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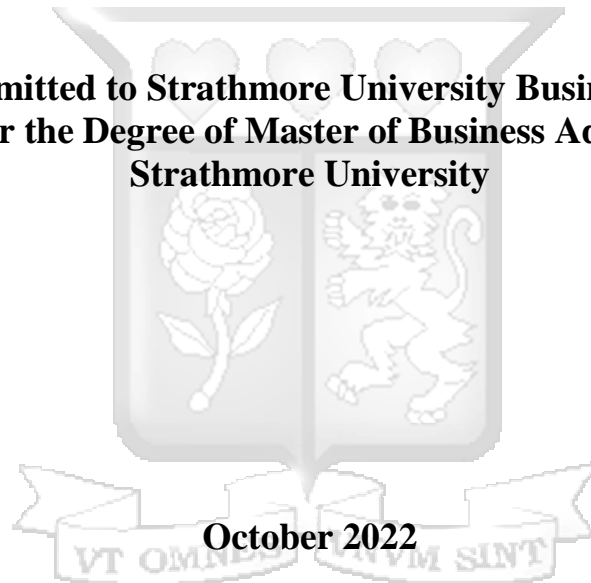
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**THE ROLE OF HUMAN RESOURCE FACTORS IN THE  
IMPLEMENTATION OF ENTERPRISE RISK MANAGEMENT: A CASE  
STUDY OF RWANDAN INSURANCE INDUSTRY**

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**(MBA 135817/2020)**

**A Dissertation Submitted to Strathmore University Business School in Partial  
Fulfillment for the Degree of Master of Business Administration of  
Strathmore University**



**October 2022**

## DECLARATION

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## ABSTRACT

The Financial sector is motivated by the need to meet various regulatory requirements for risk assessment, measurement, mitigation, and capital. This has led to the increasing tendency toward a holistic view and management of risks through the enterprise risk management (ERM) strategy. Implementing ERM is an organization process that is typically carried out over a number of years and is subject to many organizational factors to succeed. Specifically, human resource factors such as teamwork, reward and recognition, and training programs play a key role in the implementation of ERM. The purpose of this study therefore was to establish the role of these HR factors in implementation of ERM in the Rwandan insurance industry. The objectives of the study were: To assess the effect of teamwork on the implementation of enterprise risk management in Rwandan insurance industry; To evaluate the effect of employee reward and recognition on the implementation of enterprise risk management in Rwandan insurance industry; and to explore the effect of employee training programs on the implementation of ERM in Rwandan insurance industry. In order to fulfil these objectives, contingency theory was selected as most appropriate theoretical models to anchor the study. The study applied the positivism philosophy to derive objective viewpoints from the respondents. The correlational research design and a cross-sectional survey approach was used to enable the researcher to obtain data about practices, situations, or views at one point in time through questionnaires. The population and sample consisted of a census of the 14 insurance companies in Rwanda and included four senior managers from each insurance company that were directly involved in the organizations risk management process. Quantitative analytical techniques were used to draw inferences from this data regarding existing relationships through descriptive and inferential statistics to test the relationship and determine the effect of HR factors on the implementation of ERM. The findings indicated that there was a strong association ( $r=0.844$ ,  $p$  value = 0.001;  $r=0.553$ ,  $p$  value = 0.003; and  $r=0.663$ ,  $p$  value = 0.002) between teamwork, reward and recognition and training respectively, and implementation of ERM. The findings also revealed that the Rwandan insurance industry as a whole only had a fairly effective level of ERM implementation. The study recommends the management of the Rwandan insurance companies to seriously consider improving their human resources practices through increased teamwork, staff reward and recognition programs as well as employee trainings that will allow them to improve on their risk management efforts and boost organizational performance.

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## ABBREVIATIONS AND ACRONYMS

BNR - Banque Nationale du Rwanda

CAGR - Compound Annual Growth Rate

CFI – Corporate Finance Institute

ERM – Enterprise Risk Management

HR – Human Resources

VAT – Value Added Tax



## DEFINITION OF TERMS

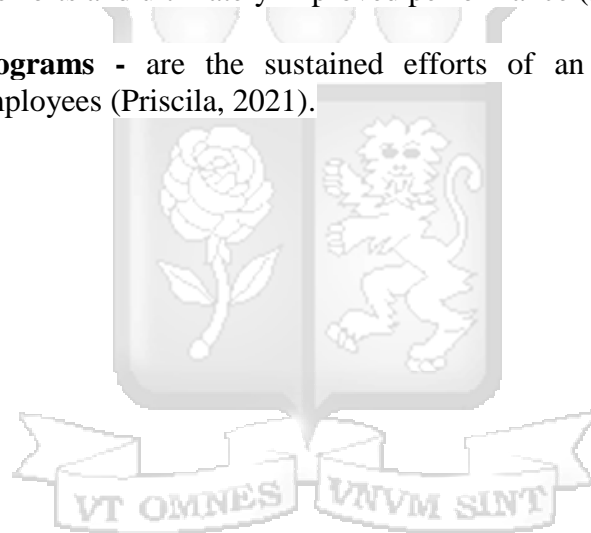
**Risk** - the probability of losing something of value, assessed against the probability to gain something of value (Liu, et., al. 2017).

**Enterprise Risk Management** - the process of identifying and addressing methodically the potential events that represent risks to the achievement of strategic objectives, or to opportunities to gain competitive advantage (Acharya & Johnson, 2006).

**Teamwork** - the collaborative effort of a group to achieve a common goal or to complete a task in the most effective and efficient way (Parker, 2018).

**Reward and recognition** - a system where employees are acknowledged for their performance in either intrinsic or extrinsic ways that includes suitable and consistent financial compensation, as well as employee or team celebrations, recognition of milestones reached, leadership initiatives, collaboration efforts and ultimately improved performance (Jones, 2019).

**Employee training programs** - are the sustained efforts of an organization to boost the performance of its employees (Priscila, 2021).



## DEDICATION

To my Dad, the late Hon Aimable Nibishaka, who made me the person I am today, continue to rest in perfect peace. You were and always will be the inspiration behind my never-ending drive to succeed and better myself. Thank you for showing me the value of hard work. I hope that through this work, I am able in some way to repay you for the efforts you made to lift me up.

And to my beloved kids Denzel, Shan and Estrella, who have taught me what matters in life and never let me get away with mediocrity.



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## CHAPTER ONE

### INTRODUCTION AND BACKGROUND

#### 1.1 Introduction

This chapter provides an overview of the background to the study and introduces the variables that will be tested. The chapter presents a discussion of the organizational management issues of enterprise risk management and its relationship to Human Resource practice. The chapter describes the problem that the study seeks to solve and outlines the research objectives and questions that this study seeks to answer, as well as the scope, significance, and limitations. The chapter concludes with a summary that leads to the subsequent chapter.

Risk, defined as the probability of losing something of value, assessed against the probability to gain something of value, is phenomenon that every organization faces (Liu, et., al. 2017). Risk is diverse, dynamic, and unique in nature to different organizations based on type of business, operational guidelines, technology used, human resource, organizational structure, among others (Akotey, 2013). Risk management strategies have therefore become an integral part of strategic management practice in businesses.

Recent global financial disasters, especially in financial sector, have led to increased emphasis and implementation of risk management strategies such as market risk management, credit risk management, and operational risk management (Leen and Roland, 2012). The Financial sector, including banks and insurance firms are further motivated by the need to meet various regulatory requirements for risk assessment, measurement, mitigation, and capital. This has led to the increasing tendency toward a holistic view and management of risks (Darja & Mojca, 2021). A collective risk management framework for the financial instruments and services offered in the financial sector and the organizational individual and team security's contribution to that collective risk management strategies would be useful.

##### 1.1.1. Enterprise Risk Management

Acharya & Johnson (2006) states that risk management in isolation often misses the big picture. Leen & Roland (2012) argue that a holistic management of risk is logical, and that risk

management should not be a separate function of the business process but a consolidated process. Enterprise risk management (ERM) is believed to be such an approach that provides a common understanding across the multidisciplinary groups of people of the organization. Enterprise Risk Management (ERM) is defined by (Acharya & Johnson, 2006) as the process of identifying and addressing methodically the potential events that represent risks to the achievement of strategic objectives, or to opportunities to gain competitive advantage. Sylvester, Horvey & David (2020) refers to ERM as the process of planning, organizing, directing, and controlling the activities of an organization to minimize the adverse effects of risk on its capital and earnings. This includes financial risks, strategic risks, operational risks, and risks associated with accidental losses. It is an integrated approach to achieving an organization's strategic, programmatic, and financial objective with acceptable risk. The philosophy of ERM generalizes these concepts beyond financial risks to include all kinds of risks (Nicholas & Geraldine, 2014). The core elements of ERM include the assessment of significant risks affecting or have the potential to affect the organization and the implementation of suitable risk responses. Such risk responses include acceptance or tolerance of a risk; avoidance of a risk; transfer or sharing risk via insurance, a joint venture or other arrangement; and reduction or mitigation of risk via internal control procedures or other risk prevention activities (Darja, & Mojca, 2021).

In addition to these ERM responses, other important concepts include the risk philosophy or strategy, organizational risk culture and the management's risk appetite or profile. These are expressions of the attitude to risk in the organization, and of the amount of risk that the organization is willing to take. These are important elements of governance responsibility. The management and team responsibilities include the risk architecture or infrastructure, documentation of procedures or risk management protocols, training, monitoring, and reporting on risks and risk management activities (Nicholas & Geraldine, 2014). According to Sylvester, Horvey & David (2020) the ERM process includes a five-step process that includes: identification of all the real and potential risks in the organization, assessing the likelihood of the risks and potential impact, Planning, and selecting a response (accept, share, mitigate or avoid), implementing the mitigation strategy and monitoring the performance and effectiveness of the ERM strategies. The process continues throughout the life of the organization.

Implementing ERM is a continuous process that is typically carried out over a number of years and is subject to many organizational factors. The process requires a phased methodology, with important steps and success benchmarks in each phase (Witte, 2021). This evolving process ensures that organizations are aware of existing and emerging risks affecting expected outcomes and are able to proactively respond to them (Marker, 2021). Implementing ERM is possible in the framework of a strong organizational strength derived from the uniqueness of the initiative, but also from a desire to obtain a fully mature ERM program.

Different scholars have presented various steps and processes for ERM implementation; Marker (2021) provides a five stem roadmap to effective implementation of ERM that include: Establishing a foundation for the ERM strategy to guide the different phases of the ERM implementation process; Determining the scope of implementation, and assigning implementation functions and ownership to critical stakeholders and project leaders; Identifying and assessing the risk based on precise criteria; Mitigating or optimizing risk with targeted risk response; and Monitoring and reporting on implementation progress. Prioteasa, Stefan & Ciocoiu (2018) presented a three step ERM implementation approach that includes: Assessing risk, which involves developing a common set of evaluation criteria that can be used across operating departments or business units, defining the extent of risk that the organization faces; Prioritizing risk by comparing the level of risk against pre-stated target risk levels and tolerance thresholds; and Responding to risk through an examination of response options, evaluating the cost-benefit analyses, framing response strategies, and developing risk response plans.

Organizations achieve varying extents of ERM implementation success based on the organization size, implementation timeline, available resources, and risk optimization goals. Witte (2021) describes four levels of implementation which are: the ERM does not exist, ad hoc ERM implementation, ERM is implemented but improvements are required, and a robust implementation of ERM. At the center of an effective ERM implementation process, are the risk oversight committee who are people within the organization that are in one way, or another involved in the ERM implementation process. Though risk can affect individual sections, departments, the ripple effect from a section or departmental risk can often be felt on the entire

organization. The importance of effective Human Resources factors in the implementation of the ERM process cannot, therefore, be understated.

### **1.2.2 Human Resource Factors Affecting ERM Implementation**

ERM studies and research have explored contextual factors that drive ERM adoption and implementation. These factors have been studied in two main research streams of organizational factors and Human resource factors. With regard to organizational factors, researchers have explored the organizations contextual variables and determinants such as Organizations structure, organizational learning and development, organizational culture, and Organizational finances (Yazid, et al., 2018). Scholars exploring human resource factors have explored factors including teamwork, reward and recognition, and training programs (Ghorbanhosseini, 2019). This study sought to explore the Human resource factors as a critical determinant to the successful implementation of ERM.

Human resources (HR) in an organization primarily includes the full-time as well as seasonal employees. They also include management and labor personnel, family and non-family members, and other organizational stakeholders. These people play two roles in ERM where they are a source of risk but are also important in managing the organizational risk (Konovalova, Mitrofanova & Konstantin, 2017). As a source of risk, HR presents three major sources namely workplace culture, performance management and evaluation and employee training and competency (Yazid, et al., 2018, Parker, 2018, and Kinse, 2019). Workplace culture can either unite HR as a cohesive team or create discord and therefore increase risk. On the other hand, performance management and evaluation can be linked to the reward and recognition policies of the organization that act as motivation for employees to perform to the best of their abilities in risk management or demotivate them to ignore such tasks. Training and competency failures come from inadequate HR learning opportunities and unawareness of training insufficiencies which become a major source of risk. HR management plays a key role in the implementation of ERM based on the extent to which these HR risk factors and processes are implemented and practiced. Based on a compilation of conceptual frameworks from several research and studies, Ghorbanhosseini (2019) therefore notes that the common HR factors that have contributed to the

successful implementation of ERM are teamwork, reward and recognition, and training programs arising from these HR sources of risk.

The teamwork model comes from a larger context of a team where Individuals are part of a team when they have a shared goal, are interdependent to each other, are finite and stable, can manage their own work and internal process, and operate in a bigger social system (Parker, 2008). Delving deeper into characteristics of teamwork that promotes organizational performance and in essence ERM, Katzenbach and Smith (2015) outlined three important aspects that are important for effective teamwork and include team communication, team involvement, and team empowerment. Team communication: the interactions that individuals on a team share with one another, primarily includes verbal or written mediums but also involves body language and nonverbal communication. Effective communication becomes critical in working on collective projects, where people are cooperating more than working independently (Kinse, 2019). Team involvement allows members of a team to analytically give their input into decisions that affect their own work and involves the direct participation of employees by applying their own ideas, expertise, and efforts towards solving problems and making decisions (Powel, 2021). This can benefit the entire organization by improving the quality of the decisions made, increasing employee engagement, enable employee collaboration and communication, bringing the management blind spots to the fore, and enabling the management to get buy-in from the people who need to implement the decisions (Landry, 2020). Team empowerment refers to conferring responsibility and authority to make decisions to the team members as opposed to a manager issuing instructions or approving requests. Every member of the self-managed team plays a role in making group decisions and are allowed to create their own rules about decision-making, communication, and implementation of tasks assigned to the team where the rules apply to the entire team (Eatough, 2021).

