An-Najah National University

Faculty of Graduate Studies

INVESTIGATING FIRM'S LOGISTICS PERFORMANCE IN THE PALESTINIAN OCCUPIED TERRITORIES DURING THE COVID-19 PANDEMIC

By

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Dedication

قال تعالى:- (يرفع الله الذين أمنوا منكم والذين أوتوا العلم درجات)، فبالعلم تسطر الحضارات وترتقي الشعوب إلى مصافي الأمم المتقدمة؛ فالبحث والجد يؤدي إلى النجاح.

بفضل الله تعالى أسير بخطىً ثابتة فوق سلالم العلم فكل الشكر لكل من أخذ بيدي لأصل إلى طريق النور والمجد والرقي ومنحني القوة والعزيمة والإصرار لمواصلة الدرب في ظل الصعاب التي واجهتني، فأقدم بحثي هذا مع خالص الشكر والإمتنان:

إلى أستاذي الفاضل الدكتور نضال يوسف دويكات على دعمه وإهتمامه الكبير لإنجاز هذا البحث، فقد حظيت بعد كرم الله بإشرافه على هذا البحث فكان ولا يزال منارة للبحث تُضيء دربي بالعطاء والمعرفة وتحقيق هدفي في الوصول للأسمى؛ فشكراً جزيلاً لأفضالك وجهودك القيمة التي لن أنساها.

إلى روح أبي الطاهرة رحمه الله تعالى؛ إليكَ يا فقيد قلبي يا مَن علمتني أن الدنيا كفاح وسلاحها العلم والمعرفة، يا مَن بذلت الغالي والنفيس لأجل راحتي ونجاحي ورحلت قبل أن ترى ثمرة غرسكَ.

إلى أمي الغالية أمد الله في عمرها؛ إليكِ يا نبع الحنان ونور عيني ومهجة حياتي، يا مَن سهرتِ الليالي على راحتي وساندتيني في صلاتكِ ودعواتكِ وكلماتكِ التي كانت رفيقة نجاحي وتفوقي.

إلى أختي الحبيبة (خلود) وإخواني الأعزاء (خالد، خلدون، عماد وعلام) حفظهم الله عزوجل من كل مكروه؛ إليكم يا سندي وقوتي وضلعي الثابت أزف هذا الإهداء حباً ووفاءً، وآمل من الله أن يكون خبراً مفرحاً لكم وأن أبقى في نظركم مثالاً يُقتدى به في الجد والإجتهاد.

إلى إبنة أختي الرقيقة (روان) وصغيرها (مهدي) الذي خظف قلبي؛ إليكِ يا صديقتي وأختي الصغيرة ورفيقة دربي، يا مَن رافقتيني وساندتيني طيلة فترة الدراسة، يا مَن قضينا لياليا ما بين الجد والتفكير.

إلى صديقاتي (رولا طه، ريم زيدان، وئام مربوع، مريم حموضه، دانه شواهنه ورنا موسى) أجمل هدية أهداها لي القدر؛ أفتخر جداً بكم فأنتنَّ أخواتي التي لم تلدهنَّ أمي ومصدر سعادتي في الحياه.

وأخيراً، إلى كافة زملاء الدراسة والعمل، وأساتذتي الأفاضل، وكل من ساعدني وساندني ولو بإبتسامة، وإلى كل الأشخاص الذين أحمل لهم المحبة والتقدير، وكل من نسيه قلمي وحفظه قلبي.

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Declaration

I, the undersigned, declare that I submitted the thesis entitled:

INVESTIGATING FIRM'S LOGISTICS PERFORMANCE IN THE PALESTINIAN OCCUPIED TERRITORIES DURING THE COVID-19 PANDEMIC

I declare that the work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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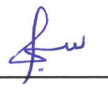
Signature: 

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INVESTIGATING FIRM'S LOGISTICS PERFORMANCE IN THE PALESTINIAN OCCUPIED TERRITORIES DURING THE COVID-19 PANDEMIC

By
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Abstract

Theoretical Background: Logistics is considered as a complex business and one of the dynamic activities that is increasingly seen as an essence competency of the firm, and plays a major role in the competitiveness and economic growth of firms. In light of the COVID-19 pandemic outbreak that caused two global crises; the health and the economic crises; and therefore has an effect on logistics performance that is a crucial for any firm to sustain its competitive advantage. An occupied territory in general lacks stability and security, in addition to lack authority and control over their own resources and revenues. In regard to logistics, occupying power imposes movement restrictions on the movement of goods, along with an overarching stranglehold over infrastructure; that leading to create disruptions for trade and the weakening of the economy. More importantly, these consequences were also increased simultaneously with the outbreak COVID-19 pandemic.

Aims: The aim of this thesis is to study the critical factors affecting firm's logistic performance in Palestinian occupied territories and the impact of COVID-19 pandemic on it. A conceptual model was designed to investigate the relationship between five constructs: logistics efficiency, political environment, logistics effectiveness, logistics performance, and firm's performance.

Methodology: The research model was analyzed by using partial least squares structural equation modeling by using SmartPLS software. The quantitative data were collected via e-mailing a questionnaire, in total 51 responses were received from four different sectors firms: trade, industry, service, and logistic sector in West Bank.

Results and conclusions: The findings revealed that there is a positive and significant relationship between factors, where the relationship between "logistics performance" and

“logistics effectiveness” has strongest influence, followed by the relationship between “firm’s performance” and “logistics performance”, while the relationship between “logistics effectiveness” and “logistics efficiency” and between “logistics effectiveness” and “political environment” have almost the same relationship and the least influence. Also, the findings revealed that the spread of COVID-19 pandemic was caused a negative impact of firm’s logistics performance in Palestine, especially the economic growth.

Keywords: COVID-19, logistics, firm performance, political environment, PLS-SEM.

Chapter One
Theoretical Background

1.1 Chapter Overview

This chapter intends to provide a general background of this research by considering Palestinian firms as a research context regardless of the sector. Also, it includes the research problem, research question and hypotheses, research objective, research scope, research significance, and thesis structure. Moreover, it presents an overview of the previous research and studies on the critical factors of firm's logistic performance, specifically in the current situation of the COVID-19 pandemic outbreak. In addition, it provides a brief description of COVID-19 pandemic impact on firm's logistic performance in Palestinian occupied territories. Finally, it shows the proposed conceptual model of this thesis based on the literature reviews, and it displays the hypotheses development and operationalization of the model constructs to achieve the desired goal of this thesis.

1.2 Introduction

1.2.1 Research Background

Nowadays and with globalized business environments; many firms have cornered their attention to logistics with a view to make their business processes more efficient and effective firms (Hwang et al., 2017).

Frazelle (2002, p.5) defines logistics simply that "is the flow of material, information, and money between consumers and suppliers". He highlighted that firms recognized logistics to significantly increase shareholder and customer value.

In addition to that, logistics is considered as an elemental part of the supply chain system that furnishes the time and place utilities for a firm (Sakchutchawan et al., 2011) and hence it can to promote firm's performance (Rutner & Langley, 2006).

State of Palestine is an occupied territory in the world under what is called Israeli–Palestinian conflict; that was started in the middle of 20th century as a communal conflict between the Jews and Palestinians (Fortna, 2018), then aftermath of the Six Day War in

1967, the West Bank, including East Jerusalem; also, Israel occupied the Gaza Strip (Farah & Abdallah, 2019). Thus, the logistic performance of all firms, regardless of the sector, is very important issue that will be affected by the current situation; as it can be considered as a part of the larger concept of firm's performance.

Recently, COVID-19 pandemic has emerged as the outbreak that was first identified at the end of 2019 in Wuhan-China. So the sudden outbreak spread of this pandemic required mitigation measures that led to stop of the most populous country and second largest economy in the world (Liu et al., 2020). Ozili & Arun (2020) indicate that the first viewpoint of the COVID-19 pandemic would only be restricted in China, but it later spread around the world over the motion of people.

Naturally, this global pandemic have destructive effects initially on the Chinese economy and then on the global economy (Xiarewana & Civelek, 2020). On the other hand, Park et al. (2020) mention in ADB Briefs that the COVID-19 pandemic now causes critical threats to many aspects such as: economy, trade, and finance; so that economic loss globally is estimated between $2 trillion and $4.1 trillion.

Barua (2020) depicts some potential sources of COVID-19 impacts on trade in China compared with the rest of the world, such as the decline in trade routes for Chinese exports and imports that led to a rise in the transportation cost and logistics services; where the trade cost will temporarily rise at the short-term. On other hand, increased cost not likely to remain for long-term while things get normal.

Finally, during the COVID-19 pandemic, it is imperative to understand how to cope with such a major disaster, especially the firms in occupied territories because of the restrictions imposed on it, and related to the critical factors affecting on firm's logistic performance.

1.2.2 Research Problem

The outbreak of COVID-19 pandemic has severely influenced on different fields such as health care, economy, transportation, and other fields in different industries and regions. Which led to weakened purchasing power and economic stagnation due to global

lockdowns and restrictions; also, considered the worst global recession since 1930 at the macro level (Atayah et al., 2021).

Shen et al. (2020) focused on firm-level performance, where pointed that COVID-19 pandemic has a significant negative effect on firm's performance in China through lowering investment and revenue. They also confirmed that the sectors influenced by the pandemic, such as tourism, catering, and transportation, there is a significant downturn in firm performance in the first quarter of 2020; which finally reversed in the negative return rate.

Moreover, Gigi & Swetha (2021) indicated that the logistics is one of the vast sectors that has a strong correlation with the basic indicators of economic including gross domestic product (GDP) and unemployment, which consider as the umbrella for other businesses sectors. And they clarified that the logistic firms during COVID-19 pandemic are suffering from several factors including the shortage in labor, lack of safety, and the constraints on transporting and shipping. Thus, the logistics firms are striving to enhance a stable flow of goods and services.

Otherwise, Food and Agriculture Organization of the United Nations (FAO) reported that the Palestinian territories have a lower middle-income economy, whereas the percentage of change in GDP per capita in pandemic COVID-19 for 2020 compared to 2019 is -13.5%. AlKhaldi et al. (2020) mentioned that health system response to fight COVID-19 pandemic in Palestinian occupation territories has been satisfactory in spite of the lack of capacity, resource, and governance; but due the Israeli occupation some efforts to respond were failed. Whereas, Maraqa et al. (2021) emphasized that the Israeli occupation multiplied attacks on Palestinians and aborted measures to limit the COVID-19 spread; while many conflict countries stopped fire and eased political tension.

Based on the above, since logistics is important not only in the firm level but also for the industry competitiveness, and due to the lack of literature for researches that clarify the critical factors affecting firm's logistic performance in occupied territories; where here lies the research gap. This research will consider the critical factors, in Palestine as a case study of occupied territory, that affect logistic performance, study the impact of logistics performance on firm performance, and conclude with recommendations and suggestions

to help in mitigating the negative effects if exist. All of these in light of the COVID-19 pandemic where its number of cases is still growing rapidly.

1.2.3 Research Question and Hypotheses

The research question for this thesis is *"What is the impact of COVID-19 pandemic on firm's logistic performance in Palestine?"* where a research model was proposed to relate five variables and four hypotheses are developed as following:

H1: *Logistics efficiency has a positive impact on logistics effectiveness.*
H2: *Logistics effectiveness has a positive impact on logistics performance.*
H3: *Political environment has a positive impact on logistics effectiveness.*
H4: *Logistics performance has a positive impact on firm's performance.*

Based on the above, this research strives to find an answer to the mentioned research question and provide a basis for future research in the important issue that is maintaining the firm's performance and reputation and thus the prosperity of the economy.

1.2.4 Research Objectives

The main objective of this research is to study the critical factors affecting firm's logistic performance in occupied territories, regardless of the sector, where achieving this objective is considered a good scientific contribution due to the lack of previous studies related to this topic.

Also, because of the poor economic conditions in Palestine and the whole World in light of the rapid spread of COVID-19 pandemic; another objective of this research is to study the impact of this pandemic on firm's logistic performance.

1.2.5 Research Scope

This thesis will be conducted in Palestine, specifically for firms, regardless of the sector, that located in West Bank. Gaza strip will be excluded in this research, because of the limited time for preparing this thesis, and the political obstacles that faces entering Gaza. *(see figure A.1 in appendix A)* that displays West Bank and Gaza map under Israeli occupation since 1967.

1.2.6 Research Significance

In view of the previous research and studies that are shedding light on assessing firm's logistics performance based on using either effectiveness or efficiency as common measures in independent territories. At the same time, these previous studies lack studying firm's logistics performance by researching other critical factors affecting logistics activities, and especially in occupied countries.

This research investigated and analyzed firm's logistics performance in occupied territories, especially in Palestine, regardless of the sector, and during the COVID-19 outbreak; where the influence of the COVID-19 was not limited to the disruption of local supply chains only, but also included global supply chains that affected profoundly at all stages, from the supply sources to the final customers (Xu et al., 2020, p.154).

This research provides significant information about the critical factors affecting in the field of logistics that needed to be considered while designing and developing strategies to maintain firm's economic growth. Also, it reveals theoretical and managerial insights relative to improve firm's logistics performance in terms of management, productivity, quality and profitability.

1.2.7 Thesis Structure

This Master thesis is organized in six chapters as follows:

Chapter 1. "Theoretical Background"; introduces the thesis subject through a general background overview. Also, it covers the research problem, research question and hypotheses, research objective, research scope, research significance, and thesis structure. Then, it includes an overview of the previous research and studies on the critical factors of firm's logistic performance, specifically in the current situation of the COVID-19 pandemic outbreak in Palestinian occupied territories. After that, it displays the proposed conceptual mode and its hypotheses development and operationalization of the model constructs to achieve the desired goal of this thesis.

Chapter 2. "Research Methodology"; highlights an overview of the basic concepts for scientific research such as research paradigm, philosophy, approach, type and strategy. It

also clarifies the research design, population, sample size, response rate, data collection methods and data analysis techniques used in this thesis.

Chapter 3. "Data Analysis and Results"; illustrates the results of quantitative data that were collected via the questionnaire. Also, it displays the research model quality through estimating the parameters of the research model, verifying the reliability and validity of the constructs, and testing the hypotheses of the model.

Chapter 4. "Discussions and Conclusions"; discusses the results illustrated in chapter three in detail by linking them to previous studies, also concludes the thesis by outlining the contribution of this research as well as the theoretical and practical implications, limitations, and suggestions for future research.

1.3 Literature Review

1.3.1 COVID-19 and its Impact

As published on the World Health Organization (WHO) website, COVID-19 is the infectious disease caused by the most recently discovered coronavirus. This new virus is genetically related to the Severe Acute Respiratory Syndrome (SARS) virus, but it is not the same virus. Compared with COVID-19, the SARS fatality rate is higher, but the infectivity is much lower. Since 2003, SARS epidemic has not occurred anywhere in the world; unlike COVID-19, the outbreak began in December 2019 in Wuhan-China, and it is now a global pandemic affecting many countries (WHO: Q&As on COVID-19, 2020). Furthermore, globally, there have been 545,226,550 confirmed cases of COVID-19, including 6,334,728 deaths. These data updated at 6:25pm CET, 1 July 2022 (*WHO: COVID-19 Dashboard*, 2022).

