

# THE EFFECT OF OPERATIONAL SERVICE QUALITY IN LAND CARGOES OPERATORS ON SUSTAINABILITY: THE CASE OF JORDANIAN LOGISTICS INDUSTRY

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## ABSTRACT

*This study aimed to analyze the sustainability of logistics industry in relationship of operational service quality as to improve profitability and the effects to long-term business strategy in Jordanian logistics industry. It is suggested that despite of considerable efforts provided by Jordanian logistics industry to improve its service. There is still evidence of lacking of operational service quality provided by service providers. Operational service quality is vital in the sustainable logistics industry such as in Jordanian land cargoes operators' companies in seeking competitive advantage among the operators. Their position will be taken by other companies whose there activates will be more focus on service quality that expected by their customers. The component of operational service quality consists of tangibility, reliability, responsiveness, assurance and empathy as the independent variable (IV). As for Dependent Variable (DV), sustainability was chosen. Using 288 Jordanian manufactural companies and multiple regression technique was used to test the hypotheses empirically. The findings revealed that a significant positive effect of reliability and responsiveness of land cargoes operators towards sustainability of Jordanian logistics industry.*

**Keywords:** Operational Service Quality, Sustainability, Land Cargoes Operators

## INTRODUCTION

Nowadays, companies such as the logistics transportation system are important for the movement of cargoes either in both local and global logistics industry. According to a report on the international freight market in terms of modes of transportation, logistics model, and geographic distributions, the global logistics market is classified into three categories: road highway logistics, waterway logistics, and railway logistics (Globe Newswire, 2021). As a result, during the forecast period of 2020-2025, the Middle East and North Africa freight and logistics industry is expected to expand at a Compound Annual Growth Rate (CAGR) of about 4% (Mordor Intelligence Report, 2020). Hence, service quality are crucial considerations that Jordanian logistics firms, such as land freight operators, must realize and focus on operational service quality if they want to be sustainable and stay competitive in the vigilance market.

Delivering high-quality service is the secret to achieving a sustainable significant advantage in today's competitive business operations. Besides this, the degree of operational service quality commitment plays the big role for long-term sustainability like land cargoes

operators in providing services. Consequently, high-quality of operational service quality, are the top priority towards customer satisfaction (Le & Shariff et al., 2020) and sustainability due to customer retention behavior (Shariff et al., 2016). There are certain elements that affect over the Jordanian logistics industry environment such as technology and regulation in Jordan's customs border clearance as well as the responsiveness of service providers in delivering the cargoes. Jordanian logistics industry has poor logistics performance. These are also the significant hindrance of Jordanian international trade (Hamed, 2019). Thus, this affects the level of service quality and sustainability of the Jordanian logistics industry.

The main objective of this research attempt to identify the main hindrance that impedes the deliveries operational flow of cargoes domestically and between Jordan and neighboring countries. Particularly, this paper will examine five sub-dimensions of operational service quality in Jordanian land cargoes operators towards sustainability of business competitive environment.

## LITERATURE REVIEW

Limited studies have been conducted on Jordanian logistics industry. In particular, the logistics service providers the term referring to the operational service quality render standard of land cargoes operation. The operational service quality is critical elements because customer retention is influenced by the quality-of-service providers. According to Yuen & Thai (2015), by rendering high service quality is one way to distinguish the services of a company from its competitors. Logistics industry such as Jordanian land cargoes operators have to meets its customers' expectations by providing high quality services. If customers view that their expectations for service quality confirm their perceptions of the service then service quality is consider achieved (Kitapci, Akdogan & Dortyol, 2014; Parasuraman et al., 1985; Zeithaml 1988).

In the literature, the SERVQUAL is a well-known service efficiency model. It has many aspects, which are drawing the reasons for customers' grates effect of satisfaction and leads to long-term sustainability. Therefore, this study adopted (Pakurár et al., 2019) which focuses on five elements of operational service quality, which are independent variable (tangibility, reliability, responsiveness, assurance, and empathy). Those elements determine the possible effects on sustainability of Jordanian logistics industry. It is design to satisfy and help to improve the operational service quality of the specific needs of land cargoes operators in Jordanian logistics industry.

### **Tangibility**

It represents the tangible elements of the business, such as the institution's structures and new technology used in them, the internal infrastructure of the buildings and the required equipment that will provide the service, and the presence of staff and others (Abdul, 2017).

