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THE IMPACT OF ENTERPRISE RISK MANAGEMENT (ERM) ON SMES FIRMS PERFORMANCE IN GHANA

Author

Mercy Kwakye and Frank Antwi

Pentecost University

Pentecost University

Authors' contributions

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Short Research Article

ABSTRACT

This study delves into the complex landscape of enterprise dynamics, examining the intricate relationships between Enterprise Risk Management (ERM), firm size, and their consequential impacts on financial and operational performance. Utilizing robust regression analyses, the study unveils a significant correlation between effective ERM implementation and heightened levels of both financial and operational success. Larger firms, with their expansive organizational footprint, exhibit a resolute commitment to the comprehensive embrace of ERM practices. The results emphasize that an extensive part of the variability in fiscal performance and operational performance can be attributed to ERM implementation. This underscores the pivotal role of ERM as a linchpin for success in both financial and operational domains. The study sheds light on the strategic value placed on navigating complex risk landscapes, particularly emphasizing how larger organizations demonstrate a more robust commitment to ERM practices. In essence, this research offers a panoramic view of the intricate relationships shaping contemporary enterprises. It establishes ERM as a critical element for organizational triumph and underscores the considerable effect of firm size on the adoption and efficacy of risk management practices.

Keywords— Enterprise Risk Management (ERM), Small and Medium Enterprises (SMEs), Firm Performance, Risk Management, Ghana.

Corresponding Author: Email: mkwakye@pentvars.edu.gh

I. INTRODUCTION

One of the primary objectives when initiating a company is to generate value and deliver benefits to the individuals who own it, commonly referred to as shareholders. According to Retno (2019), the goal of making the company more valuable in the long term is to optimise the advantages for the shareholders. The company's value is essentially determined by the amount of money individuals are willing to pay to acquire ownership stakes in the company. Investors seek assurance that their investment in the company will yield favourable returns. The company strives to enhance the value of shareholders' investment through strong overall performance. According to Wang (2020), an increase in the company's value indicates efficient utilisation of shareholders' funds. Price to Book Value (PBV) is a commonly used metric to assess whether investors are willing to pay a premium or a discount for shares compared to their intrinsic value. An increased company valuation signifies enhanced prosperity for its owners. The perception of the company's value by investors and creditors is of utmost importance. It influences their decisions regarding whether to invest in or provide loans to the company. Risk management in business proposes that companies can improve their performance by adopting an enterprise-wide approach to risk management (ERM). Implementing Enterprise Risk Management (ERM) systems is believed to mitigate both explicit and implicit expenses associated with financial matters and unforeseen fluctuations in profits. Additionally, these systems can aid in preventing unforeseen negative occurrences in financial markets. Furthermore, implementing Enterprise Risk Management (ERM) can enhance decision-making processes by facilitating the selection of optimal investment opportunities. ERM adoption has the capacity to enhance a company's overall value (Beasley et al., 2015). Although the financial sector was primarily affected by the severe economic downturn in the late 2000s, there has been a long-standing tendency to underestimate the level of systemic risk in advanced economies. Exclusively relying on intuitive instincts to assess the potential outcomes of risks, a practice commonly observed among smaller businesses, is insufficient in such circumstances (Grondys et al., 2021). Companies, particularly small and medium-sized enterprises (SMEs), face current challenges that hinder their ability to maintain competitiveness and profitability. Hence, the importance of implementing inclusive enterprise risk management (ERM) in small and medium-sized enterprises (SMEs) is increasing. Small and medium-sized enterprises (SMEs), particularly those outside the financial sector, typically experience less urgency to develop comprehensive risk management systems compared to larger companies. Small and medium-sized enterprises (SMEs) have been adopting formal risk management processes as a means to improve their competitiveness (Wirahadi & Pasaribu, 2022). ERM plays a role in enhancing the quality of information regarding enterprise risk and, importantly, in mitigating systematic risk. The objective of Enterprise Risk Management (ERM) is to mitigate the probability of financial losses, thereby minimising the reliance on external resources and positively influencing the anticipated cost of capital (Berry-Stolzle & Xu, 2018).

Although preliminary research indicates a beneficial correlation between the implementation of Enterprise Risk Management (ERM) and company performance, these investigations have predominantly focused on advanced economies. The current status of Enterprise Risk Management (ERM) in developing countries, along with its effects, is still uncertain due to a lack of empirical research conducted on the subject (Chen et al., 2019; Silva et al., 2019). Developing nations frequently require robust risk management to ensure efficient organisational operations. Therefore, it is essential to assess the impact of Enterprise Risk Management (ERM) on the performance of Small and Medium-sized Enterprises (SMEs) in Ghana. Furthermore, Saeidi et al. (2015) focused on the economic aspects of company performance. Improving overall performance includes both non-monetary and monetary aspects, and there is a noticeable lack of a clear distinction between financial and non-financial performance. This study aims to evaluate the impact of enterprise risk management (ERM) on SMES firms' performance in Ghana. The results of this study aim to fill this knowledge gap and provide a significant contribution to stakeholders in this sector.

