THE EFFECTS OF OUTSOURCING PERFORMANCE IN LOGISTICS ON EXPORTERS PERFORMANCE

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ETHICAL DECLARATION

I hereby declare that I am the sole author of this thesis and that I have conducted my work in accordance with academic rules and ethical behaviour at every stage from the planning of the thesis to its defence. I confirm that I have cited all ideas, information and findings that are not specific to my study, as required by the code of ethical behaviour, and that all statements not cited are my own.

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ABSTRACT

THE EFFECTS OF OUTSOURCING PERFORMANCE IN LOGISTICS ON EXPORTERS PERFORMANCE

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Master's Program in Logistics Management

Advisor: Assoc. Prof. Dr. Işık Özge Yumurtacı Hüseyinoğlu

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The disruptions and demand fluctuations in the supply chain during the COVID-19 pandemic affected third-party logistics companies (3PLs). 3PLs tried to find alternative solutions and improve their performance in order to respond to customers' demands. Flexibility and agility of supply chains are very important in pandemic or extraordinary situations. Drawing upon Resource Orchestration Theory (ROT) and Dynamic Capability Theory (DCT), the effect of the performance of 3PL firms on the exporter performance in the COVID-19 process is examined. Within the framework of the model, dependent variables such as flexibility, collaboration and cost performance were used. For the sample, a survey was conducted with companies that export food. The study consists of 170 participants. SPSS 29.0 and AMOS 26.0 programs were used to evaluate the analysis. This study highlights the importance of 3PL managers to understand exporter expectations in the face of emergencies and to adapt their supply chains to change in emergencies.

Keywords: Logistics outsourcing performance, Exporter performance, Flexibility, Collaboration, Cost performance, 3PL Company.

ÖZET

LOJİSTİKTE DIŞ KAYNAK PERFORMANSININ İHRACATÇI PERFORMANSINA ETKİSİ

Saka, Cansu

Lojistik Yönetimi Yüksek Lisans Programı

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COVID-19 pandemisinde tedarik zincirinde meydana gelen aksamalar ve talep dalgalanmaları üçüncü parti lojistik firmaları da dahil olmak üzere birçok sektörü etkiledi. Üçüncü parti lojistik firmaları müşterilerinin taleplerine yanıt verebilmek için alternatif çözüm üretmeye ve performanslarını iyileştirmeye çalıştılar. Pandemi ve birçok olağanüstü durumda tedarik zincirinin esnek ve dinamik olması büyük önem taşımaktadır. Araştırma ile 3PL firmaların COVID-19 sürecindeki performansının ihracatçı performansına etkisi ele alınmaktadır. Model çerçevesinde esneklik, işbirlikçilik, fiyat performansı gibi bağımlı değişkenler kullanılmıştır. Örneklem için gıda ihracatı yapan firmalar ile anket yapılmıştır. Çalışma 170 katılımcıdan oluşmaktadır. Analizin değerlendirilmesi için SPSS 29.0 ve AMOS 26.0 programlarından yararlanılmıştır. Bu çalışma, üçüncü parti lojistik yöneticilerinin acil durumlar karşısında ihracatçı beklentilerini anlamaları ve tedarik zincirlerini olağanüstü durumlarda değişime uyum sağlamasını öneminin vurgulamaktadır.

Anahtar Kelimeler: Lojistik dış kaynak kullanımı performansı, İhracatçı performansı, Esneklik, İş birliği, Maliyet performansı, Üçüncü Parti Lojistik Hizmet Sağlayıcı.

Dedicated to My Parents

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3PL: Third Party Logistics

4PL: Fourth party logistics

AVE: Average Extracted Variance

CFA: Confirmatory Factor Analysis

CFI: Comparative Fit Index

CMIN/DF: Relative Chi Square Index

CP: Cost Performance

CR: Composite Reliability

DCT: Dynamic Capability Theory

ERP: Enterprise Resource Planning

ERP: Enterprise Resource Planning

GFI: Goodness of Fit Index

LOP: Logistics outsourcing performance

NFI: Normed Fit Index

OECD: Organization for Economic Co-operation and Development

RBV: Resource-Based View

ROT: Resource Orchestration Theory

S.E.: Standard Error

SEM: Structural Equation Modelling

SEM: Structural Equation Modelling

TLI: The Tucker-Lewis Index

TPL: Third-Party Logistics

VM: Vendor Management

WMS: Warehouse Management System

CHAPTER 1: INTRODUCTION

1.1. Problem Discussion

Supply chain networks have a delicate structure. Some disruptions that may occur are predictable and organizations lay out their strategies for risk management, but unexpected interruptions may have very dangerous consequences for the supply chain (Taleb, 2007). There have been disruptions in supply chain networks due to COVID-19 pandemic. The situation was no different for 3PLs, the closure of the country's borders, the cessation of production and the great decrease in transportation capacities caused product shortages and delays (Ivanov, 2020a; Choi, 2021b).

Restrictions brought in line with the decisions taken by governments during the pandemic process affected sea, air, truck, and rail transport and caused disruptions in these operations (Loske, 2020). In addition, trade restrictions and labor shortages greatly affect freight volumes (Luke and Rodrigue, 2008). Because of these issues, strategies have been developed for the manufacturing and supply chain to address issues related to COVID-19 pandemic (such as supply diversification and leveraging digital technologies) (Butt,2021).

3PL companies are preferred because they increase customer satisfaction by controlling and managing logistics activities and can be competitive in the market (Gao et al., 2020). Support can be obtained from 3PLs to reduce the negative effects of the pandemic or to improve the situation (Choi, 2021a). They can also take over the management of supply chain operations in the process (Zacharia et al., 2011).

If unexpected risks that may occur in the supply chain are managed efficiently with superior logistics competencies, it contributes for creating value from beginning to end in the supply chain and gains competitive advantage (Wong and Karia, 2010).

3PLs are not only companies with technical knowledge covering supply chain operations, but also have the ability to quickly adapt and implement innovative solutions (Herold et al., 2021).

In order to progress smoothly in periods of disruptions in global supply chains, companies must have knowledge and skills about specific supply chain risk management competencies. Therefore, 3PLs with these competencies have an important role in urgent and challenging conditions (Sodhi and Tang, 2021).

In the previous periods, the aim of the operation managers was focused on working with just-in-time inventory management to increase efficiency and reduce costs, but due to the COVID-19 epidemic, it failed for companies that adopted this system (Govindan et al., 2020).

This thesis provides insight into what features companies should have for emergencies. In addition, awareness can be raised to improve supply chain resilience.

1.2. Research aim and objectives

The primary purpose of this thesis is to examine the effect of logistics performance on exporter performance during the COVID-19 process. Cost savings are achieved with good management of outsourcing, customer service increases and competitive advantages are gained in the market (Tian et al., 2008; Lazzarotto et al., 2014). On the other hand, non-adaptive 3PL companies caused problems in the delivery of goods due to the fragility of their supply chains and the lack of agile operational processes (Sarkis, 2020).

The ability of resource structuring and flexibility to keep supply chains active during the COVID-19 pandemic is emphasized (Siagian et al., 2021). 3PL companies and their customers are in collaboration. Collaborations are mutually beneficial. Due to the uncertainty in the COVID-19 process, 3PL companies had to be needed collaborative with their customers. If the collaboration between the 3PL and the customer does not develop, the result of this situation may end in disaster (Fugate et al., 2009). The effects of features such as compliance collaboration on the food supply chain are important, collaboration between partners in the food supply chain can reduce potential risks (Stone and Rahimifard, 2018).

With this research, it is aimed to discuss the expectations of exporters from 3PL companies during this process and the effects of these expectations on logistics performance. Variables have been discussed separately in past articles. Such as collaboration, flexibility, logistics outsourcing performance. However, the identified variables were not covered in the context of COVID-19 pandemic.

It is aimed to examine the effects of the variables used on competitive advantage or 3PL performance. This thesis is discussed within the framework of Resource Orchestration Theory, which emphasizes the importance of resource

management processes in order to gain competitive advantage and increase firm performance.

Sirmon (2007), emphasizes that firms can gain competitive advantages by structuring the resource portfolio with ROT. Resource synchronization is important to make a difference and gain a more advantageous position compared to competitors (Özcan and Yumurtacı Hüseyinoğlu, 2023).

It aims to examine and discuss the effect of 3PL performance on the export performance of the exporter and the exporter's outsourcing processes management during the COVID-19 pandemic. In previous studies, the effect of logistics activities as a mediator on logistics outsourcing performance was examined (Zhu et al., 2017). In this study, different variables were included in the model as moderator roles.

In the COVID-19 pandemic, the food sector, along with the health sector, is one of the most critical and important sectors, both to prevent food crises and to have a very high impact on the economy (Aday and Aday, 2020). Logistics and trade disruptions can cause supply chain disruptions, limiting access to food and causing major problems such as hunger and malnutrition (FAO, 2020g). Food supply chains are included in activities that are essential in the pandemic (Kumar et al., 2021). In addition, the food industry is faced with different setbacks, unlike other non-critical industries (Aday and Aday, 2020). For this reason, food is the second priority need after drugs in the COVID-19 pandemic (Farias and Gomes, 2020). Despite the shifting demand balance, supply chain partners have put a lot of effort into renewing shelves, so the food supply chain has shown a strong performance (Nicola et al., 2020). Due to the critical role of the food supply chain in the COVID-19 pandemic, the sample in this study was food exporters.

As a result, it aims to examine the effects of the role of logistics companies in emergency situations by focusing on the difficulties and expectations of food exporters in the COVID-19 processes.

1.3. Originality and Significance of the Study

Resource Orchestration Theory and Dynamic Capability Theory are used in this research. According to the ROT, it is emphasized that firms do not need more resources to gain competitive advantages and that a difference will be made by using the resources they have better (Liu et al., 2011). With this perspective, it is emphasized

that resources are used more efficiently with 3 methods (Sirmon et al., 2011). Resource Orchestration Theory, it is emphasized that to gain competitive advantage, more value can be added by structured, bundled, and leveraged resources as well as rare, non-substituted resources (Chadwick et al., 2015; Sirmon et al., 2011).

ROT emphasizes that companies can increase their performance with the correct and efficient management of resources (Sirmon et al., 2007). Resources are not only in-house resources, but supply chain partners such as 3PL companies are also included in these resources (Mishra et al., 2019).

With the use of 3PL, companies benefit from economies of scale and reduce company costs. It was argued that if the companies implement the outsourcing strategy well, the performance of the company will increase while bringing their companies to a more competitive position (Zacharia et al., 2011). Arias-Aranda et al. (2011), managers need to determine good strategies in order to benefit from the advantages of 3PL companies. The benefits and competitive advantages to be gained by the firm may differ according to the way it is managed (Waugh and Luke, 2011; Lahiri, 2015). Yeung (2006) emphasizes that reliable and short-term deliveries have an impact on the export performance of companies. Guan and Ma (2003), collaborating with supply chain partners provides benefits by bringing resources and forces together. Competitive advantage can be achieved with collaboration (Dyer and Singh, 1998; Sarkar et al., 2001). In addition, flexibility is very significant for companies to continue and develop their activities in unpredictable environments (Dreyer and Grønhaug, 2004). In this thesis, the literature review was used while developing the research model, and the expectations of exporters from 3PL were analyzed and included in the model based on the COVID-19 process.

1.4. Research Questions

Questions were determined on the determination of the variables that affect the performance of 3PL service providers during the pandemic process and the investigation of their effects on exporter performance. In this section, the following questions were determined on the development and evaluation of research questions in line with the scope of the thesis:

Research Questions:

RQ1: How does the performance of third-party logistics service providers affect the performance of exports during the pandemic?

RQ2: How does flexibility and collaboration impact logistics outsourcing performance during the pandemic?

RQ3: How does cost performance impact logistics outsourcing performance during the pandemic process?

RQ4: How does logistics outsourcing management process moderate the relationship between logistics outsourcing performance and exporters' performance?

1.5. Structure of the Thesis

The first part of the thesis is the introduction part. In the introduction part of the thesis, the writing purposes of the study and the goals to be achieved are mentioned. In the second part, the studies in literature were examined. Also, the theoretical background used in this research is explained. In this study, Resource Orchestration Theory and Dynamic Capability Theory are used.

In Chapter 3, the way of data collection, pretest and pretest processes are explained. In addition, the development stages of the hypotheses are explained. In Chapter 4, testing the validity and reliability of the study and the results are included, while the results of the analysis of the data with Structural Equation Modeling presented. In Chapter 5, the theoretical and practical implications of the study are discussed. In the conclusion and discussion section, the results are discussed and explained. In addition, the limitations of the study and the requirements for future studies are discussed.

