FRAS ABDULBY MOHAMD MOQBEL

RISK MANAGEMENT IN WAREHOUSING AND LOGISTICS IN YEMEN

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THESIS SUPERVISOR PROF.

DR. ŞERIFE EYÜPOĞLU

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Approval

We certify that we have read the thesis submitted by Fras Abdulbary Mohammed Moqbel titled "RISK MANAGEMENT IN WAREHOUSING AND LOGISTICS IN YEMEN" and that in our combined opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Business Administration.

Examining Committee	Name-Surname	Signature
Head of the Committee:	Asst.Prof.Dr.Özlem Ercantan	.....
Committee Member:	Dr. Ayşe Hyusein	.....
Supervisor:	Prof.Dr.Şerife Eyüpoğlu	.....

Approved by the Head of the Department

28../02/2024

.....

Prof.Dr.Şerife Eyüpoğlu

Head of Department

Approved by the Institute of Graduate Studies

...../02/2024

.....

Prof. Dr. Kemal Hüsnü Can Başer

Head of the Institute

DECLARATION

I , Fras Abdulbary Mohammed Moqbel, hereby declare that this dissertation entitled ‘Risk Management in warehousing and Logistics’ has been prepared myself under the guidance and supervision of ‘Prof. Dr. Şerife Eyüpoğlu’ in partial fulfillment of the Near East University, Graduate School of Social Sciences regulations and does not to the best of my knowledge breach and Law of Copyrights and has been tested for plagiarism and a copy of the result can be found in the Thesis.

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ABSTRACT

RISK MANAGEMENT IN WAREHOUSING AND LOGISTICS IN YEMEN

Logistics risk management has posed a challenge for small and medium-sized companies around the world, especially countries that have been suffering from ongoing wars for years due to security and economic instability. Managing logistics and warehouse risks comes at a high administrative cost to these small and medium-sized companies, as the companies employ an integrated administrative work team, and thus the growth of these companies becomes a challenge due to the decline in sales as a result of the goods not arriving in a timely manner and most of them being damaged due to lack of security stability. The development of risk management has provided small and medium-sized enterprises with greater opportunities to ensure the safety of warehouses, goods, and the entire supply chain. Previous studies conducted regarding the impact of logistics and warehouse services and their risks on company performance either had operational or environmental differences, which led to a research gap and thus motivated the goal of the study, which is to determine the impact of logistics and warehouse management risks on the growth of sales of small and medium enterprises in Yemen and improving their performance. The study used a descriptive cross-sectional research design to allow analysis of Companies in Yemen at the same time. The target population was mainly from the top 10 Companies over the past 5 years. From this population, a sample size of 270 employees was determined and randomly selected to answer the research objective. The results of the study indicated that the focus on the logistics and warehousing risk management sector had a significant impact on improving Companies to a large extent. The results of the study indicated that the lack of knowledge of potential and expected risks in the logistics sector was the biggest challenge for small and medium-sized companies in relying on improving corporate performance, followed by the lack of safety means and appropriate supplies. Management and lack of funding for the logistics and warehouse sectors, which may lead to a deterioration in corporate performance. The results led to the conclusion that logistics and warehouse risk management in Yemen is important in improving the sales of small and medium enterprises

and improving their performance and growth. The study recommended the need to train small and medium-sized companies and make them aware of the available logistics risk management techniques in particular and their suitability for their business. The study also recommended the need to develop appropriate policies by the government to help small and medium-sized companies provide appropriate safety means for companies to transport and store goods. Finally, the study recommended the need to provide small and medium-sized companies with the necessary financing.

***Key words*:** Risk Management, Warehousing, Logistics

ÖZ

YEMEN DEPOLAMA VE LOJİSTİKTE RİSK YÖNETİMİ

Lojistik risk yönetimi, dünya çapında, özellikle de güvenlik ve ekonomik istikrarsızlık nedeniyle yıllardır devam eden savaşların acısını çeken ülkelerdeki küçük ve orta ölçekli şirketler için bir zorluk teşkil etmektedir. Lojistik ve depo risklerini yönetmek, bu küçük ve orta ölçekli şirketler için yüksek bir idari maliyete neden oluyor, çünkü şirketler entegre bir idari çalışma ekibi kullanıyor ve dolayısıyla bu şirketlerin büyümesi, satışlardaki düşüş nedeniyle bir zorluk haline geliyor. malların zamanında ulaşmaması ve çoğunun güvenlik istikrarının olmaması nedeniyle hasar görmesi. Risk yönetiminin gelişimi, küçük ve orta ölçekli işletmelere depoların, malların ve tüm tedarik zincirinin güvenliğini sağlama konusunda daha büyük fırsatlar sağlamıştır. Lojistik ve depo hizmetlerinin etkisi ve şirket performansı üzerindeki riskleri ile ilgili yapılan önceki çalışmalarda operasyonel veya çevresel farklılıklar bulunması, araştırma boşluğuna yol açmış ve bu nedenle çalışmanın lojistik ve depo yönetiminin etkisini belirlemek olan amacını motive etmiştir. Yemen'deki küçük ve orta ölçekli işletmelerin satışlarının büyümesine ve performanslarının iyileşmesine ilişkin riskler. Çalışma, aynı zamanda Yemen'deki Şirketlerin analizine olanak sağlamak için tanımlayıcı kesitsel bir araştırma tasarımı kullanmıştır. Hedef kitle esas olarak son 5 yılda en iyi 10 Şirketten oluşuyordu. Bu popülasyondan 270 çalışandan oluşan bir örneklem büyüklüğü belirlendi ve araştırma amacına cevap verecek şekilde rastgele seçildi. Çalışmanın sonuçları, lojistik ve depolama risk yönetimi sektörüne odaklanmanın Şirketlerin büyük ölçüde iyileştirilmesinde önemli bir etkiye sahip olduğunu gösterdi. Çalışmanın sonuçları, lojistik sektöründeki potansiyel ve beklenen risklere ilişkin bilgi eksikliğinin, küçük ve orta ölçekli şirketler için kurumsal performansı artırmaya yönelik en büyük zorluk olduğunu ve ardından güvenlik araçlarının ve uygun tedarik eksikliğinin geldiğini gösterdi. Lojistik ve depo sektörlerine yönelik yönetim ve finansman eksikliği, kurumsal performansın bozulmasına neden olabilir. Sonuçlar, Yemen'deki lojistik ve depo risk yönetiminin, küçük ve orta ölçekli işletmelerin satışlarını iyileştirmede, performanslarını ve büyümelerini iyileştirmede önemli olduğu sonucuna varmıştır. Çalışma, küçük ve orta ölçekli şirketlerin eğitilmesi ve onları özellikle mevcut

lojistik risk yönetimi teknikleri ve bunların işlerine uygunluğu konusunda bilinçlendirmenin gerekliliğini önerdi. Çalışma ayrıca, küçük ve orta ölçekli şirketlerin, şirketlerin mal taşıması ve depolaması için uygun güvenlik araçları sağlamasına yardımcı olmak için hükümet tarafından uygun politikalar geliştirilmesi ihtiyacını da önerdi. Son olarak çalışma, küçük ve orta ölçekli şirketlere gerekli finansmanın sağlanması ihtiyacını ortaya koydu.**Anahtar kelimeler:** Risk Yönetimi, Depolama, Lojistik

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CHAPTER 1

INTRODUCTION

1.1. Overview (Background)

Management of Risk Recent global developments have made the risks even more visible. Terrorism, extreme weather, and the global financial crisis pose severe risks to society and commerce. At the heart of risk management is the assessment of the range of responses to available risks and the identification of the most appropriate response in each case. By avoiding bad things from happening, reducing their impact when they do, and controlling costs after the fact, risk management aims to give the company the best possible result. In other words, risk management is focused on attaining the optimal outcome by strategies and goals. The increased request for logistical performance combined with lower costs leads to increasing complexity and thus to additional potential risks in logistical systems. Because risks can be excluded from unanticipated events, they can have massive negative effects on the company`s overall actions, particularly if they are not adequately ready for them to happen.

Moreover, unanticipated unfavorable events with lower impact still require extra work and money. Therefore, this paper aims to provide a management way that will help you understand the situation of logistic risk and deal with it appropriately. In addition, proper definition and classification of logistic risk must first be done to understand the full context. Warehouses are exposed to many risks, so you need to be careful about your warehouse's risk management. Assessing and managing the risks that may arise is very important. Often, they are the target of robbery, theft, theft, and various types of unexpected dangers. Wholesalers and suppliers lose millions of dollars due to improper storage systems. If you own or are responsible for the warehouse, you need to make sure that all potential risks and issues associated with the warehouse have been assessed. When hiring risk managers, they must be able to effectively reduce risk. Failure to do so can have a direct impact on business performance. Describe the main problems that you may

encounter with the repository and possible solutions. This thesis also describes the importance of risk management in the warehouse.

In chronological order to meet consumer demands, specific Logistics is the process of planning, executing, monitoring, and managing the effective and efficient from the place of origin to the location of consumption, the flow, and storage of products, services, and related information. All logistics-related activities must be meticulously coordinated and well-planned in advance. Any interruption will lower the level of performance. Risk management must be incorporated into enterprise risk management to maintain logistical performance. The series contains more stakes. Therefore, adaptive logistics are required to handle ongoing risk management as well as market rivalry. Logistics and warehousing play a critical role in ensuring the smooth flow of goods and materials throughout the supply chain. However, these operations are not without risks. Risks such as theft, damage, accidents, and disruptions can significantly impact the efficiency and effectiveness of logistics and warehousing operations, leading to delays, increased costs, and reduced customer satisfaction. Therefore, risk management is essential for logistics and warehousing operations to identify potential risks, assess their impact, and develop strategies to mitigate or eliminate them. This master's thesis aims to explore the various risks faced by logistics and warehousing operations and develop a comprehensive risk management framework to effectively manage these risks.

The thesis will begin by reviewing the literature on risk management in logistics and warehousing and identifying the different types of risks faced by these operations. It will then proceed to develop a risk management framework based on the identification, assessment, and mitigation of risks. The framework will incorporate various risk management techniques, including risk assessment tools, risk communication strategies, and risk mitigation plans. The thesis will also include case studies to illustrate the application of the risk management framework in real-world logistics and warehousing operations. The case studies will examine the effectiveness of the risk management strategies implemented and provide insights into best practices for managing risks in logistics and warehousing. This master's thesis on risk management in logistics and warehousing aims to contribute to the development of effective risk management strategies

that can enhance the efficiency and effectiveness of logistics and warehousing operations, reduce costs, and improve customer satisfaction.

1.2. Statement of the problem

Yemen is currently suffering from wars and an unstable security situation, and this negatively affects most projects, whether small or large, and also individually affects the community. Therefore, this thesis will study a very important part of risk management, which is risk management in logistics and warehouses. The administrative risks in logistics and warehouses in countries that are at war, especially Yemen, were not mentioned.

Yemen is a country with a significant reliance on imports for its necessities, and logistics and warehousing play a vital role in ensuring the smooth flow of goods into the country. However, the ongoing conflict and political instability in Yemen have led to significant risks and challenges for logistics and warehousing operations, including theft, damage, and disruptions to supply chains. Therefore, the problem statement for this thesis could be: Despite the critical role of logistics and warehousing in ensuring the supply of goods in Yemen, the ongoing conflict and political instability pose significant risks and challenges to these operations. There is a need for a comprehensive risk management framework tailored to the Yemeni context to identify, assess, and mitigate the risks faced by logistics and warehousing operations in the country.

1.3. Purpose of the study

The thesis aims to identify, study and evaluate the administrative risks facing companies and institutions in the logistics and warehousing sectors. The impact of wars on the logistics services of customers and companies. data collected will agree that there is a risk to the logistics and warehousing sector and this affects the company's performance and customer reaction.

The thesis will aim also to address this problem statement by exploring the various risks faced by logistics and warehousing operations in Yemen, identifying the gaps in the existing risk management approaches, and developing a tailored risk management framework that can effectively manage the risks in the Yemeni context. The thesis will also

aim to provide insights into best practices and lessons learned from other conflict-affected countries to enhance the effectiveness of the risk management framework in Yemen.

1.4. Study Significance

The primary importance of this thesis stems from the importance of the study topic under discussion. Any company looking to implement the best way to achieve the best goals in competitive markets. Therefore, any of them would make positive remarks about this research firm which is deficient in aspects of management risk for the logistics sectors. Developing employee skills will facilitate risk management and the ability to raise the company's bar in terms of safety and consumer confidence in a greater way.

Studying the topic of risk management in logistics and warehousing in Yemen is of great importance for several reasons, the most of which is mitigating the effects of the humanitarian crisis because Yemen is currently facing an acute humanitarian crisis, with millions of people in need of humanitarian assistance. Effectively managing risks in logistics and warehousing can help ensure the smooth flow of essential goods and supplies into the country, ultimately helping to mitigate the impact of the crisis on the population. Studying risk management in the warehousing and logistics sector develops the economy because logistics and warehousing services are among the basic components of the Yemeni economy, and effective risk management can enhance economic growth by reducing costs, improving efficiency, and enhancing reliability in the supply chain. Thus, the study of logistical and warehouse risks enhances national security because the conflict in Yemen and political instability have led to security risks in the country. Effective management of risks in logistics and warehousing can help reduce the risk of theft, damage, and other disturbances, which ultimately enhances the country's national security. Among the most important elements that Yemen lacks at present is the weakness and lack of international trade, such as exporting goods. The importance of this message is to improve international trade, as Yemen relies heavily on imports for its basic needs, and effective management of risks in the field of logistics and warehousing can improve the reliability of international trade and the possibility of Forecasting them, leading to increased foreign investment and economic growth.

The importance of the study may lie in the academic contribution as research on risk management in logistics and warehousing in Yemen can contribute to academic knowledge in this field, leading to the improvement of risk management practices in other conflict-affected countries. Studying the topic of risk management in logistics and warehousing in Yemen is of great importance for addressing the humanitarian crisis, promoting economic growth, enhancing national security, improving international trade, and contributing to academic knowledge in this field.

1.5. Limitations of the Study

Limitations of the current study are the applicable categories and lists;

1. Human Obstacles: The study population was limited to logistical and warehousing risk management, from an appropriate sample of (270) employees in Yemeni companies. Between managers, storekeepers, employees in the logistics and warehousing sectors, and human resources employees.

2. Time constraints: The current study was conducted in the first semester of the academic year 2022/23.

3. Geographical restrictions: The current study was limited to logistics and service companies in several Yemeni governorates, including Sana'a, Aden, and Ibb.

1.6. Conceptual Framework

Based on the study problem and objectives as well as on previous research, the study model and hypotheses developed its objectives to be tested to achieve the objectives. The literature was collected to construct the study tool and collect data from the study sample, to determine risk management and its impact on organizational performance in the logistics and warehousing sector. You can see from the hypothetical research form that there are two different types of variables: first, the independent variables, which represent management risks in terms of their definition, causes, and methods of treatment and

reduction; And secondly, the dependent variable, which focuses on how well companies are doing in the logistics and warehousing sectors. The hypothetical research model has evolved through inquiry and survey in many studies and field research, based on previous theoretical and field studies and research.

Where the study seeks to know whether there are negative or positive relationships for risk management in the warehouse and logistics sectors in several aspects such as customer satisfaction and employee satisfaction, enhancing trust between the customer and the company, and all of these are reflected in the company's performance and increased.

1.7. Hypotheses

The main question of the thesis is how properly managing risk affects company performance?

1. The hypothesis: Risk management for the logistics and warehousing sectors has a positive and significant relationship with the company's performance.