II. LITERATURE REVIEW

Concept of Risk Management

Risk management is a concept that can be defined in different ways, as explained by Hopkin (2012). Its understanding is influenced by both its historical origins and its practical applications. The origins of risk management can be traced back to the earliest stages of human existence. Throughout daily existence, human instincts and encounters have been utilised for the purpose of ensuring survival. In a letter to the author, Douglas Barlow, the risk manager at Canada's Massey Ferguson Company, emphasised the inherent nature of risk management, highlighting that it is innate (Kloman, 2019). Kloman (2019) attributes the evolution of Homo sapiens to an innate and persistent drive to protect the organism against the uncertainties and dangers of existence. Ancient philosophers such as Homer, Odysseus, and Thucydides employed strategies such as prediction, deduction, and conservation to address uncertainty, which can be considered early instances of risk management. Anbari (2014) concluded that risk management is a crucial component of project management and identified a range of tools and techniques that can be employed to proficiently handle risk. Insurance is recognised in the business world as a necessary step before risk management, allowing companies to manage risk by reducing possible risks through insurance coverage. During this period, there was a substantial rise in the adoption of risk management techniques by businesses, financial institutions, and project managers. The characteristics of risk management professionals have evolved, transitioning from a focus on insurance or security responsibilities to a broader objective of safeguarding the company (Vaughan and Vaughan, 2002). The acknowledgement that risks can lead to both favourable and unfavourable outcomes prompted the development of risk management (Ward and Chapman, 2003). In contemporary times, insurance is regarded as one of the various options available for the purpose of managing and mitigating risks and hazards. In his study, Zimmerman (2016) asserted that insurance companies encounter a multitude of risks and employ various strategies to mitigate these risks. These strategies encompass reinsurance, capital management, and diversification.

Enterprise Risk Management and Firm Financial Performance

Implementing a strong risk management system, like enterprise risk management (ERM), is thought to improve business performance and increase shareholder value, as stated by the Agency Theory (Idris & Norlida Abdul, 2016). Researchers (Chen et al., 2019; Florio & Leoni, 2017; Hanggraeni et al., 2019; Ojeka et al., 2019; Teoh et al., 2017; Zungu et al., 2018) have begun studying the connection between Enterprise Risk Management (ERM) and organisational performance. The relationship between ERM and financial performance is particularly intriguing. Li, Lin, and Yang (2017) found that Enterprise Risk Management (ERM) has a substantial and favourable` influence on a company's financial performance. The researchers discovered that companies with effective Enterprise Risk Management (ERM) practices generally experience greater returns on assets, reduced cost of debt, and higher market-to-book ratios. ERM scholars argue that businesses can enhance shareholder value by reducing external capital costs, optimising capital efficiency, and minimizing earnings and stock price volatility (Lechner & Gatzert, 2018). The company's performance was assessed by other researchers, including Gordon et al. (2009), Grace et al. (2015), Quon et al. (2012), Li et al. (2014), Khan Majid et al. (2016), and Florio and Leoni (2017). The researchers employed a range of financial variables to evaluate the company's performance, such as excess stock market return, return on assets, expense reduction, return on equity, profitability, earnings volatility, accounting performance and earnings before interest and tax. Only a limited number of studies, such as Ping and Muthuveloo (2015) and Teoh et al. (2017), have taken into account both financial and non-financial performance. Enterprise Risk Management (ERM) aims to mitigate an organisation's overall risk exposure by employing a strategic and systematic approach to managing all the hazards it encounters. This ultimately enhances the efficiency and worth of the company for both its shareholders and the company itself.