CHAPTER 2: LITERATURE REVIEW

2.1. Impact on Supply Chain and Logistics Industry in the COVID-19

The COVID-19 pandemic has greatly disrupted the supply chain at both global and local scales (Moosavi et al., 2022). At the beginning of 2020, COVID-19 pandemic affected the whole world, not only affecting health and life, but also had a great impact on production and transportation (Cui et al., 2022). Despite the risk of transmission of pandemics and epidemics, measures such as border controls and lockdowns, travel restrictions and social distance have begun to be taken (Kirwan et al., 2020). The measures taken against the COVID-19 pandemic led to major disruptions in economic activities (Baldwin and di Mauro, 2020: Gopinath, 2020). World trade in goods decreased by 7.4% in 2020 compared to 2019 (Liu, et al., 2022).

One of the most important issues affecting international trade in the pandemic was China's COVID-19 pandemic measures. Chinese government took very strict measures after the virus started to spread (Atay et al., 2022). However, as the severity of the COVID-19 epidemic in China increased, both the trade restriction was increased, and the trade restrictions were decided. As a result of this decision, China's total exports fell. Especially China has become a global supply chain center for most products. It is highly preferred in industrial parts and components (Zhao et al., 2021).

One of the problems observed in the COVID-19 process is the disruptions in the supply chain, which causes uncertain demands, late deliveries of products and shortages of goods (Tietze et al., 2020). Another factor that caused the interruption of the supply chain in the COVID-19 epidemic is the closure of the factories; production was affected due to the closure of the factories (Baumgartner et al., 2020; Kumar et al., 2020; Queiroz et al., 2020). According to the International Federation, China is the world's largest manufacturer of electronic components. The electronic parts produced by China are combined by the importing country and the final product is obtained. Therefore, the product group most affected by the COVID-19 epidemic was electronic products (Elrhim and Elsayed, 2020). For example, Apple's assembly company Foxconn has worked below capacity as suppliers in Malaysia, South Korea and Europe have been affected by government restrictions (Ivanov and Das, 2020). In addition,

Hyundai closed all of its automobile factories in the country due to intermediate goods supply problems (Dağlı, 2020).

Declines in shipping activities slowed the supply chain. As 3PLs could not carry some products, the export rate in April 2020 decreased by 41% in Turkey. These products include white goods, textiles, and car parts (Pitel, 2020).

Both social distance and virus restrictions were very effective in supply shocks (Baldwin and Tomiura, 2020). Then, the rapid closure of the economies caused domestic demand shocks from basic needs such as fresh vegetables, eggs, milk, toilet paper (Deconinck et al., 2020). People's panic buying and hoarding behaviors caused fluctuations in the supply chain (Hobbs, 2020). During the pandemic process, lockdowns and social distance practices have caused great changes in shopping habits (Dinesh MuniRaju 2021). Post-pandemic e-commerce sales increased by 25% only in March 2020. E-commerce requires physical distribution and transportation (D'Adamo et al., 2021). Increasing online purchasing in the COVID-19 era demonstrates the importance of logistics systems. For example, airlines earned the most revenue from cargo transportation after the travel ban (Ikram, 2022). Another example is UPS, in partnership with CVS Pharmacy, to differentiate their services by using drones for home delivery (UPS, 2020).

COVID-19 has had serious effects on the economy, especially on imports and exports (Xu et al., 2021). The lockdowns imposed by the governments caused disruptions in logistics operations. The complexity of the transit of goods across borders caused delivery delays of their goods (Zondervan et al., 2022).

Air transport was interrupted due to travel restrictions (Zhu et al., 2020). In road transport, the government's closing the border gates to prevent the spread of the pandemic, travel restrictions and extra checks at the border gates caused delays due to vehicle queues (Özcan and Yumurtacı Hüseyinoğlu, 2023). The profound effects of COVID-19 pandemic have also had an impact on the maritime industry (Cullinane and Haralambides, 2021).

Due to the 14-day quarantine application imposed on ships entering the ports of countries including Turkey, India and Australia in the maritime sector, there have been problems such as the prolongation of the cruise times of the ships, the disruption of the voyages and the inability of the containers to arrive at the port to unload on time (Xu et al., 2021). Restrictions affected domestic and foreign trade due to the decrease in ship capacities (Ikram et al., 2021). In addition, quarantine and transportation

problems affected export activities, which resulted in cost increases in activities such as handling and storage (Ikram et al., 2021).

Sharma et al., (2021) emphasizes that strategies such as supply chain diversification, optimization and digitalization of processes can help for a resilient supply chain for "new normal" scenarios. For example, Sankyu, a well-known logistics company in Japan, has provided a safe facility for its customers by avoiding potential risks by using technology to analyze incoming inventory related data from warehouse worldwide in real time (Sankyu, 2020). McKinsey (2020) emphasizes that with the impact of the COVID-19 pandemic, digitalization has accelerated supply chain implementations for 3 to 4 years in most companies on a global scale.

With the thought of the necessity of diversifying the supply chain in the COVID-19 pandemic, governments outside of China made offers to companies with production activities in China to attract all these production activities to their own countries (Zhu et al., 2020). Vietnam offered privileged tax policies and incentives to attract foreign investors (Yu, 2020).

2.2. Food Supply in the COVID-19 Process

While the quarantine caused great reductions in the workforce in all sectors due to curfews, travel restrictions and social distance, the food and agriculture sectors were also affected (Sridhar et al., 2023).

With the COVID-19 crisis, some governments made some changes in their food trade policies and followed the policies of restricting exports and facilitating imports. The basis of these policies was to maintain the number of products in the domestic market, but the negative effects of these practices were experienced. First, it caused local prices to drop, which puts the farmers in financial hardship (Aday and Aday, 2020). If many countries impose export restrictions, prices will rise above normal and there will be price volatility due to supply uncertainty (Hoekman et al., 2020). It results in reduced crop production due to financially strained farmers. Secondly, the competitive advantage between countries will be damaged and it may lose its position in the international market. Finally, the restriction will damage the reputation and position of the exporter, affect the exporter's future business opportunities, and undermine credibility (Espitia et al., 2020, Aday and Aday, 2020).

The pandemic has greatly affected food trade, and the effects of export restrictions have caused disruptions in the supply chain. Policies restricting exports have led to an increase in the prices of products such as wheat and rice, but the rise in prices has also led to a decrease in quality (Fyles and Madramootoo, 2016).

As the pandemic got serious, governments ordered the closure of non-essential businesses, but exemptions were introduced for some industries (Song et al., 2021). Food and agriculture are key sectors (Stemmler, 2022). Governments around the world have given high priority to staple food products so that staple foods can reach the consumer (Laborde et al., 2020).

Due to the lockdown, consumers gave their priority to canned foods, pasta and products with a long shelf life necessary for daily cooking at home (Pappalardo, et al., 2020). It is thought that liters of milk are thrown away (Aday and Aday, 2020). In addition, the absence of work due to lockdown, illness and travel restrictions adversely affects the company's production capability (Barman et al., 2021).

In addition, there were interruptions due to the shortage of workers in worker-intensive jobs such as agriculture, planting, collecting, and harvesting during the COVID-19 process (Stephens et al., 2020). Due to both illness and physical distance, companies had to work below their working capacity, so there were problems in providing an uninterrupted food supply in the field of food and agriculture (Barman et al., 2021).

Since all processes in the supply chain are tightly interconnected, a small delay can trigger butterfly attachment and cause large losses (FAO, 2020k). For this reason, transportation and logistics problems have mostly affected perishable products such as fruits and vegetables. The fresh fruit and vegetable sector were affected by deterioration due to quarantine measures as well as border controls (OECD, 2020). To avoid these negativities, Canada increased the service hours of truck drivers carrying products (Tabak, 2020).

The COVID-19 pandemic has affected consumers in different ways, for example, they stocked up on toilet paper, bread, water, meat, disinfectants, cleaning products, and ready-to-eat food products (Sheth, 2020). Although it is thought that there will be a decrease in the consumption of food services after the decisions to close the restaurants and activity areas, there has been an increase in the demand for food products sold over the market (Hald and Coslugeanu, 2022). When consumers cannot afford to buy scarce goods, they hoard to reduce the risk of going out and becoming

infected by buying more essentials than they need. Consumers who are concerned about the risk of meeting COVID-19 pandemic are likely to stock up. The increasing demands of consumers have left the shelves empty, and prices have increased (Aday and Aday, 2020). At the beginning of the pandemic, consumers encountered empty shelves in stores, due to the sudden overflow of food supply (OECD, 2020). Another issue is food security. All people are at risk if workers in factories become infected (Staniforth, 2020). It has been shown that the virus can live up to 3 days on plastic, 2 days on stainless steel, and 1 day on cardboard at 21-23 degrees Celsius (Doremalen et al., 2020).

According to the German Federal Institute for Risk Assessment (BfR), 2020, it can be transmitted by sneezing or coughing when an infected person does not adequately follow the hygiene rules. According to studies, it has been noted that the virus existing on frozen meat loses only a small amount of its infectivity even after 3 weeks. Despite the risk of contamination, salmon imports from China and European countries were halted and some were removed from supermarket shelves (Han and Lui, 2022).

Failure to reach final consumers causes significant food waste and loss of income for food producers (Zhu et al., 2020). It has become popular due to the increase in the shelf life of foods packed with Modified Atmosphere Packaging (MAP) and Active Packaging (AP) technology (Qiu et al., 2019). During the COVID-19 pandemic, emphasis was placed on packaging to safely handle food and keep it fresh without spoiling due to longer shipping delays due to quarantine (Chitrakar et al., 2021).

With the outbreak of COVID-19 pandemic, it was expected that the movement of goods and services would continue, while keeping the epidemic under control. In this process, it was seen how important it was to maintain logistics and supply chain operations (Illahi and Mir, 2021).

2.3. Outsourcing

Outsourcing is the provision of services from an external organization, not from internal sources (Butler, 2000). According to another definition, outsourcing is the transfer of the business to efficient and expert service providers in areas other than the main focused activities (Elmuti, 2000).

Barthelemy (2003) emphasized that the core competencies of the business should be considered in outsourcing decisions and the importance of outsourcing to focus on the core business by outsourcing less important work. Firms should not continue the in-house production system by taking advantage of outsourcing in order to minimize their operational costs (Barthelemy and Quélin, 2006). With outsourcing, organizations can provide benefits such as agility, responsiveness, increased flexibility, and innovation, as well as cost reduction. These advantages translate into an overall increase in the competitiveness of the organization (Kroes and Ghosh, 2010). The outsourcing partner provides businesses with an experienced and skilled management team (Linder, 2004). Outsourcing allows organizations to be more flexible and allows their customers to access more innovative solutions with support from specialized vendors (Quinn, 2000).

The competitive pressures that have arisen with the globalization of businesses and organizations have become increasingly dependent on their ability to deliver customized productions all over the world quickly and on time (Sohail and Sohil, 2003). As competitive pressures continue to increase in the face of constantly changing business environments and profits decrease, outsourcing has developed as an important strategy to keep costs under control and increase performance (Murphy et al., 2012). With outsourcing, companies can outsource the necessary activities from an organization outside the company, where they can get more affordable and faster service (Lankford and Parsa, 1999).

The outsourcing orientation is increasing day by day. 94% of 3PL providers acknowledged an increase in their customers' use of outsourced logistics services this year, compared to 83% last year (Langley, 2020).

Despite the increasing competitive pressure, outsourcing provides companies with a competitive advantage in different aspects. Outsourcing, which is used strategically, has become very important (Quinn and Hilmer, 1994; Welson, 1996). By using the outsourcing agreement, the company can be better managed. Contracts are necessary to avoid hidden costs. For this reason, outsourcing is also strategically important (Kakabadse and Kakabadse, 2000; Gonzalez et al., 2005).

However, it should be considered that it can cause negative effects as well as benefit. The cost of outsourcing can be affordable, but the right tasks need to be outsourced (Behara et al., 1995).

2.3.1. Reasons for Outsourcing

In addition to globalization and competitive pressure, companies include outsourcing in their business processes due to the increase in the need for information technologies and the customer-specific production approach (Qureshi et al., 2007). Edvardsson and Teitsdóttir (2015) emphasize that outsourcing is very important for companies, that outsourcing is not only a choice that companies use to control their costs, but focusing on core competencies can become a very important strategy for improving the services provided to customers (Edvardsson and Teitsdóttir, 2015).

Outsourcing is seen as a typical competitive strategy for firms in both domestic and international markets (Javalgi et al., 2009; Mukherjee et al., 2013; Adams et al.,2018). There are four strategic reasons for outsourcing for the company. These reasons are improvement of cash flow includes improvement of payment controls, reduction of staffing and reduction of overall business performance (Narayanan, 2009). Lee and Cavusgil (2006) emphasized the importance of the strategic partnership relationship, stating that it would not be possible for companies to maintain their competitive advantage in global markets only with internal resources.

Companies have started to focus on which activities will be kept within the company and which activities will be outsourced, instead of making decisions about outsourcing or not (Jennings, 1996).

Companies do not prefer outsourcing just to reduce costs. At the same time, technological and strategic reasons are also effective reasons for outsourcing according to Saunders et al. (1997): access to technology, cost saving, strategic consideration, human resource considerations, increase range of functions, politics, renewal of contract, cash infusion.