Ranasinghe et al. (2020) stated that over this year, many countries around the world will suffer the worst global economic depression with the continued sudden lockdown caused by the outbreak of COVID-19 pandemic. Additionally, the International Monetary Fund (IMF) published in World Economic Outlook on April 6, 2020 that the COVID-19 pandemic will severely impact growth rate across all regions, where the growth rate in the year 2020 estimated to be -3.0% of global economy with -6.1% in advanced economies, and -1.0% in emerging markets and developing economies (IMF, 2020).

As a result, growth rates have become too slow, and investment is too subdued to increase median incomes. This means that every economy must invest more resources to prevent the COVID-19 pandemic, especially in large economies.

Moreover, Tardivo et al. (2020) emphasized that the COVID-19 pandemic have profound impacts of on consumer, such as changing significantly the interaction between producers and consumers where the distribution channels will play a critical role in this condition; thus, the supply chain must adjust and be more flexible to deal with the current challenge. Also, they clarified that E-commerce sector in Italy is an example for the impact of COVID-19 outbreak on global consumer behavior, which experienced growth in first week of lockdown almost 97% while in second week reached to 101%.

In March 2020, Tardivo et al. (2020) reported that transport restrictions affected many companies as follows: 75% of companies globally reported interruptions in their supply chain, 46% of companies of international logistics have been suffered significant delays in the shipment from Chinese ports, while 86% of the companies have been suffered significant delays in the shipment to China, 74% in Europe, and 44% in North America.

Furthermore, this pandemic is causing impacts on the whole logistics chain of shipments with massive disturbances of whole supply chains. Also, considering the impending worldwide recession, which is expected to have outcomes alike on advanced and emerging economies. As such, World Trade Organization (WTO) economists foresees for 2020 that that the volume of global trade will tumble by between 13% and 32% contrasted with the earlier year; where the profundity of this decrease will rely upon two major factors: firstly, what duration of time it requires to put the pandemic under control; and secondly, the policies implemented by governments, both domestically and internationally, to mitigate their economic outcomes (WTO, 2020).

In this context, AlKhaldi et al. (2020, p.4) highlighted that “the Palestinian economy is Israel-dependent where Palestinians lack sovereignty and control over their own resources and the Israeli occupation policy deprives them from building a viable independent economy”. So, the Government of Palestine faces a fiscal crisis caused by the Government of Israel with holding of revenue, and will increase as a result of the emergency measures taken to decrease the spread of COVID-19 pandemic in specifically.

As a result, Palestine is already in significant economic crisis which will lead, according to government of Palestine expectations, to: dropping revenues by at least 40%, increasing budget deficit significantly to between $1.8 and 2.4 billion, gathering economic loss at least $2.8 billion, and multiplying poverty rates among Palestinians particularly those living in refugee camps (State of Palestine, 2020). United Nations Office for the Coordination of Humanitarian Affairs (OCHA) reported according to the World Bank, the Palestinian economy is supposed to decline by at least 7.6% in 2020, and potentially as much as 11%, in the case of a slower recovery or further restrictions imposed due to another outbreak (OCHA, 2020).

1.3.2 Logistics

Frazelle (2002) confirmed the logistics evolution in scope and influence in the private sector was started since the mid to late 1940s. And the military was used the term logistics in the 1950s and 1960s as the only organization that using this term in the mentioned period. To show the logistics development *(see figure A.2 and figure A.3 in appendix A)*.

Gourdin (2006) highlighted that the logistics can be considered as a management approach for firms to evolve sustainable competitive advantage. While Lai & Cheng (2009) emphasized that the logistics become as an increasingly competitive weapon for firms to obtain advantage in cost and service, where it can be achieved through the seven rights (7Rs) principle, i.e., the ability to deliver the right amount of the right product at the right time in the right condition to the right place with the right information to satisfy the right customer fully.

Furthermore, many authors defined logistics as efficient and cost-effective managerial decisions that related to the planning, organization, execution and control of the supply chain processes, this is known as the logistics management. And the aim of logistics management is to mend logistics performance, thus an ability in logistics management is fundamental for developing firm's performance and become a key to the success of business firms (Woensel, 2012; Lun et al., 2010; Rushton et al., 2006).

Further, Christopher (2005) considered that logistic management has possibility to help firms in the accomplishment of both a cost advantage and a value advantage, and

suggested a number of important ways for gaining competitive advantage *(see figure A.4 in appendix A)*.

1.3.3 Inbound and Outbound Logistics

For the last 30 years the value chain has been used as a concept and instrument to understand and analyse firms, this concept was first introduced by (Porter, 1985) and it is essentially similar to the supply chain concept.

Since competitive advantage be comprehend by viewing at a firm as an entire; it is necessary to categorise firm's value chain into two types of activities: the primary activities and support activities (Mukhtar & Azhar, 2020; Hitt & Ireland, 2011). Primary activities are included inbound logistics, operations, outbound logistics, marketing and sales, and service. While support activities are included infrastructure, human resource management, technology development and procurement (Christopher, 2011) *(see figure A.5 in appendix A)*.

It is noted that two activities from primary activities are related to logistics: inbound logistics and outbound logistics. Some studies, (Hitt & Ireland, 2011; Lai & Cheng, 2009), defined inbound logistics as material management which is concerned with supplying raw materials, handling, warehousing, inventory control and related services into the production line. They defined outbound logistics as physical distribution which is involving managing, collecting, storing, and distributing the finished goods from the end of the production line to the customer.

Therefore, the objective of inbound logistics is to meet firm's needs for inbound items in efficient and low-cost manner. On the other hand, the objective of outbound logistics is to meet customer demand and minimize the cost of outbound items from the production point to the delivery point.

1.3.4 Logistics Performance

Mentzer & Konrad (1991) defined logistics performance as effectiveness and efficiency in performing logistics activities. While Erkan (2014) illustrated that the definition of

logistics performance is a productive results of firm in terms of cost, quality, delivery, time, and financial measures.

Moreover, logistics performance may be seen as a subset of the major concept of firm's performance. Green et al. (2008) concluded that there is a positive relationship between logistics performance and firm's performance within the manufacturing sector. Where many firms desire to measure logistics performance lies in at least three basic reasons; decrease operating costs, lead revenue growth, and thus promote shareholder value (Keebler & Plank, 2009).

Novack & Thomas (2004) pointed out that logistics performance measurement is an ongoing challenge for all firms for several causes, the most important of which are logistics is process-oriented rather than functional. In addition, logistics service performance includes various outputs (e.g., lead time and on-time delivery) that are linked with each other; where any lack in any one measure leads to lack of overall logistics service.

Saslavsky & Shepherd (2014) notified that the best logistics performance empowers firms to move goods across borders rapidly, inexpensively, and reliably; thus, it assists to reduce overheads cost. Otherwise, Aboul-Dahab & Ibrahim (2020) indicated that the logistics performance assists countries to recognize the challenges and opportunities that meet in the trade sector in particular, and how to improve their performance; where it can measure performance over the logistics supply chain for any country in two various perspectives: international and domestic.

Furthermore, Green et al. (2008) concluded that logistics performance is positively impacted by supply chain management strategy and the both positively influence marketing performance (sales and market share growth), which thus positively influence financial performance (return on investment and profit growth); finally therefore drives to enhanced firm's performance.

Many studies clarified that the logistics performance may be measured through four major indicators: infrastructure, services, border procedures and time, and supply chain reliability (Arvis et al., 2014; Andrejić & Kilibarda, 2016; Hwang et al., 2017; Önsel Ekici et al., 2019). Lauri Ojala & Celebi (2015, p.6) summarized the logistics

performance indicators of countries through six dimensions that catch the main important aspects of the logistics environment as below:

1) Infrastructure; quality of trade and transport related infrastructure.
2) Customs; efficiency of the customs clearance process.
3) Logistics Quality; competence and quality of logistics services.
4) International Shipments; ease of arranging competitively priced shipments.
5) Tracking and Tracing; ability to track and trace consignments.
6) Timeliness; frequency with which shipments reach consignees within scheduled or expected delivery (Arvis et al., 2014, p.6).

1.3.5 Logistics Efficiency and Effectiveness

Generally, efficiency measures the relation among inputs and outputs or how inputs transform into outputs successfully, while effectiveness measures the degree to which a firms obtains its targets or how outputs interface with the economic and social environment (Bartuševičienė & Šakalytė, 2013). Thus, effectiveness and efficiency are sole performance measures, which firms can utilize to evaluate their performance. This is in line with the conclusion of Mouzas (2006) that emphasize the efficiency and effectiveness are central terms used in assessing and measuring firm's performance.

In the logistics discipline, Fugate et al. (2010) revealed that logistics function as an entire should aim to reduce the ratio of resources used (efficiency), and achieve pre-characterized objectives (effectiveness). In addition, Forslund (2007) stated that the quality of logistic performance is evaluated through the efficiency and effectiveness of the flow of materials and information.

Grönroos & Ojasalo (2004) and Wong et al. (2015) posited that there are two sides to performance: efficiency (the costs-effective use of resources); which represents the internal capability to the overall performance and effectiveness (the revenue generating capability); which represents the external capability to the overall performance. Otherwise, Fugate et al. (2010) identified efficiency indicators may be measured by rating business unit's performance on logistics activities, while effectiveness indicators can be measured by rating business unit's actual performance compared to budgeted performance.

In addition to the above, Andrejić & Kilibarda (2013) proposed model that can be used for measuring and improving efficiency, this model consists of productivity, financial, operational, and utilisation indicators and elements. Where Stępień et al. (2016, p.492) indicated that effectiveness "leads to considering logistics costs as the instrument creating the financial result of the company, affecting the value of equity". Fugate et al. (2010, p.55) mentioned logistics efficiency and logistics effectiveness indicators through six aspects for each as the following:

Logistics Efficiency Indicators:

1) Orders shipped to customers from their primary service location.
2) Number of order picking transactions.
3) Inventory turns.
4) Orders shipped on time.
5) Shipments requiring expediting.
6) Order cycle; that means time in days between order receipt and order delivery.

Logistics Effectiveness Indicators:

1) Sales.
2) Order processing costs.
3) Transportation costs.
4) Warehousing costs.
5) Inventory management costs.
6) Total logistics costs.

1.3.6 Political Environment

Mark & Nwaiwu (2015, p.7) emphasized that "the political environment was measured as the degree of political stability and absence of violence while business performance was measured by the profitability of the companies". Moreover, Salih (2018, p.58) demonstrated that the political environment refers to the actions taken by the government, which potentially affect the daily business activities of any business firms; and added that that the political stability is a prerequisite for success regardless of the industry. Political stability is considered as an important variable that effects on level of economics growth and attracting internal and global investment for any country (Radu, 2015).

Several studies concluded that the political environment have positive and significant influence on business performance (Rodríguez & Isabel, 2020; Salih, 2018; Mark & Nwaiwu, 2015). Furthermore, the political environment plays a fundamental role in ensuring economic stability (Rodríguez & Isabel, 2020, p.16); where Rugman & Collinson (2006, p.373) emphasized that the political developments affect strongly over economic change, particularly in emerging markets like China.

In addition to the above, Perera (2017) explained that the political factors are one of the key factors of PESTEL model, (Political, Economic, Social, Technological, Environmental, and Legal), which used as a tool of analysis for business external evaluation, which are directly and indirectly affecting the business performance.

Rodríguez & Isabel (2020) mentioned several indicators to measure political environment represented by:

1) Taxes and restrictions on the imports.
2) Rules and regulations within a country.
3) Level of corruption and peace stability in the country.
4) Control on border crossings.

1.3.7 Firm's Performance

According to Akdoğan & Durak (2016), performance can be defined as the level of success that achieved by firm during a certain period. Or the degree of success arrived by a person, group, or firm to achieve an aimed activity by expressing it quantitatively or qualitatively. Finally, and in simple terms, it is to determine the number of goals that have been achieved, so the required evaluation does not include only the quantity of work accomplished, but rather the quality of the work accomplished.

Wisner (2003) supposed a positive relation between logistics performance and firm's performance. Likewise, the results of (Green et al., 2008) study support the positive relationship between logistics performance and firm's within the manufacturing sector; where logistics performance reverses firm's performance as it relates to its ability to provide goods and services requested by customers in accurate quantities and at specified times.

Many studies demonstrated that the measurement of firm's performance was not only related to financial measures, but also includes the non-financial measures. For example, Ittner et al. (2003) found that firm's performance is significantly and positively linked with the firm measures which correlating with the indicators of financial and non-financial performance. Also, Jusoh et al. (2008) explained that traditional performance measures based on financing and accounting are seen as inadequate for comprehensive decision making; so it is necessary to include non-financial performance measures.

Many authors illustrated the indicators of financial performance are measured by earning profitability (operational capability), while the indicators of non-financial performance are measured by sales growth rate of goods or service, and market share (marketing capability) (Fugate et al., 2010; Sardana et al., 2016); these indicators are as below:

1) Return on investment.
2) Return on sales.
3) Profit growth.
4) Market share growth.
5) Sales growth.

According to the findings of Ahmed et al. (2014) where both operational and marketing capabilities influence firm's performance in periods of economic growth, it is the latter that become more essential in economic downturn.

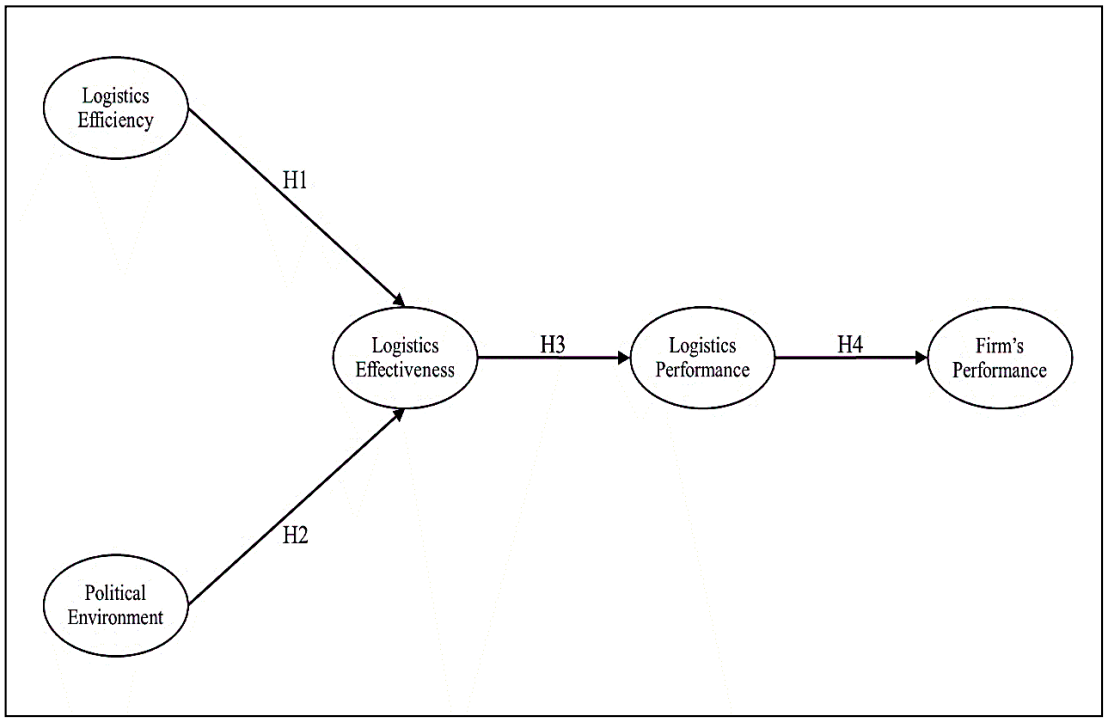
1.4 Research Hypotheses and Conceptual Model

1.4.1 Hypotheses Development

Figure 1.1 explains the proposed conceptual model of this thesis, which intends to check the influence of COVID-19 pandemic on the factors of logistics performance and firm's performance in occupied territory, where four hypotheses are formulated to create the model composed from five constructs.