III. METHODS

A study design is a framework that integrates all the components of a research project and serves as a roadmap for the planned research endeavour. An explanatory research design is used when the study seeks to investigate a field that has not been explored before. Its main emphasis is on comprehending the underlying causes or "why" of a phenomenon, without considering aspects related to comparison and change. Singh and Sahu (2015) conducted a study on "violence against women" that investigated multiple factors, such as personality traits like possession, dominance, and suspicion, as well as contextual elements like alcoholism, resourcefulness, stress, strains from maladjustment, and stress. Experimental research design is a systematic approach employed to examine causal relationships within a controlled environment. It can be defined as a design that aims to control the environment in which observations are conducted or one that manipulates specific variables being studied (Singh & Sahu, 2015). Quantitative research involves a wide range of methods for systematically studying social issues by using numerical or statistical data. Quantitative research covers a wide range of topics and uses standardized methods to verify, calculate, and analyze data across different types of measurements. It can be regarded as a method of understanding the world by using deductive reasoning, which includes measurement, analysis, and drawing logical conclusions. It is important to note that choosing between quantitative and qualitative research does not indicate one method is better than the other. In this study, the quantitative approach has been selected. The study focuses on Small and Medium-Sized Enterprises (SMEs) located in Accra. Issau's study in 2022 estimated that there are around 5,800 small and medium-sized enterprises (SMEs) in Accra. The sample needs to be representative of the population it was taken from and large enough for statistical analysis. For statistical analysis to be supported, the sample must be large enough.

This research utilised convenience sampling techniques and is a quantitative research sample approach, according to Sedgwick (2013), in which participants are chosen based on their availability and accessibility to the researcher. This technique selects participants based on availability to the researcher, as opposed to drawing them at random from a larger community. Using the formula (N/(1+N(e^2))) where N Total population, e= the Margin of error (which is mostly 0.05). The sample size of a population of 5800 is calculated to be: (5800/(1+5800(〖0.05〗^2)))= 374.193 approximately 374. The questionnaires were subjected to a pre-testing phase with three subject matter experts (SMEs) from a comparable target community in order to evaluate their appropriateness. The questionnaire was modified as needed according to the feedback received during the pre-test. The instrument was specifically designed to incorporate a combination of open-ended and closed-ended questions, enabling a thorough examination of the influence of enterprise risk management (ERM) on the performance of small and medium-sized enterprises (SMEs). The Pearson correlation coefficient is calculated using the following formula:

r = (∑ 〖(Xi-Xi)(Yi-Y)〗)/(√(∑)(Xi-Xi)∑(Yi-Y) 〖^2)

where Xi and Yi represent individual data points for firm size and ERM implementation, respectively.

X and Y denote the means of the firm size and ERM implementation scores, respectively.

The Pearson correlation coefficient ranges from -1 to, where -1 indicates a perfect negative linear relationship, 1 signifies a perfect positive linear relationship, and 0 denotes no linear relationship. The significance of the correlation coefficient was assessed through hypothesis testing, using a predetermined significance level (a). Ethical considerations, which encompass a collection of beliefs and principles, have a crucial impact on human affairs by safeguarding against actions that could harm society or individuals. These ethical principles prohibit detrimental conduct and are especially crucial in the field of research. Disregarding ethical concerns can render an entire research project invalid. When conducting a study, it is essential to consider the ethical considerations outlined by Bhasin (2020).

IV. RESULTS

ERM implementation in SMEs firms

The data provided presents summary statistics for essential constructs in the research study, providing insights into ERM implementation, firm size, operational performance and financial performance based on the responses of 349 participants. ERM_IMP consists of three items (ERM_IMP1, ERM_IMP2, ERM_IMP3) assessing the implementation of risk management. The mean ERM_IMP rating is 3.1, indicating a moderate level, with a standard deviation of 1.4240, signifying variability in responses concerning risk management implementation.

FZ is made up of three components (FZ1, FZ2, and FZ3) that measure how firm size affects the use of ERM. Regarding the effect of firm size on ERM adoption, responses varied widely, with a mean FZ rating of 3.1 and a standard deviation of 1.3. Operational Performance consists of three items measuring participants' views on ERM implementation and overall operational performance. Participants provided an average score of 2.9100 when rating the organisation's operational performance, with a standard deviation of 1.44, suggesting variability in perceptions of organisational operational performance. In essence, the findings suggest a general agreement among respondents with the survey statements, yet there is significant variability in their perspectives, particularly concerning ERM implementation and its influence on financial and operational performance.