Outsourcing continues its activities in many areas such as facility operations, logistics, finance, accounting, legal services, marketing, and customer service. With globalization, increasing customer demands and the emergence of new technologies, outsourcing becomes more prominent (Yang et al., 2007). As a result of outsourcing, companies increase their productivity and focus on their core competencies. In this way, they provide two benefits. While satisfying customers, they also increase their profitability (Liou and Chuang, 2010).

2.4. Logistics Outsourcing

Increasing competitive pressures with globalization required better standards of service while providing services to customers, so companies directed their logistics activities to experts (Gandhi et al., 2012).

Outsourcing provides the transfer of activities that are not the core competence of the enterprises (Harrison and Hoek, 2002). 3PLs are entities operating in the supply chain process so that they can effectively meet the needs of customers (Sahu et al., 2015). While 3PL providers provide reservation services for air and sea services, it is among their duties to prepare necessary documentation for operations (Liu et al., 2008). Logistics service providers are considered to be important players in the supply chain, as they are at the end of the chain and deliver products and services to customers (Ellram, 1990).

There are three options for companies to carry out their logistics activities effectively and efficiently. The first one is executing logistics activities in-house. Second, by acquiring the existing 3PL firm or establishing a logistics company. The third is realizing logistics activities by outsourcing (Razzaque and Sheng 1998).

Many companies try to reduce the risk and failure factors related to these activities as much as possible by transferring the activities that are not in the core competency of the enterprise to companies specialized in their field (Batarliene and Jarasuniene, 2017).

3PL service also means logistics outsourcing and contract logistics. 3PL companies are in the role of intermediary companies that perform logistics functions carried out by a shipper or a customer (Hwang et al., 2016). There are three different relationships when defining 3PL. The initial relationship is between the vendor and the 3PL provider. The second relationship is between the buyer and the 3PL provider. The link between the buyer and the seller in the supply chain can be established with 3PL. For this reason, 3PL companies provide services to buyers and sellers in the supply chains. The first party is the shipper or supplier while the second party is the buyer (Bask, 2001).

Businesses work to carry out all logistics activities of their companies or some of their logistics activities with 3PL companies (Green et al.,2008). Third party logistics are businesses that carry out at least three different logistics activities (management and execution of transportation and warehousing) from basic logistics

activities on behalf of a sender and in line with certain contracts, by logistics companies that are experts in their field (Laarhoven et al., 2000). One of the important contributions of 3PL companies, services that cannot be easily obtained by customers or that will be costly when provided by the company, by expert and experienced companies (Razzaque and Sheng, 1998).

2.4.1. Services Provided by Third-Party Logistics Providers

With the use of outsourcing, companies are provided with critical assistance, allowing them to focus on their core activities. While outsourcing increases operational efficiency, it provides the opportunity to reduce costs and improve the supply chain (Haldar et al., 2017).

3PLs initially provided the traditional services of transportation and warehousing. However, due to the increase in both the volume and scope of the services demanded from 3PLs, the role of 3PLs has changed (Zacharia et al., 2011).

The main services that 3PL companies provide to their customers can be listed as warehouse management, consolidated cargo transportation, logistics information systems and the management of logistics processes and operations (Aghazadeh, 2003). In addition to these activities, value-added services, stock management, customer service and customs clearance are among the important services that 3PL companies provide to their customers. Day by day, logistics outsourcing has become strategically important. In addition to the transportation and storage activities in logistics, advanced logistics activities (purchasing, logistics information development) offered by 3PLs have become a significant part of the strategies of the companies (Sahay and Mohan, 2006).

3PL providers deal with multiple activities. These activities include the arrival, storage, assembly, labeling, repackaging, distribution, and delivery of goods. For this reason, they optimize all these logistics processes, as there are many components in operating costs (Batarlienė and Jarašūnienė, 2017). Figure 1 shows logistics outsourcing services in 2020.

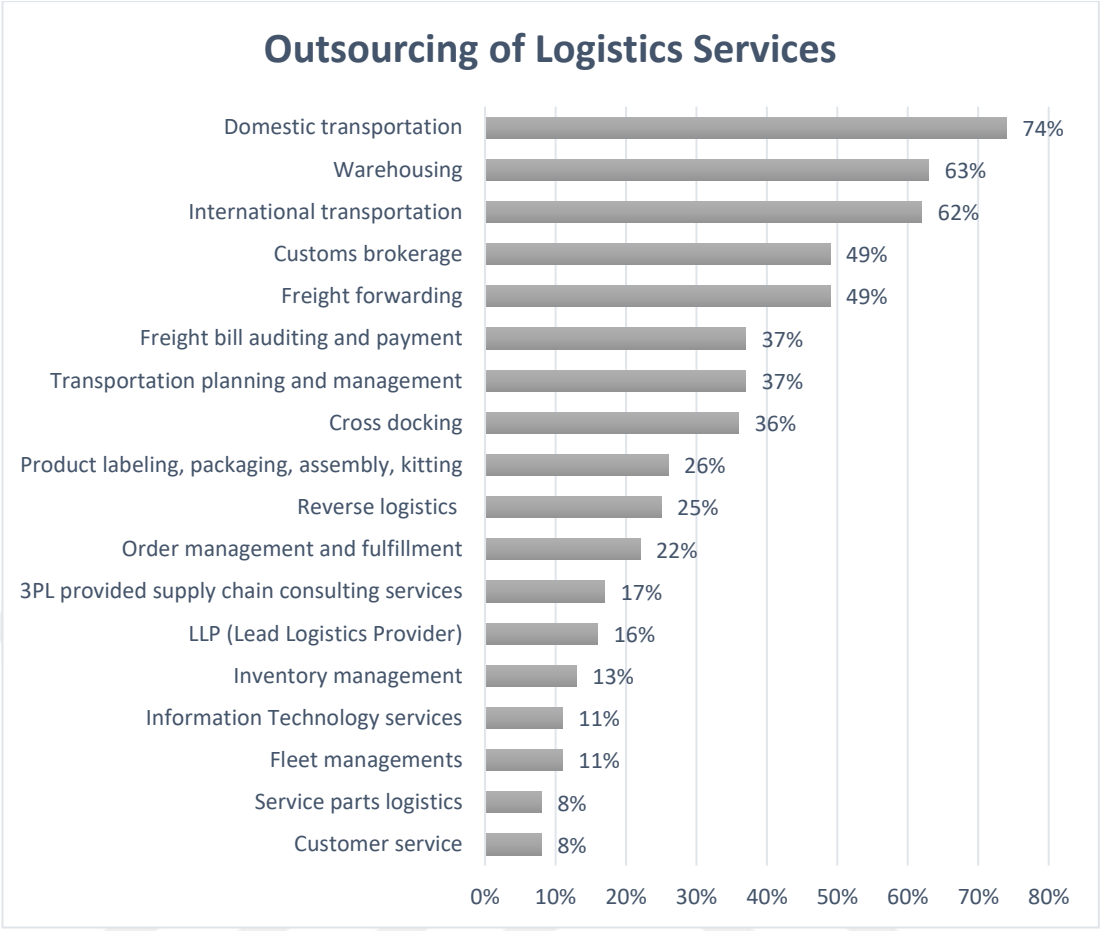

Figure 1. Logistics Outsourcing Services in 2020 (Source: Langley, 2020)

Langley (2020) listed the activities most frequently performed by third-party logistics companies in this study. The results reveal one of the most common services is transportation. 74% of domestic and 62% of international transportation activities are outsourced. The service with the second highest percentage is Warehousing (63%). Customs brokerage and freight forwarder are used at a rate of 49%.

The tendency to outsource activities that are more strategic and customer-specific are decreasing. Examples of this situation are cross-docking (36%), order management and fulfillment (22%), lead logistics provider/4PL services (16%), information technology services (11%) and customer service (8%) (Langley, 2020).

2.4.1.1. Freight Forwarding

Freight forwarder is a third-party logistics service provider responsible for efficiently delivering products between buyer and seller (Subhashini and Preetha, 2018).

The main activities of a forwarder include preparation of documents required for transactions, organization of internal freight processes and payment of freight charges, etc. Freight forwarders can offer lower prices by consolidating several small shipments and combining them into one large shipment. In this way, they can submit offers lower than the prices that the shipper will receive directly from the agency (Lambert et al., 1998).

Freight forwarder companies act as a bridge. These companies make a profit by providing delivery services. Unlike agencies, they have more flexibility as they do not need to make large investments (Huang et al., 2019).

Freight forwarder, which organizes the shipment of various goods, takes responsibility for the timely, accurate and high-quality delivery of these shipments. Solutions are provided for all problems that may arise within the scope of forwarding service (Burkovskis, 2008). With only transportation and consolidation operations, these companies also offer value-added services such as packaging and labeling, warehousing, and providing their own transportation (Subhashini and Preetha, 2018).

Freight Forwarders have dual objectives. The first is to ensure customer satisfaction and the second is to reduce costs, that is, to eliminate all non-value-added activities (Lai and Cheng, 2004).

2.4.1.2. Inventory Management

Inventory management is one of the important logistics operations. This process needs to be carefully planned as it requires a large amount of capital binding for both its strategic and operational planning **(**Kayakutlu and Buyukozkan, 2011).

Keeping inventory has risks in terms of cost. Although these risks vary depending on the product and the company, they generally include the risk of obsolescence, theft risk and obsolescence (La Londe and Lambert, 1975). However, storage costs include costs such as warehouse setup when the warehouse is

insufficient. In addition, transportation and equipment costs must be calculated (La Londe and Lambert, 1977).

Products in high demand often have safety stocks assigned to them. However, many organizations tend to stock even lower demand items, which is prohibitively expensive. In rapidly changing markets, companies must now offer good service while keeping minimum inventory (Graman and Magazine**,** 2006).

The most common risk in warehousing is poor inventory management. Poor inventory management affects 3PL customer performance. In this case, it reduces the competitiveness of the 3PL provider in the industry **(**Prasad and Venkatasubramanian, 2019). Problems that arise when inventory management is not well managed by businesses; Increasing number of canceled orders, not enough storage space due to excess inventory, the risk of obsolescence of products waiting in warehouses, increasing numbers of back-orders (Lambert et al., 1998).

2.4.1.3. Packaging Management

It is recognized that packaging is important for the efficiency of logistics systems (Lockamy, 1995). Packaging has two importance in terms of logistics. First, packaging protects the stored or transported product from damage. Secondly, it makes the storage and transfer of products easier by reducing the transportation process and consequently the transportation costs (Lambert et al., 1998).

Packaging is a coordinated system designed to maximize profits while ensuring safe and secure transportation of goods, as well as processes such as efficient handling, transportation, distribution, storage, consumption and recovery, reuse, or disposal (Saghir, 2002).

In addition, less energy is consumed during the handling process, and storage or transportation creates a cost advantage (Kye et al., 2013). Also, processes such as labeling and repackaging for promotional purposes are value-added services and play an important role in the supply chain (Ramos and Pinho, 2011).

2.4.1.4. Cross Docking and Consolidation

Cross docking is the direct shipment of finished products to the production line without being stored in a warehouse. It also enables shipment integration of different

sized shipments with full truck loads, reducing transportation costs (Panousopoulou et al., 2012). On the other hand, consolidation allows larger loads to be shipped by combining small orders (Gümüş and Bookbinder, 2004). In addition to reducing costs, cross-docking allows for improved customer service, increased storage space, reduced risk of damage and loss, and faster delivery of goods. With these operations, efficiency at critical distribution points increases and the need to store loads is eliminated (Van Belle et al., 2012). 3PL firms make cross-docking plans by taking advantage of economies of scale. It ensures efficient and cost-effective organization of shipments within the supply chain (Papadopoulou et al., 2012).

Another effective cost reduction strategy used by 3PL companies is freight consolidation. 3PL providers support their customers by better planning, taking advantage of economies of scale and providing consolidation of shipments (Rushton et al., 2014). By consolidating the goods destined for the same region, 3PL providers allow multiple customers to ship their shipments at once, so they can not only reduce costs, but also reduce the negative impact on the environment by reducing CO2 emissions (Weerakkody and Niwunhella, 2021).

2.4.1.5. Transportation Management

The transportation management process includes the processes that plan, organize, manage, and control the movement of goods and passengers from the starting point to the end point. While realizing these, it is to ensure that the arrivals are on time and in the right condition and to be delivered with the lowest costs (De Villiers et al., 2008).

Stock and Lambert (2001) mentioned five transportation models; transportation: road, rail, air, water, and pipeline. Selection of transportation mode and carrier selection processes are issues that need to be decided in transportation (Monczka et al., 2005). The carrier's performance can affect the effectiveness of a company's entire logistics function. It turns out that the process of choosing a suitable shipping carrier is important to the success of the firm (Meixell and Norbis, 2008). Transportation, storage, inventory management activities are transferred by industrial companies to 3PL companies. Therefore, these activities are the activities that 3PL companies undertake most frequently (Hertz and Alfredsson, 2003).

