



جامعة الجميع الذكية
Everyone's Smart University

**The impact of logistics risk management on improving the performance of
delivery applications.**

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Abstract

Logistics risks to delivery applications are among the most difficult risks because they are directly related to future expectations. Managing logistics and implementing its various functions is not an easy task. Each step must be handled carefully. Achieving error-free performance may not always be possible, but every step must be taken to achieve this. Supply chain disruptions occur when logistics management and task execution are not synchronized and, in some cases, when unexpected events occur. This study focuses on the impact of logistics risk management on improving the performance of delivery applications. This study was classified into qualitative research. The sample was selected from 100 employees and the method was random. The data was analyzed using a questionnaire. The results of the data analysis showed that logistics risk management directly helps improve the performance of delivery applications.

Chapter One

Introduction

Logistics services are one of the vital topics in which interest has increased in recent years at the academic and applied levels in many fields such as public administration represented by the Ministry of Transport and Logistics Services, whose name was recently changed from the Ministry of Transport to the Ministry of Transport and Logistics Services to reflect the importance of logistics services in the development plans and vision of the Kingdom. 2030, as well as in other fields such as marketing and business management, which reflects the necessity of integration in the areas of management in providing logistics services. (Khayyat, 2024).

The concept of logistics services is that it is a group of public services that administrative authorities work to secure in the best available ways to ensure that operations and activities proceed as required. Logistics operations managers seek to obtain the best resources from their sources, store them in an optimal manner, and then transport them by appropriate means to the final place that needs them. While the American Logistics Board defines logistics as the process of planning, implementing, and monitoring the movement and storage of raw materials, in-process inventory, finished goods, and related information from the point of source to the point of consumption with the aim of conforming to business requirements, provided that this is done efficiently and cost-effectively, It includes three dimensions: transportation, storage, and supply, with the aim of reducing costs and supply times, and improving the level of logistical service to customers, while reducing storage levels to the lowest possible extent without prejudice to those supplies.(Meidutė, 2014)

Logistics activities take many names for various fields, including physical distribution, materials management, transportation management, and supply chain management. Logistics operations management represents one of the aspects of modern management in facing the challenges of today's world, whether economic, technological, or informational, as it reflects one of the models of integrated management in terms of integrating the basic activities in the organization and integrating them with the activities of transportation, storage, and supply through which it is carried out. There are many factors that have led to increased interest, including the large size of organizations, the multiplicity of their activities, the expansion and multiplicity of their

product lines and markets, and the increasing interest in logistics activities, which have become the backbone of these organizations, which aim to serve customers while achieving a competitive advantage. Logistics services are of great importance as their presence in many commercial sectors helps by providing safe means of transportation for shipping, storing, marketing and supplying goods, in addition to the fact that the presence of this type of service affects reducing the cost of trade exchange operations, especially between countries, as it contributes to providing larger quantities of goods and services and transporting them across those countries, which helps protect the consumer by providing better purchasing options in terms of product quality and prices.(Feng, B.,2021)

For several years, the Kingdom of Saudi Arabia has witnessed a boom in the field of logistics services, especially in the delivery sector, as the number of delivery operations increased to more than 200 million operations in 2023 alone, according to the official spokesman for the General Transport Authority. The boom in the sector has had a positive impact on the Kingdom's economy as it has provided many jobs and contributed to facilitating the lives of citizens through the rapid delivery of orders. In addition, specialized technological applications have developed in this sector, which have enabled consumers to follow up on the details of their orders from the request until the order is delivered to the door of the house. In addition, these developments have contributed to improving the shopping experience for consumers and boosting local economic affairs. However, every coin has two sides. With the quick click on the mobile phone that has made life easier, there have been unexpected and significant impacts on sustainability and the environment in Saudi Arabia. The problem of traffic congestion is also rapidly worsening due to the increase in the number of vehicles used for delivery operations. The potential recklessness of delivery drivers has also led to many traffic accidents. (Sadiq & Saad , 2005)

Statement of Problem

Most studies agree that adequate planning for the diversity of service offerings is the critical causal factor and can unlock a series of risk mitigation responses throughout the supply chain. The next most important cause is the flexibility of supply contracts, These major risks can be managed if, based on the cause-effect relationships between different factors, work is done to reduce the overall impact of the risk. Risk management actions make it possible for the support function of logistics services to remain in the background and become a crucial factor for the market success of the business operation. it is also necessary to clarify that research does not often clearly distinguish between the concepts of supply chain-wide risks and logistics risks.

Risks are described as unplanned events in the scientific literature, which does not imply a lack of preparation to manage them. For supply chains, logistics risks are related to the main service objectives: the lack of appropriate and customer-required goods, in the required delivery time, in the specified location, in the required quality, Quality management activities and their associated risks identify the likelihood of risks before they occur and may, accordingly, affect the conditional allocation of losses in advance.