Table 4.1: Summary statistics of ERM implementation in SMEs firm

Variable	Mean	Standard deviation	Minimum	Maximum
Enterprise Risk Management ImplementationP1	3.0946	1.42220	3	55
ERM IMP2	3.0917	1.47884	0	15
ERM IMP3	3.1175	1.37107	0	45
Firm Size 1	3.1261	1.37971	4	67
Firm Size 2	2.9656	1.45782	21	48
Firm Size 3	3.4441	1.39597	5	64
Financial Performance 1	3.0401	1.38489	7	23
Financial Performance 2	3.2722	1.55744	1	87
Financial Performance 3	2.9398	1.33815	0	43
Operation Performance 1	3.1404	1.47170	5	23
Operation Performance 2	3.1261	1.37971	4	46
Operation Performance 3	2.9656	1.45782	8	75

Source: Field Survey, 2024

Relationship of RMIMP, FIRMP, FINPERF and OPERF in SME firms

FINPERF suggests an upward trend. In this context, larger firms may be linked to more favourable financial results. Additionally, the noteworthy correlation coefficient of 0.624** between FIRMZ and OPERF signifies a significant positive correlation. An increase in firm size (FIRMZ) relates to improved operational performance (OPERF), suggesting that larger firms might demonstrate superior operational performance. These findings provide valuable insights into the complex interaction among firm characteristics, risk management practices, and organizational performance. They suggest that a focus on risk management may lead to positive outcomes in terms of firm size, financial performance, and operational performance.

The notably strong correlation coefficient of 0.982** between firm size (FIRMZ) and operational performance (OPERF) indicates an exceptional and robust positive relationship. As the firm's size increases, there is a significant tendency for operational performance to improve. This highlights that larger firms tend to outperform smaller ones operationally to a significant degree, likely due to their greater resources, capabilities, and market presence.

Additionally, the significant positive correlation coefficient of 0.593** between financial performance (FINPERF) and operational performance (OPERF) suggests a meaningful relationship.

Table 2: Relationship of RMIMP, FIRMP, FINPERF and OPERF in SMEs firms

		RMIMP	FIRMZ	FINPERF	OPERF
Risk management implementation (RMIMP)	Pearson Correlation	1	.526**	.582**	.547**
	Sig. (2 - tailed)		.000	.000	.000
	N	349	349	349	349
Firm Size (FIRMZ)	Pearson Correlation	.526**	1	.588**	.982**
	Sig. (2-tailed)	.000		.000	.000
	N	349	349	349	349
Financial performance (FINPERF)	Pearson Correlation	.582**	.588**	1	.593**
	Sig. (2 - tailed)	.000	.000		.000
	N	349	349	349	349
Operational performance (OPERF)	Pearson Correlation	.547**	.982**	.593**	1
	Sig. (2 - tailed)	0.000	0.000	0.000	
	N	349	349	349	349

**. Correlation is significant at the 0.01 level (2-tailed).

Effect of Risk Management Implementation (RMIMP) on SMS's firm

The model evaluation metrics provide valuable insights into the fit of the regression model to the data. With an adjusted R-square of 0.274, it suggests that approximately 27.4% of the variation in the dependent variable, risk management implementation (RMIMP), can be attributed to firm size (FIRMZ). This indicates that firm size moderately explains variations in ERM adoption. The statistical significance of the regression model is further supported by the ANOVA results. The high F-statistic, coupled with a very low associated p-value (Sig.) of 0.000, indicates that at least one predictor variable (FIRMZ) is significantly associated with the dependent variable (ERM implementation). This strongly underscores the overall significance of the model.

Examining the coefficients, particularly the Beta coefficient of 0.523, reveals a notable positive correlation between the predictor variable (FIRMZ) and the dependent variable (RMIMP). In practical terms, this suggests that as firm size (FIRMZ) increases, the predicted value of ERM implementation (RMIMP) also increases. The moderate effect indicated by the Beta coefficient implies that firm size moderately influences ERM implementation.

Table 3. Effect of Risk management implementation (RMIMP) on SMSs firm

Source of Variation	Degrees of Freedom	Sum of Squares	Mean square	F	P
Regression	1	79.067	79.06	132.503	0.000
Residual	347	207.06	0.597		0.000^b
Total	348	286.129			

a. Dependent Variable
b. Predictors: (Constant), FIRMZ

Coefficient

Variables	Coefficient	Std. Error	Sig.
Constant	1.145	0.117	0.000
FIRMZ	0.523	0.045	0.000
Adjusted R Square	0.274		

a. Dependent Variable: RMIMP

Effect of Operational Performance Implementation OPERF on SMS's firm

The results of this study suggest that the independent variable (RMIMP – Risk Management Implementation) may account for approximately 33.7% of the variability in the dependent variable (FINPERF – Financial Performance). The ANOVA results underscore the significance of the regression model, consistent with previous research. The substantial F-statistic and the extremely low associated p-value (0.000) strongly indicate the significant relationship between the predictor variable (RMIMP) and the dependent variable (FINPERF). Further insight into the relationship between financial performance (FINPERF) and risk management implementation (RMIMP) is provided by the coefficients. The significant positive correlation is evident from the 0.596 beta coefficient, indicating that enhanced financial performance is linked to increased adoption of risk management. The moderate effect of the beta coefficient underscores the substantial impact of risk management on financial performance.