The services offered by 3PL companies have gone beyond traditional services. In freight management, it carries out many operations such as managing and coordinating global freight movements in all modes, delivery from ports to distribution centers, and order consolidation (Rushton and Walker, 2007).

Transportation is the activity that causes the most cost among logistics activities (Bowersox et al., 2013). If enterprises can manage transportation management well, they can increase their profit levels (Stock and Lambert, 1999). Many improvements are realized with transportation management such as delivery speed, low transaction costs, service quality, efficient use of facilities and energy savings (Sreenivas and Srinivas, 2008). The choice of transport mode is a very important decision, and it is a balancing factor for both determining costs and customer satisfaction (Rushtan et al., 2014).

Firms reduce their investment costs by outsourcing transportation activities. In addition, since the transportation activity is managed by experts, service efficiency increases. In this way, companies not only reduce their overall costs, but also make their supply chains more agile (Lambert, et al., 1998).

2.4.1.6. Customer Service

To be successful in the highly competitive 3PL industry, companies must have the ability to respond to customer needs and provide reliable service to meet complex customer requirements (Ellinger et al., 2010). Within the scope of customer services, there are activities such as ease of stock control, ordering and support provided for customers after ordering (Lambert et al.,1998). It is possible to increase customer service while providing logistics services. The seven truths of logistics improve customer service.

Today, third party logistics providers provide many value-added services. In this way, customer service can be improved such as packaging, labeling, palletizing, consolidation, quality control, deconsolidation, inspection, merge-transit, inventory management (Tien et al., 2019). 3PL providers offer many customer services such as carrier selections, order management, warehousing solutions, call centers. 3PL providers also play a leading role in reverse logistics. Although Langley (2020), identifies customer service as the least-used outsourcing activity in its report, many

popular companies outsource customer service, including Nike, Scovill, Oneida, and Cisco (Vaidyanathan, 2005).

2.4.1.7. Warehousing Management and Logistics Information Systems

There are 3 activities taking place in storage activities. These activities are movement, storage, and information transfer (De Villiers et al. (2008). Storage is considered to be an activity with low added value compared to high costs, time losses and other activities, but warehouses are also used as value-adding stations rather than just storing goods. for example, for repair, packaging and assembly works (Richerd,2014). Positioning in well-managed warehouses, in locations close to market, reduces the risks of obsolescence, deterioration, while allowing to increase the level of customer service (Hilmola and Lorentz,2011). The fact that 3PL companies are in the right position to choose their warehouses reduces storage costs in small and medium-sized enterprises (Graungaard et al., 2012). Warehouse service companies are defined as one of the important operations in the supply chain because they can provide competitive advantage in the market by providing special services to their customers (Vatumalae et al., 2020). 3PLs aim to reduce transportation and storage costs and provide better service to their customers (Langley, 2019. 3PL companies expand the business opportunity in the storage process, but it is becoming increasingly difficult to manage customers for various inventory mix (Hilmola and Lorentz, 2011).

Langley, (2019) reported that over the past 25 years, 3PL companies have made more investments in technology. One of the frequently cited technologies is execution and transaction-based technologies including warehouse distribution center (Langley, 2019). For example, it is important to share logistics information among supply chain partners to better serve customers, enable better planning, and shorten delivery time (Balcou and Yadavalli, 2017). In order to benefit from such services, it is necessary to implement integrated logistics information systems (Faber et al., 2013).

Nowadays, the use of Information Technologies is gradually increasing. This is due to the fact that people need fast communication and also the rapid processing of storage information. The warehouse management system (WMS) ensures the improvement of the controls of warehouse operations. The development of WMS is an automation process (Jawad, 2019). More than one information technology can be used in Storage Management. WMS can be used together with the ERP program and

storage processes can be improved by combining technologies such as Radio Frequency Identification (RFID) and voice recognition. When customers choose service providers, they find companies that provide the right level of service in storage (Vatumalae et al., 2020). WMS technology reduces costs by increasing efficiency with Decoupling between transportation management and warehouse management systems (Langley, 2019). As it is seen that the application of the warehouse management system has a positive effect on inventory accuracy, both customer satisfaction and service.

2.4.2. Logistics Outsourcing Performance

Firms that want to manage third party logistics providers should measure their outsourcing activities (Fawcett and Cooper ,1998). Sahay and Mohan (2006) emphasize that high-level logistics performance can provide cost advantages with economies of scale while improving business performance, while emphasizing benefits such as shortening lead times and reducing inventory. Soinio et al. (2012), on the other hand, argue that for excellent performance, value-added services should be provided to their customers. At the same time, Cho et al. (2008), the cost saving effects are among the findings in the research.

Companies need to have the ability to measure outsourcing performance in order to determine their outsourcing strategies or to understand the appropriateness of the determined strategies. It's not uncommon for companies to publish performance data, so reliable performance data is challenging to come by (Zailani, et al., 2017). In addition, it is argued that logistics outsourcing performance is difficult to measure due to its nature and that it requires complex measurements (Knemeyer and Murphy 2004; Stank et al., 2003).

Some of the research on logistics outsourcing performance is based on metrics such as delivery time, cost, service quality, inventory management, responsiveness, and flexibility (Wilding and Juriado, 2004). Stank et al. (2003) defined performance in three dimensions, operational, relational and cost performance. According to another study, logistics outsourcing can be measured with two structures in order to reveal its performance. One is reaching the target and the other is exceeding the target (Deepen, 2007; Wallenburg et al., 2010).

Deepen (2007) represents the first dimension to reach the goal agreed between the logistics service providers and their customers, and the second dimension, the goal exceedance, to perform above and exceed the goals.

Deepen (2007) emphasizes that customer expectations can be exceeded by adapting to changing environmental conditions, meeting customer needs, improving services and presenting innovative solutions to customers in order to exceed customer expectations.

Another decision that affects the decisions in the selection of logistics companies is the performance measurement capability (Bourlakis and Melewar, 2011). Other criteria include evaluation criteria such as operational performance, delivery performance, financial performance. According to a survey, the majority of logistics outsourcing users find the performance of logistics service providers satisfactory and think that they will continue to receive services (Juga et al., 2010).

2.4.3. Third Party Logistics Companies Classification

In the literature, logistics service providers are categorized differently in terms of their characteristics. One of these classifications is third party logistics providers evaluated on the basis of customer relations. Other classifications are standard TPL provider, TPL as customer developer, customer adapter, and customer developer (Hertz and Alfredson, 2003).

Standard TPL providers provide standardized logistics services e.g., warehousing, distribution, picking and packaging etc. Standard TPL firms benefit from economies of scale when performing routine transactions (Bask, 2001).

The TPL as Service Developer are able to provide services specific to their customers, unlike logistics companies that provide standard services. They can offer additional services such as custom packaging, cross-loading, tracking, and tracing (Wagner and Sutter, 2012; Hertz and Alfredsson, 2003). The customer adapter while producing special solutions for their customers, they establish close relations with them, but they do not focus on efforts to improve service quality. 3PL companies, which are Customer Developers, continue to operate in a manner close to the 4PL business structure. Companies that are customer developers have a certain number of customers and they carry out all logistics activities of these customers. It is businesses that are more comprehensive than the other three classifications. Service is provided

for each customer, and they perform well in problem solving (Hertz and Alfredson, 2003).

In another study, outsourcing in logistics is divided into three. The first is Basic Outsourcing. TPL firms of this type provide transportation, storage, and delivery services (Hsiao et al., 2010). It includes activities offered as standard to 3PL users (Lui et al., 2015). Customized Outsourcing, on the other hand, meets special requirements, unlike standard activities. Customized logistics services require investments such as some special programs and information processing decision support systems (Halldórsson and Skjøtt-Larsen, 2004). In advanced outsourcing, unlike other activities, flexibility in the supply chain and providing solutions to customers are the primary goals (Lui et al., 2015).

2.4.4. Advantages and Disadvantages of Third Party Logistics

The advantages and disadvantages of outsourcing services to companies are increasingly discussed among industries (Kotabe et al., 2008). With the effect of globalization, companies no longer have to do everything within the company itself. Outsourcing allows companies to focus on what they do best, allowing them to be delegated to specialists who can do processes outside the core business cheaper, faster and with higher quality (Aswini et al., 2018). Some studies predict that outsourcing will reduce costs, but at the same time, it is shown that outsourcing both focuses more on core competencies and has an impact on improving innovation processes (Graf and Mudambi, 2005). However, in some studies, in case of collaboration in outsourcing, sharing company-specific information increases the possibility of future competitors, while there are risks such as loss of control over the company and therefore reduced flexibility (Harris et al., 1998). Most outsourcing contracts aim for cost savings of a minimum of 15 percent, sometimes 20 to 25 percent (Lankfort and Parsa, 1999).

There are benefits of outsourcing to companies focused on production costs, but in addition to these benefits, activities such as contract review and monitoring of third parties increase costs (Kraut et al.,1999). Choosing a 3PL partner is important in outsourcing. When reliable 3PL companies are not selected, there may be economic losses (Vasiliauskas and Jakubauskas, 2007).

2.4.4.1. Advantages of Third Party Logistics

3PLs provide various benefits according to the needs of companies. These benefits include lower costs and service delivery, expertise and experience, market knowledge and data access. In addition, with the takeover of 3PL companies, companies focus on their core business and operational efficiency is ensured (Aghazadeh, 2003).

3PLs allow businesses to focus on their core activities, enabling them to gain competitive advantages (Li et al., 2012). According to Scott et al. (2011), 3PL firms are included in supply chains for 3 reasons. The first is to increase flexibility. Second, companies want to reduce investments. The last reason is to increase efficiency.

The assimilation of logistics outsourcing concepts creates opportunities for companies to devote more time to their core competencies while outsourcing shipping and other logistics activities (Aktas and Ulengin, 2005). Increasing globalization and competitive pressure have enabled companies to gain competitive advantage by specializing in their own fields (Gürcan et al., 2016). Outsourcing allows a firm to concentrate on its own areas of expertise, for example manufacturing, while leaving logistics expertise to logistics companies (Jung et al., 2005). The use of companies' resources by concentrating on core competency can provide a competitive advantage globally (Quinn and Hilmer, 1994).

The firm and the 3PL provider must determine and share the risks between them. It is important who will be responsible for the risks that may arise. There are some risks associated with using 3PL. These risks are demand risk, inventory risk and financial risks. Risk sharing management is important for reliable partnerships (Vasiliauskas and Jakubauskas, 2007). In addition, 3PL companies and their customers can share risks by making business contracts. In this way, they reduce their financial risks (Nemoto and Tezuka, 2002).

With the use of outsourcing, financial risks are reduced by the decrease in capital investments. When outsourcing is well managed, it increases return on assets and improves financial performance (Liu et al., 2015). Return on asset is one of the ratios used to determine the profitability of companies (Abeyrathna and Priyadarshana, 2019). Outsourcing provides avoidance of high-cost investments that are necessary for the maintenance of logistics activities. For example, distribution centers and information networks (Nemoto and Tezuka, 2002). By using the 3PL provider, it

means obtaining logistics resources without any additional investment by the organization (Parashkevova, 2007).

Instead of maintaining a determined and stable program, the capabilities of the companies in the supply chain and the partnerships that can be formed can be more flexible and able to respond to customer needs more quickly (Choy et al., 2016). Logistics outsourcing contributes to the increase of operational performance. Increasing operational performance provides some benefits such as reduced costs, increased flexibility in operations, and shortened delivery times (Liu et al., 2015). Switching between modes of transport increases flexibility by anticipating when seasonal fluctuations may occur. For example, during Easter or Christmas, it may be necessary to switch from rail to road. In this way, operational efficiency increases (Willner and Zafeiridis, 2012). For the efficiency of companies, 3PLs spend less money, reduce costs and focus on getting better results (Scott et al., 2011). With the flexibility of 3PLs, it makes it easy for customers to adapt to changes and can compete in unpredictable markets (El Meladi et al., 2018).

2.4.4.2. Disadvantages of Third Party Logistics

Outsourcing provides some benefits from which organizations can gain a competitive advantage. Such as reducing costs, increasing the flexibility of organizations however, despite all these advantages, outsourcing causes some problems (Lau and Zhang, 2006). The potential risks that the companies outsourcing in logistics may encounter can be listed as follows (Wang and Regan, 2003; Sanders et al., 2007).

The cause of information asymmetry is due to poor communication (Tsai et al., 2012). Lin et al. (2005) explains the problems and situations caused by information asymmetry with examples and clearly mentions how it causes problems. The reason why companies do not share information about their costs is that they do not want their competitors to learn (McCarthy et al., 2012). Inadequate management of the logistics service provider causes difficulties in communicating and getting quick responses. Failure to manage the contract well can result in the failure to deliver the correct delivery information on time and lead to delivery problems (Tsai et al., 2012).