Figure 1: *Study Hypotheses*

Source: prepared by the researcher

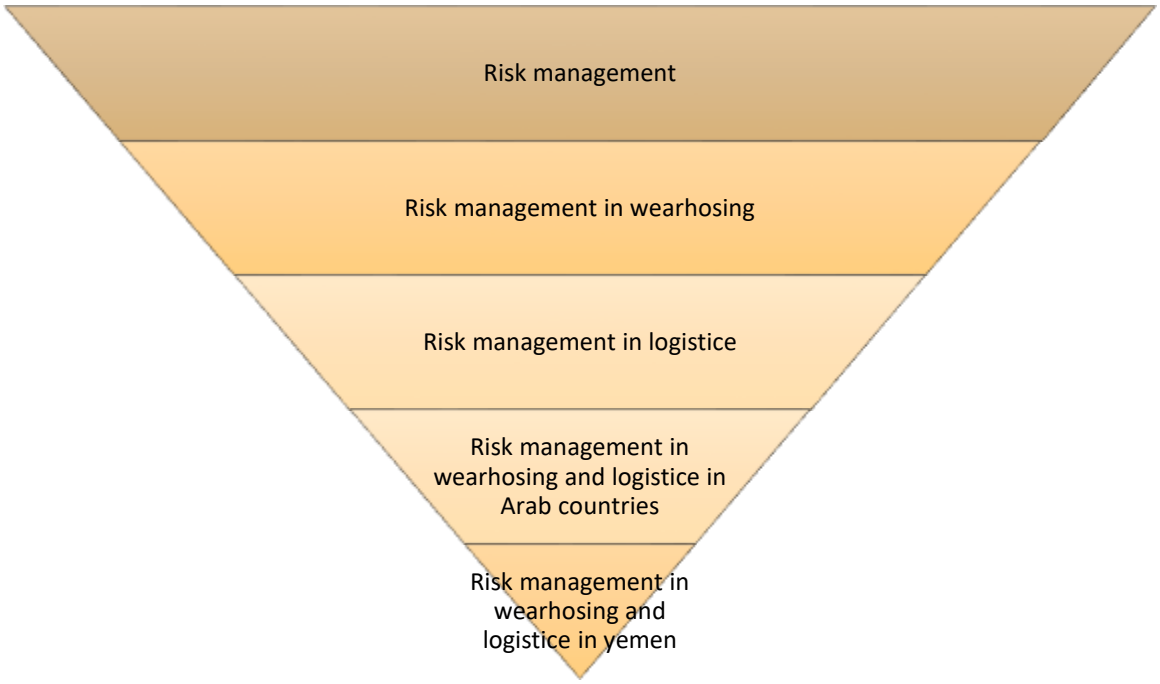
CHAPTER 2

LITERATURE REVIEW

2.1. Overview

To fully comprehend the theory in the field of risk management in terms of logistics and warehousing for businesses, the concepts related to it in this chapter will all be discussed. The research related to it to provide a point of reference for any future studies of this kind will be explored. We will analyze each concept, step, point, or even definition, and provide a connection between the company's performance of all kinds and how it affects performance. To review the previous literature on risk management in warehousing and logistics, several websites books, articles, and studies have been used. The reviewed papers were mostly published between 2002 and 2021.

Figure 2: *Overview Literature Review*



Source: prepared by the researcher

In an article titled *"The Risk Management Process: Business Strategy and Tactics"*, by C. Culp. (2002) He explained that in order to develop a framework for responsible risk management, we must develop a healthy and responsible risk management framework that does not allow for excessive caution or negligence is a framework that avoids three fundamental fallacies; risk is always bad, playing it safe is always the best course of action since some risks are so serious that they must be avoided at all costs**.** (Culp C. , 2002)**.** Risk management is an essential component of any organization's decision-making process. The process of identifying, assessing, and prioritizing risks is crucial to the success of any project, program, or enterprise. This literature review provides an overview of the risk management process, including its key components, best practices, and challenges.

Culp described that the risk management process involves four key components: risk identification, risk assessment, risk mitigation, and risk monitoring. In the risk identification phase, risks are identified and categorized based on their likelihood and potential impact. This step requires a comprehensive understanding of the organization's objectives, stakeholders, and operating environment. In the risk assessment phase, the identified risks are analyzed to determine the likelihood and potential impact of each risk. This step involves assessing the severity of each risk and identifying the most critical risks that need to be addressed. In the risk mitigation phase, strategies are developed to reduce or eliminate the identified risks. This step involves developing and implementing risk management plans, policies, and procedures to reduce the likelihood and impact of the identified risks. In the risk monitoring phase, the effectiveness of the risk management strategies is evaluated, and any necessary adjustments are made to the risk management plans.

The risk management process is an essential component of any organization's decision-making process. The process involves identifying, assessing, prioritizing, mitigating, and monitoring risks. Best practices in the risk management process include establishing a risk management culture, collaborating with stakeholders, prioritizing risks, developing effective risk mitigation strategies, and monitoring and evaluating the effectiveness of the risk management process. Challenges in the risk management process include the identification and assessment of risks, the effectiveness of risk mitigation

strategies, limited resources, resistance to change, and the failure to update risk management plans regularly. After going through and reviewing this book, it was found that risk measurement was only explained over a few chapters and these chapters were not reasonably long but were intended to be broad surveys of methodologies

In a paper titled "*The six mistakes executives make in risk management*", written by Taleb, Goldstein, and Spitznagel.(2009) They pointed the mistakes that managers make in risk management. Some of the mistakes that were interesting for this research from their paper was how we are convinced that by studying the past. We can manage future risk. You often catch risk managers, especially those who work in the financial services sector, using the excuse that it is unprecedented. They think they can foresee anything and discover precedents for anything if they work hard enough. But some events have no precedents. In addition, today's world is not like the past; many policies and studies have changed. The paper also mentioned another problem that comes from the hypothesis that risks can be measured or solved through fixed solutions or previous solutions. By looking at many risks that Yemeni companies previously faced, it was seen that this information is very realistic and correct, for example: the occurrence of electrical damage in food stores due to a bullet, an explosion also occurred in a store of gas cylinders in another area, so the damages and causes for this problem were completely different, and the fire was dealt with differently (Taleb, Goldstein, & Spitznagel, 2009). Executive errors in risk management can have severe consequences for the organization. The paper mentioned some of the common mistakes that were inspiring for me. Executives may overestimate their capabilities and underestimate risks, resulting in decisions that are overly optimistic or fail to adequately interpret potential negative outcomes. So is groupthink where when executives work in a group, they may prioritize consensus and consensus over critical thinking and open discussion, leading to decisions based on incomplete or biased information. Confirmation bias: Executives may focus on information that confirms their current beliefs or assumptions, while ignoring evidence that contradicts them, leading to flawed decisions. Availability bias Executives may base their decisions on easily accessible information, rather than searching for more comprehensive and accurate data, which can lead to incomplete or inaccurate risk assessments. As the researcher mentioned, one of the most common mistakes is the entrenchment of bias, whereby executives may rely heavily on

data or initial assumptions when making decisions, which leads to failure to adapt or adapt to changing circumstances. As well as escalating commitment, executives may become too invested in a particular course of action, causing them to continue to pursue it even when it is not the most rational or beneficial option.

To mitigate these risks, line managers can take steps such as engaging in open and honest communication, seeking diverse viewpoints, making thorough risk assessments, and being willing to adjust or direct their plans based on new information or feedback. Logistics operations are a paramount necessity in supply networks. Moreover, the relationships between suppliers and customers have become more important. Logistics operations are considered a success factor that affects the competitiveness of business. The increasing demand for logistical operations leads to uncertainty and potential risks in the logistics system of companies and may have tremendous effects on the overall act of the corporation, especially if the company is not prepared for its occurrence. Taleb, Goldstein, and Spitznagel expressed that the term (risk) means an unexpected event or an undesirable event, and the term (logistics) is an essential part of the supply chains. In other words, the logistical risks are disturbances in the flow of planned materials for any reason. they classified the logistical risks into internal risks and external risks. For example, internal risks are related to the material flow system or the information flow system, while external risks are related to the customer, supplier, or environmental conditions. One of the best pieces of information included in this study is that the logistical risks have certain sources, which are risks that may occur due to human error, risks that occur due to technical devices that do not work as planned, or risks due to circumstances and major forces The information flow system or the material flow system is related to internal hazards. Beyond the control of managers and employees.

Fuchs and Wohinz (2009) published an article named "*Risk management in logistics systems*". They explained that undesirable logistical events are stated by not having: the correct materials, of the right value, at the true time, or in the right place. The reason for this event is the lack of the right materials at the right time with the right value in the true place in the strategic reasons can be due to errors or malfunctions of nature. Logistics systems are complex, and the risks associated with them can have severe consequences for

organizations. Effective risk management can help organizations reduce the potential for disruption, improve efficiency, and increase overall profitability. Therefore, it is crucial to identify potential risks associated with logistics systems and to develop strategies to mitigate or avoid them (Fuchs & Wohinz, 2009). There are several types of risks associated with logistics systems, including supply chain risks, operational risks, financial risks, and regulatory risks. Supply chain risks are associated with supply chain disruptions, such as delays, quality issues, and supplier bankruptcies. Operational risks are related to the internal operations of the organization, such as equipment failures, employee safety, and security risks. Financial risks are associated with financial losses, such as currency fluctuations and defaults. Regulatory risk is associated with compliance with regulations, such as customs regulations and environmental regulations.

An interesting research for this research named "*Risk Management in Logistics*", by Wee, Blos, and Yang (2012) linked the administrative risks in logistics and this is what will be clarified in this research, but it was not launched to the administrative risks in warehouses, knowing that there are strong links between logistics and warehouses. Effective risk management is essential for logistics systems to operate efficiently and effectively. By identifying potential risks and developing strategies to mitigate or avoid those, organizations can reduce the potential for disruption and increase overall profitability The management of logistical risks has been described in this study from another aspect, which is the unexpected external aspects such as earthquakes, floods, airline disruptions, and wage increases through forced manufacturing, all of which will affect and increase the cost of the logistics service. This research also emphasized that logistics links all operations from the source to the final parties. One of the most prominent pieces of information in this book is that the most complex operations are likely to involve more risks and that this depends on external supplies to achieve the goal of its work. Wee, Blos, and Yang emphasized that service managements should achieve seven goals or rights, which is to provide the appropriate product. in the true place at the right period in the right quantity and quality to the customer (Wee, Blos, & Yang, 2012).The discussed research showed that since a global business environment has increased the possibility of being attacked by one of the risks, the organization must expand business networks to other countries to serve its customers in the local and global market, which leads to logistical

operations and an interruption in the logistical flow affects the performance of services Logistics in full, so all activities in the logistics field must be planned and logistics risk management must be developed as part of the organization's risk management. Evaluating the logistical risks in advance, that is, the more open the market, the greater the possibility of risk exposure, so that risk data from past data is gathered and work is based on the expectation that disturbances would recur similarly. Through this analysis, the company can decrease or avoid the chance of risk occurrence by also analyzing risks that occurred today so that they do not occur tomorrow. Risks can also be divided according to the possibility of risks occurring and their level of severity, taking into account that the weakness of the institution is a major factor that leads to losses. In This book, the authors focused on many aspects of managing logistical risks, dividing them, and evaluating them according to external conditions, but the aspects and conditions of wars and how to deal with these conditions within the scope of risk management in warehouses and logistics were not discussed. The book showed that the warehouse is considered one of the most important entities in organizations, so all companies try to develop and protect it because it provides organizations with added value through the availability of goods at the exact period and in the exact place. Logistics services are also no less important than warehouses, as they include transporting goods and products from the factory to the warehouses and then Sorting and distributing them to the retail trade to be accessible to the consumer, and this confirms that the method of managing warehouses and logistical services affects the efficiency and the overall success of the company.

A research by Elbarky and Morassi (2016) titled "*Warehousing Risk Management in Different Industrial*" also showed that risk management includes planning, identifying risks, analyzing and dealing with them, and developing strategies to respond to risks. What was also interesting was the authors' way of describing sound risk management as proactive rather than reactive. The results show that the risks differ from one product to another depending on the nature of the product itself. Because it is clear that goods, accidents, and fire damage are common in all industries (Elbarky & Morssi, 2016). The identification of potential risks and the development of solutions to reduce them make risk management an essential part of logistics. All of a company's operations are connected through logistics, which include the transportation and storage of commodities from one

place to another. Hence, any logistics-related interruptions or dangers could have a big impact on the entire supply chain and business operations. Elbarky and Morassi discussed a few of the various logistical concerns, including transportation hazards. Accidents, delays, theft, and damage to products during transit are a few examples of these dangers. Inventory Threats These dangers can include spoilage, obsolescence, overstocking, and stockouts. Logistics managers can build inventory management systems to monitor inventory levels, use forecasting tools to estimate demand, and create efficient communication routes to reduce these risks R with vendors. Supply chain risks are among the most significant and well-known issues addressed in this study. These dangers could include supply chain interruptions brought on by natural disasters, political unrest, or a downturn in the economy. Logistics managers can design backup plans, diversify their suppliers and transportation strategies, and build trusting relationships with their suppliers to handle these risks. For this reason, guaranteeing the smooth operation of the supply chain and reducing disruptions require excellent risk management in logistics. Logistics managers can ensure that items are delivered and stored securely and effectively and that business activities are unaffected by recognizing potential risks and creating measures to mitigate them. efficiently, and that no disruptions to business activities occur

To guarantee that commodities are stored effectively and safely, as well as to recognize and reduce potential hazards, warehousing risk management is crucial in a variety of businesses. This paper stands out since it discusses numerous storage concerns in a variety of businesses in some Arab nations, including Egypt. The food business is one of the topics that is most frequently brought up in the study. Storage concerns specific to the food business include the potential for contamination and harm to perishable items. Food business warehouses require suitable temperature and humidity control systems, routine cleaning and disinfection operations, and efficient pest control techniques to address these threats. Pharmaceutical industry: Storage in this sector necessitates rigorous respect to legal requirements, as well as the requirement to guarantee the reliability and security of goods. Pharmaceutical product storage facilities require the right security precautions, including temperature and humidity control systems, controlled access systems, and surveillance cameras.

Elbarky and Morassi (2016) further covered the automotive industry, a significant and contemporary sector in Arab nations. To prevent product deterioration, storage in the automotive sector requires specific handling techniques. Automobile-related warehouses require specific machinery like vehicle lifts and pallet jacks, as well as the requirement to guarantee the reliability and security of goods. Pharmaceutical product storage facilities require the right security precautions, including temperature and humidity control systems, controlled access systems, and surveillance cameras. The automotive industry, a significant and contemporary sector in Arab nations, was covered in this study. To prevent product deterioration, storage in the automotive sector requires specific handling techniques. Automobile-related warehouses require specific machinery like vehicle lifts and pallet jacks. to make sure things are handled safely. To find and get rid of defective products, warehouses may also need to have strong quality control methods in place. The retail sector is one of the minor sectors. Effective inventory management systems are needed for warehousing in the retail sector to guarantee that goods are kept in stock and delivered on schedule. Retail warehouses require enough room to store goods and efficient tracking systems to keep track of stock levels and avoid stockouts. For safe and effective product storage across industries, warehousing risk management is essential. Many sectors may have different unique hazards related to warehousing, but it is possible to identify and reduce these risks with the use of efficient risk management systems. Warehouses can ensure that goods are stored safely, possible dangers are reduced and ultimately result in better business operations by putting in place the necessary steps.it is a very good study because it has conducted a practical study in the State of Egypt, but its results are for those who explain the main reasons for such risks. The case studies were not sufficient to reach adequate and convincing solutions and results. Starting with what this thesis ended, it will be clarified and sufficient case studies would be compared before the war and after the war in Yemen.