Moreover, the coefficients clarify the relationship between risk management implementation (RMIMP) and financial performance (FINPERF). The considerable positive correlation indicated by the 0.596 beta coefficient suggests that higher levels of risk management adoption are associated with better financial outcomes. The moderate effect of the beta coefficient emphasises the importance of risk management in achieving financial success.

Table 4 Effect of Operational performance implementation OPERF on SMSs firm

Source of Variation	Degrees of Freedom	Sum of Squares	Mean square	F	P
Regression	1	98.069	98.069	147.796	0.000
Residual	347	230.249	0.664		$.000^b$
Total	348	328.317			

a. Dependent Variable: OPERF
b. Predictors: (Constant), RMIMP

Coefficient

Variables	Coefficient	Std. Error	Sig.
Constant	0.941	0.124	0.000
RMIMP	0.585	0.048	0.000
Adjusted R Square	0.297		

5. Dependent Variable: Operational performance OPERF

V. DISCUSSION

The findings of the study affirm the significant role of Enterprise Risk Management (ERM) in enhancing firm performance among Small and Medium Enterprises (SMEs) in Ghana. The analysis revealed that approximately 33.7% of the variation in financial performance could be explained by ERM implementation, with a positive standardised Beta coefficient of 0.596. This suggests that SMEs that prioritise risk management practices are more likely to achieve stronger financial outcomes. These results align with earlier studies, such as Hoyt and Liebenberg (2011), who found that firms with formal ERM programs generally perform better financially than those without. Similarly, Gordon et al. (2009) highlighted that ERM supports financial stability by minimising earnings volatility and helping firms capitalise on strategic opportunities. This supports the research objective of examining the relationship between ERM and firm performance, and confirms that ERM serves as a critical driver of financial success.

In terms of operational performance, the study found that ERM implementation accounted for approximately 29.7% of the variability, with a Beta coefficient of 0.585 indicating a positive correlation. This result underscores the notion that ERM contributes not only to financial performance but also to the efficiency and effectiveness of organisational operations. Beasley et al. (2008) emphasised that ERM improves operational performance by fostering a risk-aware culture, enhancing internal controls, and encouraging informed decision-making. Furthermore, Nocco and Stulz (2006) argued that ERM enables firms to take strategic risks while minimising operational disruptions, which ultimately leads to more streamlined business processes. These findings validate the second objective of the study, which sought to explore the connection between ERM and operational performance in SMEs.

Another important dimension of the study examined the influence of firm size on ERM implementation. The results showed that firm size explained 27.4% of the variability in ERM practices, with a Beta coefficient of 0.523 indicating a moderately strong positive relationship. This finding is consistent with the works of Pagach and Warr (2011) and Liebenberg and Hoyt (2003), who both noted that larger organisations tend to have more structured and formalised ERM systems due to their access to resources, increased complexity, and regulatory obligations. In the Ghanaian context, this suggests that larger SMEs are more likely to adopt ERM as a proactive measure to manage potential risks and safeguard their operations. The correlation between firm size and ERM implementation offers valuable insight into how internal firm characteristics influence strategic risk management choices.

VI. CONCLUSION

This study underscores the strategic significance of Enterprise Risk Management (ERM) beyond its traditional role as a risk mitigation tool. It positions ERM as a driving force for achieving both financial and operational excellence. The identified positive correlation between ERM and firm size emphasises the need for tailored risk management strategies that align with the scale and characteristics of each organisation. Organisations are advised to develop Enterprise Risk Management (ERM) strategies that are tailored to the specific nuances of their industry and the unique challenges they face. A customised approach, accounting for industry-specific dynamics, is crucial, as a universal strategy may not effectively address the diverse risk landscapes across different sectors. Practitioners should prioritise the adoption of ERM practices, considering the positive association identified connecting ERM Implementation and both financial and operational performance. Recognising ERM as a strategic imperative is essential for organisations seeking to enhance their overall performance. Due to the dynamic nature of risks, organisations are encouraged to engage in continuous monitoring and adaptation of their ERM strategies. Regular updates to risk management frameworks ensure that they remain relevant and effective in addressing evolving threats over time. Researchers are encouraged to conduct industry-specific studies to uncover nuances in the connection between ERM, firm size, and performance outcomes. Focused research within specific sectors can provide deeper insights into the unique problems and opportunities confronted by different industries, contributing to a more nuanced understanding of ERM dynamics.

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