THIRD PARTY LOGISTICS SERVICE PROVIDERS IN TURKEY, THEIR PERSPECTIVES IN LOGISTICS SECTOR: TURKEY AS A CASE STUDY

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SEPTEMBER 2007

THIRD PARTY LOGISTICS SERVICE PROVIDERS IN TURKEY, THEIR PERSPECTIVES IN LOGISTICS SECTOR: TURKEY AS A CASE STUDY

A THESIS SUBMITTED TO

THE GRADUATE SCHOOL OF SOCIAL SCIENCES

OF

IZMIR UNIVERSITY OF ECONOMICS

BY

AYÇA CEZAYİRLİ

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ART OF LOGISTICS MANAGEMENT

IN

THE GRADUATE SCHOOL OF SOCIAL SCIENCES

SEPTEMBER 2007

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ABSTRACT

THIRD PARTY LOGISTICS SERVICE PROVIDERS IN TURKEY, THEIR PERSPECTIVES IN LOGISTICS SECTOR: TURKEY AS A CASE STUDY

Cezayirli, Ayça

MLM, Department of Logistics Management

Supervisor: Assoc. Prof. Dr. Frank Bates

January 2007, 246 pages

This thesis focuses on the third party logistics service providers in Turkey. The primary objective of this thesis is to analyze the third party logistics service providers in terms of their capital structure, operating period in the sector, employee numbers, the target sectors that they serve, their logistics management activities, their merger and acquisition decisions and their perspectives' regarding to the problems of the sector and the suggested solutions. For this purpose, a survey was conducted to the 120 firms of International Freight Forwarders Association. To be able to get a deep understanding of third party logistics service providers in Turkey, the findings of the conducted survey is evaluated.

Keywords: Logistics, Outsourcing, Third Party Logistics, Third Party Logistics Service Providers, Logistics Sector

ÖZET

TÜRKİYEDE BULUNAN ÜÇÜNCÜ PARTİ LOJİSTİK HİZMET SAĞLAYICILARI, SEKTÖRE BAKIŞ AÇILARI: BİR VAKA ANALİZİ OLARAK TÜRKİYE

Cezayirli, Ayça

Lojistik Yönetimi Yüksek Lisans, Lojistik Yönetimi Bölümü

Tez Yöneticisi: Doç. Dr. Frank Bates

Ocak 2007, 246 sayfa

Bu tez, Türkiye'de bulunan üçüncü parti hizmet sağlayıcılarının analizine eğilmektedir. Bu çalışmanın amacı Türkiye'de bulunan üçüncü parti lojistik hizmet sağlayıcılarını, sermaye yapılarına göre, sektörde faaliyet gösterdikleri yıllara göre, sahip oldukları çalışan sayılarına göre, hizmet verdikleri hedef sektörlere göre, müşterilerine sağladıkları lojistik yönetimi hizmetlerine göre, sektördeki birleşme ve devir alma kararlarına göre, sektördeki problemlere bakış açılarına ve bu problemlere sunulan çözüm önerilerine bakış açılarına göre incelemektir. Bu amaç için Uluslararası Taşımacılık ve Hizmet Üretenler Dernek'ine mensup 120 firmaya bir anket uygulanmıştır. Türkiye'de faaliyet gösteren üçüncü parti lojistik sağlayıcılarını daha iyi anlayabilmek için anket bulguları değerlendirilmiştir.

Anahtar kelimeler: Lojistik, Dış Kaynak Kullanımı, Üçünü Parti Lojistik, Üçüncü Parti Lojistik Hizmet Sağlayıcılar, Lojistik Sektörü

ACKNOWLEDGEMENTS

This is a great opportunity for me not only to acknowledge but also to thank the people that helped me in one way or another to succeed during the past year that I have been pursuing the Master of Logistics Management (MLM) degree.

I express sincere appreciation to Assoc. Prof. Dr. Frank Bates for his guidance and insight throughout the research. Thanks go to the other faculty members, Prof. Dr. Tunçdan Baltacıoğlu, Assoc. Prof. Dr. Okan Tuna, and Işık Özge Yumurtacı for their suggestions and comments.

Also, I would like to acknowledge and thank for my friends who were always with me for their support and encouragement during my preparations.

Finally, I would like to thank and acknowledge my parents for their unshakable faith in me and encouragement.

To My Parents

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LIST OF ABBREVIATIONS

3PLs	Third-Party Logistics Service Providers
4PL	Fourth-Party Logistics
APL	American President Lines, a company
CEO	Chief Executive Officer
CFO	Chief Financial Officer
C.H. ROBINSON CO.	Charles Robinson partners with the Nash Brothers, North Dakota Corporation.
CLM	The Council of Logistics Management
DHL	The first letters of the last names of the three company founders; Adrian Dalsey, Larry Hillblom, Robert Lynn, Deutsche Post Company
DC	Distribution Center
DSC	Dry Storage Corporation, in Chicago
EDI	Electronic Data Interchange
FedEx	Federal Express, a company
FIATA	International Federation of Freight Forwarders Association
GDP	Gross Domestic Product
GE	General Electric, a company

GPS	Global Positioning System
IATA	The International Air Transport Association
IBS	Leading IT company
ID	Identification
IMC	Intermodal Marketing Company
ISO	The International Organization for Standardization
IT	Information Technology
JIT	Just In Time
KARID	Cargo Administrators Association
LAN	Local Area Network
LLP	Lead Logistics Provider
LTL	Less than Truckload
RFID	Radio-frequency identification
RODER	International Ship Administrators and Combine Transporters Association
SCM	Supply Chain Management
SDV	French logistics company, partner of Horoz Logistics
SWOT	Strength, weakness, opportunity and threat analysis
SPSS	Statistical Package for Social Sciences
TL	Truck-load
TND	Turkey Transporters Association

TNT	Thomas Nationwide Transport, a company
TPG	A global mail, express and logistics company
TPL	Third Party Logistics
UK	United Kingdom
UND	International Transporters Association
UPS	United Parcel Service Inc.
US	United States
USA	United States of America
USF	A logistics company serving to North America
UTI	Global Integrated Logistics Company
UTIKAD	International Freight Forwarders Association in Turkey
VMI	Vendor Managed Inventory
WMS	Warehouse Management System
WWW	World Wide Web
XML	The Extensible Mark-up Language

INTRODUCTION

Logistics has been performed since the beginning of civilization: it is hardly new. Logistics is happening around the globe, twenty-four hours of every day, seven days a week during fifty-two weeks a year. Simply logistics is concerned with getting products and services where they are needed and when they are desired. Logistics has been identified as one of the key business processes in delivering value and quality to the customer and in gaining a competitive edge.

Since 1980s, with the globalization of the businesses and the consequent competitive pressures, many organizations realize that they have to focus on their core competencies in order to stay competitive in the market. Especially logistics activities are evaluated as out of their core competencies and they increasingly seek to outsource their logistics activities to a third party specialist.

In the last decade, the issue of third party logistics has emerged as a significant topic in the logistics literature. Third party logistics services refer to situations where a third party performs logistics activities that were previously performed by its customer in-house. Third party logistics service providers perform these activities on the behalf of their customers for a price. It is a newly developing concept in the world and especially in Turkey.

Logistics sector is a newly developing sector in Turkey and it is very important for the economy of the country. The main players in the sector are Third Party Logistics Service Providers. So the analysis of third party logistics service providers in Turkey and evaluation of their perspectives' regarding to the problems of the sector and the suggested solutions is very crucial. Turkey has been a bridge between Asia and Europe from past to nowadays. The development of the logistics depends of the logistics possibilities of the countries. Turkey has this important advantage. With its geopolitical position, its ports and the capacity of the international trade, it is seen that Turkey is on the way to be a logistics base of the world. So it is important for the firms to outsource their logistics activities into the 3PLs in Turkey and concentrate in their core competencies in order to stay competitive and make Turkey as a logistics center.

The first chapter of this thesis deals with the logistics concept. In this part, the main concepts underlying logistics examined. This chapter serves as a background for the following chapters.

The second chapter of this thesis deals with the outsourcing, outsourcing logistics activities and third party logistics service providers which is the main topic of this study.

The third chapter of this thesis deals with the previous researches that have been performed in USA, Europe and Turkey regarding the third party logistics service providers and the logistics sector.

The fourth chapter of this thesis deals with the brief information regarding the logistics sector in Turkey, some of the main third party logistic service providers in Turkey, the objective of the research and the methodology approach. The main objective of this research is to analyze the 3PLs operating in Turkey and evaluate 3PL perspectives regarding the problems of the Turkish Logistics Sector and regarding the suggested solutions.

The fifth chapter of this thesis deals with the findings of the survey. The survey has been conducted to the population from the 331 members of International Freight Forwarders Association in Turkey (UTIKAD) via taking the lead 120 units of 3PL companies into consideration. Only 32 units of member response.

The sixth chapter of this thesis deals with the conclusion part.

The last section is the Appendix where you can see the tables which belong to the methodology part.

CHAPTER I

LOGISTICS AND LOGISTICS ACTIVITIES

The aim of this chapter is to understand the logistics concept in literature which is the base of this study. The development of logistics concept, broad definition of logistics and logistics management in literature, the relationship between logistics and supply chain management, definition of supply chain and supply chain management in literature, components of logistics management, the key logistics activities and the role of logistics in the organization are analyzed and explained, accordingly.