Also, inadequate service from the outsourcing provider directly affects the outsourcing service provider's performance. Problems that may arise, such as slow

service, cause anxiety and panic in customers (Feng et al., 2018). Failure to understand with outsourcing can cause problems. Low productivity can cause loss of trust for company employees as well as loss of customers (Milecova et al., 2010). When the companies outsourcing was examined, the most common problems were identified; promises that are not kept, inadequacy in information technologies, insufficient reduction in costs, inadequacies in project management skills, problems in manual work in the workflow create problems for their companies (Stock and Lambert, 2001).

Supplier selection, restructuring and control provision or switching to another logistics provider causes transition costs, which increases costs (Quelin and Duhamel, 2003). These additional costs are hidden costs and should be considered. In contracts between 3PL and its customers, customers can skip or ignore many costs. Unconsciously skipped tasks introduce unexpected costs (Sanders et al., 2007).

In addition, since they are not in frequent contact with customers, staying away from their customers' suggestions and recommendations may not give companies an opportunity to improve themselves (Sanders et al., 2007). When the company transfers its expertise to 3rd party companies, the investments made in the previously specialized business will decrease and it will be difficult to keep up with the existing innovations and technologies (Onge, 2002).

The objectives of the parties involved in logistics outsourcing differ. For this reason, there are differences caused by the operation and management styles within the companies. These differences between the two firms can lead to a lack of alignment. (Wang and Regan, 2003). The resulting lack of compliance may cause it to be one of the factors that cause outsourcing to fail (Barthélemy and Adsit, 2003; Gandhi et al, 2012).

When the risks of outsourcing are classified, one of the managerial risks for the shipper is the loss of control (Ellram and Cooper, 1990). While it is mentioned that concerns about loss of control related to outsourcing can be a problem, there are also concerns that it will cause excessive commitment to logistics service providers (Kersten et al., 2007). Inadequate management and uncontrolled management in outsourcing will inevitably lead to failure or poor performance (Thakkar et al.,2012). Companies should be careful about sharing tasks that require high integration in outsourcing with 3rd parties (Sanders et al., 2007) Companies may be concerned about sharing important information for the company (Damme and Amstel, 1996).

Another difficulty is that the services provided by 3PLs are relative and difficult to follow with guidelines (Liu et al., 2015). For example, it is difficult to check whether the requirements of logistics services are fulfilled. Specifically, it may be the issue of whether a sustainable activity is being carried out. Such problems can also cause information asymmetry (Kudla and Klaas-Wissing, 2012). Firms lose their direct control over activities as a result of outsourcing activities within the company (Diabat et al., 2011). Companies lose their direct control over the activities carried out as a result of outsourcing the activities within the company and directing them to the outside (Diabat et al., 2011).

2.5. Export and Logistics Relations

Export is important for companies to grow and maintain their existence. For this reason, exports play a key role for both managers and policy makers (Leonidou et al., 2007). Exporting companies should have the necessary competencies to provide competitive advantage while performing export transactions with overseas countries (Piercy et al., 1998). With the skills of supply chains, companies can gain a competitive advantage against exporting companies in other countries. It is emphasized that exporters are benefited on a cost basis with supply chain management with the research conducted (Piercy et al., 1998).

The use of logistics in trade; it is the process of safely moving goods from one country to another. It includes operations such as the fulfillment of customs procedures for goods moving through national borders (Gani, 2017). Organization management, monitoring and use of information technologies are important in this process (Korinek and Sourdin, 2011). It can be mentioned that the advances in the logistics sectors increase trade, and this increase has positive effects on the economy (Lean et al., 2014). Positive developments and improvements in logistics processes both reduce logistics costs and improve international trade (Puertas et al., 2014). One of these positive developments is the improvement of the infrastructure, thus contributing to the flow of trade by enabling the production networks to progress more efficiently (Limão and Venables, 2001). Weak logistics infrastructures in developing countries cause problems in terms of both time and cost as obstacles to the movement of flow (Gani, 2017).

As a result, it is emphasized that logistics networks facilitate international trade. In this finding, it is argued that the importance of logistics infrastructure is an important factor (Halaszovich and Kinra, 2020).

2.6. Export Performance

Many variables have been proposed in the literature to measure export performance (Ayan and Perçin 2006). When export performance indicators are examined, nearly 50 different performance indicators have emerged, showing that there is no consensus on the concept (Sousa, 2004). One of the main reasons why a general consensus can not be reached in export performance measurements is the large number of method variations (Gertner et al., 2007). Diamantopoulos (1998), export performance affects export behavior that occurs when each firm is exposed to its own unique environment and conditions.

It is argued that there are two factors that affect the export performance of an export grain (Madsen, 1987; Sousa et al., 2008; Cavusgil and Zou, 1998; Agnihotri and Bhattacharya, (2015). These factors are internal and external factors. Çavuşgil and Zou (1994) examined the relationships between internal and external factors in detail. Firm-specific variables are considered as internal factors. Differences in export performance can provide competitive advantages or cause disadvantages (Safari and Salman Saleh, 2020). External factors are divided into governmental and environmental factors. The first factor has to do with marketing strategies. The product is associated with its price, promotion, distribution strategies. The external factor, on the other hand, mostly includes attitudes and perceptions, as well as export barriers (Zou and Stan 1998).

Considering the factors that are divided into internal and external, factors such as management characteristics and company characteristics are examined within the scope of internal factors Çavuşgil and Zou (1994). While listing the internal factors that can be controlled by the firm as export marketing strategy and perceptions, they showed uncontrollable internal or external factors as determinants (Zou and Stan 1998).

Madsen (1987) grouped indicators such as profitability, growth, transaction volume, and perceived firm success and reputation for export performance. On the other hand, export performance is examined more generally, it is also defined as the

outputs of the firm from its international sales (Shoham, 1996). In order to measure export performance, export sales rates were examined. Total growth, sales are discussed (Aaby and Slater, 1989). To measure export performance, all units of the company must reveal their knowledge and experience, because while knowledge defines how the work will be done, performance is effective in the result (Lages et al., 2005).

Aaby and Slater (1989) argue that firm characteristics have an impact on export performance. It is argued that the criteria affecting export performance depend on the environment and company strategies. Technology, marketing strategies, size of the organization, planning, loyalty, and profit perception determinants were used in the export performance measure.

Export performance criteria are classified as financial and non-financial, and financial indicators are classified as objective criteria non-financial indicators are subjective measures (Katsikeas et al., 2000; Evangelista, 1994; Sousa, 2004; Beleska-Spasova 2014).

2.6.1. Subjective Measures

When compared with objective measures, non-financial criteria affecting export performance are subjective measures (Zou and Stan, 1998). In order to evaluate export performance, not only objective criteria but also subjective criteria should be evaluated (Akyol and Akehurst ,2003; Freixanet et al., 2018). Using only one of the objective or subjective measures may not reflect actual performance (Katsikeas et al., 2016). For example, it measures how satisfied managers are with returns on investments (Shoham, 1998). In general, when subjective measures are categorized, the measures that are frequently used in research; overall export performance, compared to competitors, exports success, meeting expectations and how competitors rate firm's export performance (Sousa, 2004). Subjective measures satisfaction, such as satisfaction in export sales and profitability (Gertner et al., 2007). Subjective measures may be used where there is no access to objective data, but this type of data is based on the opinion and experience of the respondent (Katsikeas et al., 2000; Lages and Lages, 2004). Evaluations of company managers are subjective criteria and give information about the company's goals and overall satisfaction. While managers have information about the skills and competencies of their employees, they also reveal the

strengths of their products (Madsen, 1998). It is very difficult to measure export performance only with objective data, because the numerical data on which the objective measures are based are evaluated according to the comments of the people and can be evaluated as excellent or vice versa (Louter et al., 1991). Subjective measures were used for performance measures when objective measures and competitor performance could not be directly compared (Hult et al. 2008). In situations where there is uncertainty, subjective measures provide a better measurement, they include information about managers' coping with uncertainty in environmental uncertainties (Matanda and Freeman, 2009).

There are other reasons why export performance measures are not measured only with objective data. Companies often do not volunteer to share their numerical-objective data with researchers (Katsikeas et al., 1996; Leonidou et al., 2002). In addition, a reference point is required for the objective interpretation of export performance, but it is very difficult to find a common success criterion for all companies (Lages and Lages, 2004; Katsikeas et al., 1996).

Madsen and Moen (2018) conducted research on subjective and objective scales. It is revealed that export performances, which are subjectively evaluated by firm managers, are significantly related to the percentage of firm sales.

2.6.2. Objective Measures

Sousa (2004) conducted a literature review to find the factors affecting export performance and found approximately 50 different indicators that affect export performance and classified them as objective and subjective. Chen et al. (2016) stated that 53 different measures were used for export performance in 124 empirical studies in the literature in his study on export performance, 124 empirical studies stated that it was difficult to research on export performance due to different criteria. It also states that objective measures are used more frequently in indicators used in research.

Economic metrics, companies' sales, sales revenue, profitability, market share, etc. is defined by comparison with its competitors in terms of (Morgan et al., 2004). Another criterion used in addition to the criterion of sales and profitability is the criteria related to the market-related measures. Firms with a high market share have more power in reaching customers and have an advantage in terms of cost (Madsen, 1998). Objective variables include numerical values related to profitability and sales

volumes of companies (Zou and Stan, 1998). The most used indicators in the sales category are export intensity, export intensity growth, export sales growth, export sales volume and export sales efficiency (Sousa, 2004). The financial measures used to measure export performance consist of export sales, export profitability and numerical values related to the change in export sales and profitability (Çavuşgil and Zou, 1994; Shoham, 1998; Sousa, 2004). It uses export sales intensity, export profit intensity and export sales growth as objective measures used in most of the studies (Shoham, 1996; Edeh et al., 2020). In the literature review conducted by Sousa (2004), it was determined that export intensity was used as an objective measure in sixteen of the forty-three studies, and export sales growth was used as an objective measure in twelve. Madsen (1987) examines three sub-dimensions as sales, profit, and change. Street and Cameron (2007) measured export performance with frequently used indicators such as export intensity, export profits, export growth, as well as criteria such as performance success and export performance relative to competition. Objective measures do not only cover sales-related measures. However, in the measurement of export performance, it is seen that the frequency of use of numerical-objective profitability criteria is less than the sales criteria in the same category. The reason for this situation is that the profitability criteria are numerically is difficult to calculate. For example, different accounting practices among firms can cause problems in comparing performance with other businesses (Lages and Lages 2004).

Although there is no consensus on measuring export performance, studies have reported that subjective and objective criteria have a positive relationship with each other (Dess and Robinson, 1984; Baldauf et al., 2000; 1991; Sousa, 2004; Stoian et al., 2011).

2.7. Theoretical Framework

2.7.1. Resource Orchestration Theory

Barney (1991) mentioned the link between firm resources and firm performance in the Resource-based View Theory. Resource Orchestration Theory, on the other hand, expands the scope of RBV to address the management process of resources (Sirmon, et al., 2011). It emphasizes that resources that are difficult to imitate and not easily substituted according to RBV provide competitive advantage to

companies (Barney, 1986). There are researchers who disagree with the view that companies only need to acquire rare and valuable resources to be successful (Sirmon and Hitt, 2009; Sirmon et al., 2011; Liu et al, 2016). Sirmon et al. (2011) mentioned ROT for the first time in 2011. ROT's focus has been to develop new aspects by broadening a broad perspective on RBV theory (Gligor et al.,2022). It also aims to improve by emphasizing the deficiencies (Sirmon et al. 2011). Resources cannot make a firm perform well, so firms must manage resources well to improve their performance (Sirmon et al.,2011). The most criticized issue of RBV is that it focuses too much on the resources owned and not on resource management (Kraaijenbrink, Spender and Groen 2010).

It is important to meet the needs of customers in logistics operations, but large investments are required (Zacharia et al., 2011). Firms appear to benefit from outsourcing in competitive markets (Madhok ,1997). The use of logistics functions for increasing customer demands and competitive pressure contributes to the performance of companies (Zailani et al., 2015). In order to gain competitive advantage, companies should offer extra services to their customers and keep the service quality high (Prokhorova et al., 2016). While some LSPs are asset-weighted and stand out with their assets, some of the most LSPs are knowledge-based (Das and Teng, 2000). Outsourcing is important for companies to capture market share (Chen et al., 2010). In addition, it has been examined that it has many benefits such as increasing profits, gaining flexibility and penetrating the market (Lau and Zhang, 2006). Companies that want to focus on core logistics activities and increase customer satisfaction use outsourcing for activities other than their core competencies (Giri and Sarker, 2017). With the use of 3PL, companies can access software such as ERP without making technological investments (Escobar and Benito, 2015).3PL companies can reduce lead times by opting for faster transport methods and arranging better transport networks (Hsiao et al., 2010). In addition, the competitive advantages to be gained in foreign markets are positively reflected in export performance (Morgan et al., 2006).