The costs of remediation can be summarized in three main groups:

Financial costs: once the non-conformity has been identified and action is taken to rectify it, the logistics organization must cover any damages to the customer. Studies find that the cost of correcting non-conformities is greater than what could have been spent on prevention in the planning process. The costs of recalling products and covering all reverse logistics activities are often excluded from the selling price of logistics services and are covered by the contingency and extraordinary costs line item.

Survival costs: in most cases, inconsistencies in processes entail, at least, legal consequences. Larger inconsistencies can be a challenge to business survival as restitution damages can drag a logistics organization into insolvency.

Reputation costs: inconsistencies in logistics operations and processes will, in most cases, result in customer backlash and a reduction in profit to cover losses from a reduction in planned sales.

Hence, the following problem can be raised: What is the effect of logistics risk management on improving the performance of delivery applications?

Research objective

This study aims to identify the impact of logistics risk management on customer satisfaction in delivery companies, through the following:

1. Measuring the impact of logistics risk management in terms of transportation on customer satisfaction for delivery companies in the Kingdom of Saudi Arabia.
2. Measuring the impact of logistics risk management in terms of storage on customer satisfaction for delivery companies in the Kingdom of Saudi Arabia.
3. Measuring the impact of logistics risk management from the supply side on customer satisfaction for delivery companies in the Kingdom of Saudi Arabia.
4. Measuring the impact of logistics risk management with its variables: transportation, warehousing, and supply in achieving customer satisfaction, quality of service, and reducing time and cost for delivery companies in the Kingdom of Saudi Arabia.

Research Questions

1. What is the impact of measuring logistics risk management in terms of transportation on customer satisfaction for delivery companies in the Kingdom of Saudi Arabia?
2. What is the impact of measuring logistics risk management in terms of storage on customer satisfaction for delivery companies in the Kingdom of Saudi Arabia?
3. What is the impact of measuring logistics risk management from the supply side on customer satisfaction for delivery companies in the Kingdom of Saudi Arabia?
4. What is the impact of measuring logistics risk management with its variables: transportation, warehousing, and supply in achieving customer satisfaction, quality of service, and reducing time and cost for delivery companies in the Kingdom of Saudi Arabia?

Definition of Terms**Delivery applications:**

They are digital platforms that allow users to order products or services to be delivered directly to their homes or any location they specify. (Choi, 2016)

Delivery applications:

They are digital platforms that allow users to order products or services to be delivered directly to their homes or any location they specify. (Fuchs, 2009)

Chapter Tow

literature Review

Study Rajath & Baptiste (2012), on the potential impact of the logistics function when using a third party to carry out various logistical tasks, the existence of this trend is confirmed in Sweden and France, i.e. outsourcing is carried out Through it, logistical tasks are carried out in some functions and not others, as the use of third parties in warehousing functions is reduced , Information technology and supply chain management .

Study Cedeño-Gómez (2015), which aimed to demonstrate the impact of human resources management on supply chain management, which in turn produces customer satisfaction and better corporate performance. This study was conducted on 230 managers in the senior management of Spanish companies in the industrial sector. The study found great importance for managing human resources functions on supply chains. Where the compatibility between Human resources strategy and supply chain strategy lead to an increase in customer satisfaction and thus to better performance for these companies.

Study Gregory, et al, (2001) This study aimed to explore the development and concept of logistics projects and shed light on the organization's capabilities in terms of logistical integration and its supply chain. This study was applied to organizations with membership in the World Trade Organization in the state of North Carolina, and it was It is concluded that logistics practices can achieve higher levels of organizational performance. The results indicate that the logistics project is a tool for coordinating supply chain operations that are geographically distributed throughout the world.

Study by Anderson & German (2001) The study focused on the importance of administrative logistics services in the European "MALCOLM" company. The aim of the study was to present the relationship between service quality, logistics management, and factors influencing customer service. The study found that when certain standards are applied based on operational performance and saving time and effort in logistics management functions, the company reaches the goal is quality, added value, and achieving customer satisfaction for the services it provides as a result.

Study by Vladimir & Maria (2003) This study, Qwhich was applied to Flextronics companies based in Singapore, aimed to reduce the cost and spending related to inventory to obtain a competitive advantage. The results of the study indicated that the coordination process between members of the supply chain is important to reduce the cost and obtain the advantage. Competitiveness in addition to integrating all Flextronics network companies in Singapore and the United States into a single supply chain.