Reward and recognition exist in organizational environments where there is appropriate acknowledgement and appreciation of employees' efforts in an equitable and timely manner. This includes suitable and consistent financial compensation, as well as employee or team celebrations, recognition of milestones reached, leadership initiatives, collaboration efforts and ultimately improved performance (Jones, 2019). According to Chatterjoo (2020), the different types of rewards are pay increase, bonuses, variable Pay, stock Options, and written or Verbal praise.

Recognition on the other hand can take the form of structured programs such as regular recognition gifts, employee of the month or year recognition, featuring employee accomplishments in publications, providing additional support, empowering the employee with greater options of assignments to choose from, increased authority among others (Chatterjoo, 2020). Rewarding and recognition is important in the implementation of ERM as it is likely to increase employee productivity in the workplace and encourages them go the extra mile. This stimulates a spirit of teamwork and acts as a catalyst for greater ERM implementation levels and high performance. This system also encourages employees to do more and creates an environment for employee development and career growth by elevating their work performance. It also gives employees morale to exceed the expectations which boosts the success rate of ERM implementation process (Jones, 2019).

Employee training programs have recently emerged as a crucial element of HR strategy. Many organizations' management have realized that investing in employee training not only serves as a motivation, but also enables the organization to create a highly skilled workforce (CFI, 2022). According to Priscila (2021), there are 8 common types of employee training programs that enhance their skills and enable efficient fulfilment of their roles and responsibilities in the organization. These include orientation training that introduces the a new employee to the organization, onboarding training to get new hires up and running quickly, technical skills training to improve or acquire new skills required in their jobs, soft skills training that allow employees to communicate, collaborate and manage conflict effectively, Product and service training to educate employees on what they offer and represent, compliance training to fulfil certain legal obligations in performing their jobs, franchise training to keep processes and products consistent across business and franchise units, and managerial and leadership training to prepare employees with a leadership role (Priscila, 2021). With reference to implementation of ERM, technical skills training, soft skills training and in some cases managerial and leadership training are most relevant. According to CFI (2022), although there are a few disadvantages to employee training, the advantages outweigh them considerably. These advantages include addressing employee weaknesses and expanding their knowledge base, improves employee performance, boosts the company reputation and profile, and increases innovation. These benefits are critical for the effective implementation of ERM in the organization.

There have been empirical studies conducted globally on the effect of HR factors on various organizational contexts. Caldwell (2016), Rahman (2018), and Elhusadi et al., (2020) explored the influence of teamwork factors in managing risks at various industries and economies and found that There exists a positive and statistically significant relationship between teamwork and effective risk management. Similarly, Carey (2011), Adeyele (2019), Yaraghi & Langhe, (2011), Gibson (2012), and Abdullah et al., (2017) studied risk management and reward systems from a HR perspective and found that effective remuneration policies as well as reward and recognition would influence the implementation policy behavior with a significant positive relationship with performance of risk management systems. With regards to training programs, Mwangi (2012), Laisasikorn & Rompho (2014), and Makarova (2014) evaluated the relationship between training programs and performance, risk management and found a significant relationship between training programs and performance and risk management strategies. However, Ranong & Phuenngam (2019) with a similar study found that there was no Significant relationship between training programs and risk management. The gap in these studies was contextual, where they were performed on individual HR factors and in different economies than the subject if this study was.

This study comes out with a different perspective as it addresses a combination of HR factors of teamwork, reward and recognition and training as opposed to the individual factors from previous studies, thus filling in the conceptual gap as well as the contextual gap in Rwandan insurance companies.

### **1.2.3 Rwandan Insurance Industry overview**

Insurance companies cushion businesses and property from probable insecurities that come with globalization and growth in technology. They play a critical role in safeguarding investments via risk reduction. Besides, insurance companies improve financial markets and is therefore a key component of economic development globally Acharya & Johnson, 2006). Through resource mobilization and investment, the insurance industry creates jobs and improves the investment climate thereby improving economic liquidity (Akotey & Abor, 2013). The industry enhances ease of business transactions, protects purchases and provides recovery in domestic production, innovation and trade (Akotey & Abor, 2013). As key contributors of economic development worldwide, insurance companies have a significant impact on national gross domestic product

(GDP) (Liu, Li, Lin & Nguyen, 2017). This indicates that for developing economies, the role of the insurance industry cannot be understated.

According to the World Bank (2019), the insurance sector in Rwanda is underdeveloped but has undergone rapid economic transformation in the last two decades. Rwanda's Insurance industry is characterized by a very low insurance penetration rate, whose current activities are targeted towards the higher income population segments. and, as in a majority of African markets, remains concentrated on traditional and corporate insurance. Despite the low penetration rate, the growth trajectory is encouraging with a compound annual growth rate (CAGR) of 13% between 2010 and 2017 (World Bank, 2019). Rwanda has a number of licensed insurance companies and public insurers where the conventional insurance products are delivered through traditional brokers and agents, to corporate and high-income individual clients. The insurance industry in Rwanda, is one of the crucial economic pillars. The Rwandan insurance industry is composed of 14 insurance companies, 2 public medical insurers, 3 life insurance companies and 9 non-life insurance companies, regulated by the Central Bank of Rwanda (BNR, Banque Nationale du Rwanda). The insurance companies include 3 life insurance companies (Sonarwa Life Insurance Ltd, Prime Life Insurance Ltd and Sanlam life Ltd) and 9 are non-life insurance companies. The non-life insurance companies include Sanlam Insurance Ltd, Sonarwa Insurance Ltd, Radiant Insurance Ltd, UAP insurance Ltd, Britam Insurance Ltd, Mayfair Insurance Ltd, BK General Insurance Ltd, Phoenix Insurance Ltd and Prime General insurance (Market Research, 2021).

Although opinions of insurance companies in Rwanda may now be more favorable than they were a few years ago, the public's lack of trust in insurance companies has increased the industries risk levels and decreased the adoption of insurance products due to their ineffectiveness in processing claims and perceived unwillingness to pay claims (Liu, Li, Lin & Nguyen, 2017). According to the BNR's Financial Stability Report from 2016, short-term insurance companies, also known as non-life insurance companies, account for 89.8% of all gross premiums and 83.2 percent of all insurance assets in Rwanda. Rwanda is the only active member of the East African Community (EAC) that levies an 18% VAT levied on premiums, which inhibits the growth of the Rwandan insurance sector, according to the National Bank of Rwanda's (2016) Financial Stability Component report. The lack of innovative goods and services in Rwanda has also raised the industry's risk levels. However, according to statistics, Rwanda's insurance market is expanding

quickly due to the efforts to implement appropriate risk management strategies to mitigate the slow uptake and possible effect of VAT. It is also important to evaluate internal factors affecting the adoption of risk management strategies, which is the purpose of this study.

### **1.3 Problem Statement**

The risk environment is constantly changing with many organizations failing to keep up despite the availability of security technologies. There is therefore a dire need to manage risks and enhance organizational performance. The role of risk management, being within the organization's control, must constantly be reviewed and examined through effective management controls and methods (Akotey and Abor, 2013). ERM is one of those methods that organizations within the financial and insurance industry have embraced in dealing with the wholistic risk view of the organization. According to Kinse (2019), HR factors of teamwork, reward and recognition and employee training programs have been to have characteristics that can positively improve the implementation of ERM thereby encouraging organizational performance.

Insurance companies were established with the main aim of reducing trade risks and have turned out to be key economic pillars of the economy as they enhance the financial stability and mobilization of savings, improve financial markets, and protect investors leading to economic development (Liu et, al. 2017). Although they protect businesses and investments against risks, the insurance companies are often faced with various kinds of risks which can jeopardize their survival. In Rwanda, as outlined previously, the financial performance especially for the private insurers has been poor, experiencing losses for a number of years. This could be attributed to many factors including poor risk management strategies as posited by a report by Research and markets (2020), which suggests that in addition to general macro factors, internal micro factors that are organizational specific also played a significant role in the slow adoption and implementation of risk management strategies. In the same report, HR management inadequacies were also sighted as barriers to proper risk management strategies by the Rwandan insurance companies. It is therefore in the interest of these insurers to reevaluate the risk management strategies and find ways to reduce their risks and in turn improve their financial performance. It is not surprising therefore that studies have attributed HR factors to improve the implementation of ERM process in helping manage the organizational risks. This study sought to focus on these

HR factors as critical factors in helping to improve the financial performance of Rwanda's insurance industry.

Studies on organizational factors that affect implementation of ERM have laid more emphasis on organizational factors such as innovation and performance effectiveness rather than adoption and implementation of ERM. Besides, most researchers have dwelt more on organizational culture and its impact on various aspects of organizations (Busara, 2016; Jung, Kang & Choi, 2020). Although HR factors have been widely researched for several companies globally, literature is deficient of its relation to the implementation of ERM. A gap exists in the study of HR factors that affect the implementation of ERM with sighted studies focusing on individual factors rather than a combination of the critical factors. Consequently, HR factors and its effect in the implementation of ERM had not been studied in the Rwandan insurance industry. Little had been done to establish how HR factors within insurance companies in Rwanda relates to the improvement of the industries performance. This is the research gap in concept and context that the study sought to fill.

## **1.4 Research Objectives**

### **1.4.1 Overall objective**

The main objective of this study was to establish the role of HR factors in implementation of ERM in the Rwandan insurance industry.

### **1.4.2 Specific objectives**

- i. To determine the extent of enterprise risk management implementation in Rwandan insurance industry
- ii. To assess the effect of teamwork on the implementation of enterprise risk management in Rwandan insurance industry.
- iii. To evaluate the effect of employee reward and recognition on the implementation of enterprise risk management in Rwandan insurance industry.

- iv. To explore the effect of employee training programs on the implementation of enterprise risk management in Rwandan insurance industry.

## 1.5 Research Questions

- i. What is the extent of enterprise risk management implementation in Rwandan insurance industry?
- ii. What is the effect of teamwork on the implementation of enterprise risk management in Rwandan insurance industry?
- iii. What is the effect of employee reward and recognition on the implementation of enterprise risk management in Rwandan insurance industry?
- iv. What is the effect of employee training programs on the implementation of enterprise risk management in Rwandan insurance industry?

## 1.6 Scope of the Study

The study sought to understand the relationship between HR factors and the implementation of the ERM within the insurance industry in Rwanda. The literature therefore focused on these two variables and the subject being Insurance Companies in Rwanda. The data collection was conducted during the months August to September 2022. All the findings, analysis, conclusions, and recommendations were derived from this period.

## 1.7 Significance of the Study

### 1.7.1 Regulating and Policy Authorities

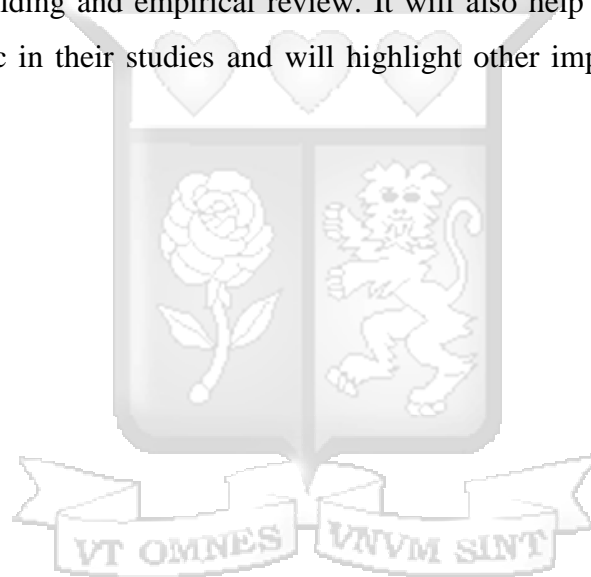
Given that the insurance industry is a key economic development pillar through enhancing the financial stability and mobilization of savings, improving financial markets, and protecting investors, the research is of great importance to the insurance industry regulation bodies for policy development. The study will assist the regulating authorities to understand the risk environment, the implementation levels of ERM deployed by the insurance companies, and what HR factors can influence the success of ERM. This will enable the institutions to make governing policies that will assist insurance companies in future risk mitigation and management processes.

### *1.7.2 Rwanda Insurance Companies Management*

The research is of great importance to insurance companies' management in Rwanda for managerial practice purposes. The study will assist the company management to identify the HR factors and their effectiveness in the implementation of ERM strategies that will have a strong positive influence on their organizational performance. This will enable the institution's management to make more informed decisions on implementing HR factors that are effective.

### *1.7.3 Scholars and Researchers*

The study is a source of reference material to scholars and future researchers on other related topics for theoretical building and empirical review. It will also help other academicians who undertake the same topic in their studies and will highlight other important relationships that require further research.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

Chapter two discusses literature on HR factors and Risk management that form the theoretical basis of the study. The chapter also reviews empirical work in different industries relating to the variables of the study. Then concludes with a conceptual Framework showing the relationship between the independent and dependent variables that will be tested, and the operationalization of the variables under study.

#### 2.2 Theoretical Review

Risk management is critical for insurance companies since they are primarily involved in managing risks on behalf of their clients. For competitive advantage, survival and ultimate performance, the insurance companies in return need to manage the risks arising from absorbing the risks of others. Implementation of ERM is therefore one of the most recommended methods in managing their own risk. There are several risk management theories and models available for use in academic and research fields that are useful to anchor this study. Contingency theory has been outlined as the most possible and appropriate anchor to this study.

##### 2.2.1 The Contingency Theory

Contingency theory is a risk and leadership strategy that was informed by two earlier research programs at Ohio State University that sought to identify effective leadership behavior in the 1950s. Two earlier research projects that sought to identify the characteristics of good leadership behavior had an impact on the contingency approach to leadership. Woods (2019). This line of research was later extended by Robert Blake and Jane Mouton in 1964. According to Kaplan (2014), contingency theory refers to a behavioral theory that claims that there is no one best way of organizing a business, leading a company, or making decisions within an organizational context. The theory Instead, posits that the best possible course of action is contingent (dependent) upon the internal and external factors and situation. This requires contingent organizations and

their leaders to be flexible in selecting and adapting to succinct management strategies to suit change in situation at a particular period in time in the running of the organization.