Figure 1. 1

The Proposed Conceptual Model and Hypotheses



Andrejić & Kilibarda (2016) concluded that it is essential to measure, monitor and improve efficiency of logistics activities in order to enhance trade flows and country economies, where the efficiency estimates both environmental and logistics performances of the country from a global perspective. While Bartuševičienė & Šakalytė (2013) indicated that firms geared toward effectiveness are interested with output, sales, quality, creation of value added, innovation, cost reduction. As a result, Wong et al. (2015) emphasized that all firms should strive to follow a balanced approach which focuses on increasing the efficiency and effectiveness indicators evenly and simultaneously.

But in view of the emergency measures taken by the Government of Palestine to contain the COVID-19 pandemic outbreak; the significantly negative impact will continue on the Palestinian economy (State of Palestine, 2020). Moreover, the movement restrictions associated to the COVID-19 pandemic have significantly declined domestic economic activity and external trade in the occupied Palestinian territory (OCHA, 2020). Particularly, these restrictions will impact the indicators of logistics efficiency and effectiveness for any firms. Hence, first hypothesis (H1) is drawn, where:

H1: *Logistics efficiency has a positive impact on logistics effectiveness.*

Radu (2015, p.571) highlighted that the stability of political environment "is a variable of great importance in a country's evolution since, across time, it was identified as causing law level of economic growth, but also it was presented as a consequence of poor economic development". Therefore, it effects economy and business, especially on the strategies adopted by the business firms, and it considers a prerequisite for success regardless of the industry (Salih, 2018). As a result, the political environment is a primary factor that is undertaken by firms before deciding into conducting business, and it plays an essential role ensuring economic stability (Rodríguez & Isabel, 2020).

But the Israeli state is still practicing economic violence on the Palestinians by controlling the logistics system in Palestine (Alimahomed-Wilson & Potiker, 2017). Where AlKhaldi et al. (2020, p.2) confirmed that the Israeli occupation multiplied attacks on Palestinians and aborted measures to limit the COVID-19 spread. Mostly, the Government of Israel may be seized this opportunity to put more severe restrictions related to the political that poses a challenge for logistics effectiveness for any firms. Hence, second hypothesis (H2) is drawn, where:

H2: *Political environment has a positive impact on logistics effectiveness.*

Banomyong et al. (2017) pointed that the measurement of logistics performance is based virtually on financial indicators; where the logistic performance considered as an assessment of the effectiveness of logistics activities from the standpoint of efficiency, and economical operation. While Wisner (2003) posted that the practices of logistics and supply chain management are linked closely with the strategic management together with their benefits: better customer service, lower cost, higher quality, and improved competitive advantage. Also, he added that these practices tended to improve internal collaboration that led to positively influenced on logistics service performance. Otherwise, Sakchutchawan et al. (2011) clarified that the effectiveness of the whole logistics function of any firm influence their performance. He added that the effective logistics operation results in superior operational performance and superior financial performance such as: delivery performance, cost reductions, customer satisfaction, operational income, net income, and sales growth; thus, this leads logistics firms to superior competitive advantage and raise a firm's market share.

Bartuševičienė & Šakalytė (2013) clarified that most firms evaluate their performance in terms of effectiveness, which focus mainly to accomplish their mission, goals and vision; and concluded that firms assessment lies in fact using effectiveness that is much border perspective comparing with efficiency. Also, Zheng et al. (2010) added that effectiveness usually sets the policy objectives of the firms or how much firms achieves its own goals. Hence, third hypothesis (H3) is drawn, where:

H3: *Logistics effectiveness has a positive impact on logistics performance.*

Keebler & Plank (2009) emphasized that the returns to stockholder investments and the market value of any firm significantly affected by logistics performance refinements, that led to evolve firm performance. While Sakchutchawan et al. (2011) mentioned that it is so serious for firms to examine an innovative ways of adding value for the sake of invent superior logistics performance, and it is essential for logistics firms to preserve customer value and service quality. As a results, Hong & Nguyen (2020) and Khan et al. (2019) confirmed that the logistic performance create positive influence on firm's performance.

Mihajlović & Trajković (2020) declared that in a time of COVID-19 pandemic that has engulfed the entire world, the logistics sector is one of the most vulnerable economic sectors. Where the movement of human and the logistics for goods have become largely restricted due to the countries' closure of ports, borders, factories and firms worldwide, in response to the outbreak of this pandemic (Barua, 2020). Thus, it will have significant consequences for financial situation that will severely affected firm's performance. Hence, fourth and final hypothesis (H4) is drawn, where:

H4: *Logistics performance has a positive impact on firm's performance.*

1.4.2 Operationalization of the Proposed Model

Following the above section, table 1.1 shows the operationalization of the model constructs. Where all mode constructs are assumed to be measured by using reflective indicators, and these indicators were chosen depend on the reviewing the previous studies. In addition, it is important to remark that these indicators will be measured in light of the outbreak COVID-19 pandemic. And figure 1.2 describes the overall research model.

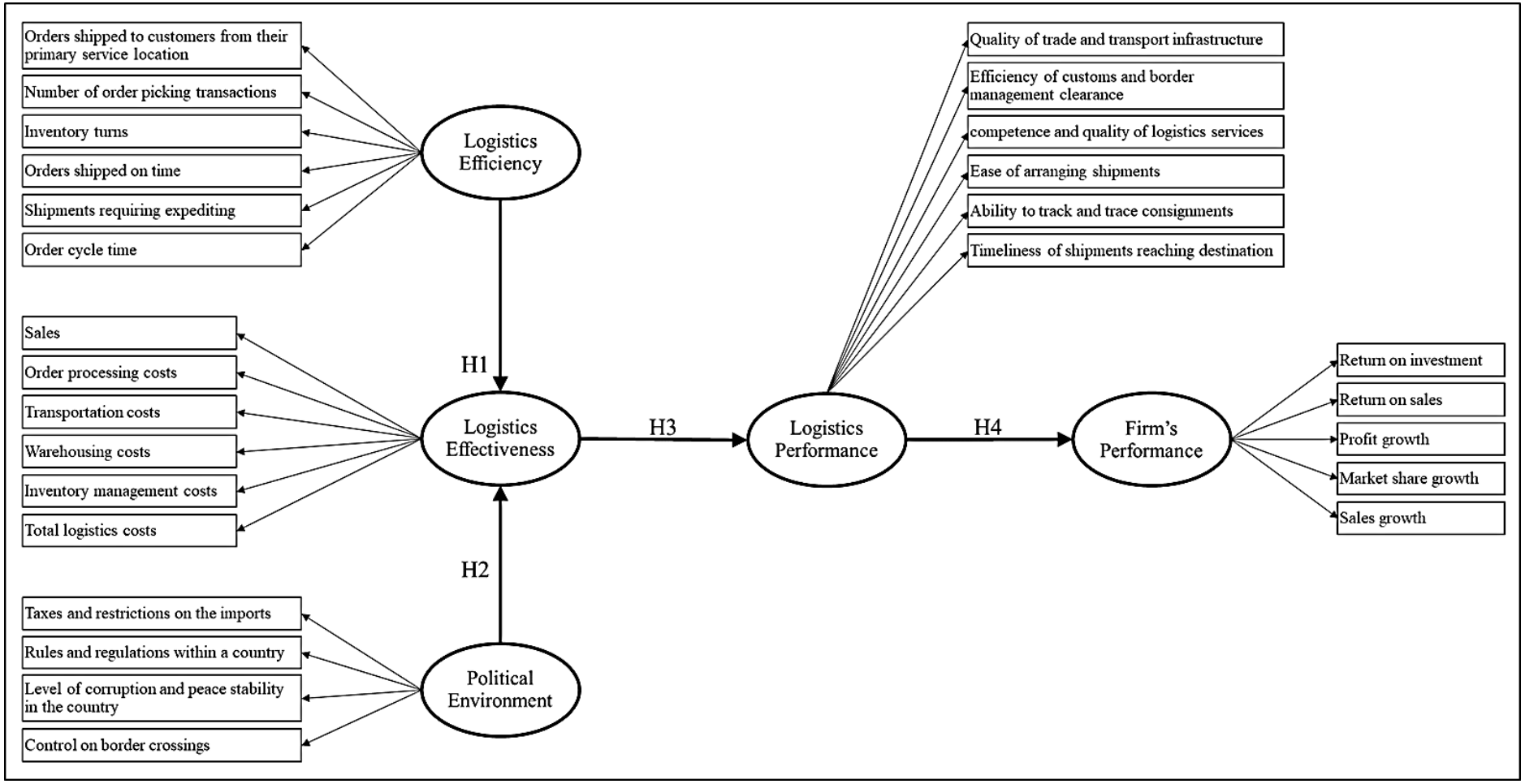
Table 1. 1

Operationalization of the Model Constructs

Construct		Indicators	References
Logistics Efficiency (LEY)	LEY1	Orders shipped to customers from their primary service location	(Fugate et al., 2010) (Andrejić & Kilibarda, 2013)
	LEY2	Number of order picking transactions	
	LEY3	Inventory turns	
	LEY4	Orders shipped on time	
	LEY5	Shipments requiring expediting	
	LEY6	Order cycle time	
Logistics Effectiveness (LES)	LES1	Sales	(Fugate et al., 2010) (Stępień et al., 2016)
	LES2	Order processing costs	
	LES3	Transportation costs	
	LES4	Warehousing costs	
	LES5	Inventory management costs	
	LES6	Total logistics costs	
Political Environment (PE)	PE1	Taxes and restrictions on the imports	(Rodríguez & Isabel, 2020)
	PE2	Rules and regulations within a country	
	PE3	Level of corruption and peace stability in the country	
	PE4	Control on border crossings	
Logistics Performance (LP)	LP1	Quality of trade and transport infrastructure	(Arvis et al., 2014) (Andrejić & Kilibarda, 2016) (Hwang et al., 2017) (Önsel Ekici et al., 2019)
	LP2	Efficiency of customs and border management clearance	
	LP3	competence and quality of logistics services	
	LP4	Ease of arranging shipments	
	LP5	Ability to track and trace consignments	
	LP6	Timeliness of shipments reaching destination	
Firm's Performance (FP)	FP1	Return on investment	(Fugate et al., 2010) (Sardana et al., 2016)
	FP2	Return on sales	
	FP3	Profit growth	
	FP4	Market share growth	
	FP5	Sales growth	

Figure 1. 2

Overall Research Model



Chapter Two
Research Methodology

2.1 Chapter Overview

This chapter intends to present an overview of the basic concepts that should be considered when conducting scientific research such as research paradigm, philosophy, approach, type and strategy. It also clarifies the research design, population, sample size, response rate, data collection methods and data analysis techniques that are used in this thesis.

2.2 Basic Concepts of Research Methodology

2.2.1 Research Paradigm

Kivunja & Kuyini (2017) defined research paradigm as a conceptual lens through which the researchers examine the methodological elements of their research in order to define the research methods to be used and how the information will be analyzed. The term paradigm was used for the first time in 1962 by Thomas Kuhn to mean a philosophical way of thinking (Kuhn, 1996).

Majeed (2019) and Eriksson & Kovalainen (2008) pointed out that the paradigm defines the philosophical position of a researcher, and added that the researchers proposed a set of paradigms such as positivism, critical rationalism, hermeneutics, interpretivism, social construction, and phenomenology. While Candy (1989), who is the one of the leaders in the field, indicated that all of these can be gathered into three key paradigms as follows: Positivist, Interpretivist, and Critical.

The positivist paradigm is also called the scientific paradigm. Its aim is to evidence or refute a hypotheses that advanced from existing theory of a particular phenomenon (Mack, 2010). Furthermore, positivists usually believe that reality is “objectively given and measurable” or “objective and quantifiable” (Antwi & Kasim, 2015, p.218).

On the other hand, the interpretivist paradigm can be also called “the anti-positivist paradigm because it was developed as a reaction to positivism” (Mack, 2010, p.7). Its aim is to understand and explain the subjective causes and meanings that underlie social action

through experiences of different individuals (Antwi & Kasim, 2015). Therefore, interpretivists believe that reality is socially constructed that considered as the key tenet of this paradigm (Rehman & Alharthi, 2016).

Otherwise, the critical paradigm derives from critical theory and the belief that research is undertaken to liberate individuals and groups in an egalitarian society (Cohen et al., 2007). Its aim is not only to understand or list the behaviors in societies, but also to change these behaviors (Mack, 2010). Further, critics assume that reality exists, but it is formed by cultural, political, ethnic, gender, and religious factors that interact with each other to create a social system (Rehman & Alharthi, 2016).

Based on the above, this thesis classifies as positivist paradigm due to existing an objective reality which can be measured and known.

2.2.2 Research Philosophy

Woo et al. (2017) highlighted those philosophers of science distinguish inference that form the logical basis of a researcher's investigations into three philosophical approaches: deduction, induction, and abduction.

Deduction approach requires moving from the general to the particular, in which a researcher starting from a theory of a certain phenomenon, arising hypotheses from it, testing those hypotheses, and modifying the theory. While induction approach requires moving from the particular to the general, in which a researcher starting from empirical observations about some phenomenon of interest and composing concepts and theories based on them (Locke, 2007).

However, abduction approach implies the interaction between the particular and the general, and it is a combination of deduction and induction approach that can address some of the weaknesses traditionally associated with both two approaches (Mitchell, 2018).

Based on the above, this thesis classifies as deduction approach due to reasoning aims at testing an existing theory where moving from general ideas to specific conclusions.

2.2.3 Research Approach

Queirós et al. (2017) and Flanagan (2013) concluded that the scientific studies are fundamental to increase the horizons of theories and clarify the phenomenon of society, so the research methods are used according to a specific research methodology that suits the situation to be analyzed. Therefore, scientific research aims to discover and interpret the facts that are inserted in a certain reality, in which categorized into two methodologies: quantitative and qualitative.

According to Antwi & Kasim (2015), quantitative research depends on the collection of quantitative data (i.e., numerical data). It is used to determine one's hypotheses and then test those hypotheses with empirical data to view if they are supported. While qualitative research depends on the collection of qualitative data (i.e., non-numerical data such as words and pictures). It is used to create new hypotheses and theories, and is also used when little is known about a particular phenomenon and when one wants to reveal it or learn more about it.

Based on the above, this thesis classifies as quantitative research due to seeking test causal relationships, and generalize results to wider populations.

2.2.4 Research Type

Henseler (2018) mentioned that the research in business and social science is categorized into three dominant types: explanatory, exploratory, and descriptive. Explanatory research usually seeks to spot causal factors to clarify a situation, or to illustrate why phenomena occur and predict future occurrences; while exploratory research seeks new insights, clarifies concepts, generates new hypotheses and ideas; otherwise descriptive research indicates the current status of some phenomenon and strives to specify characteristics of populations based on data collected from samples (Bass et al., 2018; Sue & Ritter, 2012).