Success depends on understanding and managing risk while reinventing the business model to capture new business opportunities. The green transport ecosystem and value chain are becoming increasingly important features of world trade. The shipping process determines the efficiency of delivery to the customer. Innovative technology and government support infrastructure enhance mobile load, delivery speed, and service

quality, lowering operating costs, maximizing utility use, and conserving energy (Pfohl, 1998) .In warehouse and logistics, technology has a big impact on efficiency, productivity, and accuracy. This research also covered a number of the technologies utilized in warehouse and logistics services and explained how they are used. WMS, as it is commonly referred to, is a software program that aids in controlling and optimizing warehouse operations. WMS can automate pick and fill, shipping, and inventory control activities, which lowers errors and increases accuracy. Autonomous guided vehicles can pick up and carry objects around a warehouse without the assistance of a human. It can increase warehouse productivity and lower the chance of mishaps brought on by human mistakes. In addition, Technology based on radio frequency identification (RFID) RFID technology tracks and identifies items in a warehouse using radio waves. RFID readers can be used to track products' movement and position by attaching RFID tags, which enhances inventory management and lowers the possibility of loss or theft. Drones that operate independently in the management of inventory can be done using autonomous drones to track inventory levels and scan bar codes. Moreover, drones can be utilized to transport items within a warehouse, lowering labor costs and boosting productivity. Predictive analytics makes use of machine learning algorithms and data analysis to forecast demand and enhance warehouse operations. Predictive analytics can assist warehouses in lowering inventory costs and enhancing supply chain efficiency by analyzing data on inventory levels, shipping trends, and customer demand. This study clarified how to develop the logistics system in the Kingdom of Saudi Arabia by considering the ecosystem, but it did not clarify how the logistics system can be developed and protected in developing countries that do not have sufficient technological components and are not in stable security conditions such as the State of Yemen.

In the research *"Proceedings of the 9th International Conference on Education and New Learning Technologies"*, Hudáková, Míka, and Masár (2017) wrote that Existing businesses and companies are affected by various and unstable changes, as these changes in risk management and operations are not only affected by traditional threats, but are affected by various current conditions and new crises, and for this reason, managers are forced to deal frequently with risk management issues. We need to find and identify the essential skills and abilities of an effective manager in difficult situations. Accurate and

swift decisions to eliminate the negative effects of nature, technology, and social systems and deal with the consequences of accidents require well-prepared managers, professionals, and volunteers from businesses and governments**.** (Hudáková, Míka, & Masár, 2017).The research further emphasized that to enable professionals to successfully identify and manage risk, risk management education is a necessity. Standards and Expertise of Risk Management Professionals can benefit from risk management education by learning about different risk management frameworks and standards, including COSO, ISO, and NIST. Professionals can create efficient risk management plans with the aid of an understanding of these frameworks and standards. Risk assessment is a crucial component in risk management, and education in risk management can aid professionals in understanding various risk assessment methodologies, such as quantitative and qualitative risk assessment. The formulation of risk management strategies is also made possible through risk management studies, education, and research: Professionals can create risk management plans that efficiently identify and reduce hazards with the aid of risk management education. This entails determining risk triggers, creating backup plans, and monitoring risks to stop them from growing. This aids in reducing operational risks when researching and growing the subject of risk management since experts can recognize and control operational risks including supply chain interruptions, product flaws, and cybersecurity threats. The book enhanced communication abilities. Good communication is a prerequisite for effective risk management, and risk management education can assist professionals in honing their communication abilities to effectively explain hazards and risk management solutions. Therefore, the risk manager must be able and responsible to prepare the necessary precautionary measures, anticipate risks, avoid them, and limit them before they occur. React promptly to limit the increase in the problem and the resulting damages and damages resulting from them. See all that is new in risk management studies

Since Yemen is an unstable environment due to the political situation and wars, choosing a means of transporting goods inside and outside Yemen is a very difficult task, so the logistics experts in the organization must study the situation well and determine a method of transportation and a suitable storage place because the situation of storage and transportation does not only affect securing the goods but also on the whole supply process. This study also identified some of the problems faced by the supply chain in Yemen, such

as the lack of suitable trade routes in Yemen, which leads to the non-arrival of the goods at their appropriate time and quality. Damage may also occur to the goods due to the interruption and questions of transportation for long periods under the sun and high temperatures. This study also explained the modes of transport in Yemen, which are as follows: First: sea transport, which is less expensive than air transport but takes a longer time. Second: land transport, which is the most important and most used due to its flexibility, diversity, relatively low cost, and the possibility of using the infrastructure that already exists in the regions. For those affected by the war, as well as one of the most important characteristics, is the delivery of goods to all retailers in the region and from them to the consumer. Third: Air transport is the least used method in the current situation in Yemen due to the closure and destruction of most airports and not allowing any airline from any country to enter Yemen, which increases the cost the inflexibility of this method.

Margarita Blank, in her research(2021) "*Maritime transportation in humanitarian logistics: the case of Yemen crisis*" emphasized that certain storage arrangements must be put in place for the successful use of procurement methods. Choosing a means of transportation is a difficult task in disaster response. Humanitarian logistics makes it difficult to perform humanitarian operations because they work with limited resources. Therefore, resource allocation in humanitarian logistics is as important as the need for more cost-effective solutions in terms of transportation. The purpose of this book was to provide insights and increase knowledge about the use of sea shipping in the context of humanitarian logistics. (Blank, 2021). In this book, an aspect of the logistical aspects in Yemen was described, which is shipping from outside Yemen by sea and internally by land, but the author does not address any details about storage and warehouses and the risks they are exposed to because of the lack of previous studies on risk management in warehouses and logistics, comprehensive research will be made on risk management in Yemen. Risk-based audits Within a tax agency can only be implemented with three key organizational prerequisites: management structure, resources, and collaboration. Consensus regarding the overall goals to be accomplished and the ability of employees to perform the necessary measures to accomplish these goals are crucial components of a risk assessment. In Sweden, risk-based audits must be implemented with the technical ability to gather and comprehend data. Important elements include IT systems, including hardware

and software, and technological know-how for data administration. Both being able to comprehend the statistical importance of data and having the investigative abilities needed to look into data that could seem dubious are equally crucial.

Instead of focusing on individuals who have made mistakes on their forms, the Swedish Tax Agency aims to discover and select people who deliberately dodge their tax duties. Instead of focusing just on the data included in the tax return, an effort is made to comprehend the behavioral characteristics of taxpayers. Understanding the motivations and behavior of taxpayers is essential to developing a successful compliance plan. Developing the information required to comprehend taxpayer behavior and motivations is challenging in the absence of the three essential pillars of data, tools, and analysts. The foundation of risk-based audit systems is information and data. This improves the knowledge base and provides analysts with important insights regarding taxpayer behavior. Next, the outcomes of this analysis need to be prioritized. The Department prioritizes and identifies taxpayer groups that require greater attention by using agency plans and objectives. To apply the lessons learned from audits to future models, auditors must share information about their findings with IT professionals within the organization once target groups have been identified. Both central and regional data are gathered in Sweden. The President's Risk Management Group is informed of this information, the office and regional offices participating. Hazard Assessment, the team compiles and forwards to management a list of tasks that are prioritized, the selecting team is the selecting team. Head office managers, the selecting panel, which includes individuals from the region as well Which groups to target and which groups to target are determined by the selection team. There will be an implementation of audit strategies. This choice is determined by Data that is accessible as well as internal personnel competencies. These elements Ascertain the necessary tools.

Employee competence and knowledge are the cornerstones of risk-based auditing in Sweden. Administrative frameworks that align risk assessment with the overarching goals and tactics of the tax agency are also essential. These tools are just the beginning. Standard company planning and decision-making include risk assessment. It is essential to have both strong local engagement and central coordination. The exchange of information can be facilitated by organizing these interactions between the central and local offices.

(Dogan, 2011). Although tax risks and their role in ensuring appropriate risk management and finding solutions to them do not align with the goals of this research, this research provided a general overview of risk management and explained its importance in avoiding financial and tax risks in several countries, including Sweden. It does not enhance an organization's performance by controlling warehousing and logistics risks.

An interesting article by Saleem and Abideen titled "*Do effective risk management affect organizational performance*" analyzed that risks are rising as a result of globalization and fierce competition, and risk management is becoming essential. a crucial component of practically every organization's performance, particularly in the software development industry given their high-risk projects since there are risks involved in each stage of a project's development Establishing the context, identifying, analyzing, assessing, treating, monitoring, and communicating risks are the processes in the risk management process that enable ongoing decision-making improvement. One step in risk management is risk identification, which identifies potential risks to an organization's means of operation. Since it establishes the foundation for the organization's future efforts to develop and implement new risk control programs, it is regarded as the most crucial step in risk management. The organization's cultural practices and other factors influence the risk identification approach selected. Deliverables from the risk identification phase must include a risk list that at least suggests one way to address the risks that have been identified. see risk identification as a collaborative effort that examines project events about several risk categories and identifies those that could hurt the undertaking. The organizational environment has undergone significant changes, thus the risk identification process needs to be ongoing. (Saleem. & Abideen, 2011) .In their article, the authors explained many points related to risk management and its role in developing the company's performance. They spoke in detail about the stages and steps that must be followed in risk management, but the authors limited their research to the country of Pakistan, which is different from the environment of Yemen. By definition and nature, the risk is an occurrence that cannot be eliminated. There is a difference between risk and uncertainty, even though they are frequently used synonymously. Risk is the extent to which one is unclear about what will occur in the future. Uncertainty is defined as not knowing what will happen. Put differently, risk is the extent of our ambiguity regarding the future. In the

past, risk management was approached from a silo-based perspective within organizations, and self-assurance was seen as a technique for doing so. We are now living in the ERM era. Conventional risk metrics, such as value-at-risk (VAR), focused only on the drawbacks of taking risks. Furthermore, estimations of the operational and financial risk were made in Estimates of operational and financial risk were created in separate areas and never appeared to be integrated or ingrained in the businesses' core values. However, the risk profession has changed over time, moving away from viewing risk as exclusively bad. Professionals in risk management nowadays also highlight the advantages of taking risks.

When managers are questioned about a notion, they often say, that a risk management program is needed. Nonetheless, many organizations did not have a strong understanding of risk management until recently. The issue of a precise definition for ERM was resolved by the standards-setting Committee of Sponsoring Organizations of the Treadway Commission (COSO) in late 2004 with the introduction of its ERM framework. This framework provided a set of guidelines and a structure that helped organizations of all stripes profit, nonprofit, and government agencies—and all shapes and sizes big and small better handle their risky situations. Known as risk management, it's the art of striking the right balance between taking advantage of opportunities to make money and limiting losses. As this definition suggests, risk management is a crucial component of both strong corporate governance and sound management practices. Risk management is a methodical procedure consisting of actions that, when performed as a result, lead to better performance and decision-making. Risks must be identified, examined, assessed, managed, tracked, and communicated.

In a research titled *"Risk management, performance measurement and organizational performance"*, Ismail, & Ahm (2012) pointed that oorganizations can minimize losses and maximize gains by using this technique. Maximizing shareholder value is the main objective of risk management. Historically, insurance, brokers, and auditors were the first people that came to mind when discussing risk management. The task of the risk specialist was to minimize the harmful effects of risk exposures, as this was the main source of worry. The idea of ERM has surfaced in recent years. Both the positive and negative aspects of risk are highlighted in ERM (S, N, Ismail, & Ahm, 2012). Ismail

and Ahm discussed two important concepts, namely risk and risk management in general, with precise and detailed clarification, which were inspiring to expand the understanding of this research and made it easier to absorb and extract information and complete this thesis in a very appropriate manner. Unwanted disruptions in logistics can have an impact on organizations and erode their corporate strength, especially in the complicated market and business environment.

Nowadays, minimizing risks is essential to preventing losses for businesses. Unexpected external events, like earthquakes, or internal events, like the 2010 Toyota quality recall, can cause disruptions to an organization's logistical operations and lower performance. From the standpoint of operations flow, the study clarified risk management in the sector of logistics services. Enterprise performance assessment, risk management strategy, and the logistics industry's risk management procedure are among the subjects covered. There are several risk management frameworks and ideas discussed. The study's declared objective is to give organizations useful insights by comprehending the fundamental ideas of risk management in the field of logistics. A complex logistics network resulted from the complicated market and commercial environment, as well as from growing globalization. Logistics has added more services, like vendor-managed inventory and reciprocal distribution, to meet this complexity. Distribution from warehouses as a commercial tactic. Unwanted logistics disruptions also have an impact on businesses and erode their viability. For instance, aeroplane plans were affected by the 2010 Icelandic volcanic eruption; additional factors including pay Factories may have to move as a result of the rise. The movement of products, services, and associated data from the point of origin to the site of consumption is stored to comply with client expectations. From the logistics function's point of view, physical delivery and storage are efficiently managed to satisfy the business needs of the organization. The Supply Chain Management Council states that you should strive to accomplish the following seven objectives in logistics management: Deliver the appropriate product at the appropriate time, location, and quality, along with the appropriate amount and cost. the ideal customer. Coordination of all seven objectives for all external partners and internal departments is difficult.

Wee, Blos, & Yang (20012) wrote in their article "*Risk management in logistics"* that a global firm needs the cooperation of both upstream and downstream partners to achieve all of these aims. Effective and efficient logistics management has become a commercial need. a plan for long-term, sustainable business growth. Work together, plan, and exchange information with everyone involved in the supply chain, from suppliers to customers. Regarding information sharing and ongoing development Throughout the entire process, information technology assisted logistics management with data sharing and communication. This lowers the supply chain's level of uncertainty as well as the complexity of the physical process flow. Nevertheless, the possibility of a risk attack will always have an impact on any logistic system. The business must maintain operation performance under all conditions to compete in the low-profit margin market. The risk management strategy, the risk management procedure in logistics, the enterprise performance assessment, and the logistics procedures are covered in the parts that follow. (Wee, Blos, & Yang, , 2012)

Wee, Blos, and Yang discussed logistical risk management and explained in an accurate and detailed manner the logistical process and the supply chain process. They presented realistic events and problems that occurred and inferred from them emphasizing the problems and risks they caused. The article showed a clear lack of sufficient information on logistical risks and how to avoid them, reduce them, and treat them if they occur. Logistics is defined as the "process of planning, implementing, and controlling procedures for the efficient and effective transportation and storage of goods including services, and related information from the point of origin to the point of consumption to conform to customer requirements" by The Council of Supply Chain Management Professionals. Transportation and inventory control are two crucial functional areas in logistics, and both incoming and outbound logistics are major operations. Many parties are involved in a typical logistics system, including manufacturers, distributors, wholesalers, retailers, and suppliers of raw materials. It makes sense that a logistics system can only function successfully and efficiently when each of its constituent parts is working correctly. Put another way, the logistics system will quickly come apart and fall short of its goals if any member performs poorly. The likelihood of a "logistics systems failure" is larger than

ever in the modern era due to the increasing globalization of logistics systems and their growing membership.

It's a widely held research titled *"Risk management of logistics systems"* by Choi, Chiu, and Chan (2016) viewed that in the age of global commerce, logistics systems are exposed to numerous risks. For instance, the occurrence of mishaps and political unrest may cause market interruptions that cause significant losses for the supply chain participants. A significant degree of operational risk results from the logistics system's high levels of supply and demand uncertainty. Catastrophes, like the 2004 Indian Ocean tsunami and the 2011 Japan mega earthquake, put a strain on logistical networks and necessitate the need for emergency supplies. Popular business strategies like outsourcing logistics services and forming strategic alliances also increase the risk associated with logistics systems (Choi, Chiu, & Chan, 2016). Choi, Chiu, and Chan summarized the principles of the supply and storage chain and their importance in increasing and improving companies' revenues from various aspects. He also mentioned that political problems and natural disasters hurt the ease of the supply and storage process, and this point has a direct connection to this thesis, as margarine suffers from political problems that led to a defect in logistical management and storage. Many international corporations still handle data processing and material transportation within their warehouses using "paperwork" or without using a computerized technique of data organization. transactions involving picking, warehousing, shipping, and receiving. Risk management is also something that businesses should be concerned about since in the event of a calamity, documentation will be extremely exposed. By offering a web service and using SMS to deliver information about the amount of stock in the warehouse to a mobile device, this research aims to assist small manufacturing companies in improving their business and warehouse management. Ultimately, this research will serve as a solution to the aforementioned issues. Up until the data warehouse was processed, this system tracked the incoming materials for every company and produced reports that were helpful for the division's decision-making. Supplies are one of the key components or divisions in many manufacturing organizations. Supplies must be periodically and frequently monitored because they have an impact on the financial unit. Furthermore, the quantity of defective items (i.e., reject items) that are returned or restored to their pre-defect state must still be calculated. The availability of raw

materials must be sufficient to meet the demands of the production schedule since insufficient supply will impede the process of manufacturing.