Woods (2019) states that the contingency theory was influenced by two research in the 1950's endeavoring to pinpoint effective leadership behavior. Researchers at Ohio State University measured a range of possible leader behaviors in various organizational contexts. Two types of behaviors were found to be especially typical of effective leaders: consideration organizational and leadership behaviors that build a good rapport and interpersonal relationships while showing support and care for subordinates and initiating structure organizational and leadership behaviors that provides structure to ensure task completion and goal attainment. Similarly, researchers from the University of Michigan's Survey Research studied the measures of group productivity to assess effective leadership behaviors. The findings revealed similar organizational and leadership behavior identified by the Ohio State studies. They however, termed them as relation-oriented behavior and task-oriented behavior. Historically, contingency theory has pursued broad generalizations about formal organizational and leadership structures that are naturally associated with or best fit use of different strategies and technologies (Woods, 2019). This perspective originated from Joan Woodward (1958), who contended that organizational strategies and technologies determine differences in organizational attributes like the range of control, centralization of authority, and formalization of rules and procedure. According to Morgan (1986) the main ideas underlying contingency are: Organizations consists open systems that require cautious management to satisfy and balance internal needs and to adapt to environmental circumstances; There is not one best way of strategy and organization and appropriate forms depend on the task or internal/external environment; Management must therefore be more concerned with achieving alignments and good fits; and that different organizational specifics are needed in different types of environments.

Contingency theory has been used extensively in research, especially within the strategic area of risk management. Kulchmanov, Hassan & Rashid (2016), explored the theory in risk management practices in Islamic banks in Kazakhstan where the outcomes helped to identify the contingency variables that explain the risk management challenges with respect to Islamic markets. Similarly, Kaplan (2014) studied the contingency theory of enterprise risk management where he sought to put forward a contingency theory of ERM through the identification of potential design

parameters that could explain observable variation in the “ERM mix” adopted by organizations using three detailed case studies. Woods (2019) studied the contingency theory perspective on the risk management control system within Birmingham City Council to extend existing theory for the public sector. The study found that whilst the structure of the control system fits a generic model, the operational details indicated that controls were contingent upon three core variables—central government policies, information and communication technology and organizational size. All three contingent variables were suitable for testing the theory across the broader public sector arena. This study therefore sought to apply the contingency theory as a foundation in evaluating three HR variables of teamwork, employee reward and recognition, employee training programs and their effect on the implementation of ERM in the Rwandan insurance industry. This enabled the researcher to identify the best possible course of action is HR factors contingent (dependent) upon the internal and external ERM implementation factors and situation.

### **2.2.2 Measuring the Extent of ERM Implementation**

The nature of ERM suggests that its implementation affects various levels and characteristics of organizations. This implies that an appropriate methodology to measure its implementation must be comprehensive so as to capture all possible indicators, outputs, and effects from the features of the organization. Similarly, the specialized nature of the insurance industry and its operations, as well as the associated risk requires risk measures that suit the peculiarities of the sector. A study by Adam, Soliman and Mahtab (2021) in the review of the banking sector that has similar peculiarities with the insurance industry, proposed a sector specific multifaceted approach to evaluate ERM measures for the banking sector, taking in to account the various components of ERM and the specific needs of the sector.

To measure the extent of implementation of ERM, Witte (2021) proposes four levels of implementation which are: the ERM does not exist, ad hoc ERM implementation, ERM is implemented but improvements are required, and a robust implementation of ERM. This study used Witte’s 4 levels of ERM implementation.

## 2.3 Empirical Review

This study focusses on three critical HR factors that are important for implementation of ERM within an organization. These are teamwork, employee reward and recognition and employee training programs. The empirical review therefore presents previous studies on these factors.

### 2.3.1 Teamwork and Enterprise Risk Management

Teamwork is considered essential for any effective risk management strategy. This is because managing risks involves every individual in the organization and collaboration between team members assist them in understanding organizational risk, their importance and effects to the organization, and their involvement in developing and implementing a risk management strategy (Williams, 2019). Many studies have shown that effective teamwork plays a key role in organizational risk management.

Acharyya (2006) examined the Enterprise Risk Management (ERM) in four European-based insurance companies, where he explored the understanding, evolution, design, and performance of ERM in the organizations of study in Europe as well as the challenges they face in implementing ERM. The findings showed that among others, risk communication within the team was a key operational challenge and suggested it is improved to overcome conflict for effective implementation of ERM to be achieved. Rahman (2018) studied the influence of effective teamwork in the construction risk management among Kuantan Malaysian construction industries. From the regression analysis performed, the results found that there is a strong positive relationship between effective teamwork and construction risk management implying that effective teamwork among the employees played a major role in curbing future risk.

Though not directly related to risk management, a study to establish a connection between teamwork and organizational innovation was performed by Doris et al. (2014) to investigate how much the management/administrative staff and production staff are organized into teams, and whether this affects organizational innovation. They also looked at whether human resource management (HRM) systems, which can be either enabling or limiting in nature, improve the teamwork/innovation relationships. The results demonstrated that organizational innovation increased as teamwork usage increased throughout organizations. Additionally, the effectiveness

of the HRM systems in place in those organizations also plays a role in this effect, especially for production teams.

Similarly, Horvathova and Mikusova (2012) evaluated the employees' teamwork and its effect on organizational performance in order to evaluate its importance to provide practical implementation for organizational performance. The findings showed that Teamwork had a major impact on both, staff performance and overall organization performance. Similarly, Busara (2016), investigated the relationship between teamwork and performance in the public sector of Government Procurement Services Agency. The findings reveal that for higher levels of performance, companies must implement motivational personnel practices in teamwork activities as a key for building trustful relationships with the organizations. This implies that it is not possible for an organization to gain higher returns without the best use of its human resources.

Shayan, Kim, and Tam (2019) conducted research on the construction industry's essential success factor analysis for efficient risk management during the project execution phase. The study sought to identify the most important success factors for effective risk management because it was argued that in order to successfully manage risks and complete project success, it is essential to do so during the project execution stage, where the majority of risks actually occur. Teamwork was found to be a crucial success factor in this study, and its relative importance is anticipated to give construction professionals a way to prioritize it for risk management at the execution stage. It will also serve as a risk management auxiliary tool to help them make an appropriate plan and decision on risks.

Caldwell (2016) explored teamwork factors and safety performance in a high-risk work environment where he explored the contextual conditions associated with teamwork and leadership thought to be relevant to work group engagement and safety performance. The findings showed that leaders and their teams with lower predicted incidents were more likely to demonstrate resilient behaviors and practices than work teams with higher predicted incidents. Elhusadi et al., (2020) carried out a study in the Eastern Province of Libya on the risks facing Libyan commercial banks in the region and the role of teamwork in managing these risks. The study reveals that there exists a positive and statistically significant relationship between the dimensions of teamwork and effective risk management. Additionally, the study showed that

training, incentives, and participation, sharing of authority, were also important in risk management even though the risk management and human resources factors have been found to differ in their dimensions. This study therefore tested the effect of teamwork on implementation of ERM.

### **2.3.2 Reward and Recognition and Enterprise Risk Management**

By applying the Turnbull approach, Carey (2011), suggested the advantages of reward and recognition on issues of risk management within an organization. The study highlighted the importance of an effective remuneration policy in an organization that includes bonuses payment and share options to employees that would influence the implementation policy behavior of the employees. It is therefore critical for organizational HR managers to pay attention to reward and recognition policies in order to influence the performance of employees and then affect risk management performance. Similarly, Adeyele (2019) highlighted risk management and reward systems from a HR perspective and argued that for a more responsible management of reward systems, it was critical to review five high-risking issues and challenges facing organizations in contemporary times to encourage effective risk management strategy implementation. These are strategic compensation misalignment, overreliance on short-term incentives, skewed compensation mix, overemphasis on a single performance metric, and risk management not being a compensable factor.

Yaraghi & Langhe, (2011) in their study ranked reward and recognition system as critical success factors for risk management systems and identified a significant relationship between reward and recognition systems and performance of risk management systems. This finding was supported by a study conducted by Gibson (2012), who found that there was a significant relationship between appropriate employee compensation and incentives on risk management strategy implementation among South African financial services organizations. Abdullah et al., (2017), in a study on the relationship between reward and recognition found that there was a significant and direct relationship between reward and recognition and organizational performance of Malaysia's electrical and electronic sector which was further supported by Abdullah et al., (2018) in another study that revealed there was a significant and direct relationship between reward and recognition and quality performance improvement among electrical and electronic firms in Malaysia.

The risk perspective on human resource management was examined by Becker & Smidt (2016), who also reviewed possible future study topics. The goal of the study was to pinpoint the risks that ineffective or nonexistent HRM practices pose. The study's article review covered a wide range of topics that together constitute possible risk factors for human resource management, including reward systems. In order to bridge the gap between risk management and human resource management, the study highlighted some potential future directions. Similar to this, Sax & Torp (2015) examined the impact of psychological safety on risk performance, as well as how it interacted with enterprise risk management (ERM) processes to determine whether decentralization would enhance or crowd out the impact of a centralized-ERM process. The results demonstrate that not only do ERM, participative leadership style, and an alluring reward scheme improve risk performance, but that they also have a beneficial interaction effect. The results also indicate that a secure environment comes before a participative leadership style, indicating that this is a requirement for management to implement enticing reward programs and a participative leadership style. These results support the notion that an efficient risk management system should integrate a formalized, comprehensive ERM system with organizational efforts to improve strategic responsiveness through employee motivation and engagement.

While evaluating the relationship between teamwork and organizational performance in the public sector, Busara (2016), recommended that for higher levels of performance, organizations must implement employee motivational personnel practices including rewards and recognition which is a complementary HR practice to teamwork. In following the empirical review on risk and reward as well as Busara's (2016) recommendation, this study tested the effect of employee reward and recognition on implementation of ERM.

### **2.3.3 Training and Enterprise Risk Management**

Employee training programs and in particular technical skills training, soft skills training and managerial and leadership training are seen to be relevant in playing a crucial role in risk management strategies. This assertion has been supported by numerous research and studies conducted worldwide. In Kenya, A study conducted by Mwangi (2012), focused on the level of effective risk management procedures in Kenya's Airport and found that there was a significant and direct effects of employee training and risk management effectiveness. Laisaikorn &

Rompho (2014) concur with Mwangi's findings in their study which also found that there was a significant and direct relationship between employee training programs and financial performance of Thai listed companies. In Russia, Makarova (2014) found that there was a significant positive relationship between employee training and risk management strategy effectiveness in a study conducted on the effectiveness of risk management implementation in Russian companies.

Riley et al. (2016) intended to ascertain whether internal integration, information exchange, and training serve as direct precursors to organizations' warning and recovery capacities and have an impact on their capacity for supply chain risk management. The study used structural equation modelling to create novel warning and recovery metrics using Q-sorts and confirmatory factor analysis. The findings show that internal integration and training have both direct and indirect positive effects on an organization's capacity for risk warning and recovery. Mariscal et al. (2019) used data from the 7th National Survey on Working Conditions in Spain and Bayesian Networks to examine the impact of employee training and information on the risk likelihood of accident rates within the construction industry. The results demonstrate that there were significant dependencies between the risk probability of accident rates and information on risks, training received, contract type, time on the job, the workplace accident variable, and the industry or activity variable.

However, there has also been contrasting evidence on the effect of employee training programs and risk management, where Ranong & Phuenggam (2019) found that there was no significant relationship between training and risk management effectiveness in Thailand financial institution. The study, however, concluded that employee training was considered significant to improving risk management effectiveness. The highlighted studies and research tested the direct effects of employee training as a single independent variable on dependent variables, however, employee training program also have been tested as part of a multiple independent variable both as direct effect and indirect effect on measured dependent variable. A few researchers have categorized programs as part of other HR critical success factors for success of risk management strategies (Agoi, 2013; Banasadegh et al., 2014; Zafar et al., 2011, Busara, 2016). These studies found that there was a direct relationship between selected HR factors and risk management effectiveness.

Based on these findings therefore, this study tested the direct effect of employee training programs on implementation of ERM.

## 2.4 Summary of Literature and Research Gap

Risk management is critical for organizations aiming at achieving competitive advantage amidst turbulent industry and operating environment. The HR in any organization plays a crucial role in the identification, analysis, evaluation, and mitigation of risks. Although HR factors like teamwork, reward and recognition, and employee training programs play a crucial role in risk management, literature is limited to their collective effects on the insurance industry as seen from the empirical review. Similarly, studies on the relationships with ERM have mostly focused on organizational performance, and effectiveness of ERM systems. This presented the research gap in concept and context hence the rationale of this study. Additionally, the relationship between HR factors and risk management strategies in Rwandan Insurance industry had not been studied. This research sought to fill both the contextual and conceptional gap regarding HR factors and risk management in Rwandan insurance industry.

