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Enterprise Risk Management Practices and Financial Performance of Apparel Industry in Sri Lanka

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Abstract

The apparel industry plays an important role in the Sri Lankan economy. However, based on the previous literature, apparel factories continuously face many internal and external risks and business recessions that affect their performance. Therefore, the main objective of this study is to identify the impact between enterprises' risk management practices and firm's financial performance.

To achieve the said objective, researchers carried out a questionnaire-based survey of 167 managers who were involved in enterprise risk management in the apparel industry in Sri Lanka, applying a simple random sampling method. This study is quantitative research that adopts ontological and positivist research philosophy. The Statistical analysis has been done through correlation coefficient analysis with the SPSS software.

Results found that small apparel factories' risk management systems turned out to be relatively weak and informal. Further, firm size and management attitude toward risk have been shown to significantly impact enterprises' risk management practices and company financial performance. The findings confirmed a strong positive correlation between risk management practices and financial performance in the Sri Lankan apparel sector.

Keywords: *Apparel industry, Enterprise risk management, financial performance, Firm size, Management attitude*



Introduction

Enterprise risk management is a dynamic process and a formal part of corporate decision-making. Enterprise risk management can be traced back to the late 1940s and early 1950s. It is an ongoing process that helps to improve operations, priorities, and resources, establish regulatory compliance, reach performance targets, improve financial and production stability, and eventually avoid loss and damage to the entity (Dickinson, 2001)

A set of factors can cause results to differ from what was planned, these include human error, fraud, system failures, and production interruptions. Many external and internal factors can deviate from the company's purpose as a result of the company's activities. These internal causes are known as "operational risk." and external factors are related to the markets in which companies compete. Other external factors arise from the broader context. Most of these are beyond management control, but active risk management across the enterprise requires organizations to be stronger and have systems that can adapt to major changes (Dickinson, 2001)

The main objective of this paper is to identify the impact on the financial performance of apparel firms in Sri Lanka by implementing enterprise risk management practices which are risk identification, risk analysis, risk evaluation and treatment, and risk monitoring and review (ISO 31000 – Enterprise risk management). It will analyze the relationship between risk management practices and the firm's financial performance: asset growth, sales growth, and profit growth.

The apparel industry has a massive place in Sri Lanka's economy. It has become Sri Lanka's largest export trade since 1985. It has been the country's main net foreign exchange earner since 1992. About 1400 apparel factories (Department of Census and Statistics Sri Lanka) are operating in various parts of the country, and the industry employs 300,000 people directly and 600,000 indirectly (Sri Lanka Export Development Board) Sri Lanka is a country that struggles with female workforce participation: the apparel industry has leapt to the forefront of empowering ladies to be financially independent.

Recent research shows that enterprise risk management is less developed in the apparel industry, and a strong corporate culture can undermine professionally structured risk management. These include global competition, rapid fashion changes, labour turnover, and customer loss. All possible risks must be considered, and solutions should be generated for each. (Sugathadasa, Senadheera, & Thibbotuwawa, 2021).

As mentioned above, the apparel industry is very important for the Sri Lankan economy. Identifying the risk criteria affecting the apparel industry and finding solutions through enterprise risk management practices to keep the industry efficient for a long time is essential. Although there is research about challenges faced by the Sri Lankan apparel industry, there is no research conducted on enterprises' risk management practices implementation in the apparel industry. Therefore, it has been considered as a motivation to conduct this research to find out the impact of business performance related to risk management practices and to give recommendations based on the final result that risk management is important or not to the apparel industry because enterprises risk management has never been more vital than it is now.

Business risk management capabilities have not changed regarding industry or ownership, and companies tend to have a more formal risk management process over the years. The experience of owners and managers has a significant positive impact on risk management

practices. Proper business planning is required and is the main component of sound risk management (Jayathilake, 2012).

Problem Statement

Many organizations in developed countries of the world use enterprise risk management as a standard method. Those organizations have been successful and lasted for a long time in the industry due to using efficient, risk management techniques. To recover from these losses, apparel companies like “Raymond”, “Lifestyle”, and “Nike” have effectively used risk-managing practices and have been capable of managing liquidity with an increasing focus on payments and market realization (Subashini, Kanchanaet & Kavitha, 2020).

However, many apparel firms in Sri Lanka struggle to reduce losses. Welmilla (2020) has identified labour shortage, less attractive and negative thoughts about the apparel industry jobs, different people’s attitudes, and decisions, lack of strong work ethic together with turnover and absenteeism, inadequate technological development, lack of safety and health needs, and lack of knowledge in sexual well being, various management skills in human resource management, fierce competition from the opponent enterprises and parties and extreme requirements for long-standing legal and social standards compliance as the barriers to the apparel industry in Sri Lanka, and these challenges are hurting the operation of apparel companies.

Despite its risky features, the fast fashion apparel industry pays little attention to supply chain risk management research and practice (Bruce, Daly, & Towers, 2004; Sen, 2008). Therefore, it is important to investigate whether the apparel industry in Sri Lanka implements enterprise risk management practices as the main revenue-generating industry in Sri Lanka and to give recommendations based on the final result to enhance their performance.