### **Reliability**

It expresses, from the customer's perspective, the organization's capability to provide the services on time required by the client and appropriately fulfilling his expectation, as well as the level of the organization's fulfilment of its commitments to the client (Pakurár et al., 2019).

### **Responsiveness**

The opportunity to consistently deal with all consumer needs, respond to their grievances, and seek to address them easily and efficiently in order to persuade consumers that the company in which they deal values and respects them. Furthermore, the response represents personnel initiative in providing service (Sivakumar et al., 2014).

## Assurance

Employees' courtesy and professionalism, as well as their ability to instil faith and trust in customers. Researchers' perspectives on the ranking of assurance among service quality dimensions differ, some researchers' ranked assurance first and others ranked it fourth. Assurance means holding consumers aware and listening to them in their native language, regardless to educational degree, age, or nationality. States the assurance reflects employee attitudes and behaviour, as well as the staff's willingness to deliver friendly, private, courteous, and professional services (Pakurár et al., 2019).

## Empathy

Exemplify a friendly and polite attitude toward the customer, and remind him of the responsibility and ability to offer the service in accordance with his expectations (Sivakumar et al., 2014).

## Sustainability of Logistics Industry

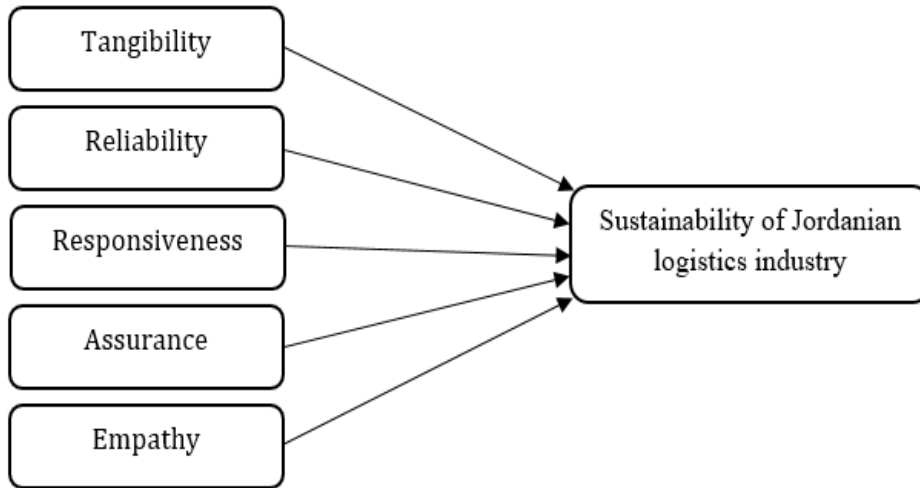
According to Wichaisri & Sopadang (2014), sustainable logistics system is a distribution management system that combines sustainable production and logistics to enhance long-term efficiency. It is a resource management structure that integrates environmental growth and a logistics structure. A sustainable logistics structure focuses on logistics processes (such as supplier selection, procurement, manufacturing, warehousing, and delivery) to minimize a company's costs, reduce its environmental impact, and mitigate its societal impact. Sustainable logistics provides economic, financial, and social benefits for companies, such as an increase in asset utilization, enhanced customer service, increased energy efficiency, reduced impact on the community, and improved quality of life.

According to Tseng et al., (2005), Land logistics is a critical link in logistics operations. It expands air and marine transportation distribution systems from airports and seaports. The most advantageous feature of land logistics is the high degree of mobility in land areas. The three primary modes of land logistics transportation are railway transport, land cargos transport and pipeline transport.

According to MoT (2014), the road network is split into three main transport corridors: The North-South-Central Corridor (which links Jordan with Syria and Saudi Arabia), the Western Borders Corridor (which connects the Syrian border to Aqaba), and the Eastern Corridor (which branches from the Central and connects Ma'an to the Iraqi border). Jordan's most heavily used trucking routes are from Aqaba to Amman or the free zone in Zarqa. As a result, Aqaba has the greatest density of trucks in Jordan. Jordan's road network links Jordanian cities as well as Jordan and nearby countries on a global scale.