1.1. THE ERA OF LOGISTICS CONCEPT

Logistics has its origin near the year 1670, when a new staff structure proposed for the French Army included the position of "Marechal General des Logis" who was responsible for supply transportation, selecting camps and adjusting marches. Although logistics long has been a military term, its application to non military management occurred primarily in the 1960s. (Leenders, Fearon and et al., 2002, p.8) Logistics was recognized as an independent and important function by many of the nation's railroad organizations well before 1900. In 1850, a book with the name *Railway Economy: A Treatise on the New Art of Transportation* by Dionysius was

published. This book was followed by the studying of the economists Taussig, Fetter and Handley. (Leenders, Fearon and et al., 2006, p.3)

Logistics was first examined in scholarly writing in the early 1900s. John Crowell (1901) discussed the costs and factors affecting the distribution of farm products in the U.S. government's *Report of the Industrial Commission on the Distribution of Farm Products.* Later, in his An *Approach to Business Problems* (1916), Arch Shaw discussed the strategic aspects of logistics. During the same year, L.D.H. Weld introduced the concept of marketing utilities (time, place, profession) and channels of distribution. In 1922, Fred Clark identified the role of logistics in marketing. And in 1927 the term logistics was defined in a similar to its use today.

> *"There are two uses of the word distribution which must be clearly differentiated…first, the use of the word to describe physical distribution such as transportation and storage; second, the use of word distribution to describe what is better termed marketing."* (Lambert and Stock, 1993, p.19)

With the onset of World War II, logistics was further developed and refined. Used in conjunction with a new corporate philosophy that originated in 1950s-"the marketing concept"-logistics came to be associated to an even greater degree with the customer service and cost components of a firm's marketing efforts. (Lambert and Stock, 1993, p.19)

The 1960s saw a number of developments in logistics. The first dedicated logistics texts began to appear in the early 1960s which is also the time that Peter Drucker a

noted business expert, author and consultant stated that logistics was one of the last real frontiers of opportunity for organizations wishing to improve their corporate efficiency. (Lambert, Stock and Ellram, 1998, p.6)

The Council of Logistics Management (formerly the National Council of Physical Distribution Management) was formed in 1963 to develop the theory and understanding of the logistics process, promote the art and science of managing logistics systems and to foster professional dialogue and development in the field operating exclusively without profit and in cooperation with other organizations and institutions. (Lambert and Stock, 1993, p.20)

During the remainder of the 1960s and on into 1980s, a multitude of textbooks, articles, monographs, journals, and conferences were devoted to the subject of logistics management. (Lambert and Stock, 1993, p.20)

Beginning in the late 1970s and continuing throughout the 1980s, logistics management was significantly affected by deregulation of the transportation industry. (Lambert and Stock, 1993, p.20) Widespread reductions in the economic regulation commonly referred to as deregulation relaxed government control of carriers' rates and fares, entry and exit, mergers and acquisitions and more. (Murphy and Wood, 2004, p.8) As a result carriers become more creative, flexible, customer oriented and competitive in order to succeed. Shippers are now faced with many more transportation options. They can focus on negotiation of the rates, terms and services with their overall attention directed toward getting the best transportation buy. (Lambert, Stock and Ellram, 1998, p.6)

During 1970s, with rising interest rates and increasing energy costs, logistics received more attention as a major cost driver. Logistics costs became a more critical issue for many organizations because of the globalization of industry. (Lambert, Stock and Ellram, 1998, p.6)

During the same years, with the development of information technologies and technological advances in computer hardware, software and capacity gave organizations ability to make faster, more informed and more accurate decisions. The Internet-virtually unknown and unused until the mid 1990s- has also proven to be a powerful tool for improving logistical effectiveness and efficiency. (Murphy and Wood, 2004, p.9)

The shifting of channel power from manufacturers to retailers, wholesalers and distributors has also an impact on the logistics. This power shift is relevant since a number of these retailers have recognized logistics as an essential component of their corporate strategies. (Murphy and Wood, 2004, p.9)

Beginning in the 1970s and accelerating in the 1990s has been the development and expansion of global competition. Firms have increasingly become more international, as evidenced by the increase in foreign sourcing of raw materials, component parts, subassemblies and labor. Companies have penetrated new markets throughout the world. Enterprising firms throughout the world have recognized the need to become more globally oriented. (Lambert and Stock, 1993, p.21)

With the globalization of the trade, logistics gain a high importance as a particularly powerful management tool in global organization because it is an approach to doing business that works anywhere. Logistics is providing to be a source of sustainable competitive advantage for firms competing in the global arena.

To have a better understanding about logistics, broad definitions of logistics and logistics management will be stated in the next part.

1.2. BROAD DEFINITIONS OF LOGISTICS AND LOGISTICS MANAGEMENT

Logistics has been called by many names including the following: Business Logistics, Channel Management, Distribution, Industrial Logistics, Logistical Management, Materials Management, Physical Distribution, Quick-response System, Supply Chain Management, Supply Management (Lambert, Stock and Ellram, 1998, p.2)

Murphy and Wood (2004) states the terms used to refer business logistics as following: Business Logistics, Distribution, Industrial Distribution, Logistics, Logistics Management, Materials Management, Physical Distribution and Supply Chain Management. Each of the terms has slightly different meanings. In essence, each of the terms is associated with managing the flow of goods and information from a point of origin to a point of consumption. (Murphy and Wood, 2004, p.5) But logistics management is the most widely accepted term among logistics professionals. (Lambert and Stock, 1993, p.4)

Some researchers use the term “physical distribution” instead of logistics. These two terms differ from each other at a critical point. Logistics includes all the processes from the supply of materials up until to the customer satisfaction. On the other hand, physical distribution is only about the distribution of end products. So logistics management is composed of material requirement management, physical life cycle and physical distribution. (Sezen and Gök, 2004, p.719)

In order to avoid any potential misunderstanding about the meaning of logistics, it is worthwhile to give some different definitions for the scope and content of the subject.

A dictionary (Macmillan Contemporary Dictionary) definition of the term logistics is: The branch of military science concerned with the movement, procurement and maintenance of equipment, facilities and personnel. (Halsey, 1988, p.601)

The Council of Logistics Management (CLM), which is a professional organization of logistics managers, educators and practioners formed in 1962 and named as Council of Supply Chain Management Professionals in 2005 for the purpose of continuing education and fostering the interchange of the ideas defines the term of logistics as per below:

“Logistics is the process of planning, implementing, and controlling procedures for the efficient and effective transportation and storage of goods including services, and related information from the point of origin to the point of consumption for the

purpose of conforming to customer requirements. This definition includes inbound, outbound, internal and external movements.[1] ”

As Ballou (2004) states this is an excellent definition, conveying the idea that product flows are to be managed from the point where they exist as raw materials to the point where they are finally discarded. (Ballou, 2004, p.4)

Logistics is also concerned with the flow of services as well as physical goods, an area of growing opportunity for improvement. Logistics is not confined to manufacturing organizations. It is relevant to service and manufacturing organizations and to both private and public sector firms. (Leenders, Fearon and et al., 2002, p.8)

Lambert and Stock (1993) also supports that logistics is not only important to manufacturing firms. It is an important component of the operation of all companies, including retailers, wholesalers, and other service providers. (Lambert and Stock, 1993, p.4)

As Pienaar (2004) states the definition of logistics includes the flow of goods and services in both the manufacturing and service sectors. The service sector (i.e. the tertiary sector in economics terminology) includes commerce, electricity supply, transport, communication, education and financial, personal and public services. (Pienaar, 2004, p. 8)

[1] http://cscmp.org/Downloads/Public/Resources/glossary03.pdf

As a result; logistics is a process that includes all the activities that have an impact on making goods and also services available to customers when and where they wish to acquire them. (Ballou, 2004 p.4) Logistics concept looks at the material flow process as a complete system, from initial need for materials to delivery of finished products or service to the customers. (Leenders, Fearon and et al., 2002, p.8)

After the definition of logistics is given, the definitions of Logistics Management in literature are given as below.

Council of Supply Chain Management Professionals defines the Logistics Management as below:

"Logistics management is that part of supply chain management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements.

Logistics Management activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, logistics network design, inventory management of third party logistics services providers. To varying degrees, the logistics function also includes sourcing and procurement, production planning and scheduling, packaging and assembly, and customer service. It is involved in all levels of planning and execution -- strategic, operational and tactical. Logistics Management is an integrating function, which coordinates and optimizes all logistics activities, as well as

integrates logistics activities with other functions including marketing, sales manufacturing, finance and information technology."[2]

Logistics Management is the coordinative and effective application of all processes of information and product flow from supplier to end user. Therefore, it covers the management of strategies and activities related to the flow of materials, replacements and end products from suppliers to customers and/or buyers. Another definition of Logistics Management in literature includes the planning and processing of systems to control the flow of material, process and final inventory for supporting the business strategy. (Sezen and Gök, 2004, p.719)

The objective in logistics management is to be efficient and effective across the entire system and to minimize system-wide costs from transportation and distribution to inventory of raw material, semi-finished goods and finished products. Thus the emphasis is not simply on the cheapest or the fastest transport or reducing inventories, but rather on an integrated and coordinated systems approach to the logistics process. (Pineaar, 2004, p.7)

[2] http://www.cscmp.org/AboutCSCMP/Definitions/Definitions.asp

1.3 LOGISTICS VS. SUPPLY CHAIN MANAGEMENT

Supply Chain Management is a term that has emerged in recent years that captures the essence of integrated logistics and even goes beyond it. Supply Chain Management emphasizes the logistics interactions that take place among the functions of marketing, logistics and production within a firm and those interactions that take place between the legally separate firms within the product-flow channel. (Ballou, 2004, p.4-5)

The definitions of Supply Chain and Supply Chain Management in literature are as stated below.