**Table 2.1: Summary of Knowledge Gap**

<b>Authors</b>	<b>Objective</b>	<b>Findings</b>	<b>Research Gap</b>	<b>How the study filled the gap</b>
<b>Teamwork</b>				
Acharyya (2006)	Explore the understanding, evolution, design, and performance of ERM in the organizations in Europe and the challenges which they face in implementing ERM.	Risk communication is identified as the key operational challenge	Conceptual: The study generalized the challenges of implementing ERM with communication being identified as key. There is need to study other HR aspects	This study addressed other HR aspects including Reward and Recognition & employee training programs

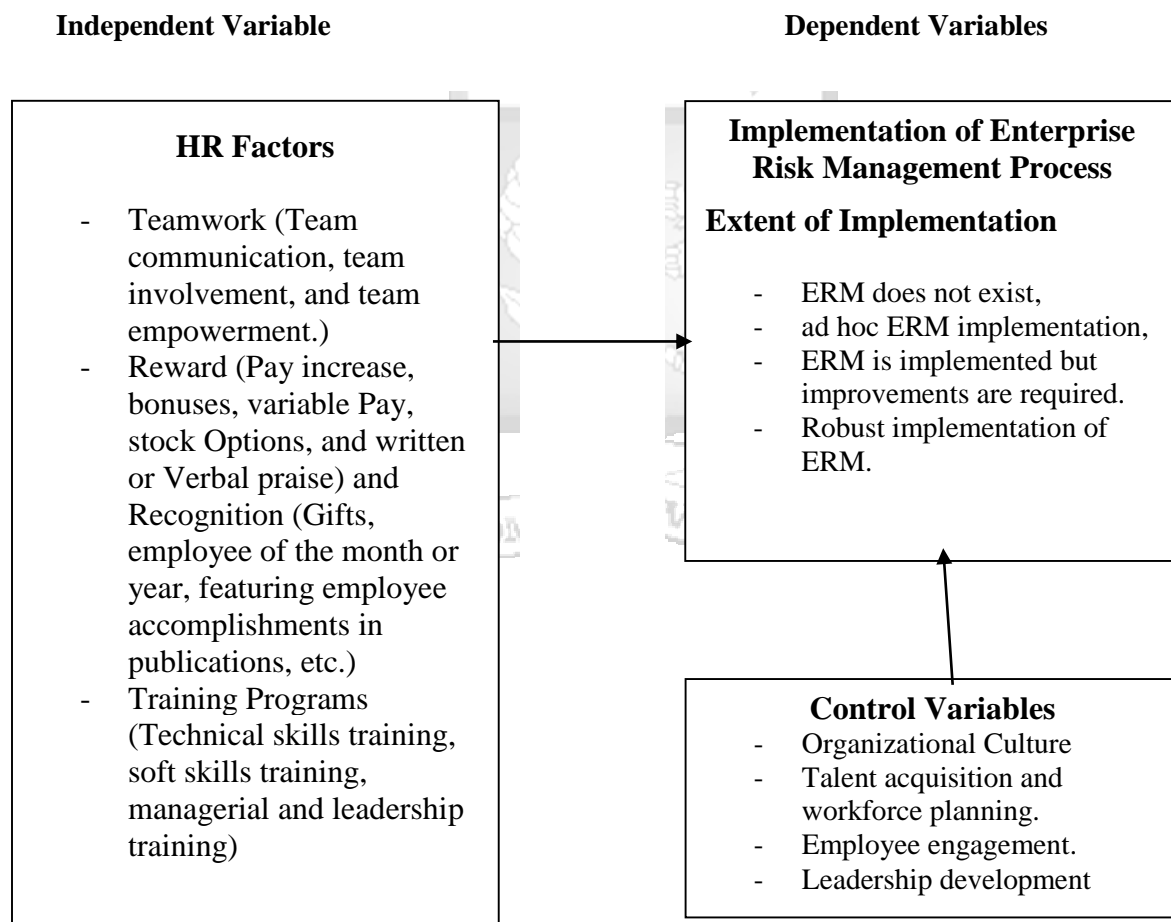
<b>Authors</b>	<b>Objective</b>	<b>Findings</b>	<b>Research Gap</b>	<b>How the study filled the gap</b>
Rahman (2018)	The influence of teamwork in construction risk management among Kuantan Malaysian construction industries	There is a strong positive relationship between teamwork and construction risk management	Contextual/ Conceptual: The study was conducted in Malaysian construction industry. There is need to study other HR aspects	The study addressed other HR aspects and was conducted in the Rwandan Insurance industry
Caldwell (2016)	explored teamwork factors and safety performance in a high-risk work environment	leaders and their teams with lower predicted incidents were more likely to demonstrate resilient behaviors and practices	Conceptual: There is need to study other HR aspects	The study addressed other HR aspects and was conducted in the Rwandan Insurance industry
Elhusadi et al., (2020)	Investigating the risks facing Libyan commercial banks in the region and the role of teamwork in managing these risks	There exists a positive and statistically significant relationship between teamwork and effective risk management	Contextual/ Conceptual: The study was conducted in the banking sector There is need to study other HR aspects	The study addressed other HR aspects and was conducted in the Rwandan Insurance industry
<b>Reward a Recognition</b>				
Carey (2011), Adeyele (2019)	Risk management and reward systems from a HR perspective	Effective remuneration policy would influence the implementation policy behavior	Conceptual: There is need to study other HR aspects	The study addressed other HR aspects and was conducted in the Rwandan Insurance industry
Yaraghi & Langhe, (2011), Gibson (2012), Abdullah et al., (2017) (2018)	Reward and Recognition for Risk Management	Significant relationship between reward and recognition systems and performance of risk	Conceptual: There is need to study other HR aspects	The study addressed other HR aspects and was conducted in the Rwandan Insurance industry

Authors	Objective	Findings	Research Gap	How the study filled the gap
		management systems		
<b>Training Programs</b>				
Mwangi (2012), Laisasikorn & Rompho (2014), Makarova (2014)	Relationship between training programs and performance, risk management	Significant relationship between training programs and performance, risk management	Conceptual: There is need to study other HR aspects	The study addressed other HR aspects and was conducted in the Rwandan Insurance industry
Ranong & Phuenggam (2019)	Relationship between training programs and risk management	No Significant relationship between training programs and risk management	Conceptual: There is need to study other HR aspects	The study addressed other HR aspects and was conducted in the Rwandan Insurance industry
Agoi, 2013; Banasadeh et al., 2014; Zafar et al., 2011, Busara, 2016	HR critical success factors for success of risk management strategies	Direct relationship between selected HR factors and risk management effectiveness	Conceptual: Focussed on effectiveness of ERM	The study addressed implementation of ERM and was conducted in the Rwandan Insurance industry

## 2.5 Conceptual Framework

The conceptual framework is a visual representation of the variables under study and is a depiction of the correlation between the variables of the study in a diagrammatic form to provide and create a conceptual form that can be easily understood. The study sought to test the effect of the HR factors in implementation of ERM. The independent variable, the cause, and whose value is independent of other variables in the study in this study, therefore include HR factors of Teamwork (Team communication, team involvement, and team empowerment.), Reward (Pay increase, bonuses, variable Pay, stock Options, and written or Verbal praise), Recognition (Gifts, employee of the month or year, featuring employee accomplishments in publications, etc) and Training Programs (Technical skills training, soft skills training, managerial and leadership

training). The implementation of ERM was considered the dependent variable of this study because it is the effect and whose value depends on the changes of the independent variable. Extent of implementation of ERM is measured by Witte (2021) four levels of implementation which are: the ERM does not exist, ad hoc ERM implementation, ERM is implemented but improvements are required, and a robust implementation of ERM. The control variables in the conceptual framework are those factors that are held constant or limited in a research study. They are variables that are not of interest to the study's objectives but is controlled because it could influence the outcomes. For the purpose of this study, the control variables are organizational culture, talent acquisition and workforce planning, employee engagement and leadership development. The conceptual framework is shown in Figure 2.2.



**Figure 2.1: Conceptual Framework**

*Source: Researcher (2022)*

## 2.6 Operationalization of the Variables

Operationalization of variables in this study involves turning any abstract concepts into measurable observations. In research, some concepts can be easily measured, while others are not. This study systematically collected data on the independent and dependent variables that were not directly observable, through the operationalization process in Table 2.2.

**Table 2.2 Operationalization of Variables**

Variable	Construct	Measurement Scales	Source (s)
Dependent Variable <b>(Implementation of Enterprise Risk Management)</b>	<ul style="list-style-type: none"> <li>- Extent of Implementation</li> </ul>	<ul style="list-style-type: none"> <li>- ERM does not exist,</li> <li>- ad hoc ERM implementation,</li> <li>- ERM is implemented but improvements are required</li> <li>- Robust implementation of ERM.</li> </ul>	Witte (2021)
Independent Variable <b>(HR Factors)</b>	<ul style="list-style-type: none"> <li>- Teamwork</li> <li>- Reward and Recognition</li> <li>- Training Programs</li> </ul>	<p>Three-point Likert scale</p> <p>1- Agree 2- Neutral 3- Disagree</p> <p>Factor Analysis variable indicators</p> <p>0 – Lowest significance 1 – Highest significance</p>	Agoi, 2013; Banasadegh et al., 2014; Zafar et al., 2011, Busara, 2016

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the research methodology in the following aspects: the research philosophy, research design, the population to be studied, the sampling strategies, the data collection process, the instruments to be used for data gathering, as well as data analysis methods which helped to come up with a meaningful conclusion of the study.

#### **3.2 Research Philosophy**

Research philosophy refers to the way in which data should be gathered, analyzed, and used. Research philosophy is encompassed by epistemology (what is known to be true) and doxology (what is believed to be true). There are two major research philosophies that have been identified and used in the field of social science namely positivist and interpretivist (Kothari and Garg 2016).

Positivists believe that reality is stable and can be observed and described from an objective viewpoint without interfering with the phenomena being studied. This involves a process of manipulation of reality with changes in only a single independent variable to identify symmetries in, and to form relationships between, some of the constituent elements (Cooper & Schindler, 2006). On the other hand, Interpretivists explain that only through the subjective interpretation of and intervention can reality be fully understood. They contend that there may be many interpretations of reality, but these interpretations are in themselves a part of the scientific knowledge they are pursuing (Cooper & Schindler, 2006).

This research used positivism philosophy. Through the positivist approach the study concerned objective viewpoints. This is because the independent variables of HR factors of teamwork, reward and recognition, and training programs are current stable realities in the organizations and can objectively be measured without interfering with other organizational aspects. Similarly, the dependent variable of implementation of ERM can be adequately measured from an objective point using the set parameters. The findings are therefore observable and statistically quantifiable (Wilson, 2014).

### **3.3 Research Design**

Research design refers to a way of gathering information that can be evaluated to answer specific research questions. The design involves identifying the data gathering method(s) and instruments, how the instruments will be administered, and how the information will be organized and analyzed (Kisilu et al. 2006). This study used a correlational research design and a cross sectional survey approach (Orodho et al., 2002).

Without the researcher altering or changing any of the variables, a correlational research methodology was employed to look at the relationships between the implementation of ERM and the chosen HR factors (Marais, 2013). Thought to be causative, the statistical link of interest is impossible, impractical, or unethical for the researcher to alter the independent variable. Since the correlation design frequently has a greater level of external validity, it was also utilized to determine the accuracy and validity of measurements (Marais, 2013). The degree and/or direction of the association between the dependent and independent variables were also reflected using the correlational design. Then, the correlation's direction was classified as either positive or negative (Orodho et al., 2002).

Surveys enable the researcher to obtain data about practices, situations, or views at one point in time through questionnaires or interviews. Quantitative analytical techniques are then used to draw inferences from this data regarding existing relationships. The use of surveys permits a researcher to study more variables at one time whilst data can be collected about real world environments (Marais, 2013). This method was considered appropriate in this study as it enhanced a systematic description that is as accurate, valid, and reliable as possible. Following the positivism philosophy, the survey research design provides reality that is stable and can be observed and described. This design was used to explain the impact of HR factors on implementation of ERM in Rwandan insurance companies.

### **3.4 Population of the Study**

Population refers to the entire group of individuals, events or objects having common observable characteristics (Mugenda and Mugenda 2003). It is the aggregate of all that conforms to a given specification. The target population of this study consisted of all the Rwandan Insurance industry

composed of 14 insurance companies, comprising 2 public medical insurers, 3 life insurance companies and 9 non-life insurance companies, regulated by the Central Bank of Rwanda (BNR, Banque Nationale du Rwanda). The number of employees in the Rwandan insurance industry as respondents in the study total 714 employees as of December 2021 (BNR, Banque Nationale du Rwanda).

### 3.5 Sampling Design

Sampling design refers to the method of determination of sample size and sampling techniques employed in this research (Mugenda and Mugenda 2003). According to Cooper & Schindler (2013), in circumstances where the target sample is less than 50, The whole target population should be targeted as the influence of one extreme case on statistical analysis can affect the findings of the study. The study therefore conducted a census of the 14 insurance companies as the target sample.

The required respondents were employees with the required information to fulfil the objectives of the study. A purposive sampling technique was therefore used to select them using the following criteria:

- Be in the senior management position.
- Be involved in a risk management role or responsibility.
- Have worked in the insurance industry for more than 3 years.

The average number of employees that fulfil this criterion according to Banque Nationale du Rwanda is 4 per insurance company. The respondents from each insurance company therefore constituted four members comprised of senior managers. The targeted respondents consist of managers who were directly involved in the organization's risk management processes and were expected to provide the required data to fulfil the objectives of the study. The respondents were considered to have relevant knowledge of the risk management strategies in their respective insurance companies due to the positions they held. The study therefore focused on a total of 56 respondents as the unit of analysis from the 14 insurance companies.

### 3.6 Data Collection Method

Data collection methods comprise of data collection instruments and procedure for collecting data. Primary data was collected using a structured questionnaire for the Rwandan insurance company employees. The questionnaires were the only primary data collection instrument. Data collection instruments are devices that are used to collect data in an objective and systematic manner for the purpose of research. A questionnaire is a research instrument that gathers data over a large sample (Kombo & Tromp, 2006). The structured questions are easier to analyze and easier to administer because each item is followed by alternative answers. They are also economical to use in terms of money and time. The questionnaires were helpful in obtaining quantitative data from the respondents. Questions covered the aspects of HR factors and the core components of implementation of ERM. The questionnaire consisted of six parts namely, demographic data, teamwork, Reward and recognition, training programs, and Enterprise risk management.

The data collection process began with a pilot study that ascertained the validity of the data collection instrument. Data on the pilot study was then analyzed for content validity to check for appropriateness. Expert judgement was also sought to ascertain if the document presented the concepts of the study. Upon the validation of the research instrument, data collection was rolled out. The actual data collection was carried out by administering the questionnaires to employees at the Rwandan insurance companies. Data was then processed and analyzed. Data processing refers to editing, coding, classification, and tabulation of collected data (Kothari, 2004).

### 3.7 Data Analysis

According to Schindler (2014), data analysis involves reducing accumulated data to manageable size, developing summaries, determining patterns, and applying statistical analysis techniques. Data analysis in this study began by the collection of the distributed questionnaires from respondents. After data was collected, the questionnaires were carefully screened for errors, where the incomplete and missing items were organized. The questionnaires were then coded. Data analysis was done using descriptive statistics and multiple regression analysis through the Statistical Package for Social Sciences (SPSS). Descriptive was in terms of frequency, mean, and standard deviation. According to Saunders *et al.* (2007), every statistic used to describe a set of

data usually summarizes the information in the data by disclosing the average indicators of the variables used in the study. The output from descriptive statistics was summarized using simple tabulation and the data presented using tables, graphs, and charts.

Once descriptive statistics were completed, inferential statistics were then used to test the relationship and determine the effect of independent variables on the dependent variable. The total variance derived from the descriptive statistics consists of both common and unique variances. These variables variances will be partitioned, and the study then performed a factor extraction using the principal component analysis (PCA). The PCA is used to reduce the dimensionality of large data sets to smaller ones by assuming that there are no unique variances, and the total variance is equal to the common variance. PCA was used in this study to help reduce the number of variables while preserving as much information as possible.

Next, the study applied correlation analysis and regression analysis that was used to establish the relationships between the HR factors and the implementation of ERM. Correlation analysis was used to quantify the strength of the linear relationship between the two variables under study and their association. Correlation analysis signifies the level of change in the dependent variable due to the change in the independent variable. Finally, ordinal regression analysis was used to ascertain the effect of HR factors on implementation of ERM. Regression analysis is a set of statistical processes for estimating the relationships among variables. It enables the researcher to develop a model to predict the values of Continuous variables based on other value of other variables. The study applied the following regression analysis formula:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where;

**Y** = Dependent variable (Implementation of ERM)

**$\alpha$**  = model intercept

**$\beta_{1-3}$**  = Coefficient of independent variables

**$X_1$**  – Teamwork

**$X_2$**  – Reward and Recognition

**$X_3$**  – Training programs

**$\varepsilon$**  = Error Term

This research was conducted primarily for academic purposes and therefore the dissemination and utilization of the findings were based on strict academic and ethical processes and procedures.

The findings will first be made available to both internal and external examiners for examination purposes in fulfilment of the academic requirements. Secondly, the findings will be made available to participants of the study who include the management of the insurance companies in Rwanda on request. For future dissemination, the researcher may consider publishing an abridged version of the study in relevant journals to contribute to the theoretical and empirical review of the variables studied.

### **3.8 Research Quality**

Research quality comprises of validity and reliability of the data collection instrument.

#### **3.8.1 Reliability**

An instrument is considered reliable when it can elicit the same responses each time it is administered. Reliability is concerned with precision and accuracy. For research to be reliable it demonstrates that if it were to be carried out on a similar group of respondents in a similar context (however defined), then similar results would be found. Poor reliability degrades the precision of a single measurement and reduces ability to track (Mislevy, 2004). A pilot study was carried out on 5 senior managers that were not included in the final sample to ascertain the reliability of the research instruments. A final survey questionnaire was then prepared based on the response of the pilot study, and the results correlated in order to test for stability over time.

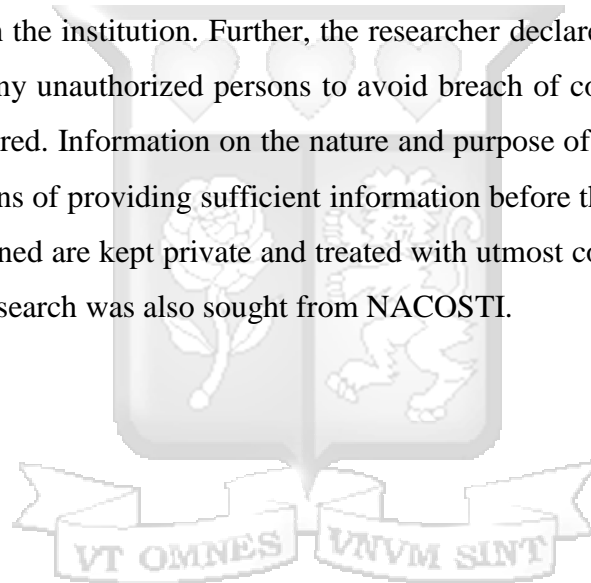
#### **3.8.2 Validity**

The validity of an instrument is the success of the scale in measuring what it sets out to measure so that the differences in individual scores can be taken as representing true differences in the characteristic under study (Kothari 2004). The instrument validity was measured by content validity test to check for appropriateness (Kothari, 2004). Also, expert advice was sought to determine whether the set of items in the questionnaire represented the concept under study. According to Donald *et al.* (2011), content validity of an instrument is improved through expert judgment. Therefore, to validate the research instruments, the researcher conducted a pilot study to assist in ascertaining the degree to which data obtained from the questionnaire will represent the theoretical concept under study. The researcher then sought the opinion of the supervisors

after the pilot to make any necessary adjustments for improvement. Further, the construct, content and face validity were tested by analyzing the data collection instrument to check on appropriateness, usefulness, and meaningfulness of the specific inferences the researcher makes based on data collected at pilot to ensure that the data obtained thereafter represented the phenomena under study.

### **3.9 Ethical Consideration**

Research ethics refers to the appropriate code of conduct regarding the respondents' rights. The researcher sought permission from the Rwandan insurance companies in preparation for data collection which was facilitated through a letter from Strathmore Business School introducing the researcher as a student in the institution. Further, the researcher declared that the data collected will not be revealed to any unauthorized persons to avoid breach of confidence. Anonymity of the respondents was assured. Information on the nature and purpose of the study was availed to the respondents as a means of providing sufficient information before they decide to participate. All the information obtained are kept private and treated with utmost confidentiality it deserves. Permits to conduct the research was also sought from NACOSTI.



## CHAPTER FOUR

### DATA ANALYSIS AND INTERPRETATION

#### 4.0 Introduction

The data analysis, presentation, and result interpretation are outlined in this chapter. This study's goal is to assess how human resource factors affect how enterprise risk management is implemented in Rwandan insurance companies. Questionnaires were used to gather the current data, which was then analyzed to provide a solution to the problem statement's query. This chapter begins by outlining the demographics and response rate of the participants being studied before moving on to assess each research goal.

#### 4.1 Response rate

35 of the 56 respondents who were targeted for the study were able to provide opinions, as indicated in Table 4.1. This resulted in a 62.5% study response rate. Based on the criteria put forward by Kothari and Garg (2016), who state that a response of above 50% is sufficient for statistical analysis, this was declared appropriate for study.

**Table 4.1: Response Rate**

	Frequency	Percentage
Questionnaires Distributed	56	100.00
Questionnaires Returned	35	62.50

*Source: Researcher (2022)*

#### 4.2 Demographic information of the respondents

According to Table 4.2, of the total respondents to the study, 20 (57.14%) were men, and the remaining 15 (42.86%) were women. This indicates that there are more men than women in senior leadership positions within the Rwandan insurance sector. This can be significant to risk management perception as noted by Brown, largey & McMullan (2021; and Haris & Jenkins (2023) that men engage in more risky behaviours than women do. In terms of age, the largest age bracket of the managers was between 45-55years (45.71%), followed by 35-45 years (37.14%), then 25–35 years (11.43%) and finally above 55 years accounting for 5.71% of the respondents.

This means that Majority of the managers in the Rwandan Insurance companies were above the age of 35. With regards to age, empirical results by Sunde et, al., (2018) indicate that willingness to take risks declines with age while those to manage risk increases with age, The patterns are linear until approximately age 65.

With regard to the education level, majority of the respondents had attained an undergraduate degree at 23 (65.71%), 11 (31.43% with a Masters degree only 1 respondent (2.86%) attaining a PhD degree. More than half of the managers 19 (54.29%) has worked in their respective Insurance company for between 6-9 years, 10 (28.57%) for between 9-12 years and 6 (17.14%) for between 3-6 years.

**Table 4.2: Gender and Age of Respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	20	57.14
Female	15	42.86
Total	35	100.00
<b>Age range</b>	<b>Frequency</b>	<b>Percentage</b>
25 - 35	4	11.43
35 - 45	13	37.14
45 - 55	16	45.71
> 55	2	5.71
Total	35	100.00
<b>Education level</b>	<b>Frequency</b>	<b>Percentage</b>
Diploma	0	0.00
Undergraduate	23	65.71
Masters	11	31.43
PhD	1	2.86
Other	0	0.00
Total	35	100.00
<b>Years worked at Company</b>	<b>Frequency</b>	<b>Percentage</b>
0 - 3	0	0.00
3 - 6 years	6	17.14
6 - 9 years	19	54.29
9 - 12 years	10	28.57
Total	35	100.00

*Source: Researcher (2022)*

### 4.3 Descriptive Statistics

#### 4.3.1 ERM Implementation

##### 4.3.1.1 Extent of Implementation of ERM in the Rwandan Insurance Companies

First, the study sought to evaluate the extent of implementation of enterprise risk management in the Rwandan insurance sector and its effect in implementation of key organizational and industry variables. As presented in Table 4.3, a majority of the Rwandan insurance companies (42.86%) had the ERM implemented but required improvements to it. A further 34.29% has an Ad hoc ERM implementation, 14.29% had a robust implementation of the ERM and only 8.57% had not yet implemented the ERM. The average extent of implementation of the ERM in the Rwandan insurance sector was 2.63 (ERM is implemented but improvements are required) with a standard deviation of 0.84.

**Table 4.3: Extent of ERM Implementation**

Extent	Frequency	Percentage	Mean	SD
ERM does not exist	3	8.57	2.6286	0.8432
Ad hoc ERM implementation	12	34.29		
ERM is implemented but improvements are required	15	42.86		
Robust implementation of ERM	5	14.29		
Total	35	100.00		

*Source: Researcher (2022)*

#### 4.3.2 HR factors in Rwandan Insurance Industry

The descriptive analysis presented in this section is based on the following study objectives: To assess the effect of teamwork on the implementation of enterprise risk management in Rwandan insurance industry, to evaluate the effect of employee reward and recognition on the implementation of enterprise risk management in Rwandan insurance industry, to explore the effect of employee training programs on the implementation of enterprise risk management in Rwandan insurance industry and to assess the implementation levels of ERM in Rwandan insurance industry.

#### 4.3.2.1 Teamwork in Rwandan Insurance Industry

The second objective of the study was to evaluate the impact of teamwork on the implementation of enterprise risk management in the Rwandan insurance sector. This section evaluates teamwork in the Rwandan insurance industry and was evaluated using a Likert scale of 1 to 3, where 1 Agree (A), 2 Neutral (N), 3 Disagree (D). The standard deviations (std) and mean are shown in Table 4.4.

**Table 4.4: Descriptive Statistics on Teamwork**

Statement	A	N	D	Mean	Sd
Specific risks, their effect and risk management strategies have been highlighted and communicated to team members	22 (62.9%)	10 (28.6%)	3 (8.6%)	1.46	0.6572
Team members know are aware of their specific and collective role in managing the risks affecting the Company	24 (68.6%)	11 (31.4%)	0	1.31	0.471
Teams have been made aware of the risk management strategies to deal with Company risk	26 (74.3%)	9 (25.7%)	0	1.26	0.4434
There is involvement of employees in identifying the risks affecting the Company and allowed to give their input in the risk management decisions.	20 (57.2%)	12 (34.3%)	3 (8.6%)	1.51	0.6585
Team members are given the authority and appropriate skills to participate in substantive risk decisions affecting their roles	20 (57.2%)	12 (34.3%)	3 (8.6%)	1.51	0.6585
The Leadership has assigned risk champions who have been given responsibility and authority to identify risks affecting their roles and teams in each department to lead risk management strategies	28 (80%)	7 (20%)	0	1.2	0.4058
Teams are self-managed and are allowed to create their own rules about risk and its management in risk management decision making	16 (45.7%)	15 (42.9%)	4 (11.4%)	1.66	0.6835

Source: Researcher (2022)

From the findings in the table, 62.9% agree, 28.6% were neutral and 8.6% disagreed that specific risks, their effect, and risk management strategies had been highlighted and communicated to team members in their respective insurance companies. The mean was 1.46 (Agreed) with a standard deviation of 0.6572. With regard to whether team members are aware of their specific and collective role in managing the risks affecting the Company, 68.6% agreed, and 31.4% were neutral. The mean was 1.31 (Agreed) with a standard deviation of 0.471.

When the respondents were asked whether teams have been made aware of the risk management strategies to deal with Company risk, 74.3% agreed, and 25.7% were neutral with a mean of 1.26 (agreed) and a standard deviation of 0.4434. As to whether there is involvement of employees in identifying the risks affecting the Company and are allowed to give their input in the risk management decisions, 57.2% agreed, 34.3% were neutral and 8.6% disagreed with a mean of 1.51 (agreed) and a standard deviation of 0.6585.

With regard to whether team members are given the authority and appropriate skills to participate in substantive risk decisions affecting their roles, 57.2% agreed, 34.3% were neutral and 8.6% disagreed with a mean of 1.51 (agreed) and a standard deviation of 0.6585. Further, when asked if the insurance leadership has assigned risk champions who have been given responsibility and authority to identify risks affecting their roles and team members in each department to lead risk management strategies, 80% agreed, and 20% were neutral with an average response of 1.2 (agreed) and a standard deviation of 0.4058. Finally, the respondents were asked whether teams are self-managed and are allowed to create their own rules about risk and its management in risk management decision making. In their response, 45.7% agreed, 42.9% were neutral, and 11.4% disagreed. The mean response was 1.66 (Agreed) with a standard deviation of 0.6835.

#### **4.3.2.2 Reward and Recognition in Rwandan Insurance Industry**

The study's third objective was to evaluate the impact of employee reward and recognition on the implementation of enterprise risk management in the Rwandan insurance sector. This section evaluates reward and recognition in the Rwandan insurance industry and was evaluated using a Likert scale of 1 to 3, where 1 Agree (A), 2 Neutral (N), 3 Disagree (D). The standard deviations (std) and mean are shown in Table 4.5.

**Table 4.5: Descriptive Statistics on Reward and Recognition**

Statement	A	N	D	Mean	Sd
There exists a formal system in organizational where there is appropriate acknowledgement and appreciation of employees' efforts in their risk management efforts.	18 (51.4%)	15 (42.9%)	2 (5.6%)	1.54	0.6108
Employees are provided with incentives to participate in risk identification and management processes.	18 (51.4%)	10 (28.6%)	7 (19.9%)	1.69	0.796
The management encourages employees to do more in risk management and create an environment for development and career growth as a reward for their work performance.	16 (45.7%)	15 (42.9%)	4 (11.4%)	1.66	0.6835
High performing employees in risk management roles receive rewards and recognition for their high performance	20 (57.1%)	13 (37.1%)	2 (5.6%)	1.49	0.6122
The management provides suitable and consistent financial compensation, as well as employee or team celebrations, recognition of risk management milestones reached, leadership initiatives and collaboration efforts.	23 (65.7%)	9 (25.7%)	3 (8.6%)	1.43	0.6547

Source: Researcher (2022)

The respondents were first asked whether there exists a formal system in the organizational where there is appropriate acknowledgement and appreciation of employees' efforts in their risk management efforts. In their response, 51.4% agreed, 42.9% were neutral, and 5.6% disagreed with a mean response of 1.54 (agreed) and a standard deviation of 0.6108. In the same area, where employees are provided with incentives to participate in risk identification and management processes, 51.4% agreed, 28.6% were neutral, and 19.9% disagreed. The average response was 1.69 (agreed) with a standard deviation of 0.796.

With regard to whether the management encourages employees to do more in risk management and create an environment for development and career growth as a reward for their work

performance, 45.7% agreed, 42.9% were neutral, and 11.4% disagreed. The mean response was 1.66 (agreed) with a standard deviation of 0.6835. The respondents were also asked if high performing employees in risk management roles receive rewards and recognition for their high performance. In their response, 57.1% agreed, 37.1% were neutral and 5.6% disagreed, with an average response of 1.49 (agreed) and a standard deviation of 0.6122. Finally, with regard to if the management provides suitable and consistent financial compensation, as well as employee or team celebrations, recognition of risk management milestones reached, leadership initiatives and collaboration efforts, 65.7% agreed, 25.7% were neutral and 8.6% disagreed, with an average response of 1.43 (agreed) and standard deviation of 0.6547.

#### 4.3.2.3 Training in Rwandan Insurance Industry

The study's fourth objective was to evaluate the impact of employee training on the adoption of enterprise risk management in the Rwandan insurance sector. This was evaluated using a Likert scale of 1 to 3, where 1 Agree (A), 2 Neutral (N), 3 Disagree (D). The standard deviations (std) and mean are shown in Table 4.6.

**Table 4.6: Descriptive Statistics on Training**

Statement	A	N	D	Mean	Sd
The company provides training programs and sustained efforts to boost the general performance of employees.	25 (71.5%)	8 (22.9%)	2 (5.6%)	1.34	0.5913
The company uses training programs to create a highly skilled risk management workforce.	24 (68.6%)	10 (28.6%)	1 (2.9%)	1.34	0.5392
The company provides soft skills training to employees that allow them to communicate, collaborate and manage risk effectively	24 (68.6%)	7 (20%)	4 (11.4%)	1.43	0.6981
The company provides managerial and leadership training to prepare employees with/for a leadership role.	25 (71.5%)	10 (28.6%)		1.29	0.4583

Statement	A	N	D	Mean	Sd
The training programs in the company have helped address employee weaknesses, expand their knowledge base, improve employee performance, boost the company reputation and profile, and increase innovation.	20 (57.1%)	12 (34.3%)	3 (8.6%)	1.51	0.6585

*Source: Researcher (2022)*

Regarding employee trainings, this study found that 71.5% of the respondents agreed that the company provides training programs and sustained efforts to boost the general performance of employees, while 22.9% were neutral and 5.6% disagreed. The average response was 1.34 (agreed) with a standard deviation of 0.5913. The study also found that 68.6% agreed that the company uses training programs to create a highly skilled risk management workforce, while 28.6% were neutral and 2.9% disagreed, with an average response of 1.34 (agreed) and a standard deviation of 0.5392.

When asked whether the company provides soft skills training to employees that allow them to communicate, collaborate and manage risk effectively, 68.6% agreed, 20% were neutral and 11.4% disagreed. The average response was 1.43 (agreed) with a standard deviation of 0.6981. On the other hand, when asked whether the company provides managerial and leadership training to prepare employees with/for a leadership role, 71.5% agreed, and 28.6% were neutral, with an average of 1.29 (agreed) and a standard deviation of 0.4583.

Finally, the findings revealed that 57.1% of the respondents agreed that the training programs in the company have helped address employee weaknesses, expand their knowledge base, improve employee performance, boost the company reputation and profile, and increase innovation. A further 34.3% were neutral and 8.6% disagreed. The average response was 1.51 (agreed) with a standard deviation of 0.6585.

## 4.4 Inferential Statistics

### 4.4.1 Factor Analysis, Correlation and Ordinal Regression between HR factors and extent of ERM Implementation

#### 4.4.1.1 Factor Analysis

In this work, a large number of uncorrelated variables were condensed into a smaller number of latent variables without losing a significant amount of information using factors analysis, notably the exploratory factor analysis. In this application, the underlying structures for the HR factor items shown in Table 4.7 were evaluated using Varimax Rotation with Kaiser Normalization.

**Table 4.7: Factor Loading after Varimax rotation.**

Items	1	2	3
Specific risks, their effect and risk management strategies have been highlighted and communicated to team members	.721		
Team members know are aware of their specific and collective role in managing the risks affecting the Company	.774		
Teams have been made aware of the risk management strategies to deal with Company risk	.967		
Team members are given the authority and appropriate skills to participate in substantive risk decisions affecting their roles	.602		
The Leadership has assigned risk champions who have been given responsibility and authority to identify risks affecting their roles and teams in each department to lead risk management strategies	.969		
There exists a formal system in organizational where there is appropriate acknowledgement and appreciation of employees' efforts in their risk management efforts.		.581	
High performing employees in risk management roles receive rewards and recognition for their high performance		.571	
The management provides suitable and consistent financial compensation, as well as employee or team celebrations, recognition of risk management milestones reached, leadership initiatives and collaboration efforts.		.671	
The company provides training programs and sustained efforts to boost the general performance of employees.			.939
The company uses training programs to create a highly skilled risk management workforce.			.893

Items	1	2	3
The company provides soft skills training to employees that allow them to communicate, collaborate and manage risk effectively			.617
The company provides managerial and leadership training to prepare employees with/for a leadership role.			.941

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

Source: *Researcher (2022)*

The findings show that the highest loading items in factor 1 (Teamwork) are listed in five items. Item 5 “The Leadership has assigned risk champions who have been given responsibility and authority to identify risks affecting their roles and teams in each department to lead risk management strategies” is highest loading with a loading of 0.969. However, item 4 “Team members are given the authority and appropriate skills to participate in substantive risk decisions affecting their roles” has the lowest (0.602) loading compared to all other items in Factor 1. Three items have the highest loading in Factor 2 (Reward and Recognition). The highest loading item in Factor 2 is Item 8 “The management provides suitable and consistent financial compensation, as well as employee or team celebrations, recognition of risk management milestones reached, leadership initiatives and collaboration efforts.”, which have a loading of 0.671, while item 7 “High performing employees in risk management roles receive rewards and recognition for their high performance” with a loading of 0.571. Next, the four items, which have the highest loading from Factor 3 (Training), are listed with the highest in item 9 “The company provides training programs and sustained efforts to boost the general performance of employees.” with loading 0.939 and lowest item, item 11 “The company provides soft skills training to employees that allow them to communicate, collaborate and manage risk effectively” with a loading of 0.617.

#### 4.4.1.2 Spearman’s Rank-Order Correlation

The study sought to test the non-parametric measure of the strength and direction of association that existed between the dependent and independent variables measured on an ordinal scale. The spearman’s correlation was conducted and presented in Table 4.8.

**Table 4.8: Spearman's Rho**

			Teamwork	ERM Implementation
Spearman's rho	Teamwork	Correlation Coefficient Sig. (2-tailed) N	1.000 . 35	0.889 0.001 35
	ERM Implementation	Correlation Coefficient Sig. (2-tailed) N	0.889 0.001 35	1.000 . 35
			Reward and Recognition	ERM Implementation
Spearman's rho	Reward and Recognition	Correlation Coefficient Sig. (2-tailed) N	1.000 . 35	0.667 0.035 35
	ERM Implementation	Correlation Coefficient Sig. (2-tailed) N	0.667 0.035 35	1.000 . 35
			Training	ERM Implementation
Spearman's rho	Training	Correlation Coefficient Sig. (2-tailed) N	1.000 . 35	0.756 0.037 35
	ERM Implementation	Correlation Coefficient Sig. (2-tailed) N	0.756 0.037 35	1.000 . 35

\*Correlation is significant at the 0.05 level (2-tailed).

Source: Researcher (2022)

The spearman's rank-order correlation was run to determine the relationship between the three HR factors of teamwork, reward and recognition and the extent of implementation of ERM in the Rwandan insurance Industry. The findings show that there was a strong, positive correlation between teamwork and implementation of ERM in the Rwandan insurance Industry, which was statistically significant ( $r_s = 0.889, P = 0.001$ ). With regard to the second HR factor, there was a strong, positive correlation between reward and recognition and implementation of ERM in the Rwandan insurance Industry, which was statistically significant ( $r_s = 0.667, P = 0.035$ ). Finally, there

was a strong, positive correlation between training and implementation of ERM in the Rwandan insurance Industry, which was statistically significant ( $r_s = 0.756, P = 0.037$ ).

#### 4.4.1.3 Ordinal Regression

To confirm the goodness of fit for the model, the goodness-of-fit tests was used. The researcher applied the Pearson and Deviance Chi-square tests presented in Table 4.9. The chi-square test of independence was used to allow the researcher draw conclusions about the Rwandan insurance companies based on the sample used. Specifically, it allowed the researcher to conclude whether the two variables or HR factors and implementation of ERM are related in the population.

**Table 4.9: Pearson and Deviance Chi-square tests of Independence**

Factor	Pearsons $\chi^2$ Value	df	P Value
<b>Teamwork * ERM Implementation</b>	127.457	36	0.000
<b>Reward and Recognition * ERM Implementation</b>	28.415	4	0.000
<b>Training * ERM Implementation</b>	103.126	8	0.000

*Source: Researcher (2022)*

The findings show that the implementation of ERM in the Rwandan Insurance sector was related to all the three HR factor of teamwork, reward and recognition, and training tested obtained at 5% significance levels.

The proportionate odds assumptions made by the data were put to the test using the parallel lines test shown in Table 4.10. This was done to make sure the model didn't go against the proportional odds assumption.

**Table 4.10: Test of Paralleled lines**

Factor	Model	-2 Log Likelihood	Chi-Square	df	sig
<b>Teamwork * ERM Implementation</b>	Null Hypothesis	189.152			
	General	184.154	6.402	3	0.006
<b>Reward and Recognition * ERM Implementation</b>	Null Hypothesis	61.540			
	General	58.454	3.096	4	0.146
<b>Training * ERM Implementation</b>	Null Hypothesis	65.198			
	General	62.188	1.985	3	0.265

*Link Function: Logit*

*Source: Researcher (2022)*

From this analysis, the variables did not go against the proportional odds assumption since they were not statistically significant (all were above 0.05) and therefore allowed the interpretation of the parameter estimates.

Further, the measures of determination as established using the Nagelkerke Pseudo-R Square are presented in Table 4.11. The coefficient of determination presented as number between 0 and 1 measures how well a statistical model predicts an outcome. An outcome of 0 means that the model does not predict the outcome, 0-1 partially predicts the outcome and 1 perfectly predicts the outcome.

**Table 4.11: Measures of Determination**

Model	Nagelkerke R <sup>2</sup>	Cox and Snell R <sup>2</sup>	McFadden R <sup>2</sup>
<b>Teamwork * ERM Implementation</b>	0.130	0.118	0.053
<b>Reward and Recognition * ERM Implementation</b>	0.049	0.048	0.017
<b>Training * ERM Implementation</b>	0.094	0.086	0.038

*Link Function: Logit*

*Source: Researcher (2022)*

The findings show that all the Hr factors partially predict the outcome of implementation of ERM with 13% of implementation of ERM determined by teamwork, 4.9% by reward and recognition and 9.4% by training.

Finally, the parameter estimates are presented in table 4.12 to explain the relationship between the independent variables (HR factors) and the outcome (extent of implementation of ERM in Rwandan insurance companies). It is important to note that the threshold coefficients are not normally interpreted individually but represent the intercepts in terms of logit where the subject (Rwandan insurance companies) might be predicted into the higher extent of ERM implementation. However, the threshold parameters can be used to explain how the model works.

**Table 4.12: Ordinal Regression using Parameter Estimates**

		Estimate	Std. Error	Wald	df	sig	95% CI Lower	Upper
<b>Threshold</b>	<b>Not Implemented</b>	-2.542	0.142	221.890	1	0.000	-2.608	-2.477
	<b>Ad hoc Implementation</b>	-1.376	0.078	61.063	1	0.000	-1.427	-1.325
	<b>Improvement required</b>	0.354	0.090	33.700	1	0.000	0.309	0.399
	<b>Robust Implementation</b>	1.988	0.134	92.380	1	0.000	1.926	2.050
<b>Location</b>	<b>Teamwork</b>	0.463	0.235	3.887	1	0.000	0.003	0.922
	<b>Reward and Recognition</b>	0.035	0.115	0.091	1	0.004	0.260	0.190
	<b>Training</b>	0.201	0.039	26.158	1	0.000	0.124	0.278

*Link Function: Logit*

*Source: Researcher (2022)*

These findings show that the individual HR factors of teamwork, reward and recognition and training were a significant positive predictor of the extent of ERM implementation in Rwandan Insurance companies. Specifically, for every unit increase in teamwork, there was a predicted increase of 0.463 in the log odds of ERM implementation. Further, for every unit increase in reward and recognition, there was a predicted increase of 0.035 in the log odds of ERM implementation. Finally for every unit increase in training, there was a predicted increase of 0.201 in the log odds of ERM implementation.

#### 4.4.2 Pearson's Correlation and Linear Regression for the strength of Implementation of ERM

The study also sought to determine the relationship between the HR factors and strength of implementation of ERM. Correlation and regression analysis was conducted and presented in Table 4.13.

**Table 4.13: Relationship between HR factors and Implementation of ERM**

							Y
X1 – Teamwork and adoption of ERM		Pearson Correlation (R)					.844**
		Sign. (2-tailed)					.001
		N					35
Model	R Square	Adjusted square	R	Std, Error of Estimate	Sig. Change	F	
Teamwork and adoption of ERM	.455	.376		.6547	.000		
							Y
X2 – Reward and Recognition and adoption of ERM		Pearson Correlation					.553**
		Sign. (2-tailed)					.003
		N					35
Model	R Square	Adjusted square	R	Std, Error of Estimate	Sig. Change	F	
Reward and Recognition and adoption of ERM	.352	.322		.5177	.000		
							Y
X3 – Training and adoption of ERM		Pearson Correlation					.663**
		Sign. (2-tailed)					.002
		N					35
Model	R Square	Adjusted square	R	Std, Error of Estimate	Sig. Change	F	
Training and adoption of ERM	.309	.302		.5077	.000		

Source: Researcher (2022)

The results showed a strong association ( $r=0.844$ ,  $p$  value = 0.001) between teamwork and the strength of implementation of ERM. As a result, improved teamwork result in higher strength of implementation of ERM. According to the regression model, teamwork accounts for R square of 0.455, or 45.5 percent of the overall variation (independent variable). Teamwork (independent variables) here accounts for 45.5% of the variation in the implementation of ERM (the dependent variable). If population data were to be used, the value of adjusted R square =0.376 represents the overall variation in ERM implementation (dependent variable) as explained by teamwork (independent variable). Additionally, given that  $p$ -value (sig) = 0.0000<0.05, the study's findings show that the regression model considerably well predicts the implementation of ERM. (5% significance level). This indicates that the regression model is a good fit for the data, that is, it significantly predicts the outcome of teamwork on Implementation of ERM.

With regards to recognition and reward, the results showed a strong association ( $r=0.553$ ,  $p$  value = 0.003) between employee reward and recognition and the strength of implementation of ERM. As a result, more reward and recognition of employees will result in higher implementation of ERM. According to the regression model, reward and recognition accounts for R square of 0.352, or 35.2% of the overall variation (independent variable). Employee reward and recognition (independent variables) here accounts for 35.2% of the variation in the implementation of ERM (the dependent variable). If population data were to be used, the value of adjusted R square =0.322 represents the overall variation in ERM implementation (dependent variable) as explained by employee reward and recognition (independent variable). Additionally, given that  $p$ -value (sig) = 0.0000<0.05, the study's findings show that the regression model considerably well predicts the implementation of ERM. (5% significance level). This indicates that the regression model is a good fit for the data, that is, it significantly predicts the outcome of employees' reward and recognition on Implementation of ERM.

On training, the results showed a strong association ( $r=0.663$ ,  $p$  value = 0.002) between training and the implementation of ERM. As a result, increased trainings of employees will result in higher implementation of ERM. According to the regression model, training accounts for R square of 0.309, or 30.9% of the overall variation (independent variable). Training (independent variables) here accounts for 30.9% of the variation in the implementation of ERM (the dependent variable). If population data were to be used, the value of adjusted R square =0.302 represents the overall variation in ERM implementation (dependent variable) as explained by training (independent variable).

Additionally, given that p-value (sig) = 0.0000<0.05, the study's findings show that the regression model considerably well predicts the implementation of ERM. (5% significance level). This indicates that the regression model is a good fit for the data, that is, it significantly predicts the outcome of training on Implementation of ERM.

The correlation and regression analysis sought to determine the relationship between human resource factors of teamwork, reward and recognition and training and the implementation of ERM. The overall results are shown in table 4.14.

**Table 4.14: Model summary showing the relationship between teamwork (X1), reward and recognition (X2), training (X3) and implementation of ERM (Y)**

Variable	Correlation Coefficient (R)	P-Value
Teamwork	0.844	<0.05
Reward and recognition	0.553	<0.05
Training	0.663	<0.05

*Source: Researcher (2022)*

The study findings show that there is a high positive association between teamwork and strength of implementation of ERM (r=0.844, p-value <0.05), reward and recognition and implementation of ERM (r=0.553, p-value = <0.05), training and implementation of ERM (r=0.663, p-value = <0.05). In determination of the relationship between these human resource factors and implementation of ERM in the Rwandan insurance industry, multiple regression model was used where X1, X2 and X3 represents the independent variables and Y as the dependent variable.

The value of R square = 0.8894 indicates how much of the implementation of ERM (dependent variable) are explained by HR factors level X1, X2, X3 (independent variables). This is a high variation in implementation of ERM. On the other hand, Adjusted R square =0.8862 represent the total variation implementation of ERM (dependent variable) as explained by HR factors (independent variables) if population data were used.

The study findings indicates that the regression model predicts the relationships of the variables significantly well given that p-value = <0.05 (95% significance level). Thus, the model can be precisely written as follows:

$$\text{Implementation of ERM} = 3.1905 + 0.455 X1 + 0.352 X2 + 0.309 X3$$

## CHAPTER FIVE

### DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.0 Introduction

The findings summary and a discussion of the individual objective findings are presented at the beginning of chapter five. The chapter concludes with recommendations and potential directions for future research that are derived from the findings and provides the results in more detail.

#### 5.1 Summary of Study

The goal of this study was to determine how HR issues affected the adoption of ERM in the Rwandan insurance sector. Based on this overarching goal, the specific goals were to: evaluate the impact of teamwork on the implementation of enterprise risk management in the Rwandan insurance industry; examine the impact of employee reward and recognition on the implementation of enterprise risk management in the Rwandan insurance industry; and determine the effectiveness of employee training programs on the implementation of enterprise risk management in Rwandan insurance industry; and to determine the ERM implementation level in Rwandan insurance industry

The Agency hypothesis put forth by Jensen and Meckling in 1976 served as the study's foundation to show the connection between HR factors and ERM. The study aimed to close any conceptual, theoretical, empirical, or contextual gaps. The study was carried out in Rwanda, a developing economy, which creates a gap as earlier studies of a similar nature were primarily conducted in developed European and Asian economies. Conceptually, the study used what is known as the contingency theory, which is a behavioral theory that maintains that there is no one ideal method to run an organization, lead a business, or make decisions in such a scenario. Implementation of ERM was used to conceptualize the relationship between human resource elements. Empirically, the study found and presented numerous studies from diverse economies that had comparable and dissimilar conclusions, demonstrating the existence of both comparable and dissimilar findings among experts. The study aimed to fill this void in the Rwandan economy, particularly

the insurance sector. Teamwork, rewards and recognition, and training served as the operationalization of HR factors.

Because positivism is concerned with objective viewpoints, the study embraced this as well as correlational research design and the survey research approach and the reality that was steady and could be observed and described. The study concentrated on 14 insurance businesses that were under the Central Bank of Rwanda's regulation, including 2 state medical insurers, 3 life insurance companies, and 9 non-life insurance companies. The intended sample size was 56 respondents, with four respondents from each organization. Utilizing structured questionnaires, data was gathered. The study's response rate was 62.5%, which was deemed adequate to allow for the analysis of the data gathered. Regression analysis and descriptive statistics were used to analyze the data. The Strathmore University Ethics Review Board evaluated and accepted the researcher's proposal, and NACOSTI also granted the researcher a research authorization.

## **5.2 Discussion of the Findings**

This section provides a summary of the findings and discussions thereafter.

### **5.2.1 Demographic Information of Respondents**

The study sought to comprehend the demographic traits of the respondents. According to Hammer (2011), the absence of these demographic characteristics would put the researcher at risk of adopting an absolutist approach, which implies a similarity in response without the influence of these crucial characteristics.

Gender is a crucial component of culture in both organizations and communities (Wood and Eagly, 2012). Individual acts and general behaviors are influenced by gender-based personality variations. As a result, one gender is more prone to value items that the other may view as unimportant. According to study, women are more likely to think about the greater picture and wider impacts of a risk management plan than men are, who often take a more streamlined, practical approach. This is why psychologists feel that each gender manages risk differently. Though a majority of respondents were male, there was also a significant mix of female managers in the insurance companies. This implies that the risk management strategies would be more

streamlined, and practical but also have aspects of the bigger picture and wider effect of these strategies.

Age determines the transition between generations, so it affects how people view and consider interactions and processes in organizations (Eagly, 2012). The length of service, which explains the level and depth of interaction with people and organizational norms, supports the age component (Rose, 2013). According to Chang et al. (2006), people comprehend and adopt certain processes and practices more readily the longer they are ingrained in them. In terms of risk management, the tendency to take risks typically declines with age. The findings of the study show that majority of responders were over the age of 35, which implies that the respondents had a lower propensity of taking risk and more conscious about risk management strategies. Additionally, majority had been employed by the insurance companies for more than three years, implying that they had a deep understanding of the risk management norms and strategies that were required in the study. Therefore, without assuming absolutes, we may say that the majority of respondents from the chosen sample possessed the necessary traits to be able to give the study with the necessary data.

### **5.2.2 Level of ERM implementation in Rwandan insurance industry.**

The first objective was to determine the level and strength of ERM implementation in the Rwandan insurance industry. The implementation is the difficult part of enterprise risk management once a business agrees to use it. Numerous factors must be considered for the same to be implemented successfully on the ground. These factors differ depending on the organization. As a result, the installation of ERM needs to be continuously monitored. Reports and comparisons to previous risk assessments are necessary for effective ERM. With the evolving risk environment, strategies need to be revised.

Given the nature of ERM, it is likely that different organizational levels and traits will be impacted by its implementation. This implies that a suitable approach for evaluating its implementation must be all-inclusive in order to account for all potential indications, outputs, and consequences from the organizational features. Similar to other specialized industries, the insurance industry, and its operations, as well as the risk they pose, necessitate risk management strategies that are tailored to the sector's specific needs. To measure the extent of implementation of ERM, the study

used Witte (2021) four levels of implementation which are: the ERM does not exist, ad hoc ERM implementation, ERM is implemented but improvements are required, and a robust implementation of ERM. The findings show that a majority of respondents from the Rwandan insurance companies had the ERM implemented but required improvements to it as well as an Ad hoc ERM implementation. Few companies had no ERM or a Robust ERM implementation. This shows that the companies need to improve their ERM to be effective and robust enough to manage the industry risks.

### **5.2.3 Teamwork and Implementation of ERM**

The first objective was to evaluate the effect of teamwork on implementation of ERM. Teamwork is the collective effort of a group to accomplish a task or a goal in the most effective and efficient manner (Parker, 2018). The teamwork model derives from a broader definition of a team, according to which individuals are considered to be a part of a team when they work toward a common objective, are dependent on one another, are limited and stable, are able to manage their own tasks and internal processes, and function within a larger social system (Parker, 2008). Characteristics of teamwork that promotes effective implementation of ERM that were tested include team communication, team involvement, and team empowerment.

The findings indicate that the respondents strongly agreed that teams have been made aware of the risk management strategies to deal with Company risk, and that the insurance leadership has assigned risk champions who have been given responsibility and authority to identify risks affecting their roles and teams' members in each department to lead risk management strategies.

They further agreed that specific risks, their effect and risk management strategies had been highlighted and communicated to team members in their respective insurance companies, that team members are aware of their specific and collective role in managing the risks affecting, that there is involvement of employees in identifying the risks affecting the Company and are allowed to give their input in the risk management decisions, that team members are given the authority and appropriate skills to participate in substantive risk decisions affecting their roles and that teams are self-managed and are allowed to create their own rules about risk and its management in risk management decision making.

Teamwork is a crucial HR factor in the adoption of ERM, according to the positively strong and significant association between the two. These results are consistent with a study conducted by Rahman (2018) among Kuantan, Malaysian construction industries, which revealed that good cooperation and construction risk management have a significant impact in reducing future risk. The results concur with those of Elhusadi et al. (2020), who conducted research in the Eastern Province of Libya on the risks faced by Libyan commercial banks there and the role of teamwork in managing those risks. They found a positive and statistically significant relationship between the dimensions of teamwork and effective risk management. Similarly, the findings agree with those of Acharyya (2006) who examined the Enterprise Risk Management (ERM) in four European-based insurance companies, to explore the understanding, evolution, design, and performance of ERM in the organizations of study, and found that that among others, risk communication within the team was a key operational strategy for its success.

#### **5.2.4 Reward and Recognition and Implementation of ERM**

The second objective was to assess the extent of to which reward and recognition affects the implementation of ERM in Rwandan insurance industries. In the study, reward and recognition was defined as a system in which workers are given credit for their performance in either intrinsic or extrinsic ways. This system is in place in workplaces where employees' efforts are fairly acknowledged and appreciated when they are made in a timely manner. In addition to employee or team celebrations, milestone recognition, leadership initiatives, collaborative efforts, and eventually enhanced performance, this also includes adequate and consistent financial pay.

The findings show that the respondents agreed that there exists a formal system in the organizations where there is appropriate acknowledgement and appreciation of employees' efforts in their risk management efforts and that employees are provided with incentives to participate in risk identification and management processes. Similarly, the respondents agreed that the management encourages employees to do more in risk management and create an environment for development and career growth as a reward for their work performance, that high performing employees in risk management roles receive rewards and recognition for their high performance, and that the management provides suitable and consistent financial compensation,

as well as employee or team celebrations, recognition of risk management milestones reached, leadership initiatives and collaboration efforts.

Rewards and recognition are seen as effective measures that a corporation can utilize to inspire its workforce. Employees are given the freedom to carry out their responsibilities while also having the power to make certain decisions. Implementing a rewards and recognition program aids in boosting employee engagement, which has numerous advantages for the business, including greater productivity and staff retention. Employees stated that receiving personal praise from a boss or organization was the best incentive to accomplish outstanding work in a survey. Because they emphasize the positives, recognition programs effectively convey to staff members the importance of their work. Giving employees what they desire as a reward for excellent work can keep them motivated and focused on improving.

The deployment of ERM and the relationship between rewards and recognition were highly correlated. The regression model also shows a high fit for data skills and variable prediction. The results support Carey, (2011) and Yaraghi & Langhe, (2011) who emphasized the significance of an effective remuneration policy in an organization that involves bonuses payment and share options to employees that would influence the behaviour of the employees in implementing the policy. Additionally, the results support Gibson's (2012) study, which was supported by Abdullah et al. (2017), which found a significant correlation between appropriate employee compensation and incentives and the implementation of risk management strategies in financial services organizations and the electrical and electronic industry.

### **5.2.5 Training and Implementation of ERM**

The third objective sought determine the effect of training on the implementation of ERM. Literature has established that programs for employee training are ongoing initiatives taken by an organization to improve employee performance. Employers use a variety of educational techniques and initiatives in an effort to train and develop their workforce. Recently, employee training has become recognized as a key component of HR strategy. Many business leaders have discovered that investing in employee training helps them develop a highly skilled workforce as well as acts as motivation (CFI, 2022).

The findings indicated that the respondents strongly agreed that the company provides training programs and sustained efforts to boost the general performance of employees, and that the company provides managerial and leadership training to prepare employees with/for a leadership role. The findings also reveal that the respondents agreed that the insurance companies use training programs to create a highly skilled risk management workforce, that the company provides soft skills training to employees that allow them to communicate, collaborate and manage risk effectively, and that the training programs in the company have helped address employee weaknesses, expand their knowledge base, improve employee performance, boost the company reputation and profile, and increase innovation.

Although risk management may appear straightforward in theory, not every employee possesses the knowledge and abilities needed to properly implement it in daily life. Employee training and development is one of the major elements in bringing about change. Each new employee has their own perspective of what constitutes an acceptable risk, and employees come from a variety of educational and professional backgrounds. It is crucial for managers to work in tandem with the training-focused Human Resources department to provide all employees with introductory risk management training. Building an effective risk management team whose members completely comprehend the organization's risk vision and goals is made possible through training programs.