The research *"Warehouse management system"* by Sahuri and Utomo (2016) pointed out that the company may suffer if the consumers' ordered products are not fulfilled by the scheduled time. On the other hand, if raw material supplies are inadequate, there may be excessive damage, loss of raw resources, and storage costs. A "warning system" is any biological or technological device that a person or organization uses to notify others of a possible threat. Its objective is to enable the person who designed the warning system to foresee the hazard and take appropriate action to mitigate or eliminate it. An organization's warning system can aid in the quicker identification of issues. Being aware that the business can deal with and even avoid that problem more readily (Sahuri, & Utomo, 2016). Sahuri and Utomo here discussed warehousing management and explained that there are still some companies in some countries that use paper transactions to record exports and imports to and from warehouses, this is what attracted attention and focus to choose this article because it emphasized an important point used by some companies in Yemen, and this study lacked certain focus on a series supply and its integration with storage because they are two closely related departments. In comparison to its roots in engineering and health and safety, risk management has advanced significantly. Nowadays, it is employed in a variety of commercial, industrial, and other types of enterprises for a wide range of purposes. As a result of external pressures from statutes and regulations as well as internal initiatives, an increasing number of businesses are creating and developing risk management facilities.

A research of press job postings titled *"What is strategic risk management"* by Frigo and Anderson (2011) indicated that risk managers are frequently the highest compensated senior staff members. You will have a better understanding of why they ought to be so highly prized at the end of this preamble. A survey of press job postings indicates that risk managers are frequently the highest compensated senior staff members. You will have a better understanding of why they ought to be so highly prized at the end of this preamble. Organizations that can recognize the need for change, create the necessary modifications and carry them out more successfully and efficiently than their competitors

will have a greater chance of surviving and growing in a world where change is happening quickly. People who are unable to adjust to change will probably end up dead (Frigo & Anderson, 2011). Frigo and Anderson's research was based on risk management strategies, how risk management was established, and how it has an impact on all industrial and other sectors, as risk management has a major role in developing and improving the performance of companies and different industries. The book, which focused on industrial firms especially, examined hazards in the realm of logistics. Risks related to supplier selection, material supply schedules, production and warehouse logistics organization, ERP system utilization, factors of supplier quality and dependability, and the effects of production plan modifications are all covered. In areas related to the product life cycle, such as supplier selection, material warehousing, production, product distribution, and product service, it handles logistics.

Respecting the connections between these domains is crucial as they can aid in effective risk management. The dangers in the aforementioned fields are described, along with precautions to take. The industrial enterprise's and its projects' risk management is contextualized concerning logistics concerns. It is emphasized that conducting business in the modern environment requires an understanding of risk. Furthermore, the coexistence of possibilities and risks is portrayed as risk. Both of these risk variables need to be balanced for the firm to prosper. In addition to the author's experience with risk management in railway vehicle design, manufacture, and supply companies, this study makes use of actual cases. In today's business world, logistics is crucial since it may give organizations a competitive edge, particularly in terms of cost and time, which are two of the most crucial aspects of competitiveness. Every firm suffers uncertainties and unforeseen developments as a result of the turbulences in the global markets, which can significantly impact the risks associated with their operation. This is particularly true for industrial businesses that engage in a wide range of activities, from acquiring raw materials to providing product maintenance. Having effective risk management gives you a clear competitive edge. For this reason, it's critical to comprehend risk and risk management concepts and to include them in logistical standard operating procedures. When we talk about risk, we typically understand some unfavorable circumstance that results in a loss for the business. However, two examples demonstrate how risk and the potential for some

merit and profit are typically tightly related. Businesses can only continue to operate if they are making money. The only way to turn a profit is to acquire a high enough order volume.

Unfortunately, the market is unstable, thus orders must be filled even if manufacturing is at capacity when product delivery is requested. The organization cannot guarantee that the original delivery time will not alter, even if it is successful in securing an order that precisely meets its capacity load. The causes can vary greatly: in the case of public tenders, disagreements on the outcome of the tender may arise, and the client may experience financial difficulties. The selection of suppliers is another example. Choosing a new supplier can help reduce the cost of the materials. The supplier's reduced price may result in cost savings for the organization, but it could also entail delays and extra expenses if the supplier turns out to be unreliable and produces subpar goods.

In 2012 Korecky published an article titled *"Risk management in logistics"* in which he analyzed that the most common ways that risks arise are when new products are introduced, complicated projects are completed, new suppliers are chosen, or the volume of orders that are received increases (Korecký, 2012). The key elements of risk management in logistics were outlined in the article. It demonstrates how risk stems from uncertainty and that it can affect an organization's operations or projects in both good and negative ways (posing a danger or an opportunity). Within the framework of the product life cycle, risks in logistics can occur. Planning the flow of materials during production and storage as well as supplier selection are the first steps. The success of risk management during product manufacturing and operation is significantly impacted by the identification of hazards and the creation of risk treatment programs during these two phases. In logistics, taking chances can pay off. It is managed using a six-step risk management approach that includes a preliminary examination of the risk management context, risk identification and analysis, the creation of treatment techniques and plans, and the utilization of these plans during risk management. Nothing about warehousing is covered in this study; risk management in logistics is merely presented to pique interest. Based on the author's real-world experience, the risk management strategy described in this paper has been successfully implemented in numerous projects and organizations.

2.2. Theoretical Framework and Hypothetical Development

2.2.1. Overview

Risk is a component of all projects; the zero-risk project is not worthwhile. This is not just common sense; it also acknowledges that taking on a small amount of risk will probably result in a higher and more desirable degree of gain in exchange for the resources invested in the endeavor. Threat and opportunity are both components of risk. Organizations that have a better understanding of the risks and are better able to manage them can not only prevent unexpected disasters but also work with tighter margins and less contingency, freeing up resources for other projects and allowing them to take advantage of profitable investment opportunities that might otherwise be rejected as being "too risky." (Chapman & Ward, Project risk management processes, techniques and insights, 2003) . The management of warehouses and logistics includes risk management as a key component. It entails locating, evaluating, and minimizing possible hazards that might interfere with the supply chain's efficient operation. The first stage in risk management is to identify the hazards that may develop in the supply chain, and risk assessment serves as the theoretical foundation for risk management in storage and logistics. The management of warehouses and logistics includes risk management as a key component. It entails locating, evaluating, and minimizing possible hazards that might interfere with the supply chain's efficient operation. The first stage in risk management is to identify the hazards that may develop in the supply chain, and risk assessment serves as the theoretical foundation for risk management in storage and logistics. And implementing control measures to prevent or mitigate risks.

Virtual Development; Consider the fictitious case of a warehouse that faces the possibility of theft to demonstrate how the theoretical framework might be utilized in real-world situations. Risk Evaluation assessing potential risk sources is the first step in managing the theft risk. This may take into account elements like the warehouse's location, its security protocols, and the kinds of items kept there. Risk Evaluation The following stage is to assess the risks and any potential repercussions after identifying potential risk sources. Assessing the likelihood of theft and its effects on the supply chain may be part of this. Risk

Reduction The warehouse might use several strategies to lessen the danger of theft. They could, for instance, put in closed-circuit television cameras to watch over structures, pay security guards to patrol the warehouse, and use key cards or biometric scanners as access control methods. Risk Assessment and Management Monitoring and controlling risks is the last step in mitigating the risk of theft. This can entail performing frequent reviews of the security protocols in place to make sure they are efficient and putting new protocols into place as necessary. The theoretical framework offers a methodical way to handle the risks involved in logistics and warehouse management. Warehouses can ensure the smooth operation of their supply chain and lessen the impact of unforeseen events by identifying, assessing, mitigating, and monitoring potential risks.

2.2.2. The Concept of Risk Management in the Organization

Risk management refers to the process of identifying, assessing, and controlling risks faced by an organization, individual, or entity. The goal of risk management is to minimize the negative impact of risk events while maximizing the potential positive outcomes. It involves a systematic approach to analyzing the risks that could impact an organization's objectives, and then implementing measures to either avoid or minimize those risks. (Iso, 2009) By avoiding the potential negative effects of unforeseen events, effective risk management can assist businesses in achieving their objectives. A proactive approach to risk management enables businesses to spot possible risks and address them before they develop into significant issues, putting them in a better position to handle unforeseen difficulties or disruptions. Risk management in an organization is the process of dealing with and controlling risks effectively and systematically so that the organization can identify and evaluate potential risks and plan strategies to deal with and control them. Risk management includes many activities such as risk analysis, risk assessment, risk response planning, implementation of preventive and precautionary measures, and follow-up and evaluation of results. Risk management is an essential part of the operations of running a business and is in line with the defined goals and strategies of the organization. When risks are managed properly, an organization can identify potential risks, reduce exposure levels, and achieve sustainable stability and growth.

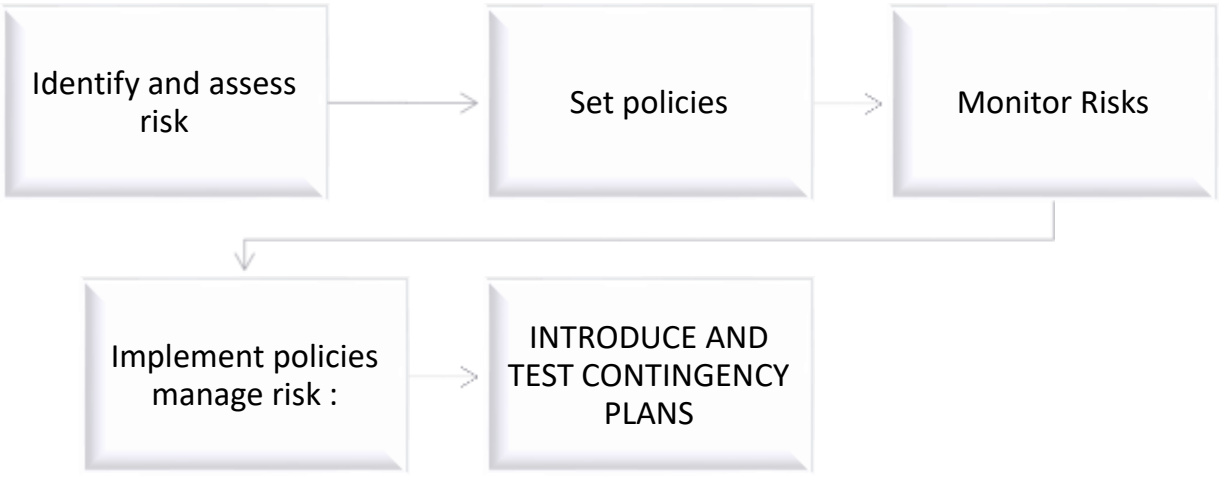
Risk management in an organization requires strong cooperation between all stakeholders, including senior management, employees, and those responsible for risk analysis and assessment. Risk analysis and assessment is one of the main tools in risk management, and it can be used to identify potential risks and determine the best strategies to deal with them.

2.2.3. Risk Management Strategies and Processes

Even since the late 1990s, risk analysis and the creation of risk management procedures have advanced significantly over the past ten years. Therefore, the 1997 book Project Risk Management by Chapman and Ward has to be updated. (Chapman & Ward, Project risk management processes, techniques and insights, 2003)The procedure of risk management typically includes the following steps: Identification of risks: Finding potential dangers that an organization or person may encounter is the first stage in risk management. This can be done through various methods, including brainstorming sessions, a review of past incidents, and industry analysis. Assessment of risks: As soon as the hazards are known, the next step is to assess their impact and likelihood of occurrence. This aids in ranking the risks and identifying those that require the most attention. Control of risks: Based on the results of the risk assessment, the organization or individual can implement measures to control the risks. This can include strategies such as risk acceptance, risk transfer, risk reduction, or avoidance. Monitoring and review: The final step in risk management is to continuously monitor the use of risk management measures and make necessary adjustments. This helps to ensure that the organization or individual stays on track and is protected from potential risks. Risk management is an ongoing process that requires ongoing monitoring and adjustment. Effective risk management can support administrations or individuals to make wise judgments, prevent losses, and accomplish their goals. (Culp & Christopher , 2002) Risk management strategies and processes include risk analysis: At this stage, potential risks that could affect the organization are identified, analyzed, classified, and assessed, and their potential impact and likelihood of occurrence are determined. Risk response planning: Based on the results of the risk analysis, the risk management team plans the response to each potential risk. This includes defining the preventive and precautionary measures to be taken and defining the resources required and

the appropriate timetable for carrying out the actions. Implementation of preventive and precautionary measures: This stage includes the implementation of plans that have been developed to deal with risks. This includes applying specific preventive and precautionary measures and providing the necessary resources to implement them. Monitoring and following up on the results: At this stage, the measures taken are monitored and followed up, their results evaluated, and the necessary adjustments are made in strategies and plans if necessary. To deal with risks, periodic reports to assess the efficiency of risk management.

Figure 3: *Risk Management Strategies and Processes*



2.2.4. Types of risk management in business

There are several types of risk management strategies that organizations can implement to address the different types of risks they face. Some of the most common types of risk management include Operational risk management, which entails handling daily hazards that an organization faces, such as issues with tools, procedures, or staff. Financial risk management: This involves managing financial risks such as currency

fluctuations, interest rate changes, and credit risk. Strategic risk management: This involves managing risks associated with an organization's overall strategy, such as changes in the market or technology, or the entry of new competitors. Compliance risk management: This involves managing risks associated with compliance with laws, regulations, and industry standards. One of the most important types is Reputation risk management: This involves managing risks to an organization's reputation, such as negative publicity or loss of consumer trust. the types also include Insurance risk management: Which involves using insurance policies to transfer the risk of potential losses to an insurance company. Project risk management: This involves managing risks associated with specific projects, such as delays, cost overruns, or technical problems. (Sadgrove, 2016)Each type of risk management strategy may involve a different set of techniques and approaches, depending on the specific risks faced by an organization. For example, financial risk management may involve the use of financial instruments such as derivatives, while operational risk management may involve implementing new processes or procedures to reduce the likelihood of problems. Effective risk management requires a tailored approach that is specific to the organization's needs and goals.

2.2.5. The Relationship of Logistics and Supply Chain with Risk Management

The chain of transportation and storage operations from the first supplier to the final consumer have altered through time, developing gradually from a logistical chain to a supply chain (Clarke & Cooper, 2000, pp. 173-187). This change has had a wide range of effects. Here, risk management refers to newly emerging and altered supply chain risks. As the chain evolves, so do the quantity, nature, and extent of the risks as well as the overall risk exposure. Since the supply chain consists of several components, each of which is often a separate business, Company risks also evolve. Different types of company risks have gained increasing attention**.** (Paulsson, Supply chain risk, 79-96.) Risk management in logistics refers to the procedure of classifying, assessing, and adjusting the risks faced by logistics operations to minimize their negative impact and maximize the potential positive outcomes. Logistics operations can be complex and subject to a variety of risks, including risks related to transportation, warehousing, and supply chain management. Effective risk management in logistics is critical for ensuring the efficient and cost-

effective operation of supply chain operations. Some common risks faced by logistics operations include Transportation risks; Which risks can include unexpected delays, losses or damage to goods during transit, or operational problems with vehicles or infrastructure Supply chain risks; risks can include disruptions to the supply chain, such as supplier bankruptcy, natural disasters, or geopolitical tensions. To manage these risks, organizations can implement a variety of risk management strategies, such as Risk mitigation; This involves implementing measures to reduce the likelihood or impact of a risk event. For example, implementing a backup transportation plan in case of transportation disruptions, or implementing security measures to prevent theft in a warehouse. Risk transfer; By employing insurance to transfer the risk of damage to goods during transit, for example, the risk is transferred to a third party. Risk acceptance; This includes compliant the risk and preparing for its potential impact, such as by implementing contingency plans to address supply chain disruptions.