Study hypotheses:

- 1- Delivery applications are given full attention and support to achieve effective logistics risk management.
- 2- Logistics risk management in delivery applications includes identifying, analyzing, and evaluating the type of risks and following them up.
- 3- Contributes to logistics risk management based on awareness of the work mechanism in delivery applications and the culture necessary to manage them.

Methodology

To achieve the objectives of the study and answer its questions, the analytical descriptive method was chosen. This method is based on describing a phenomenon to reach the causes of this phenomenon and the factors that control it, and to draw conclusions for generalization. The descriptive approach includes more than one method: the method of surveying, the method of case study and these methods need the expertise and effort of the researcher, and the results should be interpreted carefully.

Study variables:

- **Dependent variable:** Delivery applications.
- **Independent variable:** Logistical risks.

The limits of the study:

Objectivity border: The impact of logistics risk management on improving the performance of delivery applications.

Spatial boundaries: Delivery applications in the Kingdom of Saudi Arabia.

Time limits: The current semester is 2023-2024.

The study sample:

150 questionnaires were distributed about the impact of logistics risk management on improving the performance of delivery applications, and after retrieval and sorting, it was found that, we have 100 forms suitable for statistical processing.

Used equipment's:

To facilitate field study procedures and obtain, collect and analyze data to complete the field aspect For the study, a questionnaire was prepared in a way that helps collect data and its design was accurate, while the theoretical aspect was addressed

Also, previous studies and the extent of clarity of the questions and phrases of the questionnaire to enable the sample members to answer About it objectively.

Statistical analysis methods used:

The statistical analysis method depends on the type of problem being measured and analyzed and the type of data.

Statistical methods adopted in the study.**First: descriptive methods:**

- Frequency and percentages: to identify in detail the personal and functional characteristics of the study sample members.
- Arithmetic mean: This is to determine the attitudes of the study individuals towards each statement or dimension.
- Standard deviation: to identify the extent to which the responses of study individuals deviate towards each statement or dimension.

Second: Inferential methods:

- Cronbach's alpha reliability coefficient: This is to test the extent of reliability on the data collection tool used to measure Variables included in the study.
- Pearson correlation coefficient: To confirm validity and prove that the scale measures what it was designed to measure, the coefficient was also used Correlation to determine the relationship and correlation between study variables.

Reliability and internal consistency of the study tool.

In this part, we will try to identify the extent of reliance on the data collection tool in the study and analysis by measuring on the extent of its validity and reliability, by clarifying both the stability and internal consistency of its dimensions and axes as follows.

First: Calculate the Cronbach's alpha reliability coefficient

Through this part, we will attempt to show the extent of the questionnaire's stability and credibility for work on the topic by calculating Cronbach's alpha coefficient, where the alpha coefficient is greater than 0.6, the more valid the questionnaire is for the study.

Second: The internal consistency of the questionnaire.

Linear correlation matrix between the study variables by calculating the correlation coefficient between each dimension the variable and its total score for both the independent variable and the dependent variable.

Conclusion

Logistics and delivery are the process of planning, executing, and controlling the efficient and effective movement and storage of goods and services from the point of origin to the point of consumption. It includes various activities such as transportation, warehousing, inventory management, packaging, order fulfillment, and customer service. Logistics and delivery are important because they enable businesses to meet the demand and expectations of their customers. By ensuring the accurate and timely delivery of products and services, logistics and delivery services can enhance customer satisfaction and loyalty, as well as increase sales and profitability. The logistics and delivery industry are undergoing rapid transformation in the 21st century, driven by technological innovations, changing customer expectations, environmental concerns, and global competition. These factors pose challenges and opportunities for industry players, who need to adapt and innovate to survive and thrive in the dynamic market. The logistics landscape is constantly evolving, driven by changing customer expectations, technological innovations, environmental challenges, and global competition. To succeed in this dynamic and complex environment, logistics and delivery service providers need to adopt a strategic approach that leverages their

strengths, addresses their weaknesses, and creates value for their customers and stakeholders .

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Appendix

1- It's easy to overlook delivery risks, but they're among the most common logistical challenges delivery app companies face.

- ☐ Strongly important
- ☐ Important
- ☐ Neutral
- ☐ Not important
- ☐ Strongly not important

2- Regulatory and compliance risks in delivery apps can be a difficult aspect of logistics, as they can result from actual violations or simply a misunderstanding of regulations and policies.

- ☐ Strongly important
- ☐ Important
- ☐ Neutral
- ☐ Not important
- ☐ Strongly not important

3- Various financial and economic risks can affect logistics activities in delivery applications

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Not agree
- ☐ Strongly not agree

4- Cybersecurity risks in delivery applications can pose a serious challenge to logistics operations.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Not agree
- ☐ Strongly not agree