Council of Supply Chain Management Professionals defines the Supply Chain as below:

"Supply Chain is starting with unprocessed raw materials and ending with the final customer using the finished goods, the supply chain links many companies together. Supply Chain is the material and informational interchanges in the logistical process stretching from acquisition of raw materials to delivery of finished products to the end user. All vendors, service providers and customers are links in the supply chain.[3]*"*

[3] http://cscmp.org/Downloads/Public/Resources/glossary03.pdf

Chopra and Meindl (2004) defined supply chain as it consists of all parties involved, directly or indirectly in fulfilling a customer request. (Chopra and Meindl, 2004, p.4)
Ballou (2004) defined supply chain as it encompasses all activities associated with the flow and transformation of goods from the raw materials stage (extraction), through to the end user, as well as the associated information flows. Materials and information flow both up and down the supply chain. (Ballou, 2004 p.5)

Council of Supply Chain Management Professionals defines the Supply Chain Management as below:

"Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, Supply Chain Management integrates supply and demand management within and across companies. Supply Chain Management is an integrating function with primary responsibility for linking major business functions and business processes within and across companies into a cohesive and high-performing business model. It includes all of the logistics management activities noted above, as well as manufacturing operations, and it drives coordination of processes and activities with and across marketing, sales, product design, finance and information technology[4].

[4] http://cscmp.org/Downloads/Public/Resources/glossary03.pdf

Ballou (2004) define Supply Chain Management as it is the systematic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purpose of improving the long-term performance of the individual companies and the supply chain as a whole. (Ballou, 2004 p.5)

Supply Chain Management involves the management of flows between and among stages in a supply chain to maximize total supply chain profitability. (Chopra and Meindl, 2004, p.6)

Leenders, Fearon and et al. (2002) define supply chain management as it emphasizes all aspects of delivering products to customers. Supply Chain Management represents a philosophy of doing business that stresses processes and integration. (Leenders, Fearon and et al., 2002, p.11)

Lambert, Stock and Ellram (1998) defines SCM as it is the integration of business processes from the end user through original suppliers that provides products, services and information that add value to customers. They states that SCM is a term that has grown significantly in use and popularity since the late 1980s, although considerable confusion exists about what it actually means. Many people use the term as a substitute or synonym for logistics. However as stated above the definition of SCM is broader and it is the management of all key business processes across members of the supply chain. (Lambert, Stock and Ellram, 1998, p.504)

In so many respects, as Ballou (2004) states they promote the same mission:

"To get the right goods or services to the right place at the right time and in the desired condition, while making the greatest contribution to the firm." (Ballou, 2004, p.6)

After giving the definitions of logistics, logistics management, supply chain and supply chain in detail, evaluating the relationship between logistics and supply chain management, the components of logistics management will be examined to provide a broader perspective about logistics.

1.4 COMPONENTS OF LOGISTICS MANAGEMENT

Logistics management includes the actions required to prepare (plan), organize (implement) and execute (control) the activities of an organization when moving materials or finished products to customers. (Pineaar, 2004, p.7)

Preparation and planning activities include the selection of facility sites including type, number, location and capacity, distribution parties including wholesalers, retailers and third party logistics service providers and carriers including choice of transport mode necessary to offer service at the level demanded by clients to achieve the goals of the organization. (Pineaar, 2004, p.7)

The organizational and the implementation aspects of logistics include the allocation and positioning of resources and the scheduling of shipments and activities to

respond to customers' needs in an efficient manner in order to accomplish the organization's goals. (Pineaar, 2004, p.7)

Execution and control include monitoring and reviewing performance such as quality of service, expenditure, productivity and asset utilization so as to ensure that the logistics process satisfies consumers effectively, the organization's resources are deployed efficiently and corrective action is taken when performance is not in line with goals. (Pineaar, 2004, p.7)

Lambert and Stock (1993) also states that efficient management of the flow of goods from point-of-origin to point-of-consumption at the macro (society) or micro (firm) levels requires successfully planning, implementation, and control of a multitude of logistics activities. These activities shown in Figure 1.1 may involve raw materials (subassemblies, manufactured parts, packing materials, basic commodities); in-process inventory (product partially completed and not yet ready for sale); and finished goods (completed products ready for sale to intermediate or final customers). (Lambert and Stock, 1993, p.4)

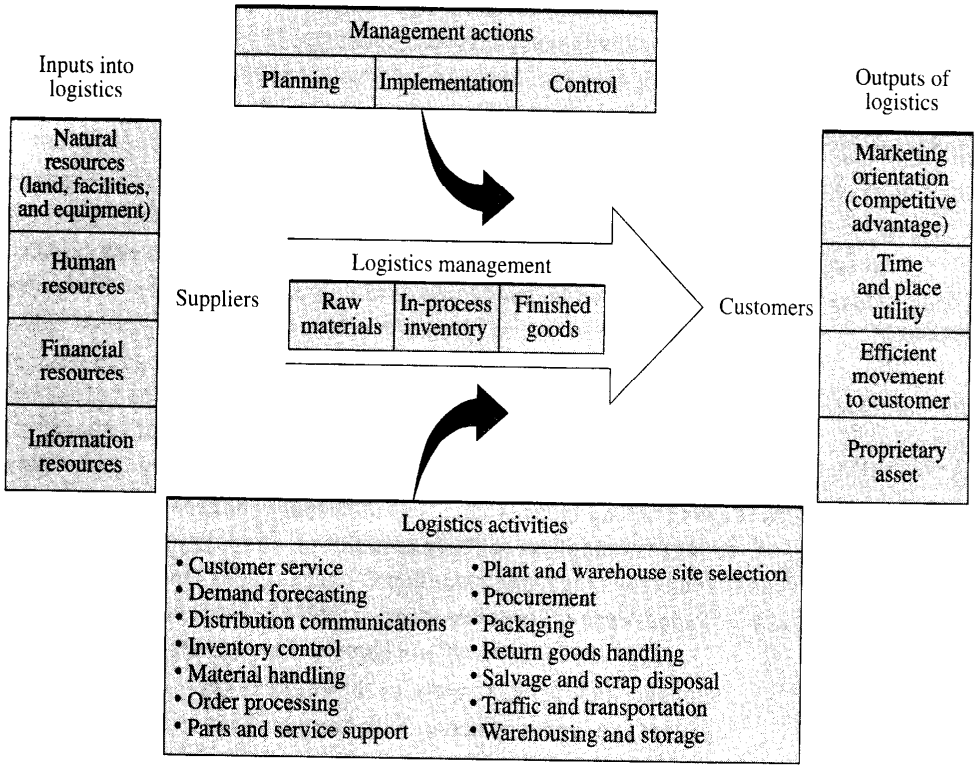

Figure 1.1: Components of the logistics management

Source: Lambert, Stock and Ellram, 1998, p.5

Logistics is dependent upon natural, human, financial and information resources for inputs. Suppliers provide raw materials which logistics manage in the form of raw materials, in-process inventory and finished goods. Management actions provide the framework for logistics activities through the process of planning, implementation and control. The outputs of the logistics system are competitive advantage, time and place utility, efficient movement to the customer and providing a logistics service mix such that logistics becomes a proprietary asset of the organization. These outputs are made possible by the effective and efficient performance of the logistics activities shown at the bottom of the Figure 1.1. (Lambert, Stock and Ellram, 1998, p.4)

These activities are explained in the next part in detail.

1.5 KEY LOGISTICS ACTIVITIES

Ballou (2004) categorizes the logistics activities as core and support activities. Core activities are customer service standards, transportation, inventory management, order policies and information flows. He states support activities as warehousing, materials handling, purchasing, protection, production scheduling and information acquisition and maintenance. (Ballou, 2004 p.10-11)

Murphy and Wood (2004) outline the logistics-related activities as customer service, facility location decisions, inventory management, order management, production scheduling, returned products, transportation management, demand forecasting, industrial packaging, materials handling, parts and service support, procurement, salvage and scrap disposal and warehouse management. (Murphy and Wood, 2004, p.25)

Lambert, Stock and Ellram (1998) outline the logistics activities as customer service, demand forecasting/planning, inventory management, logistics communications, material handling, order processing, packaging, parts & service support, plant and warehouse site selection, procurement, return goods handling, reverse logistics, traffic and transportation, warehousing and storage (Lambert, Stock and Ellram, 1998, p.15).

According to Lambert, Stock and Ellram categorization, the brief definitions of each activity is as below.

1.5.1 Customer Service

Customer service involves making sure that the right person receives the right product at the right place at the right time in the right condition and at the right cost. (Murphy and Wood, 2004, p.25)

1.5.2 Demand Forecasting/Planning

Demand forecasting addresses the need for accurate information on future customer needs so that the logistics system can ensure the right products and/or services are available to meet those requirements. (Gourdin, 2001, p.6)

1.5.3 Inventory Management

Inventory management deals with balancing the cost of maintaining additional products on hand against the risk of not having those items when the customer wants them. (Gourdin, 2001, p.5) Logisticians consider three relevant costs; the cost of holding product, the cost of ordering product and the cost of being out of stock.