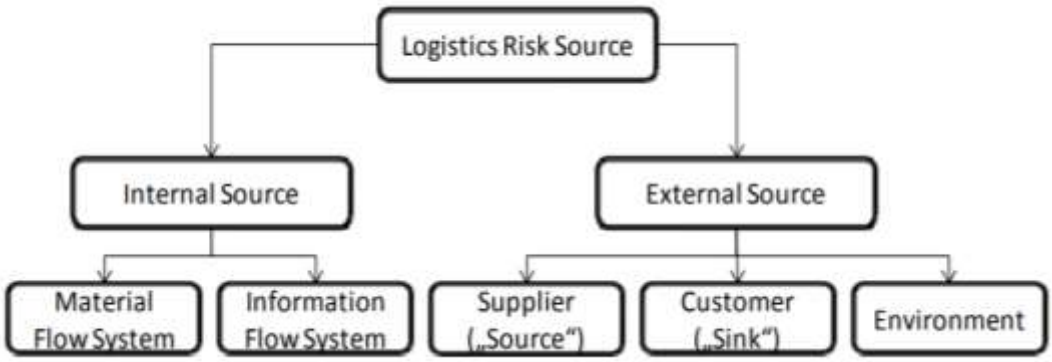
In addition to implementing specific risk management strategies, effective risk management in logistics also requires ongoing monitoring and review to guarantee that risks are being successfully managed and that risk management processes are evolving to keep pace with changes in the logistics environment (Kwak, Seo, & Mason, 2018)Logistics and supply chain management are two interrelated fields that play a crucial role in ensuring the smooth flow of goods and services from production to consumption. Both of these fields are concerned with the efficient and effective management of resources and the coordination of activities to meet the needs of customers. Risk management, on the other hand, is the method of classifying, assessing, and ranking the dangers to a company's supply chain operations, and creating plans to lessen or avoid such risks. Effective risk management in logistics and supply chain is critical to ensuring the continued operation of these systems and the ability to deliver goods and services to customers as expected.

There are several types of risks that can impact logistics and supply chain operations, including Supply chain disruptions; Disruptions can be caused by natural disasters, political unrest, transportation disruptions, and supplier bankruptcy, among other factors. Capacity constraints: The inability to meet demand due to insufficient production or storage capacity can result in stockouts or production slowdowns. Cost volatility;

Fluctuations in raw material costs, energy prices, and other inputs can result in sudden and unexpected increases in costs. Quality problems: Poor-quality goods can impact the reputation of a company and lead to returns, warranties, and legal action. (Fuchs & Wohinz, Risk management in logistics systems, 2009)To mitigate these risks, organizations need to have effective risk management strategies in place. This includes developing backup plans, diversifying suppliers, maintaining inventory buffers, and implementing quality control procedures, among other measures. Logistics and supply chain management and risk management are interconnected, and effective risk management is essential to the success of these operations. By considering and managing risks proactively, organizations can ensure the continuity of their supply chains and maintain the confidence of their customers.

2.2.5.1 Logistics Risk Source

Figure 4 :*Logistics Risk Sources*



This tree can surely be broken down into a few lesser layers of system components and subsystems. The advantage of not being overly restrictive for the requisite requires inventiveness for the risk situation development stage, however, this is provided by the degree of abstraction of logistics risk sources, which has been thoroughly examined in actual applications (Fuchs & Wohinz, Risk management in logistics system, 2009)

Logistics companies face internal and external risks that affect the performance of logistics operations and services provided to customers. Sources of internal and external logistical risks will be presented and discussed in this research. One of the most important and prominent internal risks is lack of experience; Lack of experience among logistics

workers may lead to errors and delays in logistics operations. Any supply chain needs warehousing Lack of warehousing A shortage of warehousing space can lead to delays in shipping and delivery of goods. Non-compliance with quality; Non-compliance with standards and quality may result in damage to goods and increase rates of returns and claims. Just as time is an important thing to complete any business process, failure to adhere to deadlines can lead to delays in delivery and increased transportation costs. Poor internal security can lead to theft of goods and property damage. External risks are no less important than internal risks, For example, geopolitical risks include wars, political conflicts, economic sanctions, and geopolitical changes that could affect transportation and supply operations. This is the current situation in Yemen, where geopolitical changes in Yemen are among the biggest risks that companies face. Weather changes Adverse weather conditions may lead to delays in transportation and increased transportation costs. Environmental risks: Environmental risks, such as pollution and natural disasters, may lead to delays in transportation and damage to goods. Price changes: Price fluctuations for fuel and

2.2.6. Risk Management in Warehousing

Warehousing is a complex activity with many moving pieces that are required to successfully support supply chain management in the present era of industrial economics. Risk management in warehouses is thus a major bone of contention to preserve sustainability with global supply chain processes and to accommodate high productivity performance**.** (Md Hanafiah, Karim, Abdul Rahman, & Mohammed, A. M., An Innovative Risk Matrix Model for Warehousing Productivity Performance, 2022) Several potential risks can be identified in the warehouse sector, including Security risks; Warehouses may be exposed to theft or fraud by employees or unauthorized visitors. These risks can be reduced by applying strict security measures and training staff to deal with emergencies. Environmental risks; This type of risk can include the occurrence of fires or leakage of hazardous materials, and this can be avoided by following safety and prevention measures and maintaining warehouse cleanliness. Logistics risks; These are the risks related to storage, transportation, and distribution. Such risks may include delay in delivery of the goods, loss, or damage. These risks can be reduced by using modern transfer and storage

technologies and by updating software and hardware. Economic risks; as economic and political changes can affect the demand for stored goods and their prices, and these risks can be mitigated by diversifying revenue sources and organizing commercial relations in a way that achieves greater stability for the commercial process.

Risk management in the warehousing sector means taking the necessary measures to reduce potential risks that could affect inventory, shipping, delivery, warehousing, and distribution. Among these risks is the loss of stock: this can happen as a result of theft, damage, corruption, or natural disasters, such as fire or flood. The slowdown in operations: This can cause delays in delivery and increase production, storage, and distribution costs. Non-availability means that products are not available at the specified time and in the required quantity, which leads to loss of customers and reduced revenues. We can reduce these risks by following some procedures and developing risk management plans dealing With emergencies, identifying potential risks and developing procedures to deal with them, Continuous training of employees on safety and security practices, prevention of fire and natural disasters, and handling hazardous materials, Use of modern security systems, such as early warning systems, surveillance cameras, and firefighting systems, Good inventory planning, and material flow control and products carefully, and ensure the availability of materials on time. Conduct periodic audits of the stock to ensure its integrity and to verify the presence of the required products in the correct quantit**y.**

2.2.6.1 Common Risks Management in warehousing

Risk management in the warehouse is critical to ensuring the safety of employees and the security of goods. To reduce these risks, there are some common stocking hazard management practices such as safety training and equipment. Proper safety training and equipment such as hard hats, safety glasses, gloves, and other protective gear can help prevent accidents and injuries. Fire prevention can help. Installing smoke detectors, sprinkler systems, and fire extinguishers to prevent fires. Staff should be trained in fire prevention and evacuation procedures. Security Measures installing security cameras, access control systems, and alarms can help prevent theft, vandalism, and unauthorized access. Regular Inspections Conducting regular inspections of the warehouse, equipment, and machinery can help identify potential hazards and prevent accidents. Hazardous

Materials Management Proper storage and labeling of hazardous materials and training of personnel in their handling and disposal can prevent accidents and ensure compliance with regulations. Ergonomic Design Designing a warehouse with ergonomic principles in mind can help prevent musculoskeletal injuries and increase productivity. Emergency Preparedness Having an emergency response plan can help employees respond quickly and effectively to emergencies such as fires, natural disasters, and medical emergencies. By implementing these risk management practices, warehouses can create a safe and secure work environment for their employees and protect their goods and equipment from damage and theft.

Risk management in warehousing involves identifying, assessing, and prioritizing potential risks to the operations and assets of a warehouse and implementing measures to minimize or mitigate their impact. Some common risks in warehousing include

Figure 5 : *Common Risks in Warehousing (Prepared by The Researcher)*

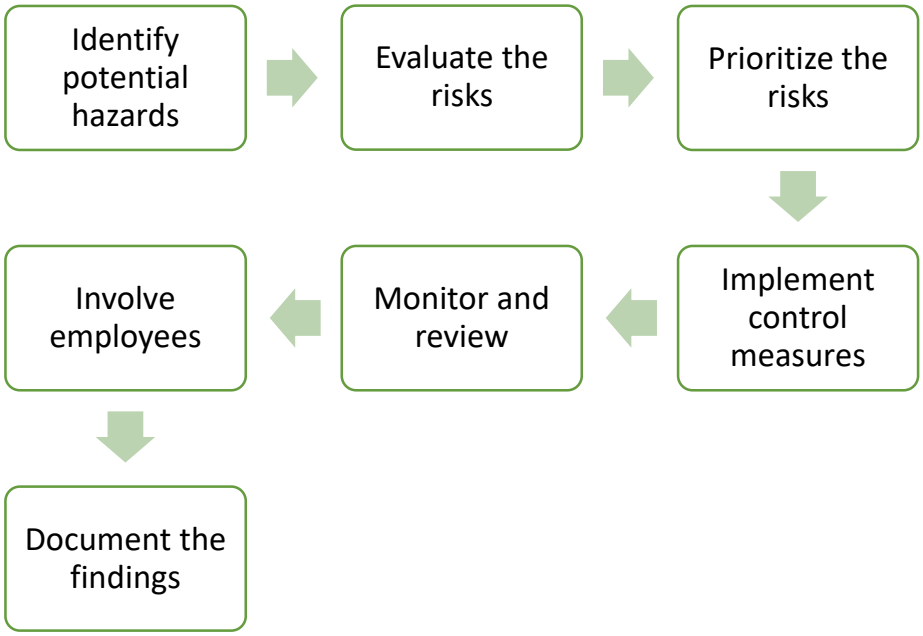
Physical damage or loss of goods: This can occur due to accidents, theft, natural disasters, or other unexpected events. Health and safety risks: Warehouse employees and visitors may be exposed to health and safety hazards such as fire, hazardous chemicals, and heavy machinery. Operational disruption: Disruptions to operations can result from equipment failure, power outages, labor disputes, or other events. Data security and confidentiality: Warehouse management systems and other computer systems may contain

sensitive information that needs to be protected from unauthorized access or theft (Md Hanafiah, Karim, & Abdul Rahman, An Innovative Risk Matrix Model for Warehousing Productivity Performance, 2022)

2.2.6.2. Methods for Conducting a Warehouse Risk Assessment

A warehoUse risk assessment is an evaluation of potential hazards and risks present in a warehouse setting, to identify and mitigate these risks to prevent accidents and ensure a safe working environment. (Tubis & Werbińska-Wojciechowska, 2021)

Figure 6: *Steps to Perform a Warehouse Risk Assessment (Prepared by The Researcher)*

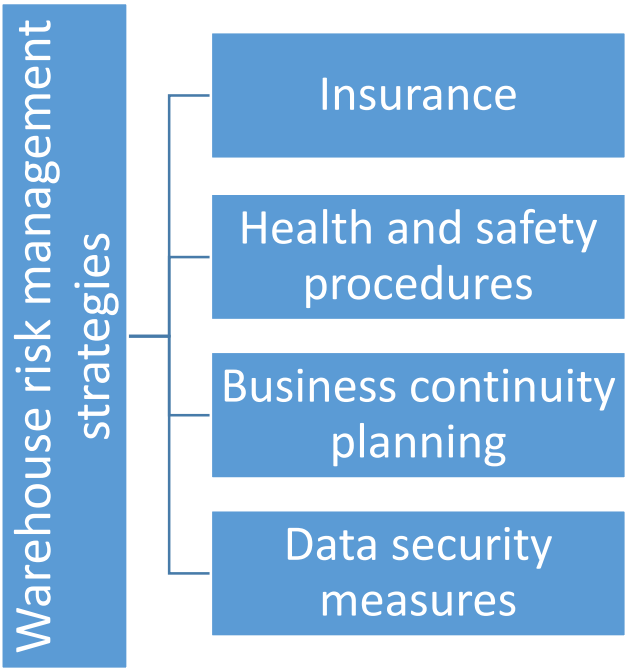


Here are the steps to perform a warehouse risk assessment: first, identify potential hazards; Start by conducting a walk-through of the warehouse and identifying any potential hazards, such as slipping and tripping hazards, heavy machinery, hazardous materials, fire hazards, and electrical hazards. second, Evaluate the risks; For each identified hazard, assess the likelihood and potential consequences of an accident or injury occurring. Third, Prioritize the risks: Based on the risk assessment, prioritize the hazards that pose the greatest threat, taking into account both the likelihood and consequences of an accident. fourth, implement control measures: For each high-priority hazard, implement control measures to reduce the risk. (Tubis & Werbińska-Wojciechowska, 2021)This may involve

installing safety equipment, providing training to employees, or putting policies in place to limit access to dangerous locations. Fifth, Monitor, and review: Regularly monitor the warehouse to ensure that the controls are working properly, and identify any potential new dangers. Regularly review the risk assessment and update it as necessary. sixth, involve employees: Encourage employees to report any hazards or potential risks they observe in the warehouse. Consider involving employees in the risk assessment process to get their input and ensure their buy-in for the control measures being implemented. Seventh, Document the findings: Document the findings of the risk assessment, including the hazards identified, the control measures implemented, and the results of any monitoring and review. This will help to ensure that the risk assessment is up-to-date and that everyone involved is aware of the identified risks and the steps taken to control them.

2.2.6.3 Managing Warehouse Risk

Figure 7: *Warehouse Risk Management Strategies (Prepared by The Researcher)*



To manage these risks, warehouses can implement various risk mitigation strategies, including; insurance, having insurance coverage can help mitigate the financial impact of risks such as theft, fire, and natural disasters. Health and safety procedures; Implementing health and safety procedures and training employees on proper procedures

can minimize the risk of injury or illness in the workplace. (Finch, 2004)Business continuity planning: Having a plan in place for how the warehouse will continue operations in the event of a disruption can help minimize downtime and ensure the continuation of business. Data security measures; Implementing strong security measures such as encryption and regular backups can help protect sensitive data from theft or loss.

Risk management in warehousing is an important aspect of ensuring the safety and security of assets and operations. By identifying potential risks and implementing appropriate mitigation strategies, warehouses can minimize their risk exposure and ensure a more stable and secure environment**.** From another point of view, Warehouse risk management is the process of evaluating and analyzing the potential risks that the store might face and taking actions to reduce these risks. One of the important ways to manage warehouse risks is good planning. Good planning requires determining appropriate quantities of inventory, appropriate space requirements, and putting in place appropriate safety procedures. Demand must be assessed and future levels of demand predicted to determine the quantities needed. Training and Supervision Staff who manage the store must be trained in safety practices and preventive measures and supervised regularly to ensure compliance with the applicable procedures. Use of Appropriate Technologies Automation, monitoring, and inventory control techniques should be used to reduce risk. Examples of these technologies are access control systems, security cameras, and inventory management software. Quality Verification The quality of stock materials and their suppliers should be checked and quality reports used to identify hazards and take appropriate safety measures. Periodic maintenance Periodic maintenance of the equipment and tools used in the store must be carried out and the necessary repairs must be carried out immediately. Insurance can be purchased to cover potential risks, such as damage, theft, or accidents. Warehouse risk management requires a combination of good planning, training, supervision, and the use of technology

2.2.6.4. The Relationship of Warehousing and Risk Management

Risk management practices in a warehouse Improved financial performance, warehouse productivity, and competitive advantage are all benefits of effective risk management. The warehouse managers can effectively manage all risks and bounce back

swiftly from setbacks. Companies from all industry sectors might experience losses because risks can have a substantial impact on a business's performance in the short and long term unless they approach this issue as a priority and in a systemic way. Therefore, risk management needs to be continuously taken into account when organizing logistical operations. Because storage is a step in a company's supply chain. (Muha, Škerlič, & Erčulj, 2020)In terms of warehousing, proper product handling and storage can help reduce the risk of damage or loss. For example, implementing inventory management systems and conducting regular inventory checks can help ensure that goods are stored and tracked properly, reducing the risk of theft or misplacement.