Even if the company's resources are adequate or plentiful, poorly managed companies may lose their competitive advantage (Premkumar et al., 2021). It is emphasized that competitive advantage will emerge when resources are managed effectively (Sirmon et al., 2010; Weick et al., 2005). For companies to gain sustainable competitive advantage, they should consider strategic options (Waugh and Luke, 2011).

In the ROT, 3 stages have been introduced for arranging resources (Sirmon et al., 2011). The processes involved in 3 stages; structuring, bundling, and leveraging (Sirmon et al., 2011; Asiaei et al., 2020).

The structuring process includes the stages of resource acquisition, accumulation, and disposal. Resource acquisition involves the acquisition of strategically decided resources (Sirmon et al., 2011, Maik et al, 2020). The second step is accumulating. Companies accumulate savings in processes where suppliers cannot provide instant resources to companies whenever requested (Sirmon et al., 2011). The final part of the structuring process is divesting so resources that are not considered to be adding enough value to firms can be disposed of (Sirmon et al., 2007). First, resources are included and then accumulated, then inefficient or less productive resources are disposed of, and resources are restructured (Malik et al., 2020).

After the resources are strategically structured, the resources are grouped together (Sirmon et al., 2011). Combining and grouping resources to create talent balances and enriches talent (Badrinarayanan et al., 2019). For example, law firms group partners with different levels of experience by bringing together less experienced and senior partners, so that service levels are increased, gaps are closed, and performance is positively affected (Kor and Leblebici, 2005).

Leverage refers to the process used to take advantage of the company's existing capabilities and to seize potential opportunities in the market. The process required to take advantage of opportunities also includes structuring and coordinating capabilities. Leverage emphasizes the importance of creating value through processes such as taking action, coordinating, and talent for opportunities in the market (Sirmon et al., 2011).

The combination of firm capabilities and firm resources is a frequently used strategy to gain competitive advantage (Alkhatib et al., 2015). Combining different combinations of resources can cause performance differences in firms (Aral and Weill, 2007). Also, resource variables can become more valuable when they change and merge with another resource (Ordanini and Rubera, 2008). ROT provides potential advantages by arranging resources differently (Li and Jia, 2018).

2.7.2. Dynamic Capability Theory

Dynamic Capability Theory is argued that firms need the ability to respond to the changing conditions in the environment by creating, integrating, and changing the resource bases necessary for firms to be successful (Teece, 2007; Helfat et al., 2007). Resource-based organizations demonstrate that they can gain competitive advantage in this way by developing talents in order to avoid possible adversities. RBV theory lacks processes involving uncertainties and capability definition (Chowdhury and Quaddus, 2017).

In addition, there are reasons that push companies to develop talents and adapt to change during the COVID-19 process (Govindan et al., 2020). Therefore, the uncertain environmental conditions caused by the COVID-19 pandemic provide an opportunity to examine the consequences of their responsiveness (Kähkönen et al., 2023).

DCT is basically the ability of firms to cope with uncertainties under changing conditions and to use capabilities to design strategies that can create value (Teece et al., 1997; Eisenhardt and Martin, 2000).

According to the DCV, companies must demonstrate their ability to adapt both their resources and their capabilities in order to adapt quickly to uncertain environments. It is necessary to accelerate the processes and take a position in accordance with the changing conditions (Teece et al., 1997). Chowdhury and Quaddus (2023) emphasize the importance that companies must have the ability to quickly resolve their supply chain disruptions. For this reason, firms must also be capable of developing their strategic flexibility (Mason-Jones et al., 2000).

Supply chain collaborations have a strong potential for joint decision making and risk sharing (Lee 2004; Liker and Choi 2004). Knowledge sharing is a factor that increases the power of supply chains (Grzeskowiak Blut and Kenning 2007).

In addition, dynamic capabilities show themselves in terms of cost. Efficient use of resources improves operations and enables faster delivery to markets (Handfield et al., 1999; Visser et al., 2010)

Due to constantly changing conditions, supply chains will need to realize their capabilities and reveal new dynamic capabilities for sustainable performance improvements (Hong et al., 2018).

CHAPTER 3: RESEARCH MODEL & METHODOLOGY

3.1. Survey Development

The survey used for this research was designed to find out the effects on the performance of exporters and was developed for this purpose. Exporters were interviewed to find out the variables affecting export performance. Of the 12 exporters we invited for research, 10 exporters accepted our invitation and participated in the interview. Three of them were interviewed face-to-face with the other 7 participants over the phone. The participants were contacted with the Aegean Exporters' Associations, and then other participants were reached through snowball sampling. The interviews lasted between 15 and 20 minutes. In the interviews with the exporters, the expected 3PL performance for the exporters in the COVID-19 process was discussed to be measured in the research model. As a result of the interview on the difficulties they experienced in this process or the advantages gained, the results of the interview with Nvivo were analyzed. While creating the research model, the features that emphasize the expectations of exporters and the fact that they are in the process of COVID-19 were included in the model, not only depending on the literature.

The variables chosen to be used in the survey and the most frequently used terms were determined from the results of the interviews with 10 export officials. In this study, word frequency analysis was performed with Nvivo software. Nvivo is a software that facilitates the editing, coding and analysis of qualitative data and provides more professional results (Richards, 1999; Hilal and Alabri, 2013). For the analysis, 7 sub-themes were created by choosing the features expected from 3rd party service providers during the COVID-19 period. Codes were assigned for each sub-theme and the most frequently repeated words were analyzed. In the study, the word frequency window was selected by transferring the world file to the system.

As a result of the frequency analysis, the first of the most repeated words was the word collaboration with 30 repetitions. The second most repetitive word is flexibility, which is repeated 18 times. The third most frequently repeated word is problem solving, but since flexibility item values and problem-solving items are quite close, another frequently used variable, the affordable price variable, was used. In the general results, it is seen that the price is quite prominent. According to the results of

the analysis, a research model was created for the survey study. The previous literature was used to ensure the availability of sufficient items during data analysis for all scale items used in the thesis. The survey consists of 27 items in total. For collaboration, four items identified by Jap (1999) were added. Five items for flexibility were cited by Cannon and Homburg (2001) and Ivens (2005), and three items for cost performance by Ellinger et al. (2003) and Panayides (2007). Seven items used to measure logistics outsourcing performance Mentzer et al. (2001) and Deepen et al. (2008) and Logistics outsourcing management Han et al. (2008) consists of five items. Three items identified by Exporter export performance Yeung (2006) and Nyage et al., 2010 were used. The substances used are listed in Table 1.

Table 1. Sources of the Items

Variable	Items	Source
Collaboration	COLL1 COLL2 COLL3 COLL4	Jap (1999)
Flexibility	FLEX1 FLEX2 FLEX3 FLEX4 FLEX5	Cannon and Homburg (2001) and Ivens (2005)
Cost Performance	CP1 CP2 CP3	Ellinger et al. (2003) and Panayides (2007)
Outsourcing Management Process	VM2 VM3 VM4 VM5	Han et al. (2008)
Logistics Outsourcing Performance	GOAC1 GOAC2 GOAC3 GOAC4 EXCE1 EXCE2 EXCE3	Mentzer et al. (2001) and Deepen et al. (2008)
Exporters' Export Performance	EP1 EP2 EP3	Yeung (2006) and Nyage et al. (2010)

3.2. Pretest and Pilot Study

For the survey study, all the scales of the thesis were tested by academicians and doctoral students. Considering the comments about the clarity and comprehensibility of the statements in the survey, the parts that are not clear in the use statements were written more clearly by detailing in line with the suggestions. Before sending the questionnaire, a pilot study was conducted with 8 people. For participation in the survey, it was tested with a total of eight participants, including seven participants working in the relevant departments of exporting companies and a deputy general manager. All participants completed the questionnaire completely and found it generally understandable. After the improvements, the survey was started.

The questionnaire was designed as a five-scale questionnaire. Responses to the survey; 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

Table 2. shows the reliability of the items was measured with SPSS 29.0. The required safety value for Cronbach's Alpha is 0.7 and above (Natarajan et al., 2017). The table shows the results. As a result of the analysis, it is seen that this value is provided for each item.

Table 2. Reliability for the Pilot Study

Variable	Items	Cronbach's Alpha
COLL	COLL1 COLL2 COLL3 COLL4	0.774
FLEX	FLEX1 FLEX2 FLEX3 FLEX4 FLEX5	0.896
CP	CP1 CP2 CP3	0.821
VM	VM2 VM3 VM4 VM5	0.861
GOAC EXCE	GOAC1 GOAC2 GOAC3 GOAC4 EXCE1 EXCE2 EXCE3	0.921
EP	EP1 EP2 EP3	0.817

3.3. Research Model

The research model proposed below is conceptualized in line with ROT and DCT. According to the analysis of previous studies and the results of the analysis, a model was prepared showing that there is a relationship between the concepts.

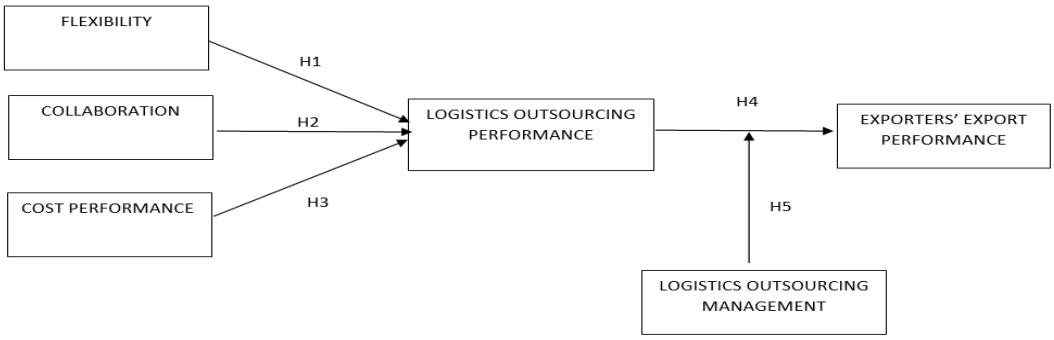

Figure 2. Research Model

In the research model, it is aimed to measure the relationship between logistics outsourcing performance and exporters export performance with the moderator role of logistics outsourcing management. The next section provides more detailed details of hypothesis development. Hypotheses are prepared based on the literature and the connections between variables.

3.4. Hypotheses Development

Flexibility is the most important feature required for companies to survive in a constantly changing environment (Dreyer and Grønhaug, 2004). Therefore, flexibility is a very important factor for increasing the coordination between commercial partnerships and export performance (Bello and Gilliland, 1997). Mark and Martin (2007) emphasized the importance of flexibility in logistics management in today's markets. With its flexibility capability, LSPs allow different opportunities to be accessed while adapting to customers' requests (El Meladi et al., 2017).

Therefore, it can be hypothesized that:

H1: Flexibility has a positive impact on logistics outsourcing performance.

Collaboration is defined as working together so that all parties can reach mutual benefits (Jap, 2001). It is argued that collaboration between parties in the supply chain increases efficiency and reduces costs (Stefansson, 2006). According to Jap (1999), deficiencies can be overcome by collaboratively sharing knowledge. Collaboration has a complementary power for partners. Information sharing helps in the decision-making process in an environment of uncertainty and improves the performance of logistics operations (Raweewan and Ferrell, 2018).

It positively influences outsourcing performance by facilitating the collaboration between trust and communication between the 3PL and its client (Huo et al., 2015).

Therefore, it can be hypothesized that:

H2: Collaboration has a positive impact on logistics outsourcing performance.

Advantages such as cost reduction and improved customer service provided by the 3PL firm are described as "perceived performance improvements" in the outsourcing performance criterion (Knemeyer and Murphy, 2004). Customers' cost reduction leads to improved firm performance (Hsiao et al., 2010b). As a result, 3PL companies should turn to these performance-oriented strategies by reducing costs and increasing customer satisfaction (Yazdanfar and Öhman, 2014).

Therefore, it can be hypothesized that:

H3: Cost performance has a positive impact on logistics outsourcing performance.

3PL companies are expected to provide timely and reliable delivery. It can provide competitive advantage to its customers, especially in time-sensitive industries (manufacturing, trade and retail). (Stank et al., 2003). For example, 3PL providers can provide faster service to exporting companies by using different technologies Krakovics et al., 2008).

If logistics providers use their logistics operations effectively and efficiently, they can provide better customer service to their customers and also reduce the company's costs (Waugh and Luke 2011).

Therefore, it can be hypothesized that:

H4: Logistics outsourcing performance has a positive impact on exporters' export performance.

One of the most important reasons for outsourcing failure is the inability or lack of outsourcing management processes (McIvor, 2000; Zhu et al., 2017). In addition, companies that play an active role in the outsourcing management process can evaluate the performance of 3PL providers and make agreements. Because of the agreements, it may have the motivation to keep the 3PL performance high (Zhu et al., 2017). While outsourcing management processes avoid the selection of poor-quality service providers, it allows the formalization of 3PL selections and the selection of experts in the field (Hwang et al., 2016).

