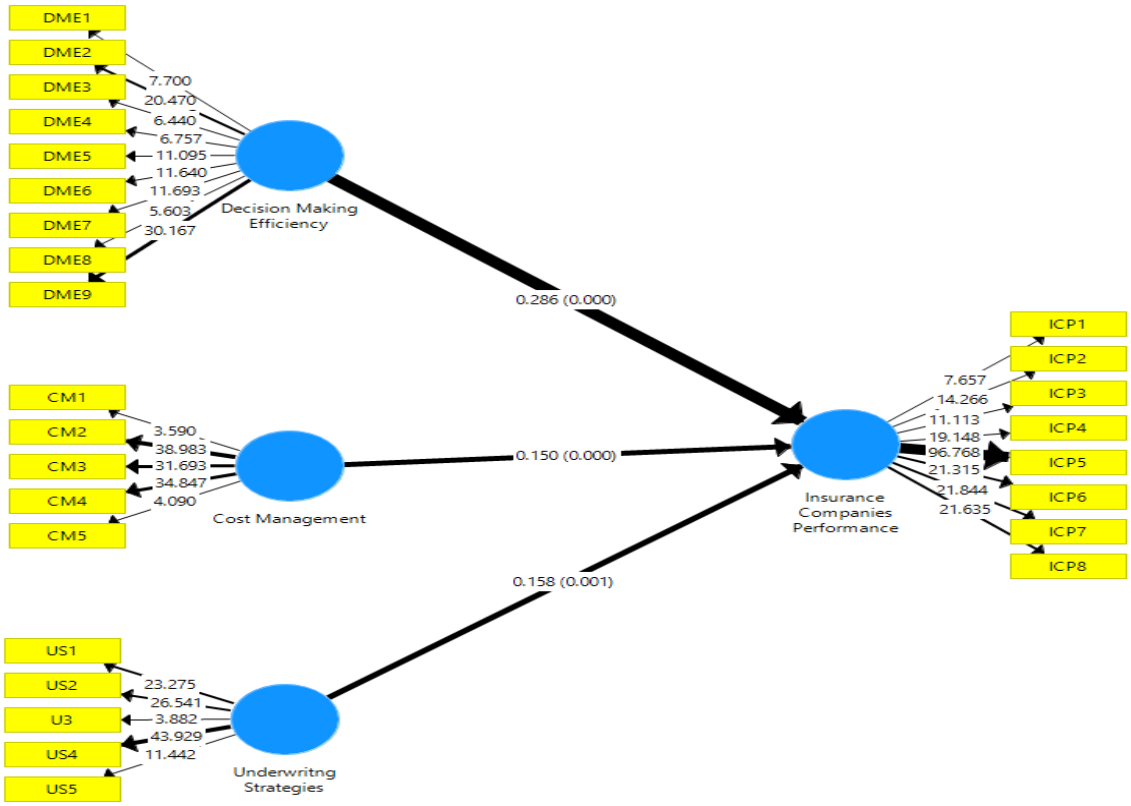

Figure 4.2: Structural Equational Model

5.0 Discussion and Conclusion

This study established that the three main management practices, decision-making, cost management, and underwriting strategies, are positively correlated with the performance of insurance firms. These findings support the postulated hypotheses and underscore the importance of every management practice in the overall performance of insurance firms' operations. The following section provides an analysis of these results and draws implications for the insurance industry. Decision-making Efficiency was the most central factor with the highest positive correlation with the performance of the company (Gbenro, Duramany-Lakkoh, & Kamara, 2023)y. This is an implication that proper and timely decision making plays a crucial role in the insurance market especially given that the market is characterized by uncertainty. This is important because effective decisions help organisations to quickly respond to changes in the market environment, to use resources in the best way possible, and to be competitive. This paper posits that managers who base their decisions on data analyses, risk analysis, and market analysis are in a better place to deliver high organizational performance. This is consistent with earlier studies which have posited decision making as a key factor that defines organizational success (Miller & Friesen, 1984). The findings of this study indicate that insurance companies should focus on operational strategies that can improve decision-making including training the managers, introducing better decision-making tools and creating an environment for flexibility and adaptability.

Cost Management also had positive and statistically significant correlation with performance, proving that firms with better cost management practices are likely to perform better. Since costs are a critical determinant of an organization's profitability, cost management becomes an essential element of organizational success. Thus, insurance companies may optimize the process and cut unessential costs in order to increase overall profitability of the company. This finding supports other findings that show that effective cost management enhances efficiency and profitability of organizations (Klein, 2007). In the case of insurance companies, the management of costs is crucial in a sector that presents high costs, such as claims, administrative and compliance expenses. The implication of the study is that insurance companies should pay attention to cost to operate effectively through enhancement of process, technology and operational openness (Zanke & Sontakke, 2021).

Underwriting Strategies were seen to have a less strong positive correlation with performance than decision-making efficiency and cost management. However, underwriting strategies are still one of the most important factors that define the potential of an insurance company to control risk and maintain sustainable financial performance. Effective underwriting ensures that insurers assess and manage risk effectively, keep their operations profitable, and minimize the chances of incurring large losses. Proper underwriting that incorporates proper risk assessment and pricing is an important way of avoiding adverse selection and hence ensuring future growth of insurance companies. This is in agreement with previous literature that associate particular underwriting approaches with sound risk management and improvements in financial performance in the insurance sector (Fitch, 2015). From the findings of the study it is recommended that insurance firms should always update their underwriting procedures by

adopting better data analysis, improving on risk assessment and ensuring that there is quality assurance in the underwriting process to improve on their financial performance.

This research also examined how these variables are related and how they affect performance collectively. The analysis demonstrates that decision-making efficiency, cost management, and underwriting strategies are the interrelated management practices that, in combination, determine the success of a company. This result suggests that companies should work towards improving decision-making, cost control, and underwriting at the same time. In practice, this means that insurance firms should aim at developing overall strategies which incorporate all aspects of management to enhance the performance results. Not paying adequate attention to any of these factors can lead to less than satisfactory results, meaning that a systems approach is probably best for organizations that want to be successful (Zinyoro & Aziakpono, 2024).

Therefore, the study offers important findings on the critical linkages between decision-making performance, cost management, underwriting approaches and insurance company performance. All three variables were, therefore, found to positively influence performance with decision making efficiency being the most critical determinant. These results are useful in extending the knowledge on factors that influence the performance of insurance companies and provide recommendations that can be of value to insurance managers who wish to improve their organizational performance. In particular, insurance companies should focus on better decision making, effective cost control and ongoing enhancement of underwriting methods (Zhang, Zhou, Li, & Chen, 2024).

In addition, the findings of the study indicate that insurance firms should consider spending in equipment and education that enhance managerial decisions, enhance cost effectiveness, and enhance underwriting processes. Through these management practices, the insurance firms can be able to prepare themselves to overcome the challenges that come with the industry and therefore gain their financial goals. This study also suggests that future studies should examine the possibility of other organizational factors, including culture and leadership as either moderators or mediators of the relationships between these management practices and the performance outcomes. For future work, the authors could also extend their analysis to explore how other contextual variables, including legal systems and market competition, may influence the outcomes of these management practices across regional environments. In conclusion, this study has shown that there are many benefits of strategic management practices in insurance companies' performance. Based on the analysis of the decision-making efficiency, cost management, and underwriting strategies, insurance companies can achieve better financial performance, enhance operational performance and sustain competitive advantage in the highly competitive insurance market.

Umar Akbar: Problem Identification and Theoretical Framework
Imran Malik: Data Analysis, Supervision and Drafting
Muhammad Rahail Akhtar: Methodology and Revision

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