Based on the above, this thesis classifies as exploratory research due to studying insights into the problem that have not previously been studied in depth.

2.2.5 Research Strategy

Saunders et al. (2019, p.815) defined research strategy as " a general plan for how the researcher will answer the research question (s)". Also, Bryman (2012, p.715) clarified that the research strategy term is used to refer to a general orientation to the conduct of research.

Yin (2002) classified research strategy into five main strategies: experiment, survey, archival analysis, history, and case study as shown in Table 2.1. Also, (Yin, 2002) explained the selection a particular research strategy is depending on three conditions: the research question type, an investigator control range along actual behavioral events, and the level of focus on contemporary versus historical events.

Table 2. 1 *Major Research Strategies*

Strategy	Form of Research Question	Requires Control of Behavioral Events?	Focus on Contemporary Events?
Experiment	How, Why?	Yes	Yes
Survey	Who, What, Where, How many, How much?	No	Yes
Archival Analysis	Who, What, Where, How many, How much?	No	Yes/No
History	How, Why?	No	No
Case Study	How, Why?	No	Yes

Source: (Yin, 2002, p.5)

In this context, Rahi (2017), Li & Stacks (2015) and Saunders et al. (2009) described these five strategies briefly as below:

Experiment is a classical research strategy for natural sciences, social sciences, especially psychology. The aim of this strategy is to study the causal relationship between variables. Therefore, it tends to be used exploratory and explanatory research to answer 'how' and 'why' questions.

Survey is common research strategy in social sciences, business research, and management research. It is generality often used to answer 'who', 'what', 'where', 'how much' and 'how many' questions. So, it tends be used for exploratory and descriptive

research. Furthermore, the principal instrument for survey strategy is a questionnaire, where each respondent is asked to answer a set of standardized and pre-designed same questions.

Archival Analysis is an investigation research strategy that used administrative records and historical documents as major data source to facilitate the investigation relates of a particular phenomenon. This strategy permits to answer research questions which focus upon the past and changes over time, whether the research is exploratory, descriptive or explanatory.

History is an empirical research strategy that used to explore past issues. This strategy is adopted to answer research questions or to report a particular situation, especially when no relevant person is alive.

Case Study is an empirical inquiry research strategy that defined as the progress in detailed, intensive knowledge about a case or a few set of linked cases. And it is preferred to use when researcher has little control on events. This strategy has senior ability to create answers to the question 'why' as well as the 'what' and 'how' questions. Therefore, it is greatest frequently used in explanatory and exploratory research.

Based on the above, the appropriate stratagem for this thesis is survey strategy due to starting research question with "what", focusing on contemporary events, and without controlling on the behaviors.

2.3 Research Design

Based on the previous section, this thesis classifies as an exploratory and quantitative, and follows positivist and deduction because it aims to test hypotheses and relationships between the proposed variables in a conceptual model. Antwi & Kasim (2015, p.220) declared that, the positivist paradigm underpins quantitative methodology, where the focus is on measuring variables and testing hypotheses associated with general causal explanations. While Payne & Payne (2004, p.180) stated that, the quantitative methodology normally using deduction philosophical approach, where usually seeking to test theoretical hypotheses and to produce generally applicable results.

By considering to the conditions for selection research strategy that posited by (Yin, 2002); the research question in this thesis starts with ‘what’, also it focuses on contemporary events and without any control on the behaviors. Thus, survey strategy is appropriate for this thesis.

According to Antwi & Kasim (2015), quantitative research uses questionnaires, surveys and experiments to collect data that is checked and arranged in numbers form, and then it is allowed to analyze statistically. On the other hand, Li & Stacks (2015, p.53) explained that survey is common method and popular strategy in business research. Where the principle instrument is a questionnaire, on which each respondent is asked to respond to the same set of questions to measure carefully what is observed (i.e. standardized questionnaire).

2.4 Research Population, Sample Size, and Response Rate

Population is a totality group of people, events or things that the researcher is intended to study and draw conclusions from. While sample is a subgroup of a population selected to participate in the study, in which the researcher enables to generalize the findings (Sekaran & Bougie, 2016).

Since many studies argue that logistics management is essential for improving firm’s performance and become a key to the success of business firms. This study focuses on Palestinian firms in West Bank and regardless of the sector; whereas selected four different sectors to conduct this study, these are trade, industry, service, and logistic sector. In order to obtain a list of valid firms and the details of contacting them; many relevant authorities have been communicated, such as Ministry of National Economy, Palestinian Federation of Industries, and Palestinian Trade Center.

It is necessary to select minimum sample size to conduct the survey. The required sample needs to be as representative and accurate as possible where it will be used to generalize statistically the results on population (Saunders et al., 2019). As a rule of thumb, the minimum sample size should be 10 times the maximum number of arrowheads pointing at a latent variable anywhere in the PLS path model (Hair et al., 2014a, p.20). In this study, the online survey was forwarded to 187 firms through e-mail during the period of November 2020 to March 2021.

In total, 51 responses were obtained; and therefore the effective response rate is 27.3%. Referring to (Hair et al., 2014a) that clarifies the minimum recommended sample size in PLS-SEM to achieve a statistical power of 80%; when the maximum number of arrows pointing at a construct is 4 same as the model of this study, 42 responses would needed at a significance level of 5% and R^2 value of 0.50. Thus, the sample size of 51 is suitable for using PLS-SEM. Moreover, response rates for e-mail survey without follow-up may only reach 25% to 30% (Kettleson, 1995). Hence, the effective response rate of 27.3% is acceptable.

2.5 Data Collection and Analysis

2.5.1 Survey Design

According to Antwi & Kasim (2015), quantitative research uses questionnaires, surveys and experiments to collect data that is checked and arranged in numbers form, and then it is allowed to analyze statistically. On the other hand, Li & Stacks (2015, p.53) explained that survey is common method and popular strategy in business research. Where the principal instrument is a questionnaire, on which every respondent is asked to answer the similar set of questions to measure carefully what is observed (i.e. standardized questionnaire). Thus, its target is to test the hypotheses of the proposed conceptual model for this research.

Due to the compounded of the epidemiological situation of COVID-19 during the period of this research, that led to prohibit movement across governorates of the West Bank, including Jerusalem; a web-based survey was designed in two languages (English and Arabic) by using a closed question method. Weber & Bradley (2006) mentioned the advantages of web-based surveys such as: reduce time and cost, increase precise data entry, decrease chance of human error, decrease response bias, and increase the potential reliability of data collection. While Rowley (2014) pointed a major benefits of closed question as: are quick for respondents that may increase response rate, and are easier to code and analyze the responses that is particularly important when collected the large number of questionnaires. In addition, five-point Likert scale was used in the research questionnaire, where the use of a five-point Likert scale considered the best option from

an information processing perspective (Chen et al., 2015), and led a significantly higher reliability estimate for the instrument (Chyung et al., 2017).

The draft of questionnaire was designed based on reviewing the previous literature, looking at the previous surveys that related to the research, then display it on thesis supervisor and other expert to take feedbacks, after that all comments were revision and modification upon experts' request. Finally, the approved questionnaire created from six sections as below:

Section 1: (5 questions) this section aims to gather firm and respondent information such as the respondents' job title, firm size, firm sector, firm location, and the logistics activities in firm.

Section 2: (6 questions) this section aims to assess the indicators of logistics efficiency for firms in light of the outbreak COVID-19 pandemic. A five-point Likert scale of [1: very poor, 2: poor, 3: fair, 4: good, and 5: excellent] was used in this section.

Section 3: (6 questions) this section aims to assess the indicators of logistics effectiveness for firms in light of the outbreak COVID-19 pandemic; where the evaluation in this section is based on comparing the actual performance of firm with the budgeted performance. A five-point Likert scale of [1: much worse, 2: worse, 3: moderate, 4: better, and 5: much better] was used in this section.

Section 4: (4 questions) this section aims to assess the indicators of political environment for firms in light of the outbreak COVID-19 pandemic. A five-point Likert scale of [1: much worse, 2: worse, 3: moderate, 4: better, and 5: much better] was used in this section.

Section 5: (6 questions) this section aims to assess the indicators of logistics performance for firms in light of the outbreak COVID-19 pandemic. A five-point Likert scale of [1: much worse, 2: worse, 3: moderate, 4: better, and 5: much better] was used in this section.

Section 6: (5 questions) this section aims to assess the indicators of firm's performance in light of the outbreak COVID-19 pandemic; where the evaluation in this section is based on judgment of firm's performance relative to competitors. A five-point Likert scale of [1: very poor, 2: poor, 3: fair, 4: good, and 5: excellent] was used in this section.

2.5.2 Survey Reliability and Validity

Reliability relates to the extent to which a measurement of a phenomenon yields a stable and consistent outcome, and also concerns with repeatability. For example, when repeat measurement under constant conditions then the same result is obtained; at this time an instrument will be reliable (Taherdoost, 2016).

Evaluating the reliability is important as it indicates to the consistency across the parts of a measuring instrument, where researchers can evaluate their instruments from different perspectives (Huck, 2012). Cronbach's Alpha (α) is the most commonly used to estimate internal consistency reliability coefficient (Garson, 2013), and it is relevant when the items measuring a certain construct is measured on continuous scale such as Likert scale (Quansah, 2017).

On other hand, validity refers to the accuracy of measurement (Whitley & Kite, 2013), and also relates to whether an instrument actually measures what is it intended to be measured; where the instrument must first be reliable to be valid. (Field, 2009). Smith (2005, p.396) indicated that the construct validity is not only widely accepted, but become seen as an umbrella term. Also, convergent and discriminant validity are the two main types of construct validity that should be establish at a minimum (Garson, 2013).

2.5.3 Survey Analysis

Since a pilot study is a preliminary small-scale and also called pre-testing of a particular research instrument; that conducting in order to help researchers through: testing the research instrument adequacy, validating the survey feasibility, and identifying the potential problems (Van Teijilingen & Hundley, 2002). However, given the movement restrictions during the COVID-19 outbreak and the lack of response from several firms, it was not possible to conduct a special pilot study prior to the survey. But after collecting 25, 31, and 34 responses were checked the relationships between elements in the questionnaire through running SmartPLS algorithm procedure as a pilot study.

All quantitative data collected from research questionnaire distribution were analyzed by using SmartPLS 3.3.3 software to check and explore the relationships between elements in the questionnaire. SmartPLS is a one of the leading software tools for partial least

squares structural equation modeling (PLS-SEM), where PLS-SEM is now widely applied in many business and social science disciplines.

Hair et al. (2014, p.4) pointed that PLS-SEM (also called PLS path modeling) is mostly used to evolve theories in exploratory research; by focusing on explaining the variance in the dependent variables when checking the model. In addition, Hair et al. (2014a, p.12) clarified that PLS path model consists of two elements; the first called structural model (inner) that represents the constructs (ovals) and also displays the relationships (paths) between the constructs. While the second called measurement model (outer) of the constructs that displays the relationships between the constructs and the indicator variables (rectangles).

Chapter Three
Data Analysis and Results

3.1 Chapter Overview

This chapter intends to analyze and present the results of the quantitative data that were collected via the questionnaire. It shows the descriptive statistics of the sample using IBM SPSS Statistics 21 software through analyzing the respondents' frequencies to the questionnaire. Also, it displays the research model quality using SmartPLS 3.3.3 software through assessing the research model parameters, checking the constructs reliability and validity, and testing the model hypotheses.

3.2 Sample Characteristics

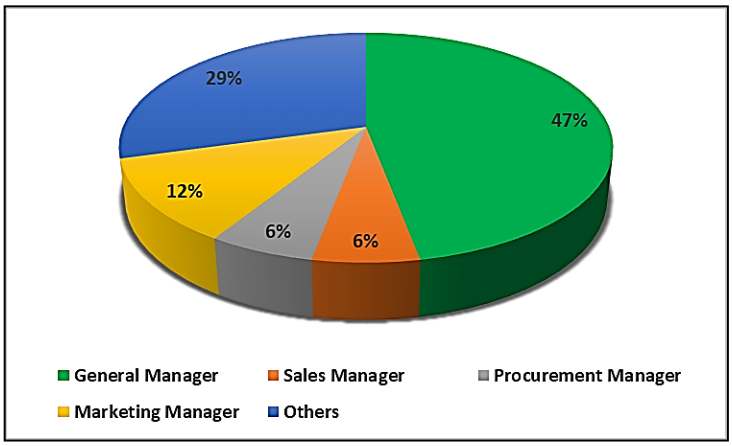
After e-mailed the web-link of the questionnaire to 187 firms from four different sectors: trade, industry, service, and logistic sector. In total, 51 responses were received; hence, the effective response rate is 27.3% that is acceptable for an online survey, as it has been noted "that the average response rate for online surveys is 25% according to a scientific website fluidsurveys.com (Penwarden, 2014)" (Dwaikat, 2016, p.84). *(see table A.1 in appendix A)* that summarizes the sample characteristics according to the statistical descriptive analysis of the collected data.

3.2.1 The Respondents' Position in Firms

Figure 3.1 represents the sample distribution regarding to the respondents' position in firms; 47% are general managers, 6% are sales managers, 6% are procurement managers, 12% are marketing managers, and 29% are others position (such as production managers and customer service managers). This indicates that majority of the respondents are **general managers**.

Figure 3. 1

The Respondents' Position in Firms

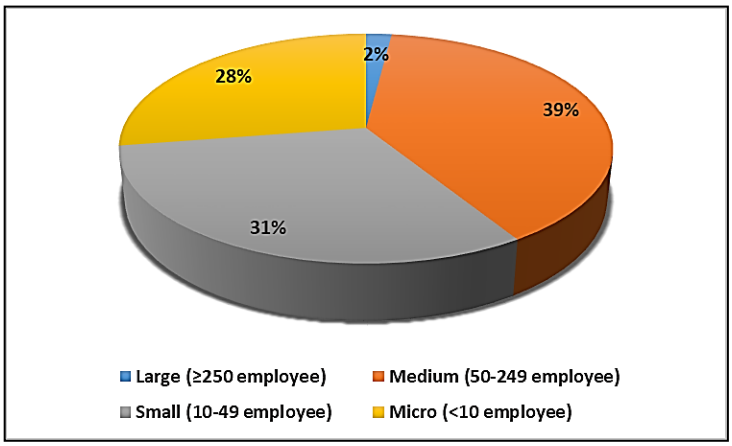


3.2.2 Firms Size

Ščeulovs & Gaile-Sarkane (2012, p.1232) and Pech & Vrchota (2020, p.4) classified firms size based on employment thresholds as the following: large (250 or more persons employed); medium (50 to 249 persons employed); small (10 to 49 persons employed); micro (less than 10 persons employed). Thus, figure 3.2 shows the sample distribution regarding to firms' size based on the total number of employees; 2% are large-sized firms, 39% are medium-sized firms, 31% are small-sized firms, and 28% are micro-sized firms. This indicates that majority of the respondents' firms are **medium-sized**.

Figure 3. 2

Firms Size



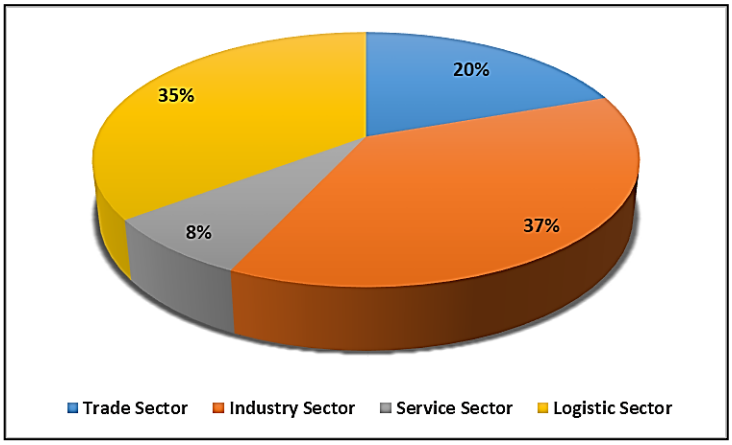
3.2.3 Firms Sector

Figure 3.3 clarifies the sample distribution regarding to firms' sector; 20% of respondents worked at trade sector, 37% of respondents worked at industry sector, 8% of respondents

worked at service sector, and 35% of respondents worked at logistic sector. This indicates that majority of the respondents worked at **industry sector firms**.

Figure 3. 3

Firms Sectors

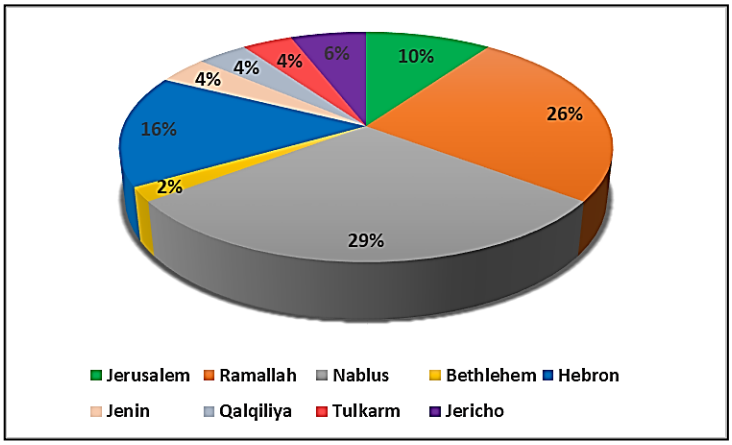


3.2.4 Firms Location

Figure 3.4 represents the sample distribution regarding to firms' location; 10% of firms are located in Jerusalem, 26% of firms are located in Ramallah, 29% of firms are located in Nablus, 2% of firms are located in Bethlehem, 16% of firms are located in Hebron, 4% of firms are located in Jenin, 4% of firms are located in Qalqiliya, 4% of firms are located in Tulkarm, 6% of firms are located in Jericho, and there is no any response from firms that located Salfit and Tubas. This indicates that majority of the respondents' firms are located in **Nablus**.

Figure 3. 4

Firms Location

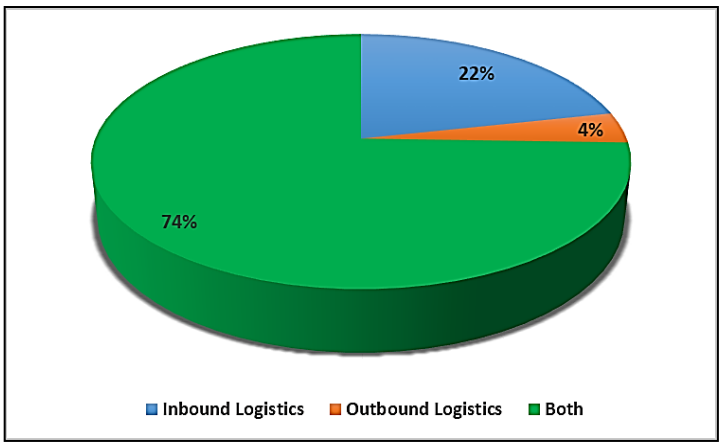


3.2.5 The Logistics Activities in Firms

Figure 3.5 shows the sample distribution regarding to the logistic activities in firms; 22% of firms are doing inbound logistics activities, 4% of firms are doing outbound logistics activities, and 74% of firms are doing both logistics activities (i.e. inbound and outbound logistics activities). This indicates that majority of the respondents' firms are doing **both type of logistics activities**.

Figure 3. 5

The Logistics Activities in Firms



3.3 Model Characteristics

Structural equation modeling (SEM) is a popular statistical technique for multivariate data analysis that is largely used in business, social and behavioral sciences, it's also used in education recently (Henseler et al., 2016; Leguina, 2015). Further, Babin et al. (2008) clarified that the SEM method has ability to assess the measurement of latent variables, as well testing relationships between latent variables.

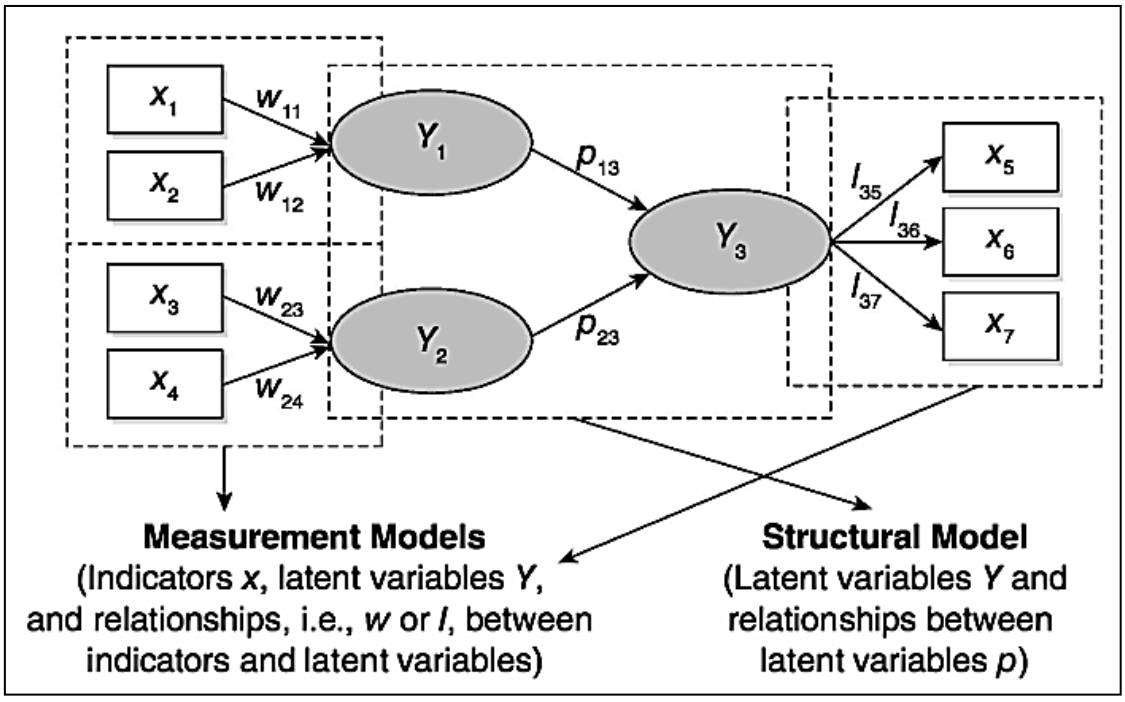
There are two approaches of SEM to estimate the relationships: the first is covariance-based SEM (CB-SEM), which is the most widely known approach to SEM, and using several software such as AMOS, EQS, LISREL and MPlus. the second is variance-based SEM, where partial least square SEM (PLS-SEM) is the most completely advanced, and can be carried out using PLS-Graph, VisualPLS, WarpPLS, and SmartPLS; the last is considered as the most popular software in the subject (Wong, 2013; Šiška, 2017). Wong (2013) illustrated that CB-SEM is still the preferred approach of data analysis confirming or rejecting theories through testing of hypothesis, particularly when the sample size is

large, have normally data distribution, and most essentially, selecting the model correctly. On other hand, Hair et al. (2014b) attributed the most leading justifications for using PLS-SEM represented as: have small sample size, the data distributed non normally, and formatively measured constructs. Furthermore, Garson (2016) highlighted that the chosen SEM approach depends on the researcher's purpose and data, as a rule of thumb, PLS-SEM particularly valuable for exploratory research purposes, while CB-SEM is used for confirmatory research purposes.

Based on the above, PLS-SEM technique is an appropriate approach for due to our sample is relatively small and this research classified as an exploratory. So, SmartPLS 3.3.3 software was used to analyze the collected data. Figure 3.6 clarifies the main two stages in SmartPLS software, first stage called the measurement model (outer) which term the relationships between the latent variables and their measures (indicators). While second stage called the structural model (inner) which describe the relationships between latent variables (paths) (Hair et al., 2014a; Garson, 2016).

Figure 3. 6

Measurement Model vs. Structural Model



Source: (Hair et al., 2014a, p.76)

3.3.1 Measurement Model: Reliability and Validity Analysis

Reliability defined as the extent to which the observed variable measures the true value, is error free, and therefore yield consistent results. While validity defined as the extent to which a measures accurately represent what it is supposed to measure, and therefore the results are truthful (Lakshmi & Mohideen, 2013; Hair et al., 2010).

Mohajan (2017) clarified that reliability and validity are the two essential attributes in the evaluation of any measurement instrument for good research. Also the purpose of demonstrating these features in research is mainly to confirm that the data are valid and reproducible, and the results are accurate. Further, Hair et al. (2014a) considered that reliability and validity assessments of the constructs are the key PLS-SEM characteristics when assessing reflective measurement models; where this step aims to evaluate the internal consistency and validity of the construct of the model. The internal consistency is estimated using Cronbach's Alpha and composite reliability, whereas the validity is estimated using convergent and discriminant validity.

Cronbach's Alpha (α) is the most widely used method for estimating internal consistency reliability of the constructs. Where Quansah (2017, p.57) indicated that Lee Cronbach in 1951 developed the Cronbach's Alpha (α) to offer a measure of the internal consistency of a scale or test, expressed as a number between 0 and 1 (Cronbach, 1951) which is commonly used for items whose responses are on a scale. As a rule of thumb, Cronbach's Alpha (α) value must be greater than 0.70 to be considered a good indicator of reliability (Hair et al., 2010). Table 3.1 shows that all construct are reliable due to the Cronbach's alpha (α) values are above the critical threshold of 0.70. Thus, the results evidence that internal consistency is acceptable of the indicators.

Composite reliability (CR) is commonly used to assess the internal consistency of the intended constructs through checking how well a construct is measured by its assigned indicators (Janadari et al., 2018; Memon & Rahman, 2013). As a rule of thumb, composite reliability (CR) should be higher than 0.70 that is a good indicator of construct reliability (Hair et al., 2011). Table 3.1 shows that the composite reliability (CR) values are higher than threshold of 0.70. Hence, the results indicate that the construct's reliability is acceptable to confirm internal consistency.

Convergent validity defined as the extent to which a measure correlates positively with an alternative measure of the same construct (Hair et al., 2013). Also, Ab Hamid et al. (2017, p.2) defined convergent validity as "the assessment to measure the level of correlation of multiple indicators of the same construct". Convergent validity is assessed by the average variance extracted (AVE) that is calculated as the mean of the squared loadings of each indicator associated with a construct (Sarstedt et al., 2017). As a rule of thumb, the average variance extracted (AVE) should be equal to or higher than 0.50 that indicates, on average, the construct explains more than half of the variance of its indicator (Hair et al., 2014a, p.103). Table 3.1 shows that the average variance extracted (AVE) values for all construct are higher than threshold of 0.50. Therefore, the results indicate that the convergent validity for the constructs is acceptable.

Table 3. 1

Construct Reliability and Validity

Construct	R^2	Cronbach's Alpha (α)	Composite Reliability (CR)	Average Variance Extracted (AVE)
(FP) Firm's Performance	0.268	0.970	0.976	0.892
(LES) Logistics Effectiveness	0.489	0.941	0.953	0.773
(LEY) Logistics Efficiency		0.925	0.942	0.735
(LP) Logistics Performance	0.591	0.903	0.925	0.676
(PE) Political Environment		0.763	0.846	0.595

Discriminant validity defined as the extent to which the construct is actually differing from one another empirically represents phenomena of interest that other measures in model do not capture (Ab Hamid et al., 2017; Hair et al., 2010). Discriminant validity can be assessed by using Fornell-Larcker criterion and Heterotrait-Monotrait Ratio of correlation (HTMT) (Janadari et al., 2018, p.190).

The first criterion is to assess discriminant validity using Fornell-Larcker criterion as a traditional assessment method, which compares the square root of the average variance extracted (AVE) with the correlation of latent constructs in the model (Fornell & Larcker, 1981). Table 3.2 shows that the diagonal values are greater than any other correlation. Therefore, the results indicate that discriminant validity for all construct is well established.

Table 3. 2

Discriminant Validity Using Fornell-Larcker Criterion

Construct	(FP)	(LES)	(LEY)	(LP)	(PE)
(FP) Firm's Performance	**0.945**				
(LES) Logistics Effectiveness	0.727	**0.879**			
(LEY) Logistics Efficiency	0.835	0.629	**0.857**		
(LP) Logistics Performance	0.518	0.769	0.344	**0.822**	
(PE) Political Environment	0.671	0.623	0.603	0.569	**0.771**

The other measure for discriminant validity is Heterotrait-Monotrait (HTMT) ratio of correlation as a new assessment method, which is the average of the heterotrait-heteromethod correlations (i.e., the correlations of indicators across constructs measuring different phenomena), relative to the average of the monotrait-heteromethod correlations (i.e., the correlations of indicators within the same construct) (Henseler et al., 2014, p.121). The value of the HTMT shouldn't be exceeded a threshold value; where Kline (2011) proposed a threshold of 0.85, while Gold et al. (2001) suggested a threshold of 0.90. Table 3.3 displays that all HTMT values are less than a threshold value.

Table 3. 3

Discriminant Validity Using Heterotrait-Monotrait Ratio (HTMT)

Construct	(FP)	(LES)	(LEY)	(LP)	(PE)
(FP) Firm's Performance					
(LES) Logistics Effectiveness	0.744				
(LEY) Logistics Efficiency	0.897	0.652			
(LP) Logistics Performance	0.504	0.829	0.370		
(PE) Political Environment	0.807	0.677	0.772	0.658	

After that, it is necessary to note the outer loadings using PLS algorithm procedure *(the default settings of 300 iterations and path analysis as the weighting scheme)*. These are fundamentally linked with the results for the relationships in reflective measurement models, and defined as the correlation between the indicators and its construct (Hair et al., 2019; Hair et al., 2014a). A threshold value of outer loadings varies according to type of research. In general, 0.70 or higher is preferred (Wong, 2013). Whereas, 0.40 or higher

is acceptable in exploratory research (Hulland, 1999). Since this research is considered exploratory; as shown in Table 3.4, the results indicate that all of indicator's outer loadings are acceptable and implying a reasonably high correlation.

Also, it is fundamental to check the T-statistic for significance testing of the outer model using the Bootstrapping procedure *(the default settings of 500 subsamples)*. T-values should be greater than 1.96 outer model loadings are highly significant (Wong, 2013). As shown in Table 3.4, the results indicate that all of indicator's outer loadings are highly significant.

Table 3. 4

Estimation of Outer Model (i.e. Measurement Model)

Construct and its Indicators	Outer Loading	
	Point Estimation	**T-Values**
(FP) Firm's Performance (α=0.970, CR=0.976, AVE=0.892)		
FP1: Return on investment	0.897	30.352
FP2: Return on sale	0.961	57.802
FP3: Profit growth	0.936	60.108
FP4: Market share growth	0.959	80.067
FP5: Sales growth	0.967	87.917
(LES) Logistics Effectiveness (α=0.941, CR=0.953, AVE=0.773)		
LES1: Sales	0.864	27.012
LES2: Order processing costs	0.894	30.216
LES3: Transportation costs	0.924	34.018
LES4: Warehousing costs	0.859	16.861
LES5: Inventory management costs	0.877	19.989
LES6: Total logistics costs	0.858	14.053
(LEY) Logistics Efficiency (α=0.925, CR=0.942, AVE=0.735)		
LEY1: Orders shipped to customers from their primary service location	0.925	42.061
LEY2: Number of order picking transactions	0.923	41.866
LEY3: Inventory turns	0.911	43.289
LEY4: Orders shipped on time	0.859	12.876
LEY5: Shipments requiring expediting	0.596	4.962
LEY6: Order cycle time	0.884	28.039
(LP) Logistics Performance (α=0.903, CR=0.925, AVE=0.676)		
LP1: Quality of trade and transport infrastructure	0.791	9.566
LP2: Efficiency of customs and border management clearance	0.632	5.084
LP3: Competence and quality of logistics services	0.867	21.516
LP4: Ease of arranging shipments	0.910	24.397
LP5: Ability to track and trace consignments	0.835	13.831
LP6: Timeliness of shipments reaching destination	0.867	18.836
(PE) Political Environment (α=0.763, CR=0.846, AVE=0.595)		
PE1: Taxes and restrictions on the imports	0.808	11.551
PE2: Rules and regulations within a country	0.935	47.225
PE3: Level of corruption and peace stability in the country	0.821	8.750
PE4: Control on border crossings	0.421	2.329

α: Cronbach's Alpha; CR: Composite Reliability; AVE: Average Variance Extracted

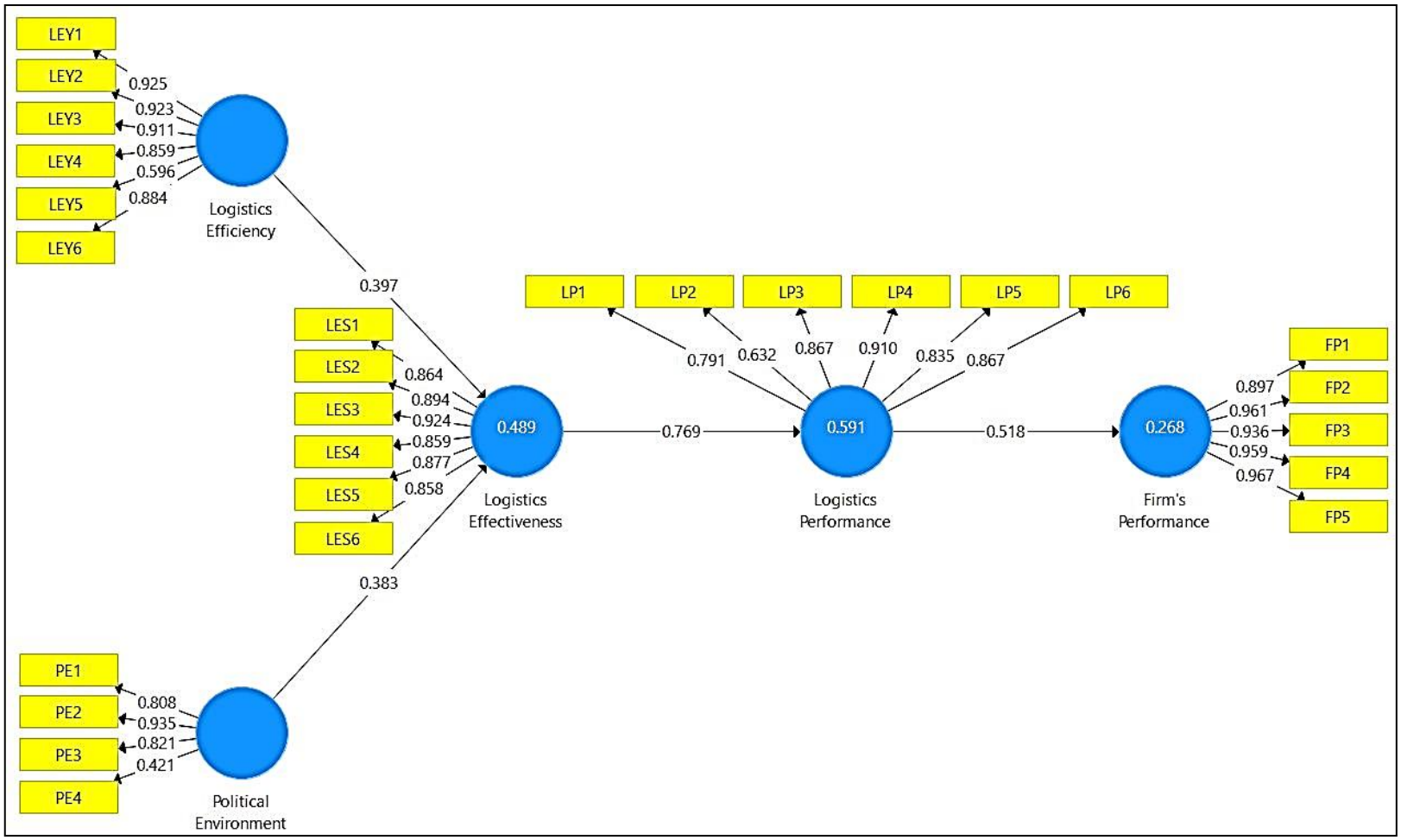
3.3.2 Structural Model

Coefficient determination (R^2) is the most usually used measure to assess the inner model, that indicate the proportion of an endogenous constructs variance that is clarified by its predictor constructs (Janadari et al., 2018). As a rule of thumb, R^2 values of 0.75, 0.50, or 0.25 for endogenous latent variables in the structural model can be described as substantial, moderate, or weak, respectively (Hair et al., 2011). As shown in figure 3.7, the structural model is described as moderate of "logistics effectiveness" and "logistics performance" because of R^2 values equal 0.489 and 0.591 respectively, while described as weak of "firm's performance" because of R^2 value equal 0.268.

Along with R^2 values of endogenous constructs, the PLS algorithm calculates the path coefficients, are the relationships between the latent variables in the structural model (i.e., between the constructs in the model). If path coefficients close to +1, then it indicates a strong positive relationship (Hair et al., 2014, p.80). As presented in figure 3.7, the inner model (i.e., structural) indicates that the relationship between "logistics performance" and "logistics effectiveness" (0.769) has strongest influence, followed by the relationship between "firm's performance" and "logistics performance" (0.518). Finally, the relationship between "logistics effectiveness" and "logistics efficiency" (0.397) and the relationship between "logistics effectiveness" and "political environment" (0.383); those two relationship are nearly the same.

Figure 3. 7

PLS Path Modeling Estimation



Although path coefficient values close to +1 are essentially often statistically significant, a standard error should be gotten using bootstrapping to evaluate the path coefficient sizes and significance. Eggert & Serdaroglu (2011) suggested that the standardized path coefficient (β-values) must be equal or larger than 0.10 in order to prove its significance. Whereas, Garson (2016) pointed that the T-values for two-tailed test must be equal or greater than 1.96 (significance level=5%), also the P-values should be less than 0.05; to conclude that the relationship under consideration is significant. As presented in table 3.5 and figure 3.8, the results confirm that "logistics effectiveness" has a significant positive influence on "logistics performance" (β=0.769 and T=9.059), and "logistics performance" has a significant positive impact on "firm's performance" (β=0.518 and T=4.329). The results also confirm that "logistics effectiveness" has a significant positive influence with both "logistics efficiency" (β=0.397, T=2.659) and "political environment" (β=0.383 and T=2.041).

Furthermore, the results presented in table 3.5 demonstrate that all hypothesis which formulated to examine the influencing of COVID-19 pandemic on the factors of logistics performance and firm's performance in Palestinian occupied territories are supported. And conclude that "logistics effectiveness" is a very strong factor that influences directly on "logistics performance". As well as, "logistics performance" is a very strong factor that influences directly on "firm's performance".

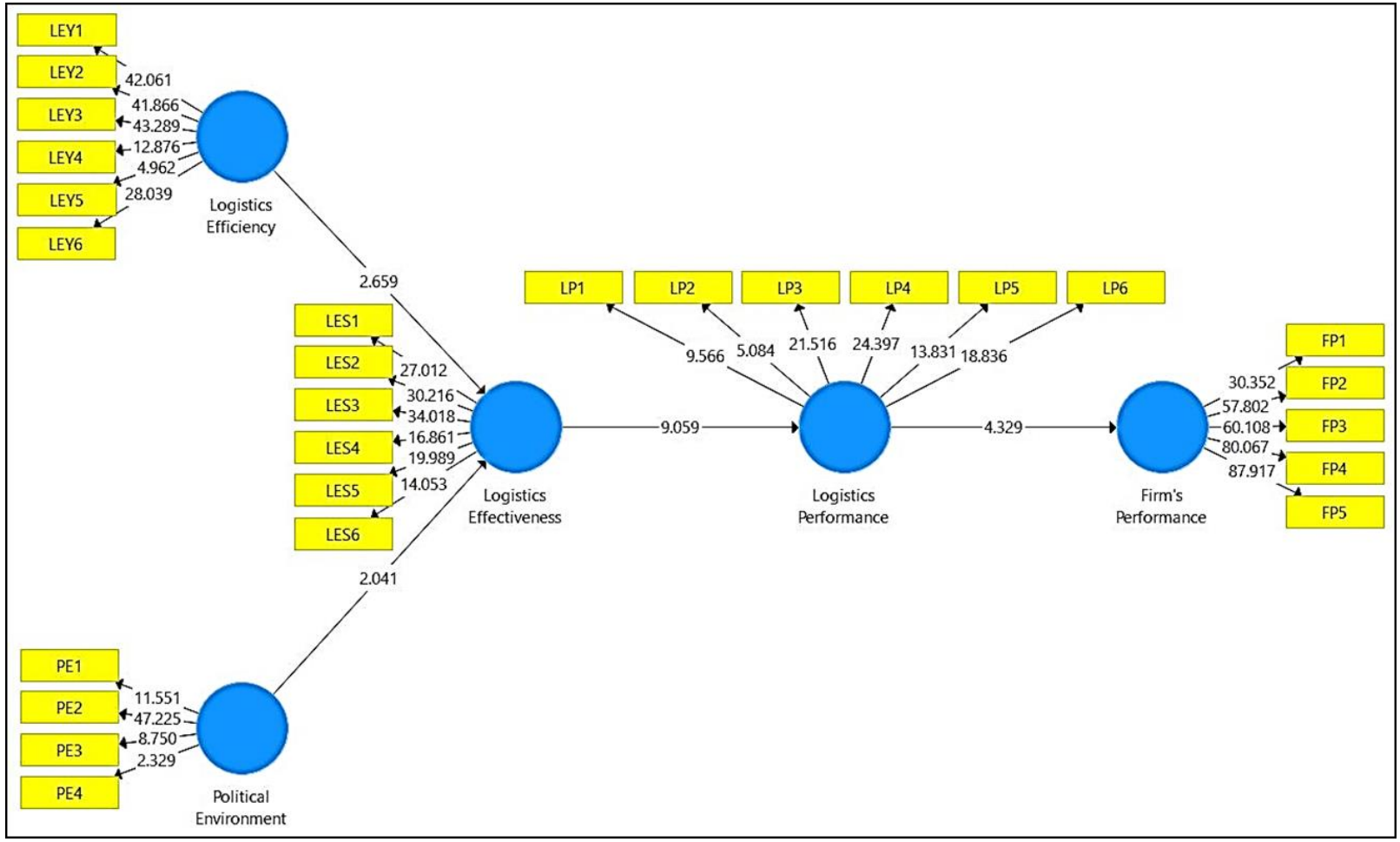
Table 3. 5

The Model Fit Results

Relationship	**Coefficient β-Value**	**Standard Deviation**	**Significance**		**Conclusion**
			T-Value	**P-Value**	
Logistics Efficiency → Logistics Effectiveness	0.397	0.149	2.659	0.008	H1 is supported
Political Environment → Logistics Effectiveness	0.383	0.120	4.329	0.000	H2 is supported
Logistics Effectiveness → Logistics Performance	0.769	0.085	9.059	0.000	H3 is supported
Logistics Performance → Firm's Performance	0.518	0.188	2.041	0.042	H4 is supported

Figure 3. 8

Model Fit Estimation Using Bootstrapping



Chapter Four
Discussions and Conclusions

4.1 Chapter Overview

This chapter aims to discuss the results illustrated in chapter three in detail by linking them to previous studies. Also, it concludes the thesis by outlining the contributions of this research as well as the theoretical and practical implications, limitations, and suggestions for future researches.

4.2 Discussions and Conclusions

The main aim of this study is to explore what is the impact of COVID-19 pandemic on firm's logistics performance in Palestine? The study proposed a research model to analyze the relationship between five factors "logistics efficiency", "political environment", "logistics effectiveness", "logistics performance", and "firm's performance". Data were collected from a sample of 51 Palestinian firms in the West Bank including Jerusalem and regardless of the sector through a web-based survey questionnaire. The model quality and its hypotheses were tested through the PLS-SEM technique using SmartPLS 3.3.3 software. IBM SPSS Statistics 21 software was also used to check the descriptive statistics of the sample.

In an attempt to answer the research question posed in this study, four hypotheses were proposed in the conceptual model that shown in section 1.4 (H1, H2, H3 and H4) in Chapter 1. The findings revealed that there is a positive and significant relationship between factors; where all proposed hypotheses were supported during data analysis. Also, confirm that the relationship between "logistics performance" and "logistics effectiveness" (0.769) has strongest influence, followed by the relationship between "firm's performance" and "logistics performance" (0.518). Moreover, the relationship between "logistics effectiveness" and "logistics efficiency" (0.397) and the relationship between "logistics effectiveness" and "political environment" (0.383). These results are in line with prior studies regardless their have a limited set of analyzes all factors together in same research; such as: Wisner (2003) and Green et al. (2008) that concluded a positive association between logistics performance and firm's performance, where the logistics performance construct reflects the firm's performance as it links to its ability to deliver

goods and services in the accurate quantities and at the specific times required by customers. Also, Mouzas (2006) indicated to the importance of significance linking efficiency and effectiveness with more widely on firm's performance, while Wong et al. (2015) deduced that the firm's performance analyzed in multifaceted dimensions of efficiency and effectiveness in business, where a reduction in current liabilities and increment of investment will enhance an improvement of firm's performance. Finally, Salih (2018) confirmed that the political environment have a positive and significant influence on business, whereas Chen & Zhang (2018) clarified that the political environment is reflected on stability, where the more stable of political environment of logistics firms; thereby increasing firm's logistic performance.

Furthermore, where all indicators of the constructs were evaluated regarding firms' business in light of the outbreak COVID-19 pandemic; the findings revealed the negative impact of firm's logistics performance in Palestine, especially the economic growth. In this regard, Mihajlović & Trajković (2020) and Ikram et al. (2021) clarified that the wide spreading of COVID-19 infection around the world was caused a negative and devastating impact on several economic sectors, where logistics, tourism, and transport are most vulnerable to the effects of COVID-19. In addition Gern & Mösle (2020) concluded that global trade has been severely affected by COVID-19 pandemic due to reduced global demand and disruptions of global value chains caused by lockdown measures taken by governments in many countries; therefore, any economy's exposure to the COVID19 pandemic is strongly and negatively correlated with firms performance in that economy (Ding et al., 2020), and Abodunrin et al. (2020) added that COVID-19 pandemic has clearly influenced on the world generally and the global economy implication cannot be defined until its end.

4.3 Research Contributions

Referring to what (Mihajlović & Trajković, 2020) mentioned in his study that the global logistics plays an essential role in global economic growth, and in the integration of business processes on a worldwide scale. Also he added that every sectors depends on importance for logistics, where any significant loss or damage in logistics can be impacted on all parts of the industry. Therefore, this study attempted to make several contributions to firm's logistic performance literature by exploring critical factors affecting logistics

activities on firms in Palestinian occupied territories amid COVID-19 outbreak due to the lack of previous studies related to this topic, as following:

The first contribution is providing clear understanding of how all logistics activities; (i.e. primary activities and support activities); can bring a sustainable competitive advantage for the firms, where it cannot be comprehending by viewing at a firm as an entire.

The second contribution is the improvement and checking of firm's logistics performance model. Whereas logistics performance is not limited to studying the effect of effectiveness and efficiency in performing logistics activities according to the previous studies, so the political environment was added to model that has an influence on business performance and plays a fundamental role in ensuring economic stability.

The third contribution is providing supply chain firms, especially logistics, of how can understand COVID-19 affects businesses; how to respond effectively to the disruptions caused by COVID-19 outbreak; also discussing what new business opportunities that may appear in a post COVID-19 environment, furthermore, how to achieve the most out of this pandemic.

4.4 Research Implications

The findings of this study promote the comprehension of how logistics activities and processes can bring a sustainable competitive advantage for the firm by investigate the COVID-19 pandemic impacts on factors of firm's logistics performance regardless of the sector. These findings have significant implications to both theory and practice as below:

From a theoretical perspective, as COVID-19 pandemic is a recent phenomenon, having clear constructs on which to base research on is rare and need in-depth researches in this filed; thus, the constructs of this study were derived from literature of previous studies and evaluated its influence on firms in light of the outbreak COVID-19 pandemic; that confirmed the significance influence of COVID-19 pandemic on firm's logistics performance in Palestine.

From a practical perspective, this study furnishes the top management teams with managerial insights to identify strategies that confine the impacts of COVID-19 pandemic on logistics to improve the logistics processes and preserve the continuity of their

effective performance, also choose and prioritize which capabilities that need to be improved. Furthermore, this study helps administrative and business owners to look in the causes for the major influence of demand because of the policies imposed by countries to mitigate the consequences of the COVID-19 pandemic, that might be valuable not only during the pandemic outbreak, but also for the post-pandemic period; where the decision makers of logistics firms should need to rethink their processes and routines based on the lessons learned from the COVID-19's impacts.

4.5 Research Limitations

As with all research studies, this study has limitations that are usually out of the researcher's control. The first and most important limitations is represented on conducting this study during the COVID-19 outbreak, especially at primitive and most difficult period of the spread of this pandemic. Where the government of Palestine requested citizens comply with quarantine and movement restrictions at the national and regional level; as is the case in all countries around the world. Thus, this study's findings are based on data collected after e-mailed the web-link of the questionnaire to Palestinian firms from four different sector.

The second limitation is the lack of response and cooperation from a lot of firms that were communicated them through phone calls and social media in addition to e-mailing the online survey, as the data was collected within 4 months that it is considered a long period and took more effort.

The third and final limitation is the lack of awareness among several firms about the importance of following up on the latest research studies related with firm's logistics performance.

4.6 Suggestions for Future Research

This study highlights the importance of studying critical factors affecting firm's logistic performance in occupied territories in light of the COVID-19 pandemic outbreak. Despite this thesis's findings provide insightful theoretical and practical implications regarding the effect of COVID-19 on firm's logistics performance, yet a few limitations stay in this

research that gives area for moreover research. Hence, there are many opportunities for future research as below:

1) Extending the research areas to broader and more samples, covering all Palestinian cities to expand the unit of analysis that enable a broader generalization of findings and more holistic.
2) Conducting research in other occupied territories, and compare the results especially those related from political stability and its firm's performance.
3) Conducting longitudinal empirical studies to monitor the COVIDE-19 pandemic implications in the longer term and to determine the relationships between the factors of firm’s logistic performance over time.
4) Developing the firm’s logistics performance model by adding other related factors such as legal, social and economic where the outbreak of COVID-19 pandemic creating these consequences. Therefore, these issues must be considered to provide in-depth information about impact on firms.

List of Abbreviations

Abbreviation	Meaning
α	Cronbach's Alpha
ADB	Asian Development Bank
AVE	Average Variance Extracted
β	Path Coefficient
CB-SEM	Covariance Based-Structural Equation Modeling
CR	Composite Reliability
FAO	Food and Agriculture Organization of the United Nations
FP	Firm's Performance
GDP	Gross Domestic Product
HTMT	Heterotrait-Monotrait Ratio of Correlation
IMF	International Monetary Fund
LES	Logistics Effectiveness
LEY	Logistics Efficiency
LP	Logistics Performance
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PE	Political Environment
PESTEL	Political, Economic, Social, Technological, Environmental, and Legal
PLS-SEM	Partial Least Squares-Structural Equation Modeling
R^2	Coefficient Determination
SARS	Severe Acute Respiratory Syndrome
SEM	Structural Equation Modeling
WHO	World Health Organization
WTO	World Trade Organization

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Appendices

Appendix A

Additional Figures and Tables

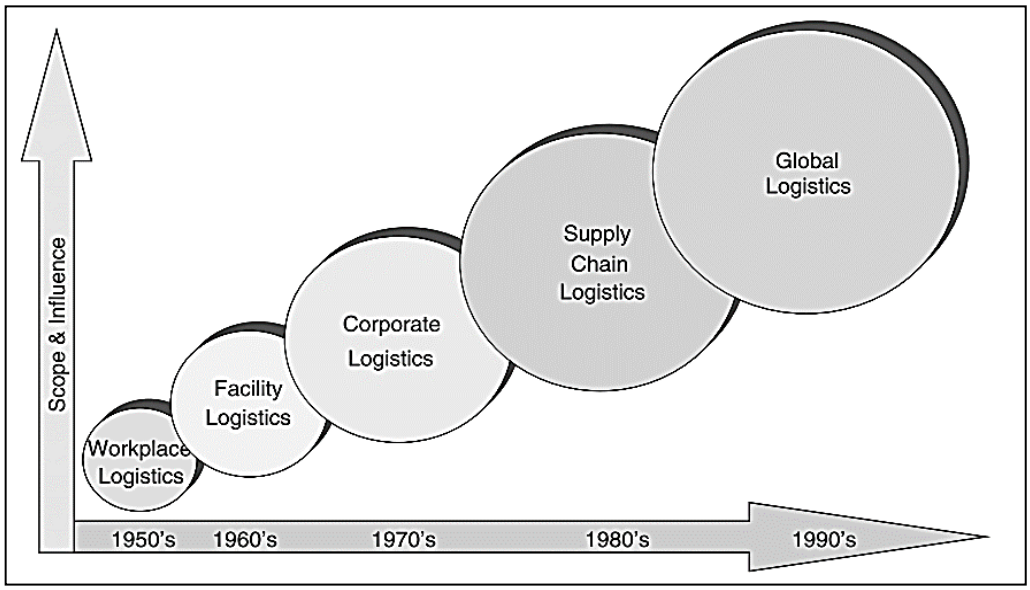
Figure A. 1

West Bank and Gaza Map under Israeli occupation since 1967

Source: website (Israeli–Palestinian Conflict, 2007)

Figure A. 2

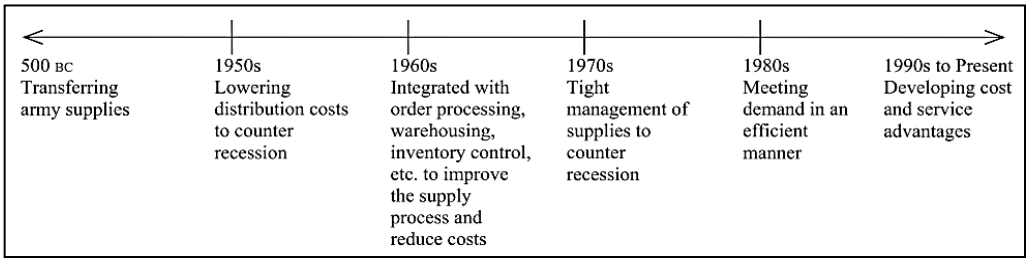
The Evolution of Logistics



Source: (Frazelle, 2002, p.6)

Figure A. 3

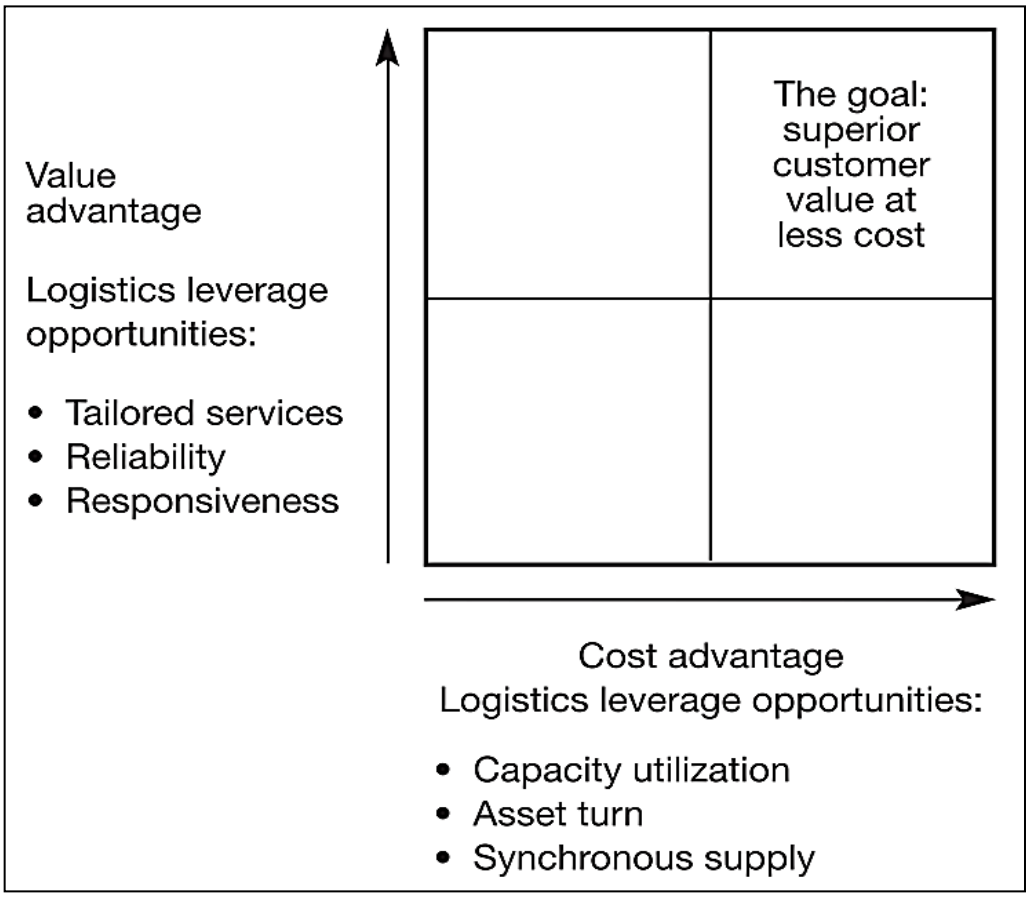
The Development of Logistics



Source: (Lai & Cheng, 2009, p.34)

Figure A. 4

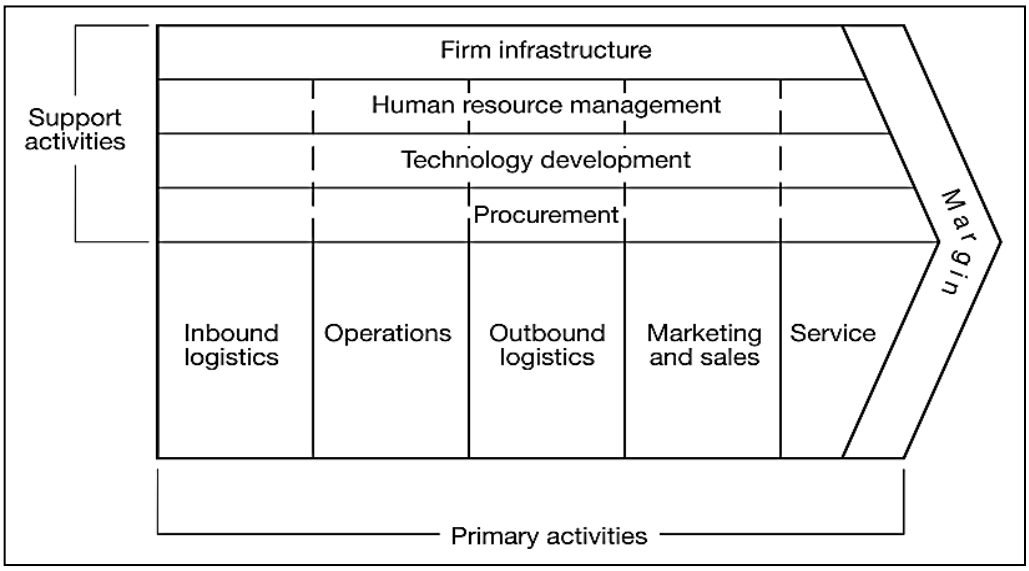
Gaining Competitive Advantage



Source: (Christopher, 2005, p.12)

Figure A. 5

The Value Chain



Source: (Porter, 1985, p.37)

Table A. 1

Description of the Respondents

Characteristic	Frequency (n=51)	Percent (%)
Job Title		
General Manager	24	47.1
Sales Manager	3	5.9
Procurement Manager	3	5.9
Marketing Manager	6	11.8
Others	15	29.4
Firm Size		
Large (≥250 employee)	1	2.0
Medium (50-249 employee)	20	39.2
Small (10-49 employee)	16	31.4
Micro (<10 employee)	14	27.5
Firm Sector		
Trade Sector	10	19.6
Industry Sector	19	37.3
Service Sector	4	7.8
Logistic Sector	18	35.3
City		
Jerusalem	5	9.8
Ramallah	13	25.5
Nablus	15	29.4
Bethlehem	1	2.0
Hebron	8	15.7
Jenin	2	3.9
Qalqiliya	2	3.9
Tulkarm	2	3.9
Jericho	3	5.9
Salfit	0	0.0
Tubas	0	0.0
Logistics Activities		
Inbound Logistics	11	21.6
Outbound Logistics	2	3.9
Both	38	74.5

Appendix B

English Survey

An-Najah National University

Faculty of Graduate Studies

Engineering Management Program

Impact of COVID-19 Pandemic on Firm's Logistic Performance in Palestinian Occupied Territories

Dear Reader:

After Greeting,,,

This survey is designed to studying the impact of COVID-19 pandemic on firm's logistic performance in Palestinian occupied territories; in order to complement the requirements for the degree of Master of Engineering Management at An-Najah National University.

There is no doubt that COVID-19 pandemic is considered one of the most dangerous shocks at global economy in the present time and it is clear that the risks of this pandemic will be more severe at Palestinian economy; Therefore, this questionnaire is divided into several sections that aiming to collect general information about the targeted Palestinian firm, in addition to assessing the factors which affect the logistics performance of this firm in light of the outbreak of this pandemic.

Therefore, we hope that you will cooperate with us in this research by carefully reading all the questionnaire questions and answering them objectively and impartially, where all information will be kept confidential and used for scientific research purposes only.

Thank you for your Cooperation,,,,

Sincerely,

Researcher: Saja Khalili

Master of Engineering Management

E-mail: saja_khalili@yahoo.com

Mobile: 0599490543

Section I: Firm and Respondent Information

Job Title	❑ General Manager	❑ Sales Manager	❑ Procurement Manager
	❑ Marketing Manager	❑ Others	
Firm Size	❑ Large (≥250 employee)	❑ Medium (50-249 employee)	❑ Small (10-49 employee)
	❑ Micro (<10 employee)		
Firm Sector	❑ Trade Sector	❑ Industry Sector	❑ Service Sector
	❑ Logistic Sector		
City	❑ Jerusalem	❑ Ramallah	❑ Nablus
	❑ Bethlehem	❑ Hebron	❑ Jenin
	❑ Qalqiliya	❑ Tulkarm	❑ Jericho
	❑ Salfit	❑ Tubas	
Logistics Activities	❑ Inbound Logistics	❑ Outbound Logistics	❑ Both

Section II: Logistics Efficiency

Please rate the following statements regarding your business in light of the outbreak COVID-19 pandemic;

Orders shipped to customers from their primary service location became	❑ Very Poor	❑ Poor	❑ Fair	❑ Good	❑ Excellent
Number of order picking transactions became	❑ Very Poor	❑ Poor	❑ Fair	❑ Good	❑ Excellent
Inventory turns became	❑ Very Poor	❑ Poor	❑ Fair	❑ Good	❑ Excellent
Orders shipped on time became	❑ Very Poor	❑ Poor	❑ Fair	❑ Good	❑ Excellent
Shipments requiring expediting became	❑ Very Poor	❑ Poor	❑ Fair	❑ Good	❑ Excellent
Order cycle time, that means time in days between order receipt and order delivery, became	❑ Very Poor	❑ Poor	❑ Fair	❑ Good	❑ Excellent

Section III: Logistics Effectiveness

Please rate the following statements regarding your business in light of the outbreak COVID-19 pandemic;
(Note: This evaluation is based on comparing the actual performance of your business with the budgeted performance)

Sales became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Order processing costs became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Transportation costs became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Warehousing costs became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Inventory management costs became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Total logistics costs became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better

Section IV: Political Environment

Please rate the following statements regarding your business in light of the outbreak COVID-19 pandemic;

Taxes and restrictions on the imports became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Rules and regulations within a country became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Level of corruption and peace stability in the country became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Control on border crossings became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better

Section V: Logistics Performance

Please rate the following statements regarding your business in light of the outbreak COVID-19 pandemic;

Quality of trade and transport infrastructure became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Efficiency of customs and border management clearance became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Competence and quality of logistics services became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Ease of arranging shipments became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Ability to track and trace consignments became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better
Timeliness of shipments reaching destination became	❑ Much Worse	❑ Worse	❑ Moderate	❑ Better	❑ Much Better

Section VI: Firm's Performance

Please rate the following statements regarding your business in light of the outbreak COVID-19 pandemic;

(Note: This evaluation is based on your judgment of your business performance relative to competitors)

Return on investment became	❑ Very Poor	❑ Poor	❑ Fair	❑ Good	❑ Excellent
Return on sales became	❑ Very Poor	❑ Poor	❑ Fair	❑ Good	❑ Excellent
Profit growth became	❑ Very Poor	❑ Poor	❑ Fair	❑ Good	❑ Excellent
Market share growth became	❑ Very Poor	❑ Poor	❑ Fair	❑ Good	❑ Excellent
Sales growth became	❑ Very Poor	❑ Poor	❑ Fair	❑ Good	❑ Excellent

Appendix C

Arabic Survey

An-Najah National University

كلية الدراسات العليا

برنامج ماجستير الإدارة الهندسية

أثر جائحة كوفيد-19 على الأداء اللوجستي للشركات في الأراضي الفلسطينية المحتلة

عزيزي القارئ/القارئة:

تحية طيبة و بعد،،،

هذا الإستبيان صمم بهدف دراسة أثر جائحة كوفيد-19 على الأداء اللوجستي للشركات في الأراضي الفلسطينية المحتلة؛ وذلك إستكمالاً لمتطلبات الحصول على درجة الماجستير في تخصص الادارة الهندسية في جامعة النجاح الوطنية.

لا شك أن جائحة كوفيد-19 تُعتبر من أخطر الصدمات التي يتعرض لها الإقتصاد العالمي في الوقت الحالي ومن الواضح أن مخاطر هذه الجائحة ستكون أكثر حدة على الإقتصاد الفلسطيني؛ وعليه فإن هذا الإستبيان ينقسم إلى عدة أقسام بحيث تهدف إلى جمع معلومات عامة تخص الشركة الفلسطينية المُستهدفة، بالإضافة إلى تقييم العوامل التي تؤثر على الأداء اللوجستي لهذه الشركة في ظل تفشي هذه الجائحة.

لذا نأمل من حضراتكم التعاون معنا في هذا البحث من خلال قراءة جميع أسئلة الاستبيان بدقة والإجابة عليها بموضوعية وحيادية، مع العلم بأن كافة المعلومات سوف تكون سرية ولن تُستخدم إلا لأغراض البحث العلمي فقط.

شكراً لحسن تعاونكم،،،

الباحثة: سجا خليلي

ماجستير الإدارة الهندسية

بريد إلكتروني: saja_khalili@yahoo.com

جوال: 0599490543

القسم الأول: معلومات الشركة والشخص المُجيب

المُسمى الوظيفي	❑ المدير العام	❑ مدير المبيعات	❑ مدير المشتريات
	❑ مدير التسويق	❑ غير ذلك	
حجم الشركة	❑ كبيرة (≤250 موظف)	❑ متوسطة (50-249 موظف)	❑ صغيرة (10-49 موظف)
	❑ متناهية الصغر (<10 موظف)		
قطاع الشركة	❑ قطاع التجارة	❑ قطاع الصناعة	❑ قطاع الخدمات
	❑ قطاع الخدمات اللوجستية		
الموقع	❑ القدس	❑ رام الله	❑ نابلس
	❑ بيت لحم	❑ الخليل	❑ جنين
	❑ قلقيلية	❑ طولكرم	❑ أريحا
	❑ سلفيت	❑ طوباس	
أنشطة الخدمات اللوجستية في الشركة	❑ خدمات لوجستية داخلية	❑ خدمات لوجستية خارجية	❑ كلاهما

القسم الثاني: كفاءة الخدمات اللوجستية

يُرجى تقييم العبارات التالية فيما يتعلق بعملك في ظل تفشي جائحة كوفيد-19؛

أصبحت الطلبات التي يتم شحنها للعملاء من موقع الخدمة الأساسي الخاص بهم	❑ ضعيفة جداً	❑ ضعيفة	❑ مقبولة	❑ جيدة	❑ ممتازة
أصبحت عدد معاملات إختيار الطلبات	❑ ضعيفة جداً	❑ ضعيفة	❑ مقبولة	❑ جيدة	❑ ممتازة
أصبح العائد من المخزون	❑ ضعيف جداً	❑ ضعيف	❑ مقبول	❑ جيد	❑ ممتاز
أصبحت الطلبات التي يتم شحنها بالوقت المحدد	❑ ضعيفة جداً	❑ ضعيفة	❑ مقبولة	❑ جيدة	❑ ممتازة
أصبحت الشحنات المستعجلة	❑ ضعيفة جداً	❑ ضعيفة	❑ مقبولة	❑ جيدة	❑ ممتازة
أصبحت مهلة الطلب (الوقت بالأيام بين إستلام الطلب وتسليمه)	❑ ضعيفة جداً	❑ ضعيفة	❑ مقبولة	❑ جيدة	❑ ممتازة

القسم الثالث: فعالية الخدمات اللوجستية

يُرجى تقييم العبارات التالية فيما يتعلق بعملك في ظل تفشي جائحة كوفيد-19؛

(ملاحظة: يعتمد هذا التقييم على مقارنة الأداء الفعلي لعملك مع الأداء المدرج بالميزانية)

أصبحت المبيعات	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير
أصبحت تكاليف معالجة الطلب	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير
أصبحت تكاليف النقل	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير
أصبحت تكاليف التخزين	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير
أصبحت تكاليف إدارة المخزون	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير
أصبح إجمالي تكاليف الخدمات اللوجستية	❑ أسوأ بكثير	❑ أسوأ	❑ معتدل	❑ أفضل	❑ أفضل بكثير

القسم الرابع: البيئة السياسية

يُرجى تقييم العبارات التالية فيما يتعلق بعملك في ظل تفشي جائحة كوفيد-19؛

أصبحت الضرائب والقيود على الواردات	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير
أصبحت القواعد واللوائح داخل الدولة	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير
أصبح مستوى الفساد واستقرار السلام في البلاد	❑ أسوأ بكثير	❑ أسوأ	❑ معتدل	❑ أفضل	❑ أفضل بكثير
أصبحت السيطرة على المنافذ الحدودية	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير

القسم الخامس: الأداء اللوجستي

يُرجى تقييم العبارات التالية فيما يتعلق بعملك في ظل تفشي جائحة كوفيد-19؛

أصبحت جودة البنية التحتية للتجارة والنقل	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير
أصبحت كفاءة التخليص الجمركي وإدارة الحدود	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير
أصبحت كفاءة وجودة الخدمات اللوجستية	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير
أصبحت سهولة ترتيب الشحنات	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير
أصبحت القدرة على تتبع الشحنات وتعقبها	❑ أسوأ بكثير	❑ أسوأ	❑ معتدل	❑ أفضل	❑ أفضل بكثير
أصبحت توقيت وصول الشحنات إلى وجهتها	❑ أسوأ بكثير	❑ أسوأ	❑ معتدلة	❑ أفضل	❑ أفضل بكثير

القسم السادس: أداء الشركة

يُرجى تقييم العبارات التالية فيما يتعلق بعملك في ظل تفشي جائحة كوفيد-19؛

(ملاحظة: يعتمد هذا التقييم على حكمك على أداء عملك بالنسبة إلى المنافسين)

أصبح عائد الإستثمار	❑ ضعيف جداً	❑ ضعيف	❑ مقبول	❑ جيد	❑ ممتاز
أصبح العائد على المبيعات	❑ ضعيف جداً	❑ ضعيف	❑ مقبول	❑ جيد	❑ ممتاز
أصبح نمو الربح	❑ ضعيف جداً	❑ ضعيف	❑ مقبول	❑ جيد	❑ ممتاز
أصبح نمو الحصة السوقية	❑ ضعيف جداً	❑ ضعيف	❑ مقبول	❑ جيد	❑ ممتاز
أصبح نمو المبيعات	❑ ضعيف جداً	❑ ضعيف	❑ مقبول	❑ جيد	❑ ممتاز

جـامعـــة النجاح الوطنية

كليـــة الدراســـات العليـــا

فحص الأداء اللوجستي للشركات في الأراضي الفلسطينية المحتلة خلال جائحة كوفيد-19

إعداد

سجا عزيز أسعد خليلي

إشراف

د. نضال يوسف دويكات

قدمت هذه الأطروحة استكمالا لمتطلبات الحصول على درجه الماجستير في الإدارة الهندسية، من كلية الدراسات العليا، في جامعة النجاح الوطنية، نابلس- فلسطين.

2022

فحص الأداء اللوجستي للشركات في الأراضي الفلسطينية المحتلة خلال جائحة كوفيد-19

إعداد

سجا عزيز أسعد خليلي

إشراف

د. نضال يوسف دويكات

الملخص

خلفية الدراسة: تُعتبر الخدمات اللوجستية عملاً معقداً وإحدى الأنشطة الفعالة التي يُنظر إليها بشكل متزايد على أنها الكفاءة الأساسية للشركة، كما وتلعب دوراً رئيسياً في القدرة التنافسية والنمو الإقتصادي للشركات. وفي ظل تفشي جائحة كوفيد-19 التي تسببت في أزمتين عالميتين وهما: الأزمة الصحية والاقتصادية؛ حيث كان لها تأثير على الأداء اللوجستي الذي يعد أمراً حاسماً لأي شركة للحفاظ على ميزتها التنافسية. حيث تفتقر الأراضي المحتلة بشكل عام إلى الاستقرار والأمن، بالإضافة إلى إفتقارها إلى السلطة والسيطرة على مواردها وإيراداتها. فيما يتعلق الخدمات اللوجستية فإن قوة الاحتلال تفرض قيوداً على حركة البضائع إلى جانب السيطرة الشاملة على البنية التحتية؛ مما يؤدي إلى حدوث إضطرابات للتجارة وإضعاف الإقتصاد. والأهم من ذلك أن هذه العواقب قد إزدادت بالتزامن مع تفشي جائحة كوفيد-19.

الأهداف: الهدف من هذه الأطروحة هو دراسة العوامل الحرجة التي تؤثر على الأداء اللوجستي للشركة في الأراضي الفلسطينية المحتلة وتأثير جائحة كوفيد-19 عليها.

المنهجية: تم تصميم نموذج مفاهيمي للتحقق من العلاقة بين خمسة عوامل وهي: الكفاءة اللوجستية، البيئة السياسية، فعالية الخدمات اللوجستية، الأداء اللوجستي، وأداء الشركة. وتم تحليل نموذج البحث باستخدام نمذجة المعادلات الهيكلية للمربعات الصغرى الجزئية باستخدام برنامج SmartPLS. حيث تم جمع البيانات الكمية عن طريق إرسال الإستبيان من خلال البريد الإلكتروني، وتم إستلام ما مجموعه 51 إجابة من

شركات تعمل في الضفة الغربية في أربع قطاعات مختلفة وهي: التجارة، الصناعة، الخدمات، والخدمات اللوجستي.

النتائج والإستنتاجات: كشفت النتائج عن وجود علاقة إيجابية وهامة بين العوامل، حيث يكون للعلاقة بين "الأداء اللوجستي" و"الفعالية اللوجستية" التأثير الأقوى، تليها العلاقة بين "أداء الشركة" و"الأداء اللوجستي"، بينما العلاقة بين "الفعالية اللوجستية" و"الكفاءة اللوجستية" وبين "الفعالية اللوجستية" و"البيئة السياسية" لهما نفس العلاقة تقريباً وذات التأثير الأقل. كما كشفت النتائج أن إنتشار جائحة كوفيد-19 كان لها تأثير سلبي على الأداء اللوجستي للشركات في فلسطين، وخاصة النمو الإقتصادي.

الكلمات المفتاحية: كوفيد-19، الخدمات اللوجستية، أداء الشركة، البيئة السياسية، PLS-SEM.