Therefore, it can be hypothesized that:

H5: Management outsourcing process moderates the relationship between logistics outsourcing performance and exporters' export performance.

3.5. Sampling

Sampling methods are divided into two as probabilistic and non-probabilistic (Smith and Albaum, 2010). While the difference between probabilistic and non-probability samples is selected based on probability principles from the population in the probabilistic sample, the non-probabilistic sample is not chosen randomly (Smith and Albaum, 2010). Probabilistic sampling has some disadvantages such as difficulty in implementation and excessive cost in addition. There are four categories in improbable samples; quota, convenience, snowball, and judgment sampling (Smith and Albaum, 2010; Etikan et al., 2016). Convenience sampling was used in this study. It enables more participants to be reached in data collection processes and facilitates accessibility (Smith and Albaum, 2010). In this study, it is a useful method to reach the data in a limited time since the target audience is exporting food companies.

3.6. Data Collection

In this analysis, the questionnaire consisting of 27 items prepared in line with the purpose of the thesis was sent to the exporting companies and asked to be answered. 640 surveys were submitted. A total of 170 valid responses were received. In order to get the right information, the operations/logistics officer, export manager and senior executives were determined as the target audience. It was aimed to increase the response rates with phone calls. In total, 1250 phone calls were made. A response rate of 26.56% was obtained. The data collected through interviews was collected in February 2022. The survey data started to be collected in May 2022 and was completed in March 2023.

The duration of the survey is approximately 10 minutes. While information such as gender, working position, education, duration in the employee position were requested from the survey participants, information about the company was also requested. The operating year of the enterprise, the number of people working in the enterprise, the export year, the export sales, the working year in the institution and the

activities that the firm uses for outsourcing are listed and it is requested to be selected. The results and answers were entered for analysis in SPSS 29.0.

According to the survey responses, 41.2% (n= 70) of the participants were female, while 58.8% (n=100) were male participants. The majority of the education level is 83.5% (n=142) university graduates. 11.8% (n=20) of them have master's or doctorate degrees. 4.7% (n=8) of them are primary or secondary school graduates. 55.3% (n=94) of the participants are export/operation specialists. 18.2% (n=31) are business owners and 7.1% (n=12) are logistics managers. Only 2.4% (n=4) are general managers. The proportion of the remaining positions constitutes 17.1% (n=29). 33.5% (n=57) of the employees' working time in their company is between 3 years and 6 years. The number of employees between 6 years and 10 years is &16.5 (n=28). 31.8% (n=54) of employees less than 3 years. It constitutes 18.2% (n=31) of those who have been working for more than 10 years.

Table 3. Demographic Characteristics of Sample

Characteristic	Frequency	Percentage
Gender:		
Female	70	41,2
Male	100	58,8
Total	170	100
Education level:		
Primary School/ High School	8	4,7
University	142	83,5
Master’s degree / PHD	20	11,8
Total	170	100
Job position:		
Owner of business	31	18,2
General Manager	4	2,4
Logistics Manager	12	7,1
Export/ operation specialist	94	55,3
Other	29	17,1
Total	170	100
Firm operating year:		
Less than 5 years	28	16,5
Between 5 years and 10 years	42	24,7
Between 10 years and 20 years	34	20
More than 20 years	66	38,8
Total	170	100

Table 3. Demographic Characteristics of Sample (continued)

Characteristic	Frequency	Percentage
Number of employees		
1-9	29	17,1
10-49	53	31,2
50-249	45	26,5
More than 250	43	25,3
Total	170	100
Firm's length of export		
Less than 5 years	39	22,9
Between 5 years and 10 years	50	29,4
Between 10 years and 20 years	36	21,2
More than 20 years	45	26,5
Total	170	100
Length of using outsourcing		
Less than 1 year	4	2,4
Between 1 year and 2 years	13	7,6
Between 2 years and 3 years	13	7,6
More than 3 years	140	82,4
Total	170	100
Percentage of sales from export		
<20	15	8,8
20-40	31	18,2
41-60	40	23,5
61-80	36	21,2
81-100	48	28,2
Total	170	100
Year of employment		
Less than 3 years	54	31,8
Between 3 years and 6 years	57	33,5
Between 6 years and 10 years	28	16,5
More than 10 years	31	18,2
Total	170	100

82.4% (n=140) of the outsourcing length has been using for more than 3 years. 7.6% (n=13) are between 2 and 3 years. Also, 7.6% (n=13) benefit from outsourcing between 1 and 2 years. Those with less than 1 year constitute 2.4% (n=4).

Table 4 lists which outsourcing activities the participants use in their companies.

Table 4. Outsourcing Activities and Percentages of Participants

Activities	Frequency	Percentage
Transportation	151	88,80%
Warehousing	92	54,10%
Stock management	29	17,10%
Material handling	53	31,20%
Order processing and communication	18	10,60%
Packaging	54	31,80%
Procurement	67	39,40%
Customer service	11	6,50%
Demand forecasting	12	7,10%
Insurance	93	54,70%
Customs clearance	134	78,80%

The most used activity is transportation with 88.80%. It is seen that customs clearance is frequently preferred at 78.8% (n=134), insurance at 54.7% (n=93) and storage services at 54.10% (n=92). It is seen that customer services constitute the least used activity with the lowest 6.50% (n=11).

CHAPTER 4. ANALYSIS AND RESULTS

4.1. Structural Equation Modeling (SEM)

Structural equation modeling was used to measure the effects of logistics companies' characteristics on logistics performance and exporter company performance. SEM is a statistical methodology that allows researchers to perform multivariate analyzes by testing the relationships between endogenous and exogenous variables (Sarstedt et al., 2014). Structural equation model (SEM) is used to verify hypotheses that support a theory (Kohn et al., 2011). SEM is used in analyzing social sciences (Ullman and Bentler, 1983). Different software is used in SEM analysis. The most common ones are AMOS, EQS, LISREL and Mplus (Bowen and Guo, 2011).

There are different analysis methods such as factor and path analysis and multiple regression in SEM (Ullman and Bentler, 2003). The path diagram reveals the relationships between internal and external variables (Shaheen et al., 2017). In some cases, there may be external variables that can change the strength of the relationship between the variables in the SEM. In this case, it is called a moderator (Shaheen et al., 2017). The moderator sets out how large or how small the effect advocated by the variable is, or whether it has positive or negative effects (Hayes, 2018).

In this study, after Cronbach analysis was completed with SPSS 29.0 to measure the safety of the scales, AMOS 26.0 was used for confirmatory factor analysis and path analysis. CMIN, NFI, CFI, RMSEA and CMIN/DF values were obtained by confirmatory factor analysis. SPSS PROCESS v3.4 was used to measure the moderator variable.

4.2. Measurement Model (CFA ANALYSIS)

The data collected for analysis were transferred to SPSS 29.0 and AMOS 26.0. Confirmatory factor analysis was performed to measure the validity of the items forming the model. In order to improve the model in AMOS 26.0, the values in the modification indices and the items that should be in covariance were determined. It has been defined in the literature for model fit statistics. Fit values are important for an acceptable model, so many goodness-of-fit values have been determined (Bentler, 1992; Garver and Mentzer, 1999).

CMIN/DF: The appropriate value for chi-square/degree of freedom is < 3.0 (Kline, 2005). For the Normed Fit Index (NFI) value, values greater than 0.90 are considered an acceptable fit (Marsh and Grayson, 1995). At the same time, Comparative Fit Index (CFI) and Incremental Fit Index (IFI) are expected to be above 0.9 (Hair et al., 2006). For RMSEA, values between 0.08 and 0.10 are acceptable (Schermelleh-Engel and Moosbrugger, 2003).

Table 5. Model Fit Statistic of CFA

Name of the index	Score	Criteria
Chi-square/DF	1.571	< 3
RMSEA	0.058	< 0.08
IFI	0.950	> 0.9
CFI	0.944	> 0.9
NFI	0.863	> 0.9
TLI	0.936	> 0.9

Table 6. Sources of the Items and CFA Loadings

Variable	Items	CFA Loadings
	COLL1: Our company and the service provider work together to exploit unique opportunities in the market.	0.832
COLL	COLL2: Both companies look for synergistic ways to do business together.	0.659
	COLL3: Our companies work together to develop new ideas.	0.639
	FLEX1: Our LSP is open to the idea of making changes to accommodate our needs.	0.788
	FLEX:2 Our LSP is ready to adjust its operation to meet sudden needs that might arise.	0.865
FLEX	FLEX3: Our LSP is flexible in response to our short-notice request.	0.858
	FLEX4: Our LSP is flexible enough to handle changes.	0.878
	FLEX5: Our LSP is open to modifying our agreement if unexpected events occur.	0.632
	CP1: Our company often gets competitive prices and shipping rates from the 3PLs.	0.737
CP	CP2: Logistics services with lowest costs are provided.	0.817
	CP3: 3PLs strives to reduce logistics costs.	0.786
	VM1: We have formalized processes to select 3PL.	0.535
	VM2: We have the ability to evaluate the performance of logistics outsourcing.	0.655
VM	VM3: We have management processes for logistics outsourcing projects.	0.848
	VM4: We have systematic processes to manage outsourcing contracts with 3PL.	0.853
	VM5: We have systematic processes to control 3PL.	0.859
	ACH1: Our LSP completely fulfills the goals and expectations we jointly set prior to this logistics outsourcing relationship.	0.602
	ACH2: This LSP delivers its service always with the required quality.	0.616
GOAC	ACH3: This LSP delivers its service always in the required time.	0.672
	ACH4: Our logistics costs have been reduced by outsourcing to this LSP to the degree we expected it.	0.663
	EXC1: The goals and expectations we jointly set prior to the logistics relationship were substantially exceeded.	0.921
	EXC2: We are significantly more satisfied with the quality of the LSP services than we expected.	0.943
	EXC3: The relationship between actual costs for this project and the overall service performance is much better than expected.	0.916
	EP1: Export sales and growth performance	0.817
EP	EP2: Market shares in target oversea markets	0.805
	EP3: perception of export profitability	0.699

According to Falk and Miller (1992), the value of standardized loads should be ⩾0.5. 1 item below 0.5 was removed (COLL4 0.446) with the results of Confirmatory Factor analysis. The variable values used in this study and the accepted variables are shown in Table 5. Criteria of CFA measurement indices in the model are given in Table 5. Chi-square/DF= 1.678; root mean square of approximation (RMSEA) =0.058; incremental fit index (IFI) = 0.950; comparative fit index (CFI)= 0.944; normed fit index (NFI)= 0.863. Goodness of Fit Index (GFI) =0.838. Since the GFI test may give meaningless results, it is not included in the goodness-of-fit indices and is not reported (Garson, 2011).

4.3. Validity and Reliability

SPSS 29.0 and AMOS 26.0 were used to examine validity and reliability. considerations. According to Griethuijsen et al. (2014), the accepted value for Cronbach's Alpha is "0.7 or 0.6. Collaboration = 0.814, Flexibility = 0.896, Cost Performance = 0.821, Logistics outsourcing performance = 0.921, Logistics outsourcing management= 0.861 and Exporters performance = 0.817 Cronbach's Alpha and Composite reliability (CR) are measures of internal consistency Accepted value for Composite reliability (CR) is greater than 0.6 (Hair et al., 2014) Collaboration = 0.755, Flexibility = 0.903, Cost Performance = 0.823, Logistics outsourcing performance = 0.910, Logistics outsourcing management = 0.870 and Exporters export performance value is 0.818.

The AVE value is expected to be above 0.50. (Davcik, 2014). Collaboration = 0.511, Flexibility = 0.655, Cost Performance = 0.609, Logistics outsourcing performance = 0.601, Logistics outsourcing management = 0.579, and Exporters export performance = 0.601.

The results for each value are as in Table 7.

Table 7. Convergent Validity and Reliability of the Measurement Model

Variable	Average Variance Extracted (AVE)	Composite reliability (CR)	Cronbach's Alpha
Collaboration	0.511	0.755	0.814
Flexibility	0.655	0.903	0.896
Cost Performance	0.609	0.823	0.821
Logistics Outsourcing Performance	0.601	0.910	0.921
Logistics Outsourcing Management	0.579	0.870	0.861
Exporters' Export Performance	0.601	0.818	0.817

4.4. Path Analysis

The model fit statistics for this thesis were made with AMOS 26.0 path analysis. The criteria of measurement indices in the model are given in Table 7. Chi-square/DF= 1.678; root mean square of approximation (RMSEA) =0.063; incremental fit index (IFI) = 0.950; comparative fit index (CFI)= 0.949; normed fit index (NFI)= 0.884. Goodness of Fit Index (GFI) =8.60. The NFI value is close approximate fit to 0.9. However, some of the most used fit indices (GFI, AGFI, NFI, NNFI, CFI and IFI) should be in the range of ≥ 0.85 (Vassallo and Saba, 2015; Kline, 2011).