## HYPOTHESIS

- H1: There is direct positive relationship between Tangibility of land cargoes operators and sustainability of Jordanian Logistics Industry.*
- H2: There is direct positive relationship between Reliability of land cargoes operators and sustainability of Jordanian Logistics Industry.*
- H3: There is direct positive relationship between Responsiveness of land cargoes operators and sustainability of Jordanian Logistics Industry.*
- H4: There is direct positive relationship between Assurance of land cargoes operators and sustainability of Jordanian Logistics Industry.*
- H5: There is direct positive relationship between Empathy of land cargoes operators and sustainability of Jordanian Logistics Industry.*



**FIGURE 1  
RESEARCH FRAMEWORK**

**RESEARCH METHOD**

The following methodology was used in the research, as it mainly relied on previous studies carried out by researchers in this scientific field to form an integrated perspective. Then the study designed a questionnaire to measure the expected effect between the variables. The study used the statistical analysis program (SPSS) to measure the effects and present the findings, which are discussed in the conclusion.

**Reliability and Validity**

Prior to administering the questionnaire to the research group, a pilot analysis was performed. The aim of the pilot study was to fine-tune the questionnaire so that participants in the main study would have no trouble answering questions and recording details. The pilot study for this survey was conducted with 50 respondents with the intention of improving respondents' comprehension of the questions, any problems with responding, the clarity of the instructions, the engaging nature of the template, and the time required to complete the survey. People who took part in the pilot study were asked to express their thoughts on the survey's content and methodology, as well as make suggestions. This information was crucial in determining whether any modifications to the poll were needed. Every single suggestion was examined, and small changes to the study's headings and architecture were made as a result. Cronbach's Alpha was conducted for all constructs using their specific objects, and the scale reliability of the questionnaire was also tested. The Cronbach's Alpha findings are summarized as follows.

A. Cronbach's Alpha test result for all variables study

<b>Table 1 RELIABILITY RESULTS</b>	
<b>Constructs</b>	<b>Cronbach's Alpha</b>
Tangibility	0.87
Reliability	0.86
Responsiveness	0.85

Assurance	0.88
Empathy	0.84
Sustainability	0.86
Overall Mean	0.86

It shows that Cronbach's Alpha test result for all variables study is acceptable and is above standard Internal consistency=70.

## B. Demographical Data Analysis

<b>Type of Company</b>	<b>Compute</b>	<b>Percentage</b>
Chemical Industries	56	19.4%
Electrical Industries	46	15.9%
Food and Beverages	37	12.8%
Mining and Extraction Industries	35	12.1%
Paper and Cardboard Industries	33	11.4%
Pharmaceutical and Medical Industries	28	9.7%
Printing and Packaging	27	9.3%
Textiles, Leathers and Clothing's	25	8.6%
Tobacco and Cigarettes	1	0.3%
Overall	288	100%

The above table shows that about two hundred and eighty-eight companies according to Nature of the Business. It was found that the highest percentage was the chemical industries at 19.4% and the lowest percentage was the tobacco and cigarette industries 0.3%. This explains that the number of chemical companies is large and that tobacco and cigarette companies are less, but this does not determine the amount of work and profits.

<b>Market</b>	<b>Compute</b>	<b>Percentage</b>
Middle East	132	46%
Europe	7	2%
Domestic	149	52%
Overall	288	100%

As shown in the above table, we note that the size of the local markets is the highest in terms of work with a rate of 52%, and the European markets were the lowest in terms of work 2%, and this indicates that companies have weak competition for European companies and the momentum of their work is limited to the local and regional markets.

<b>Volume of Cargo Imports-Exports</b>	<b>Compute</b>	<b>Percentage</b>
50 or less	75	26%

51 – 100	60	21%
101 – 500	80	28%
501 – 1000	47	16%
More than 1000	26	9%
Overall	288	100%

As shown in the above table, we note that the volume of trade exchange in containers was the highest percentage of 101-500 at a rate of 28% and the lowest percentage was for More than 1000 at a rate of 9%, and this indicates that the volume of work for companies is average competition.

<b>Employees</b>	<b>COMPUTE</b>	<b>PERCENTAGE</b>
1-50 Employees	132	46%
51-100 Employees	48	17%
101-150 Employees	66	23%
More 150 Employees	42	15%
Overall	288	100%

As shown in the above table, we note that the companies whose number of workers are 1-50 Employees were the most at a rate of 46%, and the companies with the number of more than 150 Employees were the least at a rate of 15%.