There is a lack of evidence regarding the studies done to identify whether risk management practices of the Sri Lankan apparel industry have any impact on the factories’ growth, depending on the factors of firm size and management attitude toward risk.

The same research has been applied to SMEs in Sri Lanka but not specifically to the apparel industry (Jayathilake, 2012), and there is research done in Malaysia, the USA, and Zimbabwe to identify the relationship between enterprises’ risk management practices implementation and firms’ performance with firms’ size and management attitude toward risk and has been identified that there is a significant relationship (Ping & Muthuveloo, 2015; Gwangwawa, 2014; Sithipolvanichgul, 2016).

In contrast, other studies have identified that there is no significant relationship between a firm’s performance and enterprise risk management practices (Pagach & Warr, 2010, Lin, et al., 2012; McShane, et al., 2011; Tahir & Razali, 2011; Quon, et al., 2012; Acharyya, 2009). In addition, in Sri Lanka and other countries, research has been done on the risks facing the apparel industry and the strategies to avoid them (Subashini, Kanchanaet & Kavitha, 2020; Welmilla, 2020; Sugathadasa, Senadheera, & Thibbotuwawa, 2021; Hoyt & Liebenberg, 2011; Beasley, et al., 2008; Lin, et al., 2012; Sparrow, 1999).

Based on the literature evidence, it has been noted that there is no evidence of whether enterprise risk management practices are implemented in the apparel factories and their relationship to the organization’s performance in the Sri Lankan context. Therefore, it has been identified as a gap, and this research is trying to fill the gap.

Based on the above justification, the problem statement would be to determine whether the enterprise's risk management practices impact the firm's financial performance in the Sri Lanka's apparel sector.

Research Questions

Accordingly, based on the above-discussed problem statement, the research questions of this study can be defined as follows:

1. How does firm size and management attitude towards risk impact enterprises' risk management practices implementation?
2. What is the relationship between the enterprise's risk management practices implementation and the firm's financial performance?

Research Objectives.

Based on the research questions above, this survey aims to achieve two main objectives as follows,

1. To identify the impact of firm size and management attitude towards risk on implementation of enterprises' risk management practices.
2. To measure the relationship between the enterprise's risk management practices implementation and the firm's financial performance.

Significance of the Study

For many years, the apparel industry has been widely recognized as an important source of employment, income generation, poverty reduction, and community development. But apparel factories faced many challenges such as over dependence on a single product, heavy dependence on a few export markets, insufficient product diversification, heavy dependence on a few large-scale industries, lack of solid raw material base, wage differentials, lack of skilled labor, the productivity of labor, rigidity in the labour laws, lead time, product quality and investment in technologies (Dheerasinghe, 2009).

Enterprise risk management helps decision-makers make informed decisions, prioritize actions, distinguish alternative courses of action, consider the nature of uncertainty, and decide how to deal with it for efficient, consistent, comparable, and reliable results. It also recognizes external and internal people's skills, perceptions, and intents. Promote achievements that promote or interfere with organizational goals (Gwangwava, 2014).

There is a lack of interest in enterprise risk management, particularly in small-scale organisations. The risk process does not require a risk aversion strategy, but it does require early diagnosis and management. At the same time, as a general principle, there is no focus on risk handling for specific industrial sectors in small-scale organizations (Verbano & Venturini, 2013).

Therefore, it is important to encourage apparel factories to implement enterprise risk management practices. With this research's final result, it can be proven to the factory managers whether enterprise risk management affects their business performance and whether firms need to implement enterprise risk management to enhance their business process.

Finally, based on the final result, it can give recommendations for the apparel industry to increase the chances of becoming a successful company, how to evaluate plans to address potential threats, and how to develop structures to counter risks.

Literature Review

This study's main purpose was to investigate some of the key drivers of apparel factories' financial growth aligned with enterprises' risk management practices. There are studies in the literature that show the challenges faced by the apparel industries in Sri Lanka and enterprises' risk management practices and firm performance studies. This section will highlight what direct relationships, according to previous studies, are a step away from existing research, a final review of these relevant existing direct relationships are, according to previous studies, as a step away from existing research a final review of these relevant research-field gaps was conducted.

Theories Relating to the Study

Enterprises Risk Management Process

Enterprise risk management is "Events that can affect the mission, strategy, projects, operations, objectives, core processes, key dependencies, and/or realization of stakeholder expectations." (Hopkin, 2012). The strategy chosen to achieve these business goals embodies a specific risk profile that arises from various factors that may affect the activities, procedures, and resources chosen to implement the strategy (Dickinson, 2001). The actual identification of risk is based on an analysis of the company's internal and external environment to identify all factors that may have any impact on the goals set by the company (Hartcher, Hodgson, & Holmes, 2014).