In the supply chain, risk management efforts must address a variety of potential problems, such as supplier disruptions, transportation delays, and quality control issues. To lessen these dangers, Businesses can employ a range of tactics, like broadening their supplier base, implementing contingency plans for transportation disruptions, and performing regular audits of suppliers to ensure they meet quality standards. Overall, an effective risk management strategy must consider all aspects of the supply chain and warehousing, from procurement and production to transportation and storage. By working together, these elements can help minimize the risk of disruptions and ensure the smooth flow of goods and materials throughout the supply chain. (Sahuri & Utomo,, 2016)There is a strong relationship between risk management and warehouses, as taking into account risk factors can lead to reducing the risks arising from operations related to warehouses. In the context of risk management, potential risks are identified, evaluated, and classified and the best ways to deal with them are determined. Among these risks may be risks related to inventory management, such as risks resulting from the inability to meet increased demand or loss due to overstocking or shortage of inventory. By using risk management strategies, organizations can identify and reduce these risks, and improve overall inventory management. Thus, risk management and inventory work in an integrated way to improve the efficiency and efficiency of the organization in general.

2.2.7. Inventory Planning and Risk Management Framework for Supply Chain Interruption and Disaster Relief

In the delivery of supplies, equipment, and labor to support first-response activities after a disaster strikes, government agencies, not-for-profit groups, and private enterprises frequently assume major roles. These organizations must make difficult logistical decisions to guarantee that the proper supplies—including persons and equipment—are available at the proper times and in the proper quantities. The uncertainty around anticipating whether or not a hypothetical danger would materialize into an emergency makes such logistics planning decisions much more difficult. (Lodree Jr & Taskin, 2008)Risk management in logistics is a critical concern in any country, but becomes more complex and challenging in countries where wars are taking place. There are some key considerations for effective risk management in logistics in such environments: Safety and Security; The priority in risk management in logistics in war-torn countries is to ensure the safety and security of people and cargo. This includes taking measures to reduce the risk of physical harm to logistics personnel, such as providing security guards, using safe transportation, and using fortified warehouses to protect goods. It is also necessary to comply with local regulations and international laws to avoid legal penalties and protect the reputation of the organization. This includes complying with all customs regulations and obtaining the necessary permits and licenses to operate in the country. Careful selection of suppliers and partners is critical to minimizing risks in logistics in war-torn countries. Partners and suppliers should be carefully screened for their reputation, track record, and reliability. The company needs to work on continuous planning to ensure the continuity of logistical operations in the event of disruptions caused by war, such as transportation delays, supply chain disruptions, and infrastructure damage. Prominent among these aspects is the management of communication and information is vital in managing risks in logistics in war-torn countries. Logistics personnel must be in constant contact with local partners, suppliers, and authorities to ensure they are aware of any changes in the security situation or regulatory environment. Monitoring and Reporting: Monitoring and reporting of logistics operations is critical in identifying potential risks and taking corrective action. Monitoring and reporting can help logistics managers identify areas of risk, such as weaknesses in the supply chain, and take steps to mitigate those risks. (Blank, Maritime

transportation in humanitarian logistics, 2021)Managing risk in logistics in war-torn countries requires a comprehensive and coordinated approach that includes safety and security measures, regulatory compliance, careful partner selection, continuity planning, communication and information management, monitoring, and reporting. By taking a proactive and integrated approach, logistics managers can help reduce the risks associated with operating in a volatile environment and ensure timely delivery of goods to their destination.

CHAPTER 3

METHODOLOGY

3.1. Research Design

The research is designed to answer the research questions. (1) The research problem was conducted using an analytical research design. (2) The study sought to describe the situation by examining the changing relationships. (3) The study describes and defines the topic by defining the characteristics of the issue under study. The researcher relied on this method to obtain the latest and most relevant information on the subject of the study. It also helped the researcher critically analyze the problem in question to extract more specific and detailed information that would benefit the research study. The descriptive-analytical study was conducted in Yemeni companies and institutions among the employees and managers of the Logistics and Warehouse Department.

The researcher employed a comprehensive set of data collection tools to gather information for the study. Firstly, surveys were administered to employees and managers of the Logistics and Warehouse Departments in Yemeni companies and institutions. These surveys included a range of carefully crafted questions aimed at exploring the various dimensions of the research problem. By capturing the perspectives and experiences of the participants, the researcher was able to gain valuable insights into the changing relationships within the context under investigation. Furthermore, the researcher conducted a thorough review of existing literature on the subject, drawing upon scholarly articles, books, and relevant reports. The literature review did not only provide a theoretical foundation for the research, but also helped in defining and conceptualizing the characteristics of the issue under study. By synthesizing and analyzing the existing knowledge, the researcher was able to identify gaps in the literature, thus highlighting the unique contribution of the present study.

Overall, the combination of surveys and a comprehensive literature review formed the backbone of the descriptive-analytical study. This methodological approach ensured a holistic exploration of the research problem and enabled the researcher to obtain the latest

and most relevant information. By focusing on employees and managers within the Logistics and Warehouse Departments of Yemeni companies and institutions, the study aimed to provide practical insights and recommendations to enhance the efficiency and effectiveness of logistics operations in this specific context.

3.2. Study Population:

The study population consisted of company employees who had sufficient experience in various positions, logistics and warehousing department employees, warehouse department managers, purchasing and warehousing officers, logistics officers, and logistics assistants.

The study population will consist of employees and managers who work in companies, in the cities of Taiz , Ibb, Sana'a and Aden in Yemen, that are involved with logistics and warehousing. There are 5 companies in total that are suitable for the study and the total number of employee in these 5 companies is 850 .

To ensure a representative sample, the researcher employed a careful selection process to determine the study participants. The inclusion criteria required that the participants had sufficient experience in various positions within the company, particularly those related to the logistics and warehousing department. This criterion ensured that the participants possessed the necessary knowledge and insights relevant to the research objectives. The thesis population included employees from different levels within the logistics and warehousing department, ranging from warehouse department managers to purchasing and warehousing officers, as well as logistics officers and logistics assistants. This diverse composition allowed for a comprehensive understanding of the subject matter, as each participant brought their unique perspectives and experiences to the study.

In order to select the respondents (employees and managers) a non probability convenience sampling method is used. Through this approach, a subset of individuals from the larger population was chosen, considering factors such as their roles, years of experience, and level of involvement in logistics and warehousing operations. By including a variety of participants with different roles and responsibilities, the study aimed to capture

a comprehensive view of the dynamics and challenges within the logistics and warehousing department. The insights gained from this diverse group would provide a more holistic understanding of the research problem and support the development of practical recommendations to address the identified issues. It's worth noting that the researcher prioritized ethical considerations throughout the thesis. Participants were provided with detailed information about the thesis purpose, procedures, and confidentiality measures. Informed consent was obtained from all participants, ensuring their voluntary participation and protection of their rights throughout the study.

3.3. Study Area:

The study was in Yemen, an Arab country located in the continent of Asia and bordered by the Kingdom of Saudi Arabia and the Sultanate of Oman. The study will be in several cities, including Taiz, Sana’a, Aden, and Ibb, and a wide range of reputable companies in Yemen will be selected. The study's geographical scope encompassed multiple cities in Yemen, reflecting the diverse regional and organizational contexts within the country. Taiz, Sana'a, Aden, and Ibb were among the cities selected to ensure a comprehensive representation of different areas in Yemen. These cities were chosen due to their significant economic and logistical activities, making them ideal locations to study the dynamics of the logistics and warehousing department.

Additionally, the thesis emphasizes the importance of ethical considerations and the protection of participants' confidentiality. To maintain the privacy and integrity of the selected companies, all collected data were treated with strict confidentiality measures. The names of the companies and their employees were anonymized throughout the study, ensuring that the findings would not compromise any individual or organization. By conducting the study in Yemen, the research aimed to contribute valuable insights and recommendations tailored to the specific challenges and opportunities faced by the logistics and warehousing sector in this Arab country. The findings would not only benefit the participating companies but also serve as a foundation for future research and development initiatives in the field of logistics and supply chain management in Yemen.

1. Employees who do not have sufficient experience in the field of logistics and warehousing.
2. Employees who work in other departments not related to logistics and warehousing.

3.3 Data Collection and Procedures

Data collection methods include the actual practical application of obtaining the data required for analysis. This includes collecting primary data.

Primary data collection: Primary data was obtained through a questionnaire distributed to employees of five major companies in some Yemeni governorates, Sanaa, Adan, and Ibb.

The study was conducted in direct contact with some managers responsible for logistics and services. The storage department through Google Mate and a widespread survey among employees in the company was done through managers. The questionnaire will be adopted from the study conducted by Stiller & Joehnk (2014). The study is open access and is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 3.0 Licens.

The survey was organized as follows:

1. **The first section;** explains the details of the workers and the nature of their work.
2. **Second Section;** Explanation and knowledge of the company's activity (organizational performance) and work (food, clothing, furniture, etc.).
3. **Third Section;** presents the most important administrative risks in logistics and warehouses mentioned in previous studies.

Validity also checked through distributed 50 questionnaires as pilot research to adjust proportion to the responders' abilities to answer the questions and based on their feedback the questionnaire questions was edited to be more comprehensive and accurate The thesis selected the Likert scale that was used to answer the questionnaire elements. Whereas, the questionnaires will depend on the five measures in answering, which reflect the opinions of the respondents to the questionnaire, to analyze the factors

that affect the success of risk management.: Likert Scale from 1 to 5: (where 1 = strongly disagree, 5 = strongly agree) for all questions except from question 25 to question 30 The researcher has taken the inverse value (where 1= strongly agree,5= strongly disagree)Data Analysis Plan.

3.4 Data Analysis Procedures

After collecting data, SPSS v.21 software was used to analyze the data with the following steps: First, test the reliability of the scale and validity of the questionnaire through Cronbach's alpha coefficient. According to Sekaran and Bougie (2016), Cronbach's alpha indicates that values which greater than 0.70 has high internal consistency in measured the variables and increases reliability. Second, correlation analysis shows how variables are positively related to each other. Table 7 summarizes the correlation coefficient scale. Third, factor analysis was used to find out the principal components to identify whether the factors used in the research can measure the variables and whether the factors used in the questionnaire are related to the variables or not. Finally, regression analysis was applied using SPSS to test the hypotheses that were developed to determine the positive relationship between logistics and warehouse risk management and company performance in Yemen.

3.5. Ethical Compliance

Confidentiality is ensured by not writing the employee's name and personal information is known and prepared before answering the questionnaire. The information contained in this study will remain confidential except for its publication in the required places for the benefit of new researchers**.** To ensure confidentiality and protect the privacy of the participants, the researcher implemented strict measures throughout the study. Firstly, the questionnaires and data collection instruments were carefully designed to exclude any personal identifiers such as the employee's name or contact information. Instead, participant identification numbers or codes were used to maintain anonymity and protect their identities.

Furthermore, the researcher emphasized that all personal information provided by the participants would be treated with the utmost confidentiality. The collected data were securely stored and accessible only to authorized research team members. Any hard copies of the data were kept in locked cabinets or password-protected electronic files. The information obtained from the study will be used solely for research purposes and will not be disclosed to any third parties without the explicit consent of the participants. The data will be analyzed and reported in an aggregated and anonymized manner, ensuring that individual responses cannot be linked back to specific participants. By adhering to these confidentiality measures, the study aims to build trust with the participants and create a safe environment for open and honest responses. This approach not only protects the rights and privacy of the participants but also contributes to the overall validity and credibility of the research findings.

3.7. Research Philosophy

The research philosophy was positive, because the primary goal of scientific research is to reach the truth scientifically, and because the researcher seeks to know the scientific truth by collecting data derived from sensory experience and logical and mathematical treatments. Positivism emphasizes the pursuit of truth through systematic observation, data collection, and logical and mathematical analysis. By adhering to this philosophy, the researcher aimed to approach the research problem in an objective and unbiased manner, guided by empirical evidence and rigorous analysis.

The positivist perspective recognizes the importance of sensory experience as a foundation for knowledge acquisition. In this study, the researcher sought to collect data through surveys, interviews, and literature review, ensuring that the information obtained was rooted in the real-world experiences of the participants and existing scholarly works. This reliance on empirical data provided a solid basis for the analysis and interpretation of the research findings. Furthermore, the researcher employed logical and mathematical treatments to analyze the collected data. Through statistical techniques, patterns, relationships, and trends within the data were identified and explored. This approach

allowed for a rigorous examination of the research questions and facilitated the identification of meaningful insights and conclusions.

By embracing a positivist research philosophy, the study aimed to contribute to the existing body of knowledge by uncovering the scientific truth about the dynamics and characteristics of the logistics and warehousing departments in Yemeni companies and institutions. The systematic and objective approach facilitated a thorough exploration of the research problem, ensuring the validity and reliability of the study's findings.

CHAPTER 4

FINDINGS AND DISCUSSION

Findings and discussion in this chapter are based on the data collection and analysis according to the study plan, materials used, and SPSS results in each test needed for the research study.

4.1. Data Findings

This chapter presents the results and results of the study to achieve its objectives study the data was analyzed using the statistical package for social sciences (SPSS) to conduct descriptive statistics (means, standard deviations) to determine the level of the main and sub-dimensions of the study, and inferential statistics, which means that in the case of a statistical difference in The overall impact of the wars on the logistics and warehouse sectors in food, oil derivatives, water desalination and tobacco companies.

Data was collected through self-administered questionnaires, from an appropriate sample of (270) employees from various company departments who work as managers, team leaders, supervisors, and employees belonging to the warehouse, distribution, transportation, and human resources sectors. Thus, the following research questions and hypotheses were answered:

4.2. Results of Demographic Characteristics Data

Frequency and percentages are computed for the sample's characteristics.As shown in the table below:

Table 1 :*The Frequency and Percentage of The Demographic Distribution of The Study Sample*

Category	Frequency	Percentage%
Type of company		
Good transport company	89	33.0%
food company	53	19.6%
Tobacco	37	13.7%
soft drinks	86	31.9%
Desalination	5	1.9%
Total	**270**	**100.00%**
Education level		
Bachelor	98	36.3%
Master	93	34.4%
Ph.D.	79	29.3%
Total	**270**	**100.00%**
Company Size		
Small	34	12.6%
Medium	125	46.7%
large	118	40.7%
Total	**270**	**100.00%**
Company's foundation		
less than 1 year	14	5.2%
1-3 years	100	37.0%
7-10 years	77	28.5%
more than 10 years	79	29.3%
Total	**270**	**100.00%**
year of experience in the sector		
less than 1 year	18	6.7%

1-3 years	128	47.4%
3-6 years	12	4.4%
7-10 years	47	17.4%
more than 10 years	65	24.1%
Total	**270**	**100.00%**
Department		
Administration	63	23.3%
Logistics	112	41.5%
HR	28	10.4%
Warehouse	67	24.8%
Total	**270**	**100.00%**
position		
Manager	109	40.4%
Employee	89	33.0%
supervisor	72	26.7%
Total	**270**	**100.00%**

The above table (1) shows that (33.0%) of the study sample were good transport companies which is the highest category, (19.6%) were food company, (13.7%) Tobacco, (31.9%) Soft drinks, and (1.9%) Desalination which is the lowest category. As for **the qualifications of the study**, (36.3%) of the sample qualified with a bachelor's degree, which is the highest category, while the other categories were a master's degree (34.4%), and a doctorate (29.3%). As for **Company Size (**12.6%) were small companies, (46.7%) were medium companies which is the highest category, and (40.7%) were large companies. this table also shows the **Company's foundation** Where (5.2%) is the rate of companies less than 1 year, (37.0%) is the rate of companies between 1-3 years which is the highest category, (28.5%) is the rate of companies between 7-10 years, (29.3%) is the rate of companies more than 10 years. about the **year of experience in the sector,** the highest category was (47.4%) for employees with experience ranging from 1-3 years, and the lowest category was (6.7%) for employees with experience less than one year. shows also

the **position were (**40.4%) managers which is the highest category, (33.0%) Employees (26.7%) supervisor

4.3. Calculating the arithmetic averages of the (five-point) Likert scale

Calculating the arithmetic averages of the five-point Likert scale Since the variable that expresses the options (completely agree, agree, neutral, disagree, disagree) is an ordinal scale, and the numbers entered in the program express weights, which are (strongly agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Disagree at all = 1).