Table 8. Fit Index of the Model

Name of the index	Score	Criteria
Chi-square/DF	1.678	< 3
RMSEA	0.063	< 0.08
IFI	0.950	> 0.9
CFI	0.949	> 0.9
NFI	0.884	> 0.9
TLI	0.940	> 0.9

Table 9. Path Analysis Results

Relationship	Path coefficient	S.E.	C.R.	P-value
LOP → CP	0.407	0.087	3.376	***
LOP → COLL	-0.227	0.148	-1.06	0.289
LOP → FLEX	0.500	0.158	2.622	0.009
EP → LOP	-0.180	0.104	-2.04	0.041

Logistics outsourcing performance and cost performance are significantly related. (β= 0.407; C.R. = 3.376; $p<0.05$). Logistics outsourcing performance and flexibility are significantly related. (β = 0.500; C.R.= 2.622; $p<0.05$). Exporters export performance and logistics outsourcing performance are significantly related. (β = -0.180; C.R. = -2.04; $p<0.05$).

It was analyzed with Path model using AMOS 26 and SPSS 29.0 analysis method. Table 8 shows the results of the analysis. The p- value, which gives information about whether the hypothesis is significant or not, is expected to be below 0.05. All probabilities are at the 95 percent confidence level ($p<0.05$). In this case, it is seen that three hypotheses are accepted.

In addition, the e r-square value can be examined to measure the estimated accuracy of the model. The R square value is expected to be between 0.0 and 1.0. The closer the value is to 1, the higher the prediction accuracy (Hair et al., 2014). However, there is no rule for the R square value because the R square value varies according to the discipline and model examined (Hair et al., 2014). In this model, the R square value is 0.393 for logistics outsourcing performance and exporters export performance = 0.032.

4.5. Moderation Analysis

For moderation analysis, logistics outsourcing performance is considered as independent variable, exporters export performance as dependent variable, and outsourcing management process moderator as variable. It was calculated by creating interaction value with standardized scores using SPSS 29.0 for analysis.

Table 10. Moderator Analysis Results

	Estimate	S.E.	C.R.	P
EXP PERF → INTERACTION	0.027	0.056	0.481	0.631

***<.05, **<.01, *<.001

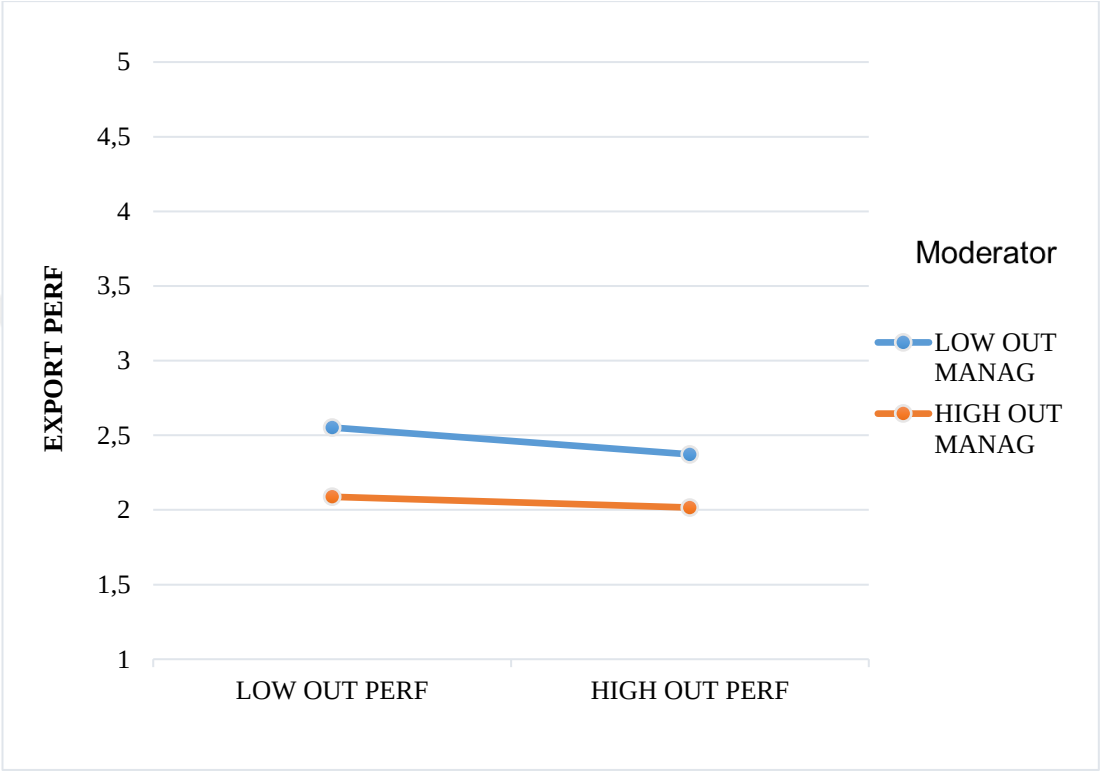

Figure 3. Outsourcing Management Process as Moderator between Logistics Outsourcing Performance and Exporters Export Performance

Logistics outsourcing management as moderator has been tested and shown to have an insignificant effect on interaction terms and exporters' export performance. (p=0.631). Therefore, we reject H5. As a result, it is seen that there is no statistical support for the outsourcing management process moderator role between the logistics outsourcing process and exporters export performance.

Table 11. Hypotheses Results

H.No.	Statement	Status
H1	Flexibility has a positive impact on logistics outsourcing performance	Supported
H2	Collaboration has a positive impact on logistics outsourcing performance	Not Supported
H3	Cost performance has a positive impact on logistics outsourcing performance	Supported
H4	Logistics outsourcing performance has a positive impact on exporters' export performance	Supported
H5	Outsourcing management process moderates the relationship between logistics outsourcing performance and exporters' export performance	Not Supported

CHAPTER 5. DISCUSSION AND IMPLICATIONS

5.1. Discussion and Conclusion

This thesis contributes to the determination of the factors affecting exporter performance. By considering the COVID-19 process, three main elements have been determined to contribute to export performance and determine the effect of logistics performance. It aims to explore the effects of flexibility, collaboration, and cost performance on logistics performance. Related studies show that it is important to be dynamic and have the ability to change structurally, so that businesses can avoid disruptions such as pandemics (Ivanov, 2021b; Ruelet al., 2021).

The purpose of this study is to investigate the effect of the relationship between logistics outsourcing performance and exporter performance. According to the results of the research, it supports the studies in the literature that reveal the effect of outsourcing performance on export performance (Yeung, 2006; Gani, 2017).

On the other hand, the statistical results do not support the relationship between logistics outsourcing performance and collaboration. Sinkovics and Roath (2004) found that logistics performance and collaboration had no effect, while flexibility had a positive effect on logistics performance. Collaboration between collaborations and 3PL companies includes different processes, approaches and behaviors may change according to the cycles of relations between partners (Sinkovics and Roath, 2004). Due to the restrictions in the COVID-19 process, collaboration features may have been interrupted and there may have been decreases in interactions.

It provides empirical evidence that flexibility and cost performance of logistics outsourcing performance is positively correlated with logistics performance. Outsourcing provides many benefits such as the use of economies of scale, expertise of companies, cost savings, and business performance can be increased by benefiting from the expertise of outsourcing companies (Selviaridis and Spring, 2007; Zailani et al., 2017). In addition, Stank et al., (2003) included the variable cost performance in the dimensions of logistics service performance.

Empirical results do not support the relationship that the outsourcing management process moderates the relationship between exporter's export performance and logistics outsourcing performance. One of the reasons for this may

be that this assessment is asked directly to the exporter. When exporters are asked a question about their company, they may be in the attitude of giving positive answers for their companies. According to the survey results, most of the companies argue that they have the ability to evaluate their logistics performance.

With the COVID-19 pandemic, it showed that the strategies of 3PL companies can provide an advantage in gaining competitive advantage (Wilson, 2020). Logistics is an important strategy for companies. With a well-organized and efficient logistics operation, it can be ensured that the business achieves its goals (Remmel, 1991). The subject of this thesis has been compiled based on the Resource Orchestration Theory and Dynamic Capability Theory. Structural equation model was used to analyze the model. Results were obtained using SPSS 29.0 and AMOS 26.0.

In the following sections, the contribution of this thesis to literature and its applications are mentioned. In the following sections, the flexibility of the supply chain and the importance of price performance are mentioned, and the changes that 3PL companies can make for their supply chains and the effect of exporter expectations on exporter performance are discussed. While the general subject of the thesis is discussed in the conclusion part, the limitations, and of the research in the research and literature for future studies are discussed in the last part.

5.2. Theoretical Implications

Research on the supply chain suggests building resilience despite small and large interruptions, gaining different flexibility capabilities, and redesigning the supply chain (Han et al., 2020). Flexibility in the supply chain is very important, but flexibility seems to come to the fore in the COVID-19 process. When epidemics or disasters occur, or in economic crises, it may be necessary for the supply chain to remain dynamic in order not to be adversely affected by setbacks (Senir and Büyükkeklik, 2020).

Due to the consequences of the pandemic, logistics service providers have been exposed to unprecedented demand volatility due to operational and staff capacity requirements. In addition, since the beginning of the pandemic,3PLs have changed their operations rapidly due to financial effects (Wilson, 2020). According to the findings, the ability of the companies to keep up with these changes affects the logistics performance and indirectly the exporter performance.

Cost performance refers to the cost position for the service relative to its major competitors and its price position relative to others (Wang et al., 2010). 3PL companies gain competitive advantage by performing value-added works other than basic services. Although value-added transactions cause additional costs, companies working with basic services have to work with low profit margins (Carleton, 2010). According to the results of the analysis, the effects on the logistics performance of cost performance appear.

COVID-19 caught supply chains off guard (Brent, 2020). No one knew that such an emergency could occur, but areas such as risk management and ensuring supply chain resilience for potential future challenges need to be rethought (Ozdemir et al., 2022).

In this study, different variables affecting exporter performance were studied. Conducting the research within the scope of COVID-19 and determining the research model variables both from the literature and by the exporters completes a gap that could not be found in the literature before. With this research, it is effective for 3PL managers to understand exporter expectations in the face of emergencies. Among the exporter expectations were cost performance, flexibility and collaboration features. The impact of flexibility and cost performance on logistics outsourcing has been proven. While this study contributes to the DCT literature, it also contributes to the limited field of ROT.

5.3. Practical Implications

Outsourcing is important for exporters to focus on their core business and gain a cost advantage (Sia et al., 2008). According to the findings, logistics outsourcing performance also affects exporter performance. For this reason, it is seen how important it is for the exporter to choose the 3PL provider. While making LSP choices, it is expected to be cost-reducing ability, service quality, reliability, flexibility and financially reliable (Selviaridis and Spring, 2007:131). In particular, it is seen that transportation and warehousing are among the items for which the most cost reduction is desired (Hwang and Lin 2016). The cost advantage to be made in this area may be an attractive offer for 3PL companies benefiting from these activities from outside. It has become important to provide a competitive advantage in the market by being able to respond to stock deficiencies and short-term demand fluctuations, to deliver goods

or services on time and to be flexible (Bhatnagar and Viswanathan, 2000). While gaining a competitive advantage is very important for exporters, flexible 3PLs have great effects on the exporter's performance in a period of uncertainties and demand fluctuations in the COVID-19 process.

Logistic flexibility requires responding to changing circumstances and conditions as quickly and effectively as possible (Zhang et al., 2005) (Zhang et al., 2005). The importance of flexibility in logistics can play an important role in order to perform better in line with customers' or company goals (Liao, 2020).

In emergencies that may occur, companies that can manage resilience and negative processes correctly may be the reason for preference. Companies can highlight these features by understanding the importance of flexibility.

The COVID-19 pandemic has shown not only the strategic role of 3PL providers in the supply chain, but also how they can provide a competitive advantage in emergencies (Herold et al., 2021). Firms can leverage this study to offer lower prices in emergencies or to highlight flexible features.

5.4. Research Limitations and Future Research

In the research, there is a relationship between the use of logistics outsourcing and exporter export performance. For this reason, the study can be carried out by adding more 3PL capabilities with the variables that affect the logistics performance. More hypotheses can be tested by adding more variables to the model. In addition, different moderators can be added that affect the relationship. In addition, while the research was conducted, there were not many studies on 3PL and ROT. How efficiently 3PL companies benefit from their resources can be discussed within the framework of ROT.

In future studies, a comprehensive study can be made on the outsourcing management process and its importance for companies can be emphasized. However, in this process, exporters need to evaluate their management processes objectively, which is one of the limitations of this study.

In addition, this research was conducted in Türkiye. During the COVID-19 process, each government has acted in accordance with its own decisions and each government has followed different policies. For this reason, the 3PL expectations of exporting companies may vary from region to region. This research is limited to Turkey. Also in this study, a study was carried out on the food sector. It can be carried out in different sectors such electronics and car parts, pharmaceuticals.

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