ISO 31000 risk management approach provides the concept that risk management is centralized and linked to business objectives through planning, management, and governance, at all levels of the organization (Gjerdrum, et al., 2011). This framework provides principles and general guidelines to help organizations establish, implement, operate, maintain, and continuously improve their risk management frameworks.

Following are the interpretation of the risk management process (ISO 31000 Risk Management – Principles and Guidelines).

Risk Identification: Risk identification aims to identify an organization's exposure to uncertainty.

Risk analysis: Root cause analysis can be performed using multiple risk assessment techniques and approaches designed to identify the underlying or initiating risk sources or factors.

Risk evaluation and treatment: It is used to about the importance of a risk to an organization, whether to accept or address a particular risk, and to select and implement actions to change the risk.

Risk monitoring and review: Effective risk control needs reporting and evaluation to ensure that risks are correctly identified and assessed, and that suitable controls and responses are in place.

Empirical Evidence

Challenges Faced by the Apparel Industry

The empirical study conducted by Sugathadasa, Senadheera, and Thibbotuwawa (2021) have identified thirty risk factors within the apparel manufacturing factories in every organizational environment, some of are, labour turnover, high labour costs, labour disputes, poor market forecasting, material cost, long cycle time, lack of capacity, supply chain visibility, IT system issues, brand damage, quality issues of outsourced services, import/export taxes, adverse changes in trade agreements, adverse government policies, rupee devaluation, Low-profit margin for a product, technological change, global competition, consumer loss, volatile demand, and rapid fashion changes (Rafi-UI-Shan, Grant, Perry & Ahmed, 2018).

Firm Size and the Enterprise's Risk Management Practices

Larger companies have more developed risk management processes due to higher levels of risk and high implementation costs. Most studies show that larger companies are more likely to implement ERM activities. However, for large, listed companies, there is no significant difference in the scope of ERM implementation depending on company size. The positive effect may be that as the business size increases, it becomes necessary to manage the business through formal procedures and internal guidelines. Small businesses lack reliable resources and mechanisms to support their risk management activities (Syrová, 2022) (Rujiin & Sukirman, 2019). Large firms may diversify their operations to mitigate unsystematic risks. However, small businesses have little opportunity to reduce unrewarded risk. Most small and medium-sized entrepreneurs tie most of their assets to their business and have no way to diversify their investments further and reduce risk. The greater the size of the firm, the greater the degree of diversification (Jayasekara, Fernando, & Ranjani, 2020).

Research results conducted by Iswajuni, Arina, and Soegeng (2018) indicate that company size significantly positive impacts on ERM. Indeed, the larger the size of a company, the more likely it is that it can control market conditions and face economic competition that can reduce its uncertainty. There is wide consistency in the empirical literature on firm-specific characteristics, such as firm size and institutional ownership, which most studies find to be important, relevant, and positively related to the existence of the ERM system (Gatzert & Martin, 2015) (Li, et al., 2014).

Shaleh and Kurniasih (2021) proved that company size has the highest influence on ERM in companies. The larger the company's scale, the more open its corporate risk management becomes (Hafizuddin-Syah, 2015). The relationship between company performance and ERM depends on the agreement between ERM and five factors that affect the business: environmental uncertainty, industrial competition, company complexity, company size, and oversight by the company's board of directors. (Muslih, 2019) (Yegon, Mouni & Wanjau, 2014) (Naseem, et al., 2019) (McShane, Nair & Rustambekov, 2011) (Ping & Muthuveloo, 2015) On the other hand Ali, Hamid, and Ghani (2019) suggests that the size of the company does not influence its performance to explain the level of ERM implementation.

Management Attitude and the Enterprise's Risk Management Practices

The study done by Yegon, Mouni, and Wanjau (2014) found that shareholders are influential in ERM adoption, while senior management, board of directors, and middle management are designated as the most effective in ensuring the success of ERM. Management culture has

accelerated the speed and effectiveness of ERM implementation, and they are more satisfied with their organization's ERM programs. Considering the importance of strong leadership for successful ERM, managers should be involved in carrying out their risk management role (Kimbrough & Compton, 2009). In all cases, its success or failure depends on the risk manager's ability to ensure that its function appears properly (Mikes, 2014). The success of ERM depends on management decisions and how they plan, measure, and monitor risk. Managers moderated the risks they accepted because of their confidence in influencing the circumstances to get the desired result (Bromiley, P, et al., 2014) (Reid & Ritchie, 2011).

Enterprises Risk Management and Organizational Performance

The relationship between ERM and business performance is undetermined. Numerous studies have shown that ERM practices either create value or lead to a positive impact on business performance (Grace, et al., 2015, Gordon, et al., 2009, Hoyt, et al., 2011, Pooser, 2012, Baxter, et al., 2013). In contrast, other studies have concluded that there is no significance (McShane, et al., 2011, Pagach & Warr, 2010, Tahir and Razali, 2011, Quon, et al., 2012, Lin, et al., 2012). There is a positive relationship between reducing the risk of low profit and minimizing the worst-case profit value, with applied the risk management model. Furthermore, the introduction of risk management into issues considered to reduce the risk in low-profit situations has contributed to increased profits. Risk management significantly reduces the risk of small profits and counteracts the small decline in expected profits (Felfel, Ayadi & Masmoudi, 2018). There is a significant relationship between the board of directors monitoring, firm size, firm complexity, and the enterprise's risk management implementation and firm performance (Ping & Muthuveloo, 2015). There are more effective risk management models of collective bargaining and trade unionism as solutions to the apparel industry's problems. (Kurpad, 2014). Managers, administrators, and executives can make effective decisions and follow effective risk management practices to enhance export competitiveness and enhance overall business in overseas markets (Safeer, He, Abrar & Ullah, 2019).