1. Calculating the range first, which is the largest number in the five-point card scale minus the smallest number, so the result becomes as follows: 5 - 1 = 4.

2. After that, the length of the category is calculated by dividing the range by the number of categories (options), i.e., 5/4 = 0.80, so the first category for the arithmetic mean values is: from 1 to 1 + 0.8, and so on for the rest of the arithmetic averages, so the following table is Which shows how to interpret the values of the arithmetic mean:

Table 2:*Calculating the Arithmetic Averages of The Five-Point (Likert Scale)*

Level	Weighted average
Strongly Disagree	1 - 1.80
Disagree	1.81 - 2.60
Neutral	2.61 - 3.40
Agree	3.41 - 4.20
Strongly agree	4.21 - 5

(, F, & D, October 2012)

4.5.Study Tool Reliability:

The study questionnaire comes as an evaluation of relevant published studies that have already been tested by specialized moderators, meaning that the questionnaire passed the test and obtained the required approval. In order to perform a final check on the reliability of the questionnaire, the researcher applied the Cronbach alpha test-retest method by distributing some questionnaires (50) to respondents such as managers, team

leaders, supervisors, and employees. Who works in five companies in different sectors in Yemen. The results were as follows:

Table 3: *Cronbach Alpha to Measure the Reliability and Internal Consistency*

No	Dimension	Numberof Items	Cronbach Alpha
1	Company Performance(overview)	6	0.672
2	Risk Management Risk management in the logistics and warehousing sector	17	0.849
Total (The main dimension: risk management for warehouses and logistics affects the performance of a company)		**23**	**0.8**58

The above table (3) shows that the reliability of the questionnaire was assessed through Cronbach's alpha by measuring internal consistency by measuring a specific item relative to the questionnaire's goal. The above table shows that the company's performance had an alpha value of (0.672), risk management for logistics and warehousing had an alpha of (0.849), Table (3) shows that the result of the final sample (0.858) was greater than the accepted value of (0.60), which indicates the consistency of the tool that enhanced the possibility of using it in the study.

4.5.1. Study results related to Descriptive Statistics Analysis

Table 4 : *Study Results Related to Descriptive Statistics Analysis (Mean & STD) For the First Section (Overview of Activities)*

Overview of Activities (Company Performance)	Mean	STD
The timeliness of the cargo movement is crucial to My company's	4.16	1.01
My company operates mobile equipment, large trucks or vans that can carry more than 16	3.9	1.12
My company conducts training courses for the staff on a regular basis	3.80	1.12
My company leases passenger vehicles for the department's employees to use	3.80	1.21
My company performs operations away from its premises	3.54	1.39
My company operates watercraft or aircraft	3.44	1.52
The result of the first section	3.7	0.75

Table (4) shows a general introduction to the activities in which the company is based, and the questionnaire had 270 participants. the response to the first question (The timeliness of the cargo movement is crucial to My company) was with a Mean (4.16), a standard deviation coefficient (1.01), and the direction of the respondent was in agreement with a percentage (43.7%) where the question got the highest percentage in this section. as well as the response to the 2nd question (My company operates mobile equipment, large trucks or vans that can carry more than 16) was with a Mean (3.90), a standard deviation coefficient (1.12), and the direction of the respondent was in agreement with a percentage

(42.6%). the response to the 3rd question (My company conducts training courses for the staff regularly) had a Mean (of 3.80), a standard deviation coefficient (of 1.12), and the direction of the respondent was in agreement with a percentage (40.0%). And by looking to the response to the 4th question (My company leases passenger vehicles for department's employee's use) had a Mean (3.80), a standard deviation coefficient (1.21), and the direction of the respondent was in agreement with a percentage (41.5%). same to the response to the 5th question (My company performs operations away from its premises) was with a Mean (3.54), a standard deviation coefficient (1.39), and the direction of the respondent was in agreement with a percentage (39.3%). the last question in this section was with the lowest percentage of agree (33.7%) with a mean and (3.44) a standard deviation (1.52). As a result of this section, the agreed rate was the highest among all questions, with a mean (of 3.88) and a standard deviation (0.74).

Figure 8:Study results related to Descriptive Statistics Analysis (Mean & STD) for the first section (Overview of Activities

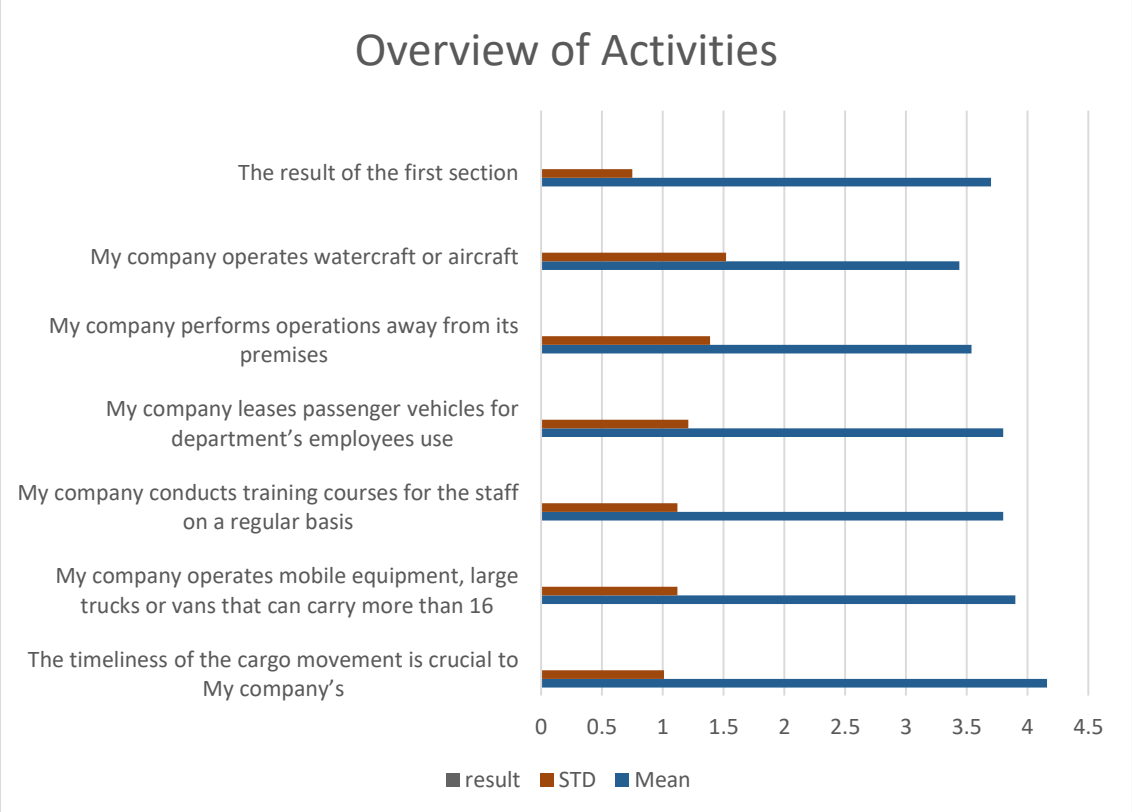


Table 5 : *Study Results Related to Descriptive Statistics Analysis (Mean & STD) For the Second Section (Risk Management)*

second section (Risk Management)	Mean	STD
There is a difference in risk management before and during the Yemen war	4.07	1.02
My company has procedures for safety inspections of vehicles and mobile equipment	3.95	0.99
My company performs a risk management process	3.83	1.06
I can predict changes in the company's Availability of Resources	3.75	1.05
I can predict changes in the company's Competition in the market	3.57	1.0
I can predict changes in the company's Legal Changes	3.7	1.07
I can predict changes in the company's Technological Changes	3.97	1.02
I can predict changes in the company's customer demand	3.7	1.04
My company has a corporate culture to proactively identify and remove any possible risk	3.77	1.09
My company has an emergency plan for terrorism, riots, and civil disturbance	3.74	1.09
My company has an evacuation and emergency plan for each facility	3.74	1.10

The result of the Second Section	3.68	0.75

Table (5) shows a Risk Management carried out by Yemeni companies at present, and the questionnaire had 270 participants. the response to the first question (There is a difference in risk management before and during the Yemen war) was with a Mean (4.07), a standard deviation coefficient (1.02), and the direction the respondent was in agreement (Agree) with percentage (41.5%) which question got the highest mean in this section. as well as the response to the 2nd question (My company has procedures for safety inspections of vehicles and mobile equipment) with a Mean (of 3.95), a standard deviation coefficient (0.99), and the direction of the respondent was in the agreement (Agree) with a percentage (44.1%). the response to the 3rd question (My company performs a risk management process) was with a Mean (3.83), a standard deviation coefficient (1.06), and the direction of the respondent was in agreement with a percentage (47.4%). And by looking to the response to the 4th question (I can predict changes in the company's Availability of Resources) had a Mean (3.75), a standard deviation coefficient (1.05), and the direction of the respondent was in agreement with a percentage (47.8%). same to the response to the 5th question (I can predict changes in the company's Competition on the market) had a Mean (3.75), a standard deviation coefficient (1.0), and the direction of the respondent was in agreement with a percentage (46.3%). the last question in this section (I can predict changes in the company's customer demand) had the highest percentage of agree (51.1%) with a mean and (3.7) a standard deviation (1.04). As a result of this section, the agreed rate was the highest among all questions, with a mean (3.68) and standard deviation (0.75)

Figure 9: *Study results related to Descriptive Statistics Analysis (Mean & STD) for the Third section (Risk Management and precautions)*

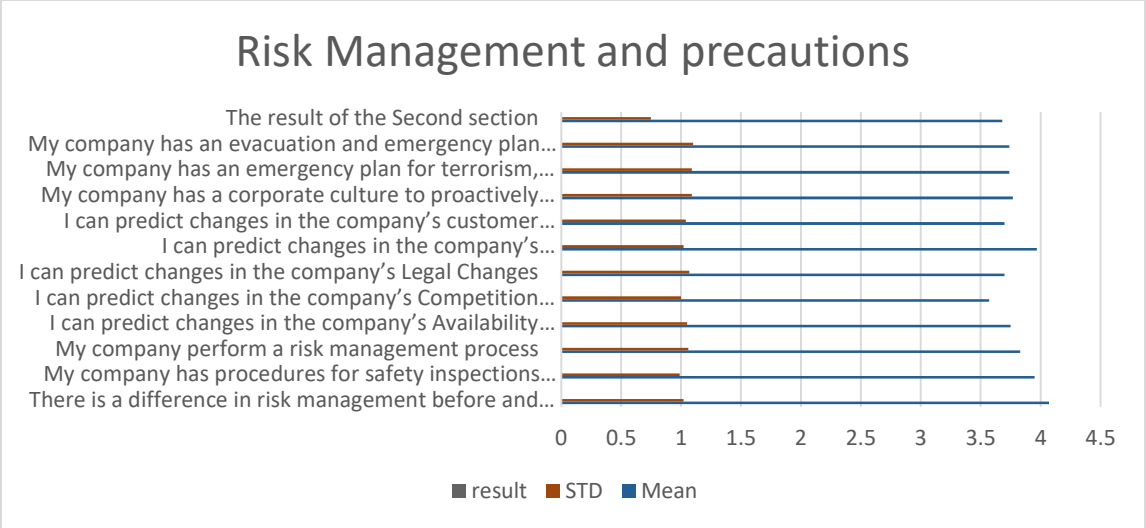


Table 6 : Study Results Related to Descriptive Statistics Analysis (Mean & STD) Second Section (Risk Management) question 25 to question 30 has taken the inverse value

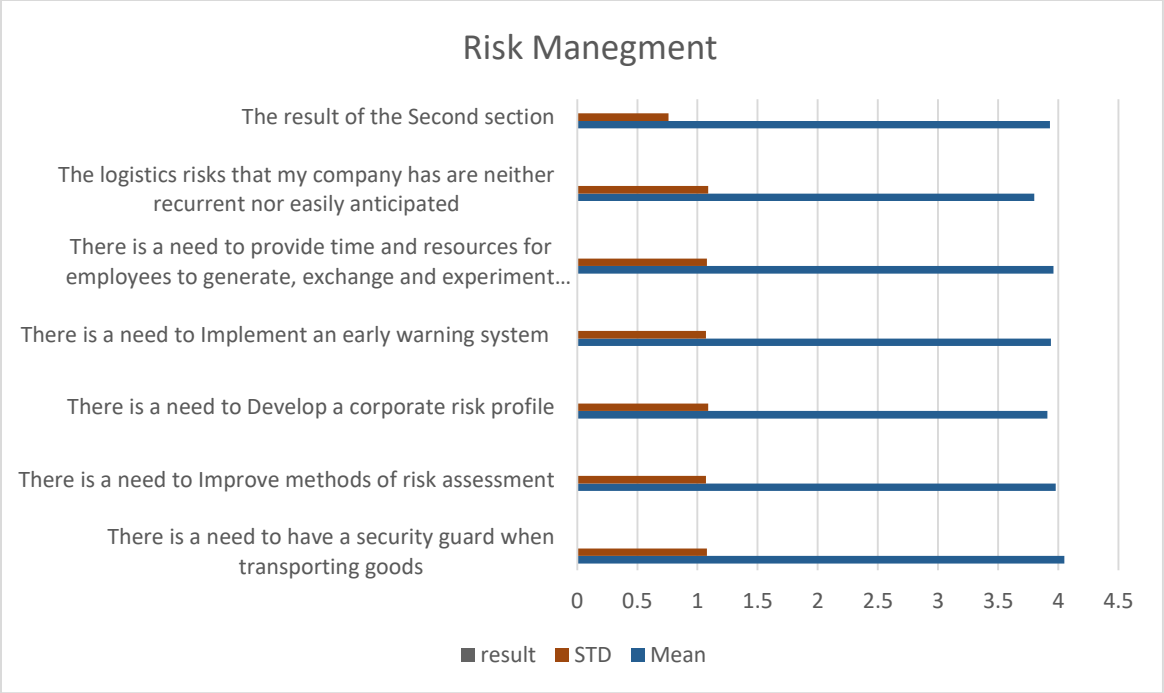
Risk Management and precautions	Mean	STD
There is a need to have a security guard when transporting goods	4.05	1.08
There is a need to improve methods of risk assessment	3.98	1.07
There is a need to Develop a corporate risk profile	3.91	1.09
There is a need to Implement an early warning system	3.94	1.07
	3.96	1.08

There is a need to provide time and resources for employees to generate, exchange, and experiment with innovative logistics ideas or solutions.		
The logistics risk that my company has been neither recurrent nor easily anticipated	3.8	1.09
The result of the Second section	3.93	0.76

Table (6) above shows a Risk Management and precautions carried out by Yemeni companies at present, and the questionnaire had 270 participants. the response to the first question (There is a need to have a security guard when transporting goods) was with a Mean (4.05), a standard deviation coefficient (1.08), and the direction of the respondent was in agreement (Disagree) with a percentage (37.8%) where the question got the highest mean in this section. as well as the response to the 2nd question (There is a need to improve methods of risk assessment) was with a Mean (3.98), a standard deviation coefficient (1.07), and a direction of the respondent was in the agreement (Disagree) with a percentage (41.9%). the response to the 3rd question (There is a need to Develop a corporate risk profile) had a Mean (3.91), a standard deviation coefficient (1.09), and the direction of the respondent was in disagreement with a percentage (42.9%). And by looking to the response to the 4th question (There is a need to Implement early warning systems) had a Mean (of 3.94), a standard deviation coefficient (of 1.07), and the direction of the respondents disagreed with a percentage (44.8%). same to the response to the 5th question (There is a need to provide time and resources for employees to generate, exchange, and experiment with innovative logistics ideas or solutions.) with a Mean (3.96), a standard deviation coefficient (1.08), and the direction of the respondent was in disagree with a percentage (42.6%). %). same the response to the question (The logistics risk that my company has been neither recurrent nor easily anticipated)was with a Mean (3.08)and standard deviation

coefficient (1.09), and the direction of the respondent was in disagreement with a percentage (46.3%). in the result of this section, the agree rate was the highest among all questions, with a mean (3.93) and standard deviation (0.76).