The results demonstrate a strong positive association between training and ERM implementation, and the regression model further suggests that training is a good predictor of ERM adoption in the Rwandan insurance sector. In their investigations, Laisasikorn & Rompho (2014) discovered a significant and direct correlation between staff training programs and financial performance, which supporting Mwangi's (2012) findings on the same. In a study on the efficiency of risk management implementation in Russian enterprises, Makarova (2014) discovered similar findings: where there was a substantial positive association between staff training and the success of risk management strategies.

### **5.3 Conclusions**

Regarding the first goal, the impact of teamwork on ERM implementation, we may draw the conclusion that there is a high degree of teamwork in the Rwandan insurance business, which has a favorable impact on ERM implementation. In the same way, the results of the second objective,

which was to evaluate the impact of rewards and recognition, show that employees in the Rwandan insurance sector are highly motivated by rewards and recognition for their risk management efforts, which also positively influences the implementation of ERM.

From the findings, we may draw the conclusion that the Rwandan insurance business has high levels of training, which led to better ERM implementation for the third purpose, which was to evaluate the impact of training on ERM implementation. In regard to the fourth goal, which was to assess the strength and level of ERM implementation, we can say that the industry as a whole only had a fairly effective level of ERM implementation. In a similar vein, implementation strength is only average and might be strengthened more. The study's overall goal has a strong positive link with the use of ERM, according to the descriptive data and simple linear regression models' conclusions.

According to the contingency theory that was the theory used, there is no one best way of organizing a business, leading a company, or making decisions within an organizational risk context. The theory Instead, posits that the best possible course of action is dependent upon the internal and external factors and situation. This requires contingent organizations and their leaders to be flexible in selecting and adapting to succinct management strategies to suit change in situation at a particular period in time in the running of the organization. In the case of this study, a combination of effective application of the HR factors in organizational HR management can be seen to have a significant positive effect on the implementation of ERM in the Rwandan insurance industry. These companies have systems that require cautious management to satisfy and balance internal HR needs and to adapt to environmental circumstances. The insurance managers should be aware that there is not one best way of strategy and organization, and appropriate measures depend on the task or internal/external environment; Management must therefore be more concerned with achieving alignments and good fits; and that different organizational specifics are needed in different types of environments.

## **5.4 Recommendations**

The findings and conclusions of the study has elicited the following recommendations:

### **5.4.1 Managerial recommendations**

The conclusions have significant managerial ramifications that serve as the foundation for managerial suggestions. The research first urges the management of the Rwandan insurance companies to seriously consider improving their human resources practices. Increased teamwork should receive special consideration, and staff reward and recognition programs as well as employee trainings should be continually monitored. Improving these elements will allow them to improve on their risk management efforts, which is likely to boost organizational performance. This is because there is a favorable association between these HR characteristics and the implementation of ERM. To help minimize risk and strengthen the effectiveness of their ERM implementation, the management of the Rwandan insurance industries should also continuously increase their employees' knowledge of risk and management tactics.

### **5.4.2 Recommendations for Policy Makers**

The insurance market in Rwanda confronts a number of difficulties, particularly from unknown risks. In order for the industry to prosper, policy makers must be proactive in assisting the risk management efforts of the actors. The results of this study showed a significant positive relationship between HR factors and ERM implementation, and the government and institutions in charge of creating national policies for industry risk management should base those policies on facts and findings from research to help the industry recognize and control inherent risks. Additionally, the government should be able to offer incentives to businesses who have made significant investments in ERM, like as tax breaks, in order to motivate the Rwandan insurance sector to continually increase its risk management efforts.

### **5.4.3 Contribution to Knowledge**

This study set out to determine how HR-related issues impact the adoption of ERM. The Agency and Contingency Theory served as the foundation for the study, which sought to show the connection between HR elements and ERM. The study aimed to close any conceptual, theoretical,

empirical, or contextual gaps. Scholars can use this as a starting point to investigate these ideas and theoretical underpinnings in greater detail. As a result, this study helped put the theories to use in real-world situations. Empirically, the research found and presented numerous papers from diverse economies with comparable and divergent findings, indicating the prevalence of disagreement among academics. Contextually, the study was carried out in Rwanda, a developing country, as opposed to similar earlier studies, which were primarily carried out in developed European and Asian nations. This study has therefore provided valuable empirical research in an area that had not been previously studied.

### **5.5 Limitations of the Study**

The study had few limitations, one of which was that due to the sensitivity of the data, particularly regarding risk management techniques and performance, some of the insurance companies in Rwanda that were the subject of the study declined to share this information.

The second limitation was that Witte's (2021) implementation level classification and the CAMELS model for evaluating bank performance were used to construct ERM strength and level of implementation. Other academics have categorized the levels and strengths of ERM implementation in different ways. Therefore, the classifications served as the foundation for the study's conclusions.

Another limitation was time constants during the data collection period. The Covid-19 pandemic was still being dealt with when data collection began, and the majority of enterprises were negatively impacted by the closing of borders that had been impacted in several nations, including Rwanda. Both the method and the quality of data collecting were impacted by this.

### **5.6 Suggestions for Future Research**

This study included HR-related issues, which were a significant role in the adoption of ERM. Researchers that are interested in this topic could concentrate on how ERM implementation in various economic sectors is affected by ERM policies in developing economies. The Rwandan insurance market was also the subject of this study. Therefore, future study might be done on other economic sectors, like service delivery firms, the hospitality sector, or tertiary educational

institutions. Researchers that are also interested in the HR aspects of the insurance sector can look at how they relate to other issues like organizational performance and change management, among others. Finally further research could also focus on some level of qualitative analysis through open ended questions to capture perspectives.



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## APPENDICES

### Appendix 1: Letter of Introduction



## Appendix II: Participant Information and Consent Form

### SECTION 1: INFORMATION SHEET

**Investigator:** Annie Nibishaka

**Institutional Affiliation:** Strathmore Business School (SBS)

**Research Topic: THE ROLE OF HUMAN RESOURCE FACTORS IN THE IMPLEMENTATION OF ENTERPRISE RISK MANAGEMENT: A CASE STUDY OF, RWANDAN INSURANCE COMPANIES**

**Initials of Participant:** .....

**Gender:** .....

**Contact Address:** .....

**Interview Location:** .....

### SECTION 2: INFORMATION SHEET–THE STUDY

#### 2.1: Why is this study being carried out?

To evaluate the role of Human Resource Factors at your organization on the implementation of enterprise risk management.

#### 2.2: Do I have to take part?

No. Taking part in this study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to complete a questionnaire to get information required by the Study. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time. You are free to decline to take part in the study from this study at any time without giving any reasons.

#### 2.3: Who is eligible to take part in this study?

Primarily senior management employees insurance Companies in Rwanda.

#### 2.4: Who is not eligible to take part in this study?

Anyone that is not a senior manager in the Rwandan Insurance companies

#### 2.5: What will taking part in this study involve for me?

You will be approached by the researcher and requested to take part in the study. If you are satisfied that you fully understand the goals behind this study, you will be asked to sign the informed consent form (this form) and then taken through a questionnaire to complete.

#### 2.6: Are there any risks or dangers in taking part in this study?

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way apart from academic purposes without your express permission.

**2.7: Are there any benefits of taking part in this study?**

The information will be used to improve research study of Human Resource factors and how it affects the implementation of enterprise risk management Rwandan insurance Companies, which will inform policy makers, academicians, and other stakeholders in the area of study. Therefore, as an employee an insurance company, your input in this study will have benefits for the common cause of improving and enhancing Human Resource factors for the purpose of effective risk management in the Company.

**2.8: What will happen to me if I refuse to take part in this study?**

Participation in this study is entirely voluntary. Even if you decide to take part at first but later change your mind, you are free to withdraw at any time without explanation.

**2.9: Who will have access to my information during this research?**

All research records will be stored in securely locked cabinets. That information may be transcribed into our database, but this will be sufficiently encrypted, and password protected. Only the people who are closely concerned with this study will have access to your information. All your information will be kept confidential.

**2.10: Who can I contact in case I have further questions?**

You can contact me, Annie Nibishaka, at Strathmore Business School, or by e-mail annienibishaka@gmail.com, or by phone. +250 788 308 551. You can also contact my supervisor, ....., at the Strathmore Business School, Nairobi, or by e-mail .....@strathmore.edu or by phone .....

I, \_\_\_\_\_, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

***Please tick the boxes that apply to you.***

Participation in the research study

- I AGREE to take part in this research
- I DO DON'T AGREE to take part in this research

Storage of information on the completed questionnaire

- I AGREE to have my completed questionnaire stored for future data analysis
- I DO NDON'T AGREE to have my completed questionnaire stored for future data a

Participant's Signature:

Date:

\_\_\_\_/\_\_\_\_/\_\_\_\_

DD / MM / YEAR

Participant's Name:

Time: \_\_\_\_/\_\_\_\_

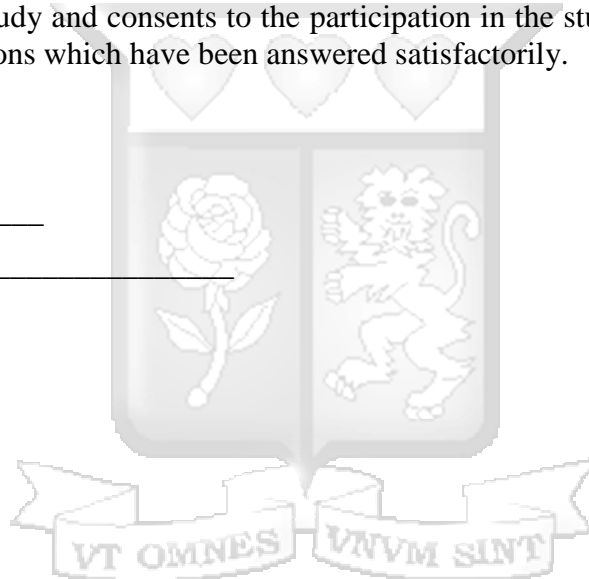
(Please print name) HR / MN

I, Annie Nibishaka certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

Date:

\_\_\_\_/\_\_\_\_/\_\_\_\_



## Appendix IV: Questionnaire

Greetings! My name is Annie Nibishaka, a Postgraduate (MBA) student at Strathmore University and conducting a study at Insurance Companies Rwanda. I am conducting a study to familiarize myself with the Effect of human resource factors on the implementation of enterprise risk management in the organization. You have been selected as one of the participants and humbly requested to participate by filling in your responses to the questions below with utmost honesty. Kindly note that this data will be treated with the utmost confidentiality and will not be used for any other purpose apart from the purpose of research.

### Part A: Demographic Information

1. What is your Gender?

Male  Female

2. What Age Bracket do you belong to?

Below 25 years  25 to 35 years   
 35 to 45 years  45 to 55 years   
 Over 55 years

3. How many Years have you worked at the Insurance Company?

Below 5 years  5 to 10 years   
 10 to 15 years  15 to 20 years   
 Over 20 years

4. What is the highest Education Level that you have achieved?

Secondary school  Certificate   
 Diploma  Undergraduate   
 Masters  PhD   
 Other  Indicate: \_\_\_\_\_

### Part B: Implementation of Enterprise Risk Management

1. What is the extent of implementation of Enterprise Risk Management (ERM) System?

ERM does not exist   
 Ad hoc ERM implementation   
 ERM is implemented but improvements are required   
 Robust implementation of ERM

### Part C: Teamwork and Enterprise Risk Management

This section aims to evaluate the aspect of Teamwork at Rwandan Insurance Companies. Please use the Likert scales 1-5, where 1- Strongly Agree, 2- Agree, 3-Uncertain, 4- Disagree, 5- Strongly disagree, to indicate your degree of agreement or disagreement with the statement on the left.

Statement	1	2	3	4	5
2. Specific risks, their effect and risk management strategies have been highlighted and communicated to team members.					
3. Team members know are aware of their specific and collective role in managing the risks affecting the Company					
4. Teams have been made aware of the risk management strategies to deal with Company risk					
5. There is involvement of employees in identifying the risks affecting the Company and allowed to give their input in the risk management decisions.					
6. Team members are given the authority and appropriate skills to participate in substantive risk decisions affecting their roles					
7. The Leadership has assigned risk champions who have been given responsibility and authority to identify risks affecting their roles and teams in each department to lead risk management strategies					
8. Teams are self-managed and are allowed to create their own rules about risk and its management in risk management decision making					

### Part D: Reward and Recognition and Enterprise Risk Management

This section aims to evaluate the Reward and Recognition of employees in risk management process insurance Companies in Rwanda. Please use the Likert scales 1-5, where 1- Strongly Agree, 2- Agree, 3-Uncertain, 4- Disagree, 5- Strongly disagree, to indicate your degree of agreement or disagreement with the statement on the left.

Statement	1	2	3	4	5
9. There exists a formal system in organizational where there is appropriate acknowledgement and appreciation of employees' efforts in their risk management efforts.					
10. Employees are provided with incentives to participate in risk identification and management processes.					
11. The management encourages employees to do more in risk management and create an environment for development and career growth as a reward for their work performance.					
12. High performing employees in risk management roles receive rewards and recognition for their high performance					
13. The management provides suitable and consistent financial compensation, as well as employee or team celebrations, recognition of risk management milestones reached, leadership initiatives and collaboration efforts.					

### Part E: Training Programs and Enterprise Risk Management

This section aims to evaluate team empowerment and risk management at UAP insurance Company Rwanda. Please use the Likert scales 1-5, where 1- Strongly Agree, 2- Agree, 3- Uncertain, 4- Disagree, 5- Strongly disagree, to indicate your degree of agreement or disagreement with the statement on the left.

Statement	1	2	3	4	5
14. The company provides training programs and sustained efforts to boost the general performance of employees.					
15. The company uses training programs to create a highly skilled risk management workforce.					
16. The company provides soft skills training to employees that allow them to communicate, collaborate and manage risk effectively					
17. The company provides managerial and leadership training to prepare employees with/for a leadership role.					
18. The training programs in the company have helped address employee weaknesses, expand their knowledge base, improve employee performance, boost the company reputation and profile, and increase innovation.					

**APPENDIX III: CLEARANCE FROM ETHICAL APPROVAL**



**APPENDIX IV: NACOSTI**