Literature Reviews Gap

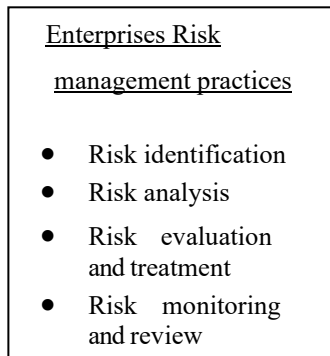
Based on the above literature survey it seems that there are many challenges that the Sri Lankan apparel industry faces (Sugathadasa, Senadheera, & Thibbotuwawa, 2021; Welmilla 2020). Studies show that small and medium-sized organizations are not concerned about enterprise risk management practices. (Verbano & Venturini, 2013; Bruce, Daly, & Towers, 2004; Sen, 2008) furthermore, international's research has proven that there is a relationship between their firms' performance and enterprises' risk management practices in connection with management attitude toward risk and firms' size. (Ping & Muthuveloo, 2015; Hoyt & Liebenberg, 2011; Beasley, et al., 2008; Lin, et al., 2012; Gwangwava 2014; Sparrow 1999). In contrast, other studies have concluded that there is no significant relationship between their firm's performance and enterprise risk management practices (Pagach & Warr, 2010, Lin, et al., 2012, McShane, et al., 2011, Tahir & Razali, 2011, Quon, et al., 2012, Acharyya, 2009). Therefore, it is important to know how the Sri Lankan apparel industry faces those challenges and whether they are implementing enterprise risk management practices and the relationship between enterprises' risk management practices and Sri Lanka apparel industry performance since there is a lack of evidence regarding the studies which are done to identify whether Sri Lankan apparel industries are adopting enterprises risk management practices. It has been identified that there is a gap in empirical evidence.

Methodology

This chapter will explain the conceptual framework diagram along with the hypothesis and research methods.

Conceptual Framework

Independent Variables



Dependent Variables

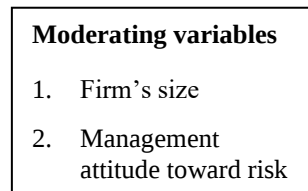


Figure I: Conceptual Framework of the Study

- Figure I represent the basic overall research framework of the relationship between an Enterprise's risk management practices and a firm's financial performance including the two moderate variables.

Research Hypotheses

According to the conceptual framework following three hypotheses have been set.

H1: Enterprise risk management practices on financial performance have a significant influence on Firm size.

H2: Enterprise risk management practices on financial performance have a significant influence on management attitudes toward risk.

H3: Enterprises' risk management implementation is significantly related to firm financial performance.

Operationalization

Table I: Operationalization

Variables	Dimension	Measurement scale
Risk identification	Monthly/annual or weekly inspections to identify potential risks	Likert scale
Risk analysis	Take action immediately to analyze risks' root causes, effects, and interrelationships	Likert scale
Risk evaluation and treatment	organizational structure clearly defines the roles and responsibilities of different functionaries regarding risk management	Likert scale
Risk monitoring and review	business units develop and determine risk mitigation strategies	Likert scale
Firm's size	Companies' annual income and number of employers	Likert scale
Management attitude toward risk	Managers willingly adopt risk management without the command of auditors or the board of directors.	Likert scale
Asset growth	A comparison of competitors' and own business's assets over the past two years	Likert scale
Sales growth	A comparison of competitors' and own business's sales over the past two years	Likert scale
Profit growth	A comparison of competitors' and own business's profit over the past two years	Likert scale

Research Philosophy

The study adopted ontological and positivist research philosophies. This research focused on what exists in reality. As a positivistic research philosophy, Data has been acquired through empirical research based on measurement and observation.

Research Approach

A deductive approach has been conducted by developing hypotheses based on existing theories and designing a research strategy to test hypotheses with the ability to explain causal relationships between concepts and variables, quantitatively measuring concepts, and generalizing research findings to a certain extent.

Research Strategy

In this study, I tested one variable (the independent variable) and observed changes in another variable (the dependent variable), and it evaluated relationships between variables. Therefore, it was an experimental study. Data has been gathered through a quantitative approach. Therefore, the choice of this research was the Mono method.

Techniques & Procedures

As this study takes on the empirical nature of the investigation, data has been collected from 167 managers of apparel factories involved in risk management, who were identified in the three main management levels. The self-completion questionnaire was made through Google form, and delivered to the sample using online methods such as Emails. Most prior research studies (Jayathilake, 2012; Ping & Muthuveloo 2015; Gwangwava, 2014; Sithipolvanichgul, 2016) have used a similar quantitative approach in examining the relationship. Firm size is taken according to the number of employees in the firms according to the export development

board. The data was collected by referring to the questionnaire to the managers of the selected apparel factories. The questionnaire is based primarily on literature and consists of 10 questions. A 5- point Likert scale has been used when developing the questions where 1 is "strongly disagree" and 5 is "strongly agree".

Assumption: Managers who belong to the managerial levels are primarily responsible for the risk management of the apparel factories.

Reliability Test

Table II: Case Processing Summary

		N	%
Cases	Valid	167	100
	Excluded	0	0
	Total	167	100

Table III: Reliability Statistics

Cronbach's Alpha	N of Items
.898	10

Table III shows Cronbach's alpha is 0.898, which indicates the high internal consistency of the survey questionnaire.

Population

The population for this study consists of apparel factories in Sri Lanka from a recent report by the Export Development Board of Sri Lanka (January 2022) which states that 292 apparel factories are operating in various parts of the country contributing to Sri Lankan export income.

Sample Size

It has been used Simple random sampling is a kind of probability sampling in which the researcher randomly chooses a subset of participants from the population. Krejcie Morgan Formula has been used for determining the sample size.

$$n = \frac{x^2 * N * P (1-P)}{e^2 * (N-1) + X^2 * P (1-P)}$$

n = sample size, X^2 = Chi-square for the specified confidence level at 1 degree of freedom, N= population size, P= population portion (50 in this table), e = margin of error

Since the data has been collected through a self-completion questionnaire the standard confidential level and error margin level have been taken accordingly.

N = 292, X^2 = at 95% confidence level with the degree of freedom 1, The chi-square value is 3.841, P= 50% - 0.5, e = 0.05 -5%

n = 166.134202 - According to the above calculation, this study's sample size is 167.

Tools used to Analyze Data

The descriptive data analysis method has been used to present a brief informative coefficient that summarizes a given set of data and represents the entire sample of a population. It provides a means of collecting baseline rates of problem behavior and the direct observational aspect of descriptive analysis helps develop operational definitions of behavior (Sloman, 2010). Statistical analysis has been done through correlation analysis. Correlation tests have been done using the Pearson correlation coefficient which is available in SPSS software. Bivariate Pearson correlation produces a sample correlation coefficient r that measures the strength and direction of linear relationships between pairs of continuous variables. (Islam & Tedford, 2012) More broadly, Pearson's correlation assesses whether there is statistical evidence of a linear relationship between the same pair of variables within a population, represented by the population correlation coefficient ρ .

Findings of the Study

This chapter covers a detailed presentation of data analysis and the results of this study. First, the data will be described using the descriptive data analysis method and then the findings will be presented along with the hypothesis.

Descriptive Data Analysis

As demonstrated in Figure II, the survey participants represented a diverse range of factory sizes. The size is based on the export development board where the number of employees between 01-50 is considered as small firms, 51-300 are considered medium firms, and up to 10,000 employees are considered large firms, and more than 10,000 employees are considered as extra-large firms. 167 apparel factories participated in the survey, and the majority of these were large factories, with 36.53% responses. Although small factories and medium factories were also represented, with 10.78% and 25.15% responses.

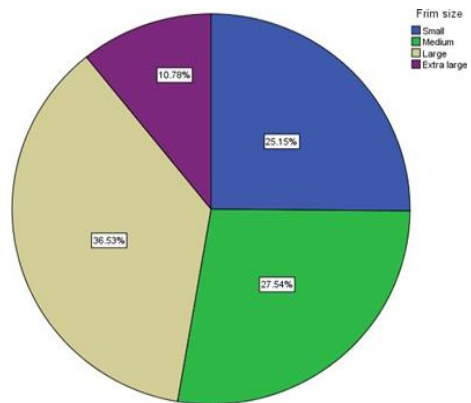


Figure II: Factory sizes

The survey collected the opinions of the managing level, who is responsible for risk management in the firm. As illustrated in Figure III, data has been gathered from three main levels of management. The term management level refers to the boundaries that exist between various management positions within an organization. Various levels of management determine the chain of command within an organization and the authority and typical influence over decision-making.

The majority of responses were in lower-level management with 79 responses which contain foremen supervisors, superintendents, and section officers. The least responses have been given by the top management level (11 responded) which includes the chief executive, managing director, and board of directors. While 77 responded from the middle-level management level. (Branch and departmental managers)

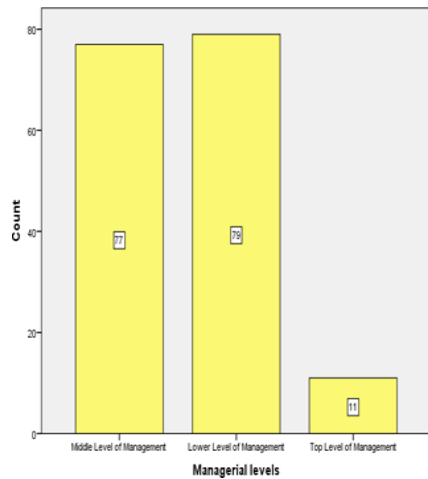


Figure III: Managerial levels

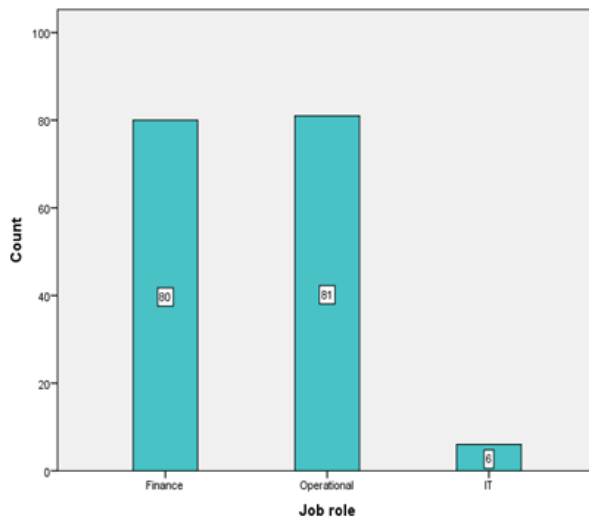


Figure IV: Job roles

Figure IV shows the percentage of the job role of the respondents in which department they work. 6 persons were in the IT department, of which 80 respondents were in the finance department. Most of the respondents (81 persons) were in the operational department.

Correlation Analysis

Enterprise risk management practices on financial performance and Firm size

As per SPSS correlation analysis, the r-value of variables of risk management practices is all above 0.701. It has been identified that there is a stronger correlation between firm size and risk management practices implementation. Similarly, as the firm's size decreases in value, the interest in the implementation of risk management practices has also decreased in value. This is called a positive correlation. Its 2-tailed significance, $p = 0.000$. This means that there is a statistically significant difference between the risk management practices implementation and firm size.

Table IV: The Relationship between Firm Size and Risk Management Implementation

		Firm size	Identify potential risks	Analysis potential risks	Evaluation and treatment potential risks	Monitoring and reviewing potential Risks
Firm Size	Pearson Correlation	1	.732**	.734**	.724**	.701**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	167	167	167	167	167

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

Enterprise Risk Management Practices on Financial Performance and Management Attitudes toward Risk

Results show that there is a positive strong correlation between management attitude toward risk and risk management practices implementation. (Table 5) The r value of variables of risk management practices implementation is all above 0.738. When the management attitude toward risk decreases in value, the interest in the implementation of risk management practices also decreases in value. Its 2-tailed significance, $p = 0.000$. This means that there is a statistically significant difference between the risk management practices implementation and management attitude toward risk.

Table V: The Relationship between Management Attitude toward Risk and Risk Management Implementation

		Manage - ment attitude toward Risk	Identify potential risks	Analysis potential risks	Evaluati- on and treatment potential risks	Monito -ring and review -ing potenti -al risks
Management attitude toward risk	Pearson Correlation	1	.768**	.785**	.786**	.738**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	167	167	167	167	167

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

Enterprises' risk management implementation and firms' financial performance

As presented in Table 6, each of the risk management practices variables is statistically significant for each of the financial performance variables. The first variable of risk management practices r value is greater than 0.702 and its 2-tailed significance, $p = 0.000$ concerns an asset, sale, and profit growth. This means that there is a statistically significant difference between risk identification and a firm's financial performance. Similarly, the second variable of risk management practices, which corresponds to assets, sales, and profit growth, has an r value greater than 0.761 and a 2-tailed significance, $p = 0.000$. This indicates that there is a statistically significant difference between risk analysis and the financial performance of the firm.

On the other hand, the third variable of risk management practices, compared of assets, sales, and profit growth, r -value is higher than 0.807, and its 2-tailed significance, $p = 0.000$. This means that there is a statistically significant difference between risk assessment and treatment of potential risks and the fourth variable of the company's financial performance and risk management practices, with an r value greater than 0.777 in relation to assets, sales, and profit growth and its 2 -tailed significance, $p = 0.000$. Therefore, there is a statistically significant difference between risk monitoring and potential risk review and a company's financial performance. Therefore overall, there is a statistically significant difference between risk management practices and the firm's financial performance with a strong positive correlation.

Table VI: The Relationship between Risk Management Implementation and the Firm's Performance

		Asset growth	Sale growth	Profit growth
Identify potential risks	Pearson Correlation	.704**	.702**	.768**
	Sig. (2-tailed)	.000	.000	.000
	N	167	167	167
Analysis potential risks	Pearson Correlation	.761**	.781**	.843**
	Sig. (2-tailed)	.000	.000	.000
	N	167	167	167
Evaluation and treatment potential risks	Pearson Correlation	.807**	.829**	.865**
	Sig. (2-tailed)	.000	.000	.000
	N	167	167	167
Monitoring and reviewing potential risks	Pearson Correlation	.777**	.795**	.826**
	Sig. (2-tailed)	.000	.000	.000
	N	167	167	167

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

Discussion and Recommendation

This chapter covers a detailed discussion of data analysis and the results of this study. First, the data will be discussed along with the hypothesis, and then recommendations will be presented.

Discussion

H1: Enterprise risk management practices on financial performance have a significant influence on Firm size

H1 proposed that firm size has a significant influence on the relationship between enterprises' risk management implementation. The result of the analysis shows that H1 has a $p < 0.05$. Therefore, H1 is accepted and significantly influences the relationship of the extent of enterprises' risk management implementation. Most evidence shows that the adoption of ERM systems is positively correlated with firm size (Hoyt and Liebenberg, 2011; Beasley, et al., 2008; Lin, et al., 2012). Furthermore, this result is confirmed by Ping, A. & Muthuveloo, R. (2015), who showed that firm size is positively related to enterprises' risk management adoption. (Syrová, 2022) (Rujiin & Sukirman, 2019) (Iswajuni, Arina, and Soegeng, 2018) (Gatzert & Martin, 2015) (Li, et al., 2014) (Shaleh & Kurniasih, 2021) (Hafizuddin-Syah, 2015) (Muslih, 2019) (Yegon, Mouni & Wanjau, 2014) (Naseem, et al., 2019)

Sithipolvanichgul, (2016) has confirmed, that firm size, market uncertainty, and gross domestic product Sectoral products seem to determine the degree of success of ERM implementations. The success rate of ERM implementation increases as the company gets bigger and its GDP increases. In addition, companies with low sales distribution Firms implement their ERM more effectively than firms with higher revenue variances.

Finally, according to the result, small and medium size companies are not interested in implementing risk management practices whereas large-scale companies are using risk management practices.

Additionally, it has been identified that companies that are implementing risk management practices have excellent financial performance in terms of assets, sales, and profit growth.

H2: Enterprise risk management practices on financial performance have a significant influence on management attitudes toward risk.

H2 proposed that management attitudes towards risk have a significant influence on the relationship between enterprise risk management implementation. The result of the analysis shows that H2 has a $p < 0.05$. Therefore, H2 is accepted and significantly influences the relationship of the extent of enterprise risk management implementation. An effective ERM implementation needs a powerful commitment from the management. (Jayathilake, 2012) Ittner and Oyon (2014) also pointed out a positive correlation between ERM and the functional and hierarchical extent of risk responsibility. The result is supported by Gwangwava's (2014) findings that risk management in SMEs is primarily focused on owner/manager beliefs, which are conducive to sustainable entrepreneurial development. This result is also consistent with Sparrow (1999), who found that risk management practices in SMEs are related to owner/manager beliefs and attitudes. Finally, it has been identified that in companies managers who have an attitude toward risk have outstanding financial performance. (Yegon, Mouni & Wanjau 2014) (Kimbrough & Compton, 2009) (Mikes, 2014) (Bromiley, P, et al., 2014) (Reid & Ritchie, 2011)

H3: Enterprises' risk management implementation has a significant relationship with firm financial performance.

H3 proposed enterprises' risk movement implementation has a significant relationship with firm financial performance. The result after analysis shows that H3 has a $p < 0.05$. Therefore, H3 is accepted, and it shows a significant relationship between the extent of enterprises' risk movement implementation and firm financial performance.

The survey showed that all respondents seemed to recognize the benefits of risk management implementation. Most companies have recognized that risk management helps manage both predictable and unpredictable events.

This evidence is supported by Ping, A. & Muthuveloo, R. (2015); Jayathilake, (2012); Hoyt, R. & Liebenberg, A. (2011). In contrast, other studies have concluded that there is no significant relationship between risk management practices implementation and firms' financial performance. (McShane, et al., 2011, Pagach & Warr, 2010, Tahir and Razali, 2011, Quon, et al., 2012, Lin, et al., 2012) A better implemented ERM program is positively associated with enterprise value. Higher ERM scores are statistically significantly more positive and correlate with simultaneous improvements in market valuation and financial valuation (ROE and ROA). Revenue growth is also statistically positively correlated with ERM and return on equity or return on investment as it creates investment opportunities (Sithipolvanichgul, 2016).

The results of the hypotheses's testing are summarized and presented below.

Table VII: Summary of the Hypotheses's Testing

Hypotheses	Results (r-value)	P value
H1: Enterprise risk management practices on financial performance have a significant influence on Firm size.	A Strong positive relationship. (r = all variables are above 0.701)	A statistically significant difference. (p=.000)
H2: Enterprise risk management practices on financial performance have a significant influence on management attitudes toward risk	A Strong positive relationship. (r =all variables are above 0.738)	A statistically significant difference. (p=.000)
H3: Enterprises' risk management implementation is significantly related to firm financial performance.	A Strong positive relationship. (r =all variables are above 0.865)	A statistically significant difference. (p=.000)

Recommendations

The lack of a consistent definition of ERM creates a problematic situation for both practitioners and researchers. Additionally, the effectiveness of ERM implementation is limited by a shortage of understanding of the factors that affect ERM success within the organization.

Overall, in large and extra-large companies, managers are implementing enterprise risk management and this study has shown that their performance has improved, therefore this study recommends that they need to continue their enterprises' risk management process by adding new technology to their existing risk management system more effectively. However, it has been identified that small and medium factories are not very concerned about implementing enterprise risk management practices, and compared to large factories their financial performance is low. (Verbano & Venturini, 2013) Therefore to become a successful firm, managers need to be 'risk aware' when reviewing strategy, plans, reporting, operations, and compliance. The purpose of implementing ERM is to provide reasonable assurance that an organization's business objectives will be achieved. (Nocco & Stulz, 2006) COSO (2004) found that ERM helps management align risk appetite and strategy, provide better responses to risks, consolidate risk management views, improve governance, and reduce operational losses, also it helps reduce unacceptable fluctuations in performance. For both small and large firms, management should consider the firm's overall risk appetite threshold (The level of risk that a firm is willing to take believing it is worthwhile) and should align with how the company develops its strategy, mission, and objectives for creating value and the infrastructure for managing risks and allocating resources across business units. Everyone in the firm needs to understand the specific risk factors of an organization, its risk appetite, and what management considers to be an acceptable level of risk to achieve growth possibility. (Beasley & Frigo, 2010) Each manager or person responsible for a business unit, division, function, process or activity is necessary to develop a risk assessment for each unit and manage it as part of their capabilities. This assessment method can be quantitative or qualitative.

Furthermore, there is a significant relationship between the board of directors monitoring, firm size, firm complexity, and the enterprise's risk management implementation and firm performance. (Ping & Muthueloo, 2015). Therefore, the board should work with management to allocate risk oversight responsibilities to committees. The committee should collaborate on risk-related events and management should inform the entire board of the strategic risks facing the company. The organizations must have a systematic periodic risk reporting system (Deloitte, 2009) and its reports must rise from the bottom up to senior management and the board of directors. The board should promote risk transparency at all levels of the organization so that day-to-day decision-makers are aware of the strategic objectives and how their decisions affect those objectives. Management must communicate a culture of risk awareness that all employees must follow. The board should also evaluate past management decisions to determine whether risk-taking was avoided.

Overall risk should be recorded in a risk register and then managed as part of the risk appetite. The risk owner and risk manager must be identified. For the action plan and course of action, all individuals must know their roles and responsibilities for the risk management process, as well as contribute to the accomplishment of the company's goals. Each party should participate in its risk identification, and management representatives from each division engage with senior management in the identification and analysis process, both at the management and unit levels. Firms can improve risk disclosure by explaining processes, providing insight into the board's oversight function, and ensuring that risk disclosures are accurate, relevant, and specific. (Sithipolvanichgul, 2016) It is essential to have enterprise risk management processes and strategies in place to improve operational efficiency and business continuity, protect company assets, improve customer satisfaction and loyalty, realize returns and achieve goals, and increase profitability.

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Appendices

Appendix A: Questionnaire

1. Please enter your company name.

2. What is your job role in the organization?

☐ Finance ☐ HR ☐ Marketing ☐ Operational ☐ IT

3. What is your managerial level in the organization?

☐ Middle Level of Management ☐ Lower Level of Management ☐ Top Level of Management

4. Do you think company size matters for risk management? (Company size based on the number of employees and revenue of the company)

☐ Strongly disagree ☐ Disagree ☐ Neither agree nor disagree ☐ Agree ☐

Strongly agree.

5. Do you follow risk management because it's a requirement of auditors?

☐ Strongly disagree ☐ Disagree ☐ Neither agree nor disagree ☐ Agree ☐ Strongly agree

6. Does your company conduct inspections (monthly/annually or weekly) to identify potential risks?

☐ Strongly disagree ☐ Disagree ☐ Neither agree nor disagree ☐ Agree ☐ Strongly agree

7. If a risk occurs immediately, would you act immediately to analyze its root cause, effect, and interrelationships?

☐ Strongly disagree ☐ Disagree ☐ Neither agree nor disagree ☐ Agree ☐ Strongly agree

8. Does your organizational structure clearly define the roles and responsibilities of different functionaries regarding risk management?

☐ Strongly disagree ☐ Disagree ☐ Neither agree nor disagree ☐ Agree ☐ Strongly agree

9. Do your business units develop and determine risk mitigation strategies?

☐ Strongly disagree ☐ Disagree ☐ Neither agree nor disagree ☐ Agree ☐ Strongly agree

10. Give the answers based on the comparison of the competitors over the past two years

1= Much worse than competitors 2= worse than competitors

3= Moderate 4= Better than competitors

5= Much better than competitors

	1	2	3	4	5
Asset growth					
Sale growth					
Profit growth					