Figure 10 *:Study results related to Descriptive Statistics Analysis (Mean & STD) for the Third section (Risk Management and precautions)*



4.6. Test Hypotheses Using Correlation Matrix

Table 7: *Test Hypotheses Using Correlation Matrix*

Organizational Performance	Risk Management
1	.433**
.433**	1

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

Table (7) Shows that the correlation coefficient between independent variables (Risk Management) and the dependent variable (Organizational Performance) was

statistically significant at the significant level (0.01) at (Risk Management), where the result was (.433**) at (Risk Management) indicate the existence of a direct and strong relationship between them and the dependent variable.

4.6.1 Study results related to hypotheses testing (regression analysis)

To make the relationship between risk management tools and companies' performance clearer, the researcher applied a regression analysis of the research variables. The variables of this research consist of two types: a dependent variable represented by the performance of companies in Yemen, and independent variables. Which is represented in managing logistical and warehousing risks, managing current risks, and taking the necessary precautions. The results of this analysis are shown in the following tables, respectively.

Table 8: *Model Summary*

Model	R	R^2	Adjust R^2	Std. Error
1	.433[a]	0.187	0.184	.67890

a. Dependent Variable: organizational performance

b. Predictors: (Constant) Risk Management.

Table 8 shows that R2 is commonly used to evaluate model fit or coefficient of multiple determinations. It is usually (= -1 the percentage of residual variance). According to previous results more than 18% of the improvement in the performance of companies in Yemen due to managing logistical and warehousing risks, managing risks and taking the necessary precautions quickly. These results demonstrate the importance and efficiency of risk management tools used in Yemen.

Table 9: *ANOVA Results*

Model	Sum ofSq	df	Mean Square	F	Sig.
1 Regression	28.469	1	28.469	61.768	.000[b]
Residual	123.523	268	.461		
Total	151.992	269			

a. Dependent Variable: organizational performance

b. Predictors: (Constant), Risk ManagemeNT

Table (9) Shows that the value of 0.00 means that the regression relationship was highly significant in predicting the items of the questionnaire, also, the model was significant because of the F value (61.768) that was calculated at the level of significance of level 5% greater than the value of critical Sig.

Table 10 : *Regression Coefficients*

Model	Unstandardized		Standardized	T	Sig
	B	Std	Beta		
1 Constant	1.530	.278		5.510	.000
Risk Management	.561	.071	.433	7.859	.000

Table (10) Shows that the value of T is significant, meaning that it assures us that the relationship is linear and we can rely on the model for prediction. As the table shows, there are two important values, which are the intercept value(1.530) and the slope value(0.561)

Figure 11: *normal p-p plot of regression standa rdized residual*

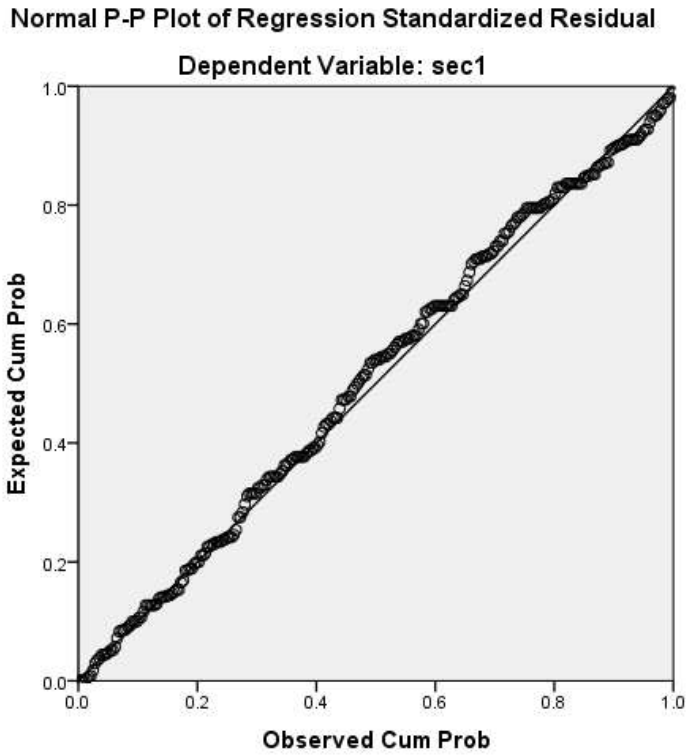


figure (11) shows that the variables are lined up in a convolutional manner along the diameter of the graph, and this indicates that the residuals have a normal distribution, this means that the model is appropriate and can be used in prediction.

CHAPTER 5

DISCUSSION

By collecting data, the results indicated that most of the participating companies were from the goods transport sector, and most of them were medium-sized companies whose ages ranged between one to three years. Their tasks are entirely related to these sectors. By analyzing the data, it was concluded that the time in transporting goods is the effective factor for providing a greater rate of safety, and this enhances the hypothesis of customer satisfaction, as the continuity of the arrival of goods regularly and its non-interruption also enhances the hypothesis of corporate satisfaction because it reduces any damage that may occur due to the random exit of goods and unsafe times.

There is also an important point, which is that most companies carry out continuous training courses, as some studies have mentioned that it is important that there be continuous and renewed courses in studying everything new and related to risk management in general and the logistical risk in particular and in one of the paragraphs of the first section of the questionnaire The result of the participants' answer was strange to me, which is that most companies own planes and transport ships because the current situation in Yemen does not allow the entry of any private commercial airline to transport goods. Such as India, China, Saudi Arabia, and Dubai to Yemen.

The introduction to this thesis indicates that there is a war in Yemen and we need to know whether companies suffer from a difference between before the war and after the war in Yemen. The result is expected in fact, as most of the participants answered with strong approval, as this explains the impact of wars on the security sector in risk management for most sectors of the company, the most important of which Logistics sector and warehouses. In more than one previous study, it was mentioned that companies should do periodic maintenance of trucks and transportation in general, and the result of this question is very satisfactory to most of the participants, as they answered with agreement that companies do maintenance of trucks. These two points achieve the hypothesis of the relationship between risk management and employee satisfaction. Previous studies have shown that among the tasks and responsibilities of managers is to have the ability to know

changes in the company's resources, competing companies in the market, technological changes, and changes in customer demand.

Participants emphasized a very important point through the positive approval of several points, and at the forefront of these points is that there is a strong need for a security guard with cargo carriers continuously, to enhance security and the proper arrival of goods on time, which reduces the security and economic risks of the logistics sector, and this achieves Positive hypothesis of the relationship between risk management and customer satisfaction and participants. Finally, even though most of the means of risk management for the logistics and warehousing sector are available in most of the companies that were studied, and the companies are trying to reduce the risks resulting from the war, the participants explain that there is a need for many factors, as the answers were negative in agreement for the lack of availability Among these factors, the most important of which is that there is a need to improve risk values and the need also to develop corporate risk files, and there is a lack of implementation of early warning systems. Riots and terrorism occurred in the last three years, due to the security instability, riots, and economic and political turmoil the companies were exposed to, which led to the company not being exposed to recurring or easily predictable risks.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusion

This thesis addressed the topic of risk management in the logistics and warehousing sector, as it sought to understand the importance of risk control and provide effective strategies to enhance the sustainability of operations in this vital sector. The thesis deeply analyzed the operational environment of logistics companies and warehouses, focusing on the challenges they face in the area of risk management. The thesis also demonstrated an inductive and analytical approach, as it comprehensively reviews the literature related to risk management and its applications in the logistics and warehousing sector. In addition, case studies and quantitative data were used to provide in-depth insights into companies' experiences in confronting and addressing risks.

The analysis is centered around identifying weaknesses in current risk management systems and proposing evidence-based improvements. Emphasis is also placed on employing modern technology and innovation to improve the effectiveness of mucus management strategies. The current study was conducted to search for risk management in logistics and warehouses for companies with different activities such as freight transport companies, water desalination companies, and food and beverage companies. The study also revealed that to benefit from risk management effectively, companies should design a risk management strategy for the logistics and warehousing sectors. Based on the results, it was found that in the case of risk management, the sides most concerned with risk management are medium and large-sized companies.

According to the results found through data analysis, and although the tools and concepts of risk management. It has acquired the traditional methods of avoiding administrative risks, but innovation in risk management and the speed of dealing with it in Yemen is still a new field for professionals working in it. The results of the study confirm that the focus on risk management in all its forms affects the company's performance and improves the results of mitigation and control of logistical and warehousing risks. Logistics

and warehousing sectors. The current study also reviewed previous studies on risk management in all its forms that affect the performance of companies and indicated that recurring risks are easy to deal with and predict in advance. In addition, the survey was conducted in various companies by preparing a questionnaire to achieve the goal of the research.

This thesis concluded that some methods of risk management are stronger than others, according to previous studies, which list that the fields and methods of risk management differ according to the company's management and continuous training of employees, and this is reflected negatively or positively on the companies' performance and development. The study revealed that the most powerful tools have a very significant impact on the company's performance, which is managing the relationship between risk management and customers, the relationship between risk management and corporate employees, and the relationship between risk management and company growth. Moreover, the management of logistical risks has a significant impact on the company's performance through partnership arrangements with the country's new sectors, arrangements and coordination with employees, and giving them all the possibilities to predict and periodic monitoring of potential risks.

According to the risk management tools, the study confirmed that: (1) It is very important to coordinate with the security services when transporting goods at present. (2) The effect of the time of transporting the goods negatively and positively on the company's performance and the security of the truck driver and the goods, (3) The effect of continuous training courses on the performance of employees in the logistics and warehouse risk management sector. ; (4) Most of the Yemeni companies that were included in this study own ships to transport goods by sea, which leads to an increase in the risk ratio, which the company must take precautions at a greater rate. (5) The need for development in the field of risk management and keeping pace with new methods and the work of an integrated team only to predict, detect, and address the risks that companies may face in the storage sector.

6.2 Recommendation

It is true that in the areas of risk management, there are additional processes in companies in Yemen, in addition to the traditional processes in risk management in the logistics and warehousing sector that must be applied differently based on this study below are some recommendations as follows:

1. Risk Analysis and Evaluation, Risk analysis and assessment processes should be strengthened to identify potential risks and their impact on logistics and warehousing operations.

2. Develop risk management strategies Effective risk management strategies should be developed, including risk reduction, risk transfer, avoidance, and acceptance.

3. Clear action plans must be put in place to deal with potential risks, including emergency procedures and appropriate insurance.

4. Improving Logistics and Warehousing Operations Improvements in logistics and warehousing operations should be implemented to reduce potential risks, such as the use of advanced technology.

5. Integrated supply chains must be developed that allow for reduced logistical risks and improve chain response to challenges.

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APPENDICES

Appendix (1): Questionnaire

Dear Respondent,

This study is part of a Master's thesis study seeking information on "RISK MANAGEMENT IN WAREHOUSING AND LOGISTICS IN YEMEN". We are kindly inviting your participation in this study, which will involve a questionnaire survey. The survey is completely confidential and is for scientific purposes only and will be kept confidential. Your participation is completely voluntary and you may stop taking part at any time you wish. The survey should take about 15-20 minutes to complete. There are no right or wrong answers. Candid responses based on your thoughts are greatly appreciated. If you have any questions concerning the research study, please feel free to contact us using the information stated below.

Thank you in advance for your cooperation and assistance.

PART 1:

Please indicate the correct option using (X) for each of the below statements;

Demographic Details						
1	Type of company	(Please state)……				
2	Company size	Large	Medium	Small		
3	Company's foundation	Less than 1 year	1-3 years	3—6 years	7-10 years	More than 10 years
4	Respondent's year of experience in the sector	Less than 1 year	1-3 years	3—6 years	7-10 years	More than 10

						years
5	Education level	Bachelor	Master	PHD	Other… (Please state)	
6	Proposition	Manager/Supervisor	Employee	Other:… (please state)		
7	Department	(Please state)……				

PART 2:

Indicate using (X) for your level of agreement for each of the statements below in regard to theactivities in your company according to the scale below;

(1= Strongly Disagree 2= Disagree 3=Uncertain/Don't Know 4= Agree 5= Strongly Agree)

A. Overview of Activities(Performance)		1	2	3	4	5
1	My company performs operations away from its premises					
2	My company leases passenger vehicles for use by your department's employees					
3	My company operates any mobile equipment, large trucks or vans that can carry 16or more people					
4	My company operate any watercraft or aircraft					
5	The timeliness of the cargo movement is crucial to My company's logistics					
6	My company conducts training courses for the staff on a regular					

	basis					

B. Risk management		1	2	3	4	5
7	I can predict changes in the company's customer demands					
8	I can predict changes in the company's Availability of Resources					
9	I can predict changes in the company's Technological Changes					
10	I can predict changes in the company's Competition in the market					
11	I can predict changes in the company's Legal Changes					
12	My company perform a risk management process					
13	There is a difference in risk management before and during the Yemen war					
14	My company has procedures for safety inspections of vehicles and mobile equipment					
15	My company has an evacuation and emergency plan for each facility					
16	My company has a corporate culture to proactively identify andremove any possible risks					
17	My company has an emergency plan for terrorism, riots, and civil disturbance					
18	The logistics risks that my company has are neither recurrent nor easily anticipated.					
19	There is a need to Improve methods of risk assessment					
20	There is a need to Develop a corporate risk profile					
21	There is a need to Implement an early warning system					
22	There is a need to provides time and resources for employees to generate, exchange and experiment with innovative logistics ideas/solutions.					
23	There is a need to have a security guard when transporting goods					

	Source: Stiller, D. & Joehnk, P. (2014). Risk Management in Companies –A Questionnaire as an Instrument for Analyzing the Present Situation. Research Papers Faculty of Materials Science and Technology SlovakUniversity of Technology,22(341) 83-88. https://doi.org/10.2478/rput-2014-0012

THANK YOU

NEAR EAST UNIVERSITY

SCIENTIFIC RESEARCH ETHICS COMMITTEE

01.02.2023

Dear Fras Abdulbary Mohammed Moqbel

Your application titled **"Risk Managemnt In Wearehousing And Logistics In Yemen"** with theapplication number NEU/SS/2023/1488 has been evaluated by the Scientific Research Ethics Committee and approved. You can start your research on the condition that you will abideby the information provided in your application form.

Prof. Dr. Aşkın KİRAZ

The Coordinator of the Scientific Research Ethics Committee

RISK MANAGEMENT IN WAREHOUSING AND LOGISTICS IN YEMEN (by 20204527 Fras Moqbel)

ORİJİNALLİK RAPORU

%12	%10	%3	%5
BENZERLİK ENDEKSİ	İNTERNET KAYNAKLARI	YAYINLAR	ÖĞRENCİ ÖDEVLERİ

BİRİNCİL KAYNAKLAR

1	docs.neu.edu.tr İnternet Kaynağı	%5
2	Kai Yang. "Risk Management in the 21st Century", Wiley, 2024 Yayın	%1
3	Submitted to Coventry University Öğrenci Ödevi	<%1
4	Submitted to University of Science and Technology, Yemen Öğrenci Ödevi	<%1
5	www.mdpi.com İnternet Kaynağı	<%1
6	orca.cardiff.ac.uk İnternet Kaynağı	<%1
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