### C. Hypothesis Analysis

*H1: There is direct positive relationship between Tangibility of land cargoes operators and sustainability of Jordanian Logistics Industry:*

<b>F-Value</b>	<b>T. Value</b>	<b>Sig.t</b>	<b>R</b>	<b>R<sup>2</sup></b>
87.3	2.99	0.02	197	0.01

P-value ( $p < 0.001$ ) The results of the hypothesis show that the p-value ( $p < 0.001$ ) is less than 0.05 which mean that there is a significant correlation. The hypothesis is acceptable this is shown by the value of F-value=87.3 and t. value=2.99.

*H2: There is direct positive relationship between Reliability of land cargoes operators and sustainability of Jordanian Logistics Industry:*

<b>F-Value</b>	<b>T. Value</b>	<b>Sig.t</b>	<b>R</b>	<b>R<sup>2</sup></b>
88.3	3.02	0.02	197	0.01

P-value ( $p < 0.001$ ) the results of the hypothesis show that the p-value ( $p < 0.001$ ) is less than 0.05 which mean that there is a significant correlation. The hypothesis is acceptable. This

is shown by the value of F-value=88.3 and t. value=3.02

*H3: There is direct positive relationship between Responsiveness of land cargoes operators and sustainability of Jordanian Logistics Industry:*

<b>Table 8</b>				
<b>RELATIONSHIP BETWEEN RESPONSIVENESS OF LAND CARGOES OPERATORS AND SUSTAINABILITY OF JORDANIAN LOGISTICS INDUSTRY</b>				
<b>F-Value</b>	<b>T. Value</b>	<b>Sig.t</b>	<b>R</b>	<b>R<sup>2</sup></b>
87.4	3.02	0.02	197	0.01

P-value ( $p < 0.001$ ) the results of the hypothesis show that the p-value ( $p < 0.001$ ) is less than 0.05 which mean that there is a significant correlation. The hypothesis is valid. This is shown by the value of F-value=87.4 and t. value=3.02

*H4: There is direct positive relationship between Assurance of land cargoes operators and sustainability of Jordanian Logistics Industry:*

<b>Table 9</b>				
<b>RELATIONSHIP BETWEEN ASSURANCE OF LAND CARGOES OPERATORS AND SUSTAINABILITY OF JORDANIAN LOGISTICS INDUSTRY</b>				
<b>F-Value</b>	<b>T. Value</b>	<b>Sig.t</b>	<b>R</b>	<b>R<sup>2</sup></b>
86.3	2.98	0.02	197	0.01

P-value ( $p < 0.001$ ) the results of the hypothesis show that the p-value ( $p < 0.001$ ) is less than 0.05 which mean that there is a significant correlation. The hypothesis is right. This is shown by the value of F-value=86.3 and t. value=2.98

*H5: There is direct positive relationship between Empathy of land cargoes operators and sustainability of Jordanian Logistics Industry:*

<b>Table 10</b>				
<b>RELATIONSHIP BETWEEN EMPATHY OF LAND CARGOES OPERATORS AND SUSTAINABILITY OF JORDANIAN LOGISTICS INDUSTRY</b>				
<b>F-Value</b>	<b>T. Value</b>	<b>Sig.t</b>	<b>R</b>	<b>R<sup>2</sup></b>
85.3	2.98	0.02	197	0.01

P-value ( $p < 0.001$ ) the results of the hypothesis show that the p-value ( $p < 0.001$ ) is less than 0.05 which mean that there is a significant correlation. The hypothesis is acceptable. This is shown by the value of F-value=85.3 and t. value=2.98

## CONCLUSION

Because of the importance of service quality and customer satisfaction in the sustainability of the Jordanian logistics industry, decision-makers in top management of land cargoes operators in Jordan must pay more attention to it. Logistics management works in an integrated manner in all countries of the world to provide the necessary goods, equipment, medicines, and spare parts to preserve the economies of the countries of the world.

## RECOMMENDATIONS

The researchers prepared recommendations as follows:

1. More future research on other dimensions of the quality of logistical services.
2. Search other sectors in supply chains, warehousing and procurement management.
3. Assuming other countries as a community for research.

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