1.5.4 Logistics Communications

Communication is key to the efficient functioning of any system. Excellent communications within a system can be a key source of competitive advantage. As Lambert, Stock and Ellram state that communication must occur between organization and its suppliers and customers; within the organization such as logistics, engineering, accounting, marketing and production. (Lambert, Stock and Ellram, 1998, p.18)

1.5.5 Materials Handling

Material handling refers to the short-distance movement of products within the confines of a facility like plant and warehouse. Since material handling tends to add costs rather than value to logistics systems, managers pursue cost-efficiency objectives such as minimizing the number of handlings and moving the product in a straight line whenever possible. (Murphy and Wood, 2004, p.26)

1.5.6 Order Processing

Order processing entails the systems that an organization has for getting orders from customers, checking on the status of orders and communicating to customers about them, and actually filling the order and making it available to the customer. (Lambert, Stock and Ellram, 1998, p.18)

1.5.7 Packaging

Packaging focuses on protecting the product while it is being shipped and stored. Too much packaging increases costs while inadequate protection can result in merchandise damage and customer dissatisfaction. (Gourdin, 2001, p.6)

1.5.8 Parts and Service Support

Parts and Service support refers to after-sale support for products in the form of repair parts, regularly scheduled service, emergency service and so on. (Murphy and Wood, 2004, p.26)

1.5.9. Plant and Warehouse Site Selection

Plant and Warehouse Site selection addresses the strategic placement of warehouse, plants and transportation resources to achieve customer service objectives and minimize cost.

1.5.10 Procurement

Procurement deals with the buying of goods and services that keep the organization functioning. Since these inputs can have a direct impact on both the cost and quality of the final product/service offered to the customer, this activity is vital to the overall success of the logistics effort.

1.5.11 Return Goods Handling

Products can be returned for various reasons, such as product recalls, product damage, lack of demand, and customer dissatisfaction. (Murphy and Wood, 2004, p.27) Return goods handling is complex because it involves moving small quantities of goods back from the customer rather than to the customer as the firm is accustomed. Many logistics systems have a difficult time handling this type of movement. Costs tend to be high. (Lambert, Stock and Ellram, 1998, p.20)

1.5.12 Reverse Logistics

Logistics is also involved in removal and disposal of waste materials left over from the production, distribution or packaging processes. As the concern for recycling and reusable packaging grows, this issue will increase in importance. (Lambert, Stock and Ellram, 1998, p.20)

1.5.13 Traffic and Transportation

Transportation refers to the physical movement of goods from a point of origin to a point of consumption and can involve raw materials being brought into the production process and finished goods being shipped out to the customer. Transportation involves selection of the mode (e.g., air, rail, water, truck or pipeline), the routing of the shipment, assuring of compliance with regulations in the region of the country where shipment is occurring and selection of the carrier. (Lambert, Stock and Ellram, 1998, p.21)

1.5.14 Warehousing and Storage

Warehousing refers to places where inventory can be stored for a particular period of time. (Murphy and Wood, 2004, p.27) Storage addresses the physical requirements of holding inventory.

Clearly, any one organization is unlikely to require the accomplishment of all these specific tasks. The number of activities in a logistics system can vary from company to company. The point is that every organization, be a manufacturer or service provider, for-profit or non-profit has customers that it wants to reach. By integrating the appropriate functions into a customer focused logistics system, the enterprise can develop a sustainable advantage that is very difficult for a competitive to imitate.

After evaluating the key logistics activities, it is important to evaluate the role of logistics in the organization in order to better understand the logistics concept. In the next part, it will be examined accordingly.

1.6 THE ROLE OF LOGISTICS IN THE ORGANIZATION

Michael Porter's concept of value chain provides an excellent way to better understand how logistics fits into an organization. In Figure 1.2. Porter's model illustrates the activities that a firm must perform in order to provide benefits to its customers. (Gourdin, 2001, p.7)

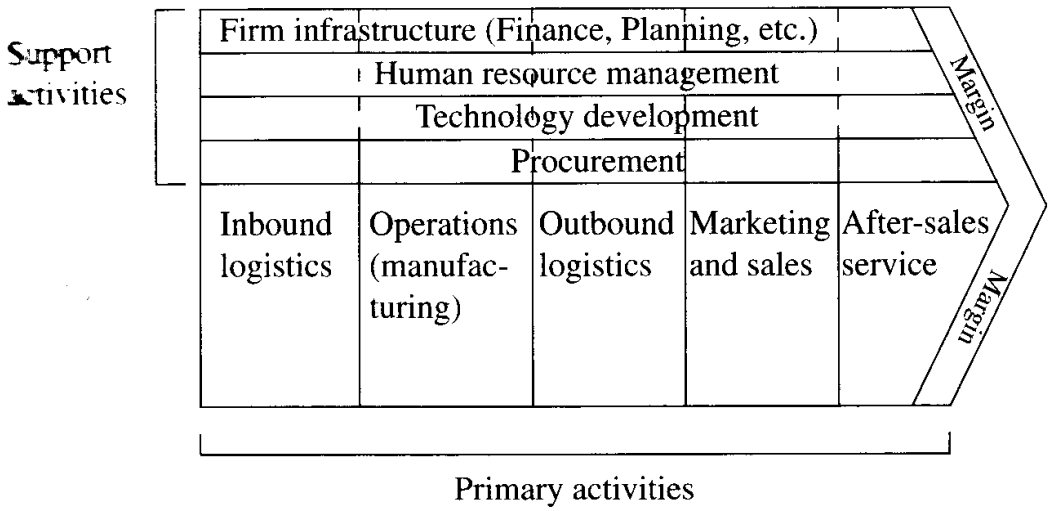

Figure 1.2: The Value Chain

Source: Porter, 1991, p.41; Gourdin, 2001, p.7

Primary activities (running vertically in the model) include those involved in the ongoing production, marketing, delivery and servicing of the product or service; support activities span those primary tasks and deal with the purchased inputs, technology, human resources and overall infrastructure needed to support the primary activities.

It is important to note that two of the five primary activities focus on logistics: feeding raw materials, component parts and related services into the production line (inbound logistics) and managing the flow of finished goods from the end of the production line to the customer (outbound logistics). (Gourdin, 2001, p.7-8)

The logistics activities between supplier and the manufacturer are called Inbound Logistics and logistics between manufacturer and the customer as Outbound Logistics (Atılkan and Cerit, 2004, p.843)

Porter (1998) defines the Inbound Logistics and Outbound Logistics as below:

Inbound Logistics: Activities associated with receiving, storing, and disseminating inputs to the product, such as material handling, warehousing, inventory control, vehicle scheduling, and returns to suppliers.

Outbound Logistics: Activities associated with collecting, storing, and physically distributing the product to buyers, such a finished goods warehousing, material handling, delivery vehicle operation, order processing and scheduling. (Porter, 1998, p.39-40)

Logistics also had a value added role within the organization. Four types of utility can add value to a product. They are: form, place, time and possession utility. Form utility is created by manufacturing activities, place and time utility by logistics activities, and possession utility by marketing activities. Form utility results when raw materials are combined in the production or manufacturing process to make a

finished product for which demand exists. Through transport, logistics creates place utility by moving goods from places where they occur in an unutilizable form or where they are in surplus to places where they are processed into utilizable form or where they are relatively scarce in terms of needs. This can be seen as the value of availability of goods at places where they are wanted to satisfy customers' desires. Logistics creates time utility by sorting and then delivering a product at the place of demand at a time desired by the customer. Possession utility is enhanced by logistics primarily through marketing activities related to the promotion of products. Logistics supports possession utility, because place and time utility are prerequisites to allow users to have the product at their own disposal. (Pineaar, 2004, p.9)

Pienaar (2004) states that if an organization can consistently provide its customers and clients with the desired quality and quantity of products, where and when needed at acceptable cost, it can gain market share advantage over its competitors. The organization might be able to supply its products at a lower cost as a result of logistics efficiencies or provide a higher level of customer and client service as a result of logistics effectiveness, or both, thereby gaining a competitive edge in the market. (Pineaar, 2004, p.9)

During the 1980's, many organizations began to recognize that they could not effectively and efficiently "do it all" themselves and still remain competitive. (Lambert, Stock and Ellram, 1998, p.34) In order to stay competitive in the market, they have to buy some activities from outside that has previously made in-house. As a result of this situation, a new concept that is outsourcing occurs. Outsourcing will be analyzed in the following chapter in detail.

In this chapter, the logistics concept in literature which is the base for this study is deeply analyzed. The development of logistics concept is examined. It is found out that logistics has its origin near the year 1670. The broad definitions of logistics and logistics management are given in order to clarify the concept. The relationship between logistics and supply chain management is analyzed. The definitions of supply chain and supply chain management are given. It is found out that they have the same mission that is to get the right goods or services to the right place at the right time and in the desired condition, while making the greatest contribution to the firm. The components of logistics management are analyzed. It is revealed that logistics and logistics management is the integration of several activities for the purpose of planning, implementing and controlling the efficient flow of raw materials, in-process inventory, and finished goods from point-of-origin to point-of-consumption. These key logistics activities such as customer service, demand forecasting/planning, inventory management, logistics communications, material handling, order processing, packaging, parts & service support, plant and warehouse site selection, procurement, return goods handling, reverse logistics, traffic and transportation, warehousing and storage are explained.

Finally, the role of logistics within the organization is analyzed. It is seen that logistics has a value-added role within the organization. Although logistics efficiencies provide cost advantage and high customer satisfaction to the organizations, it is found out that they could not perform everything by themselves and still stay competitive in the market. As a result, outsourcing concept occurs. With this theoretical background, outsourcing concept and third party logistics service providers will be examined in the following chapter.

CHAPTER II

OUTSOURCING & THIRD PARTY LOGISTICS SERVICE PROVIDERS

In this chapter, the main aim is to understand outsourcing concept, outsourcing logistics activities and third party logistics service providers which are the main topic of this study. Before explaining third party logistics service providers, the definitions of outsourcing are given, outsourcing decision are explained and analyzed.

Following to these explanations; outsourcing logistics activities, the driving forces which make firms outsourcing their logistics activities and the specialized firms, called third party logistics service providers, types of services that third party logistics firms offer, classification of third party logistics service providers, advantages and disadvantages of using third-party logistics service providers, contractual agreements between logistics providers and their customers, successful logistics partnership and the success factors in the evaluation of third party logistics companies are explained and analyzed accordingly.

2.1. OUTSOURCING

Traditionally many companies decided to carry out a very wide range of activities internally. This involved companies in directly employing staff and purchasing resources to provide for all its own needs (e.g., public relations, advertising, financial accounting, research and design, information technology (IT), transport, warehousing, market research, maintenance, repair and catering). This resulted in the development of large, vertically integrated manufacturing and retailing organizations, which had the capability to carry out all these activities with internal resources. (Brewer, Button and Hensher, 2001, p.254-255)

Managerial thinking on this issue has changed dramatically in the last few years with increased global competition, pressure to reduce costs, downsizing, and focus on the firm's core competencies. The trend is now toward outsourcing or seeking outside suppliers for services or goods that have been provided in-house. (Leenders, Fearon and et. al, 2002, p.295)

Brewer, Button and Hensher (2001) define outsourcing as following. Every organization has to make the decision of whether to perform each of the activities that it requires itself or to pay another organization to carry out these activities on its behalf. "Outsourcing" refers to the strategic decision to contract out one or more activities required by the organization to a third-party specialist. When an activity is carried out by an organization itself it is usually referred to as being performed "in-house", while those activities that have been outsourced and are carried out on behalf of the organization by a specialist provider are usually referred to as "third-party"

services. (Brewer, Button and Hensher, 2001, p.253) These third-party specialists will be analyzed in the next part in detail.

Lambert, Stock and Ellram (1998) defines outsourcing as it is an activity in which an organization hires an outside organization to provide a good or service that it traditionally had provided itself, because this organization is an "expert" in an efficiently providing this good or service, while the organization itself may not be. (Lambert, Stock and Ellram, 1998, p.34)

Outsourcing is a very mature business and a growing trend all around the world. The 1996 annual assessment of outsourcing activity in the U.S.A for example, showed that U.S. companies with revenues in excess of $80 million expected to increase their expenditure on services that they outsource by 26% in 1997. These U.S. companies spent a combined total of $85 billion on out-sourced services in 1997. In the U.K., the overall out-sourcing market is estimated to be growing at an annual rate of 22 %. (Brewer, Button and Hensher, 2001, p.256)

Dun and Bradstreer (1998) estimated that worldwide out-sourcing expenditure would be approximately $235 billion in 1999. Another study commissioned by the Outsourcing Research Council and PricewaterhouseCoopers found that about two-thirds of the executives from multinational companies interviewed already out-sourced one or more activities, and that the typical executive spent, on average, approximately one-third of their operating budget on all forms of services provided by third-part companies. (Brewer, Button and Hensher, 2001, p.256)

According to a recent survey of Fortune 500 companies conducted by Northeastern University and Accenture, 83% of these companies use 3PL providers and nearly 60% use multiple 3PLs. Major US firms spend 49% of their entire logistics budget on 3PLs, whereas for European counterparts this rate is 65%, according to a survey of Global 100 companies conducted by Georgia Institute of Technology and Cap Gemini Ernst&Young (Tanyeri and Tavmerger, 2004, p. 17)

To have a better understanding about outsourcing, outsourcing decision will be examined in detail in the following part.

2.1.1 Outsourcing Decision

The decision about whether or not to out-source an activity currently performed in-house by the organization is often referred to as the "make or buy decision".

Council of Supply Chain Management Professionals defines make and buy decision as below:

> *"The act of deciding whether to produce an item internally or buy it from an outside supplier. Factors to consider in the decision include costs, capacity availability, proprietary and/or specialized knowledge, quality considerations, skill requirements, volume and timing.*[5]*"*

The make or buy decision is one of the most critical strategic decisions. It determines and defines and organization's core competencies.

[5] http://cscmp.org/Downloads/Public/Resources/glossary03.pdf

Quinn and Hilmer (1994) state that an organization should:

(1) identify its "core competencies" (these being "those activities in which it can achieve definable pre-eminence and provide unique value for customers") and commit the organization's resources to these activities; and
(2) outsource all the other activities required for which the organization "has neither a critical strategic need nor special capabilities."

(Brewer, Button and Hensher, 2001, p.254-255)

Core competencies tend to be activities and skills in which the organization has long-term competitive advantage. These competencies are activities that the organization can perform more effectively than its competitors, and which are of importance to customers and tend to be knowledge-based rather than simply depend on owning assets. Any other non-core activities which are not of fundamental importance to the organization's competitive edge can be considered for out-sourcing.
(Brewer, Button and Hensher, 2001, p.254-255)

A strategy of outsourcing all non-core activities has its own risks and problems, as failure of these activities could jeopardize the organization's core business. Also, the cost of choosing suitable company to outsource an activity and managing this arrangement can be high, and may be in fact be greater than the cost of performing the activity in-house. When the potential for vulnerability and competitive edge with respect to an activity are high, the need for tight control over sourcing is required which suggests either carrying out the activity in-house, through joint ownership or through detailed long-term out-sourcing contracts. Conversely, when the potential for

both vulnerability and competitive edge are low, the activity requires little sourcing control, and there are likely to be adequate providers of the activity. In the case of activities that fall between these extreme cases, there are a number of sourcing options for the organization. The most appropriate choice will depend on the trade-off between sourcing control and the flexibility required by the organization. The Figure 2.1 summarizes the potential contract relationships according to flexibility and control need.

(Brewer, Button and Hensher, 2001, p.254-255)

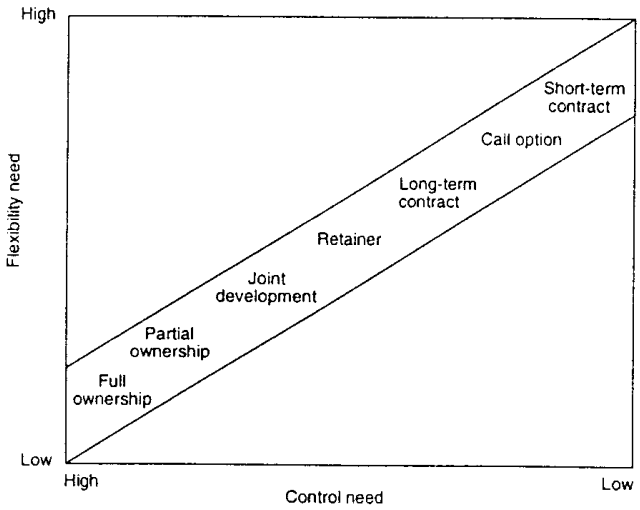

Figure 2.1: Potential Contract Relationships

Source: (Brewer, Button and Hensher, 2001, p.254)

The decision to outsource or not depends on a number of financial and non-financial variables and the particular situation of the organization. In every organization, a type of outsourcing matrix may exist as follows as it is indicated in Figure 2.2. (Leenders, Fearon and et al, 2002, p.304)

Quadrant 1 represents functions, tasks and activities that definitely should be in-house and are currently performed in-house. Quadrant 2 represents functions, tasks and activities that should be done in-house but that are currently outsourced. Quadrant 3 represents functions, tasks, or activities that should be outsourced but are currently done in-house. Quadrant 4 represents tasks, functions and activities that should be outsourced and are. (Leenders, Fearon and et al, 2002, p.304)

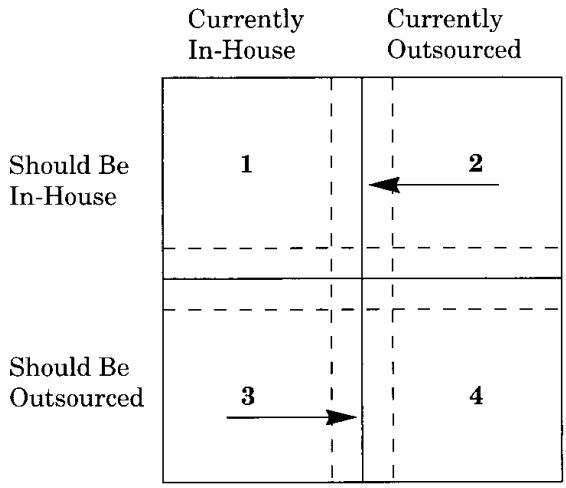

Figure 2.2: The outsourcing matrix

Source: Leenders, Fearon and et al., 2002, p.305

Quadrants 1 and 4 are the two stable quadrants where things are the way they should be but quadrants 2 and 3 are not. The dotted lines in the quadrants indicate that a fuzzy zone exists where the best decision may not be all that evident. (Leenders, Fearon and et al., 2002, p.305)

Another way of analyzing whether or not outsourcing makes sense is depicted in the flowchart in Figure 2.3.

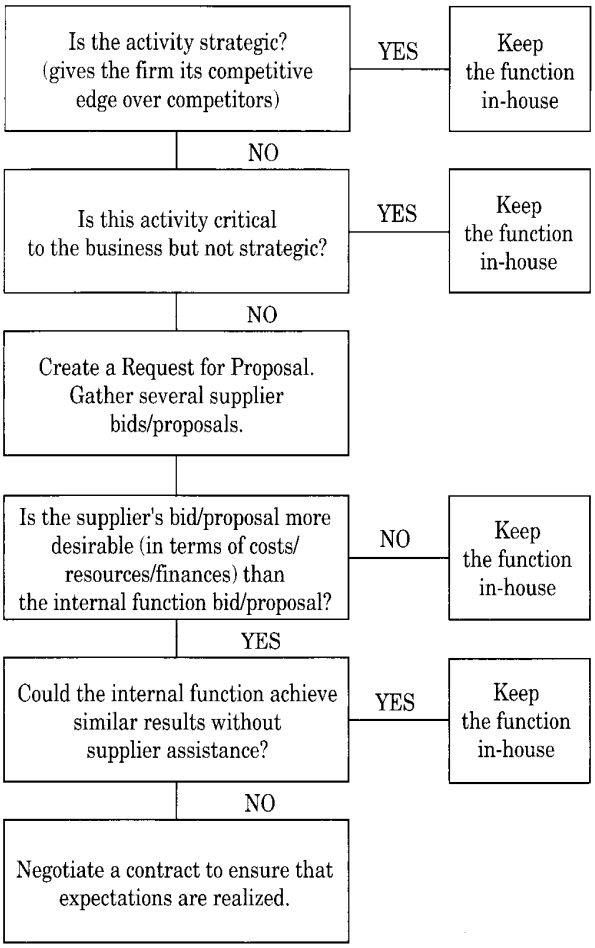

Figure 2.3: The outsourcing decision

Source: Leenders, Fearon and et al., 2002, p.307

If the activity is strategic, then it must be kept in-house. If it is not, then the second step that is the activity is critical to the business is evaluated. If it is critical, it must be kept in house. If it is not, proposals from suppliers are requested. If the suppliers' proposals are not more desirable in terms of costs, resources and finances then it must be kept in house. If it is desirable, then the internal function is able to achieve

similar results without supplier assistance is evaluated. If it achieves, then keep the function in-house. But if it is not, negotiate a contract to ensure that expectations are realized.

The outsourcing definitions in literature and outsourcing decisions have been evaluated in the previous sections. Through the development of outsourcing, a recent market trend towards logistics outsourcing will be evaluated in the next part in order to be a base before examining the third party logistics service providers.

2.2. OUTSOURCING LOGISTICS ACTIVITES

In recent years there has been a market trend towards logistics outsourcing among many companies. This shift away from in-house to out-sourced logistics operations is part of a wider desire to manage logistics activities in a different way in response to new pressures in supply chains. Many organizations require every-more responsive and reliable distribution systems that increasingly operate internationally or even globally. Often these organizations identify logistics as falling outside their core competencies. They do not feel they have the necessary expertise to achieve the level of logistics services themselves, they do not want to make the substantial investments that would be required in personnel and equipment. Instead, they turn to logistics third party providers that specialize in providing these services. (Brewer, Button and Hensher, 2001, p.258)

Other driving forces behind outsourcing logistics activities of the firms are stated as following.

Globalization of business has been viewed by many as the most prominent. The continued growth in global markets and foreign sourcing has placed increasing demands on the logistics function. (Razzaque and Sheng, 1998, p.91) Consequently, it has led to more complex supply chains (Bradley, 1994, p. 48) and has involved more transportation and distribution managers in international logistics. Lack of specific knowledge of customs and infrastructure of destination countries forces firms to acquire the expertise of third-party logistics vendors. (Hertz and Alfredsson, 2003, p.140) The increasing popularity of just-in-time (JIT) principles is another major factor promoting outsourcing. (Razzaque and Sheng, 1998, p.91) Trunick suggests emerging technology and versatility parties as two other important drivers of outsourcing. Since it would be time consuming and expensive to develop and implement new technologies in house, firms can easily employ those of a third party. On the other hand, versatility of the third parties enable them to provide an improvement in control, technology, and location, turning fixed costs into variable costs. (Razzaque and Sheng, 1998, p.92) (Taskin and Güneri, 2004, p.257-258)

According to Bradley (1994), there is no difference between outsourcing logistical functions and any other procurement process. He asserts that like a reliable supplier of materials and parts, contract logisticians should also provide a high level of customer satisfaction so that their clients can become a tougher competitor. (Bradley, 1994, p.50)

Traditionally handled by the firms internally as support functions, logistics activities such as transportation, distribution, warehousing, inventory management, order processing, and material handling have been given low priority compared with other

business functions. However, the need for developing sustainable competitive advantage, the growing emphasis on providing good customer service effectively and efficiently, and the strategic value of focusing on core businesses and re-engineering (Razzaque and Sheng, 1998, p. 92) resulted in the evolution of contract logistics which is very different from traditional logistics. (Taskin and Güneri, 2004, p.256-257)

Table 2.1: The difference between Traditional and Outsourcing Services

TRADITIONAL SERVICES	OUTSOURCE SERVICES
Not tailored	Tailored
Usually one dimensional-trucking or warehousing for example	Are multidimensional, linking transportation, warehousing, inventory management systems and others
Shippers aim to lower transportation cost through a contract	Goal is to lower a total cost while providing a better service, more flexibility
Contracts tend to run for a year or two	Contracts are more likely to be of longer duration, multi-year arrangements negotiated at a higher management lever
Require expertise in transportation of packed materials	Required broad logistical and analytical skills
Contracts take generally less time to negotiate	Contracts take generally more time to negotiate
Simpler arrangement and relatively low switching cost	Complexity arrangement leads o higher switching costs

Source: Taskin and Güneri, 2004, p.256-257

Table 2.1 summarizes the difference between traditional and outsourcing services as below. Traditional services are not tailored. However outsource services are tailored. Traditional services are usually one dimensional as trucking and warehousing for example. But outsource services are multidimensional as linking transportation, warehousing, inventory management systems and others into together. In traditional

services, the shippers aim to lower transportation cost through a contact. But in outsource service, the goal is to lower a total cost while providing better service and more flexibility. In traditional service, contracts tend to run for a year or two. In outsource services; contracts are more likely to be of longer duration, multi-year arrangements negotiated at a higher management lever. Traditional services require expertise in transportation of packed materials. Outsource services require broad logistical and analytical skills. In traditional services, contracts take generally less time to negotiate, in outsource services; contacts take generally more time to negotiate. In traditional services, there are simpler arrangement and relatively low switching cost. In outsource services, complexity arrangement leads to higher switching costs.

Ballou (2004) states that deciding whether to perform the logistics function in-house or to seek other arrangements is a balance of two factors: how critical logistics is to the firm's success and how competent the firm is in managing the logistics function. As shown in the Figure 2.4, the strategy to follow depends on the position in which the company finds itself. (Ballou, 2004 p.718)

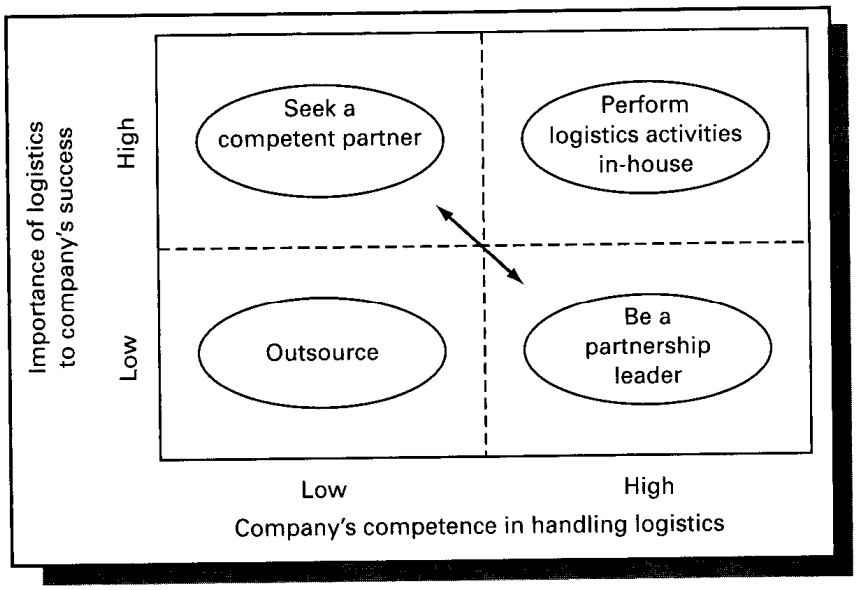

Figure 2.4: Selection Diagram of Where to Perform Logistics Activities

Source: Ballou, 2004 p.718

A company that has high customer service requirements, significant logistics costs as a proportion of total costs, and an efficient logistics operation administered by competent personnel will likely find little benefit to outsourcing logistics activities. Logistics activities are best performed in-house. On the other hand, for those companies where logistics is not central to strategy and a high level of logistics competency is not supported within the firm, outsourcing the logistics activities may well lead to significant cost reductions and customer service improvements.

Where logistics is critical to strategy but logistics management competency is low, finding a firm with which to partner may provide significant benefits. Conversely, where logistics is not especially critical to strategy but managed by capable personnel, managers may want to be aggressive by taking the lead in seeking

partners to share logistics system, thus reducing the company's costs through increased volume and the economies of scale that result. (Ballou, 2004 p.718-719)

How extensive the relationship is between the firm and its outside partner is a matter of degree. The relationship may be based on single events to long-term contractual arrangements to shared systems of a strategic alliance. This outsourcing relationship is illustrated in the Figure 2.5. (Ballou, 2004 p.717)

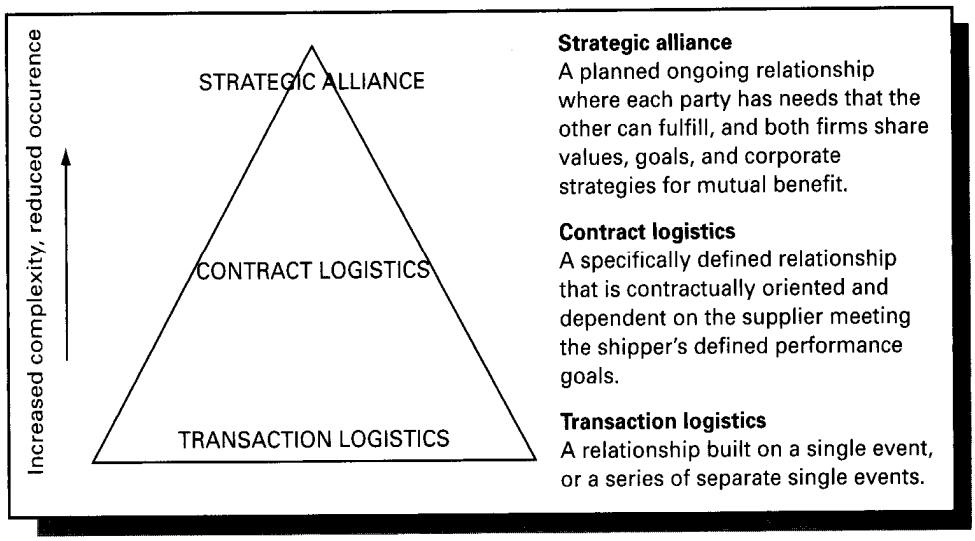

Figure 2.5: The Outsourcing Relationship Continuum

Source: Ballou, 2004, p.716

From the bottom of the triangle to the upper part, the complexity is increased and the occurrence is reduced. Transaction logistics is seen at the bottom. In transaction logistics, a relationship built on a single event or a series of separate single events. At the middle of the triangle, contract logistics is seen. It is a specifically defined relationship that is contractually oriented and dependent on the supplier meeting the shipper's defined performance goals. At the upper part of the triangle, strategic

alliance is seen. It is a planned ongoing relationship where each party has needs that the other can fulfill, and both firms share values, goals, and corporate strategies for mutual benefit.

As Lambert, Stock and Ellram (1998) state managers in many firms are accepting the concept of partnering or establishing close, long-term working relationships with suppliers of goods or services, customers and third part providers. The most closely integrated partnerships are often referred to as strategic alliances. For a partnership to be a strategic alliance, it must be strategic in nature and must directly support one of the organization's distinctive competencies. Strategic alliances are rare in actual practice. (Lambert, Stock and Ellram, 1998, p.34-35)

In logistics outsourcing, it is seen that a term that is third party specialist is used very often. Because they are the specialized firms that can perform the logistics activities of the firms on the behalf of their customers. In the next part third party logistics service providers that are the main topic of this study will be examined after this theoretical background.

2.3 THIRD PARTY LOGISTICS SERVICE PROVIDERS

Third party logistics began to emerge in the second half of the 1980s. It is discussed that there are three waves regarding the industrial development. The first wave was 1980s when the traditional transport firms developed into TPL. During the second wave, from early 1990s, firms such as TNT, DHL, FedEx, etc., entered. In the last and present wave, the players entering are consultants, financial and/or IT management firms such as Anderson Consulting, GE capital, and Manugistics. (Hertz and Alfredson, 2003, p.141)

TPL originally began as a public warehousing during the 1970's. Managers of warehouses began selling space to businesses in the area that had run out of space or were in need of additional space during the busy seasons. During the 1980's TPL expanded into selling not only space but also offering throughput to physical distribution managers who wanted to improve customer service with their current customers. By the 1990's TPL saw the consolidation of both warehousing and transportation organizations to offer logistics support to logistics vice presidents who saw an opportunity to reduce costs and through value-added services provide higher levels of customer satisfaction via third party logistics. (Aghazadeh, 2003, p. 51)

There has also been another direction added to TPL in the 1990's, which is a warehouse management system. Warehouse management systems are often in the form of order entry. Now as we move into 21st century, we are seeing even more change in the service offering of TPL. Users continue to rely most heavily on third

parties for warehousing management (56 percent), transportation services (49 percent), and shipment consolidation (43 percent) (Aghazadeh, 2003, p. 51)

Third party logistics is also known under other names as logistics alliances (Bowersox, 1990; Bagchi and Virum, 1996; Andersson, 1995), logistics partnerships (La Londe and Copper, 1989; Andersson, 1997) and dedicated contract distribution (Copper and Johnstone, 1990) (Larsen, 2000, p.112-113)

Practitioners and researchers alike may retain different perspectives about the definition of 3PL.

Council of Supply Chain Management Professionals defines the 3PL as below:

"Outsourcing all or much of a company's logistics operations to a specialized company. The term "3PL" was first used in the early 1970s to identify intermodal marketing companies (IMCs) in transportation contracts. Up to that point, contracts for transportation had featured only two parties, the shipper and the carrier. When IMCs entered the picture-as intermediaries that accepted shipments from the shippers and tendered them to the rail carriers- they became the third party to the contracts, the 3PL. But over the years, that definition has broadened to the point where these days, every company that offers some kind of logistics services for hire calls itself a 3PL[6].

[6]http://cscmp.org/Downloads/Public/Resources/glossary03.pdf

Some consider 3PL to basically entail an external provider supplying any logistics services (Stank and Maltz, 1996, p. 46), usually ones that have traditionally been executed in-house. (Lieb and Randall, 1996, p. 306) By this definition, however, any transaction-based carrier or warehouse provider could be considered a 3PL. Following a more current and specific definition, others consider a 3PL relationship to also be long-term, mutually beneficial, consisting of multiple logistics activities and contractually-based. (Leahy, Murphy and Poist, 1995, p. 7) (Murphy and Poist 1998, p. 27) (Knemeyer and Murphy, 2004, p. 37) (Maloni and Carter, 2006, p.33)

Lieb, Millen and Wassenhove (1993) used the following definition: Third party logistics involves the use of external companies to perform logistics functions that have traditionally been performed within an organization. The functions performed by the third party can encompass the entire logistics process or selected activities within that process. According to this definition, third party logistics includes any form of externalization of logistics activities previously performed "in-house". If for example, a company with its own transport facilities decides to employ external transporters, this would, according to the above definition, be an example of third party logistics. This same applies to a company which closes its warehouse and instead uses an external warehouse. (Lieb, Millen and Wassenhove, 1993, p.36) (Larsen, 2000, p.113)

As a dictionary definition; a third-party logistics provider is a firm that provides outsourced or "third party" logistics services to companies for part or sometimes all of their supply chain management function. Third party logistics providers typically specialize in integrated warehousing and transportation services that can be scaled

and customized to customer's needs based on market conditions and the demands and delivery service requirements for their products and materials[7].

Council of Supply Chain Management Professionals defines the Third party logistics service providers as below:

"A firm which provides multiple logistics services for use by customers. Preferably, these services are integrated, or "bundled" together by the provider. These firms facilitate the movement of parts and materials from suppliers to manufacturers, and finished products from manufacturers to distributors and retailers. Among these services which they provide are transportation, warehousing, cross-docking, inventory management, packaging, and freight forwarding."[8]

Murphy and Wood (2004) define the third party logistics service provider as one company (a manufacturer) allows a specialist company to provide it with one or more logistics functions (e.g., warehousing, outbound transportation). (Murphy and Wood, 2004, p.47)

Ballou (2004) defines that companies have been using the services of other companies to support their own logistics activities. In recent years, mainly since the deregulation of transportation, logistics companies have emerged that provide a full-service logistics capability. That is they can handle the entire logistics operation for a client company for a contract price. They are called third party logistics service

[7] http://en.wikipedia.org/wiki/Third-party_logistics_provider
[8] http://cscmp.org/Downloads/Public/Resources/glossary03.pdf

providers or integrated logistics companies or logistics service providers. (Ballou, 2004, p.720)

Through interviews with a number of North European third party service providers, Bagchi and Virum (1996): have developed the following definition: A logistics alliance indicates a close and long-term relationship between a customer and a provider encompassing the delivery of a wide array of logistics needs. In a logistics alliance, the parties ideally consider each other as partners. They collaborate in understanding and defining the customer's logistics needs. Both partners participate in designing and developing logistics solutions and measuring performance. The goal of the relationship is to develop a win-win arrangement. This definition emphasizes the strategic dimensions of the concept and presupposes that several characteristics are fulfilled before the relationship between buyer and seller of logistics functions can be characterized as TPL. These characteristics include certain duration, joint efforts to develop further cooperation, a customerization of the solution, together with a fair sharing of benefits and risks. (Larsen, 2000, p.113)

Hertz and Alfredson (2003) defines 3PL as it is an external provider who manages, controls, and delivers logistics activities on behalf of a shipper. This relationship can be formal or informal. The intention is that it should be a mutually beneficial and continuous relationship. The activities performed can include all or a part of the logistics activities but at least management and execution of transport and warehousing should be included. The relationship between TPL firm and its customers has changed over time from a focus on the contract to partnership and

agreement and to be seen as a mutual beneficial and continuous relationship (Hertz and Alfredson, 2003, p.141)

Sevim, Çetinoğlu and Vatansever (2004) states that outsourcing used in the logistics sector is called third party logistics. Third party logistics is defined as "procuring of more than one logistics activities by a single service provider a number of basic logistics activities in the supply chain or procuring chain(consecutively at least three different activities such as storage, transport and stock management) by different specialized logistics enterprises.(Sevim, Çetinoğlu and Vatansever, 2004, p.1163)

Lambert, Stock and Ellram (1998) emphasize that an organization hires an outside organization to provide a good or service that it traditionally had provided itself, because this third party is an expert in efficiently providing this good or service, while the organization itself might not be. (Lambert, Stock and Ellram, 1998, p.34)

Its importance in logistics and supply chain management prompted annual expenditure for contemporary third party logistics services in the United States of $10 billion in the early 1990s. In the early years of the twenty-first century, annual U.S. 3PL expenditures are approaching $70 billion-which is only about 10 percent of the potential U.S. market for 3PL services. In addition, it has been estimated that by 2005, U.S. 3PL users may be spending about one-third of their total logistics budgets up from 20 percent in 2000, for 3PL services. (Murphy and Wood, 2004, p.48)

To have a better understanding about these services, they will be examined in detail in the following part.

2.3.1 Types of Services that Third Party Logistics Service Providers Offers

There are a wide range of logistics activities that can be provided by third party logistics service providers. Freight transportation and warehousing services have been widely available for many decades, together with documentation services to support the flow of these products (e.g., delivery and customs documentation).

However, in recent years, logistics companies have begun to offer an every-expanding range of services, such as final assembly of products, inventory management, product and package labeling, product tracking and tracing along the supply chain, order planning and processing, reverse logistics systems (which tackle the collection and recovery of end-of-life products and used packaging in the supply chain). In addition, over the last 10-15 years a large number of logistics consultancies have been established that offer a diverse range of services, as well as logistics software and hardware companies offering logistics IT solutions. Table 2.2 shows the range of logistics services available from third-party specialists. (Brewer, Button and Hensher, 2001, p.256-257)

Table 2.2: Types of Services

LOGISTICS OUTSOURCING: SERVICES OFFERED	
Classical out-sourcing (a)	**Service portfolio (b)**
Warehousing Transport Goods dispatch Delivery documentation Customs documentation	Transport Storage Break-bulk Load consolidation Order picking Order processing Stock Control Pick and Pack Track and trace Vehicle maintenance Labeling Palletization After-sales service Consultancy advice Packaging/Repackaging Return of packaging/ handling equipment Quality control/product testing Customization
Advanced services (a)	
Pick and pack Assembly/packaging Returns Labeling Stock count	
Full services (a)	
Order processing Order planning Systems/IT Invoicing Payments collection Consulting Shipment tracking Materials planning	

Source: Brewer, Button and Hensher, 2001, p.257

All 3PL customers can demand a number of different activities with some of the most common involving inbound and outbound transportation, carrier negotiation and contracting, and freight consolidation. Because the services demanded by 3PL customers can vary widely in both nature and scope, it is not possible to discuss a typical 3PL relationship. A variety of different activities also can be performed by third-party logistics providers with some of the most common including development of distribution systems, electronic data interchange capability, and freight consolidation. Moreover some 3PL providers have begun to offer supplemental services, such as final product assembly, product installation and product repair among others. (Murphy and Wood, 2004, p.48-49)

In Regan and Song's research (2001), the below label summarized the services that 3PL offers. Generally, a 3PL company provides services including whole or at least part of the listed in the figure rather than focusing on a single function. (Regan and Song, 2001, p.6)

This Figure 2.6 is also used as a guideline in order to evaluate the services that are offered by third part logistics service providers in the survey that is performed for this study.

Table 1. Third Party Logistics Services

Transportation / Distribution
- General Trucking Service (TL, LTL);
- Intermodal Transportation service (rail, ocean, air freight);
- Specialized Services (bulk, tank, hazardous material, refrigerated goods etc.);
- Time-constrained services (JIT, over night, same day etc.);
- Shipment tracking & tracing;

Warehousing / Distribution
- Public / Contract / Regional warehouse;
- Operation Technology (bar coding, radio frequency, VMI etc.);
- Value-added services (cross-docking, freight consolidation, pick & pack etc.);
- Order processing and fulfillment;

Custom Services
- Custom Brokerage;
- Duty Drawback;

Freight Finance Services
- Freight Audit;
- Freight Bill Payment;

IT Support
- EDI capability;
- Logistics information system & other software;
- Web-based solution;

Product Support Services
- Reverse logistics;
- Value-added services (package, label, mark, test, assembly etc.);

Logistics Management / Consulting
- fleet operation;
- Distribution network design;
- Carrier selection / negotiation / routing;
- Facility location analysis / selection / design;
- Inventory management;

Figure 2.6: Third Party Logistics Services

Source: Regan and Song, 2001, p.6

The definitions of the each activity are given as briefly.

2.3.1.1 Transportation/Distribution

The Transportation/Distribution services which are mostly offered by 3PLs consist of:

General Trucking Services (Truck-load, Less than Truck-load): 3PL companies offer general trucking services as truck-load or less then truck-load services. In truck-load services, the full truckloads of freight are moved from point of origin to destination. In less-than truckload services, the shipments of freight that can be consolidated and transported in smaller shipments are carried by utilizing a network of terminals and relay points.

Intermodal Transportation Service: 3PL companies offer intermodal transportation services that include transporting freight by using two or more transportation modes such as by truck and rail or truck and oceangoing vessel.[9]

Specialized Services (bulk, tank, hazardous material, refrigerated goods): 3PL companies offer specialized services such as carrying of bulk, tank, hazardous materials and refrigerated goods according to the request of customers.

Time Constraint Services (JIT, Same Day, and Overnight): 3PL companies offer time constraint services to their customers such as same deliver, overnight delivery or systems that support JIT system of their customers. JIT is an inventory control system that controls material flow into assembly and manufacturing plants by coordinating demand and supply to the point where desired materials arrive just in time for use. An inventory reduction strategy that feed production lines with products

[9] http://cscmp.org/Downloads/Public/Resources/glossary03.pdf

delivered “just in time”. Developed by the auto industry, it refers to shipping goods in smaller, more frequent lots.[10]

Shipment Tracking and Tracing: 3PL companies allow their customers to track and to trace their shipments. Track & Trace is the process of recording the past and present whereabouts of a shipment, as it passes through different handlers on its way to its destination, through a distribution network.

2.3.1.2 Warehousing/Distribution

Warehousing/Distribution services consist of;

Public/Contract/Regional Warehouse: 3PL companies offer warehouse services to their customers. A warehouse is a commercial building for storage of goods. Warehouses are used by manufacturers, importers, exporters, wholesalers, transport businesses, customs, etc. They are usually large plain buildings in industrial areas of cities and towns. They come equipped with loading docks to load and unload trucks; or sometimes are loaded directly from railways, airports, or seaports. They also often have cranes and forklifts for moving goods, which are usually placed on ISO standard pallets loaded into pallet racks. Some warehouses are completely automated, with no workers working inside. The pallets and product are moved with a system of automated conveyors and automated storage and retrieval machines coordinated by programmable logic controllers and computers running logistics automation software.

[10]http://cscmp.org/Downloads/Public/Resources/glossary03.pdf

Operation Technology (Bar coding, Radio Frequency, VMI, etc.): 3PL companies offers operation technology services such as bar-coding, radio frequency to their clients. As a part of Warehouse Management Systems (WMS) the primarily aim is to control the movement and storage of materials within an operation and process the associated transactions. Warehouse management systems utilize Auto ID Data Capture technology, such as barcode scanners, mobile computers, wireless LANs and potentially RFID to efficiently monitor the flow of products. Once data has been collected, there is either batch synchronization with, or a real-time wireless transmission to a central database. The database can then provide useful reports about the status of goods in the warehouse.

Value-added services (cross-docking, freight consolidation, pick and pack etc.): 3PL companies offer value-added services such as cross-docking (a logistics activity that attempts to reduce costs and total lead time by breaking down received items on the loading dock and immediately matching them with outgoing shipment requirements, instead of stocking the items in warehouse locations and returning to pick for orders at a later time.), freight consolidation (several smaller shipments are assembled and shipped together to avail of better freight rates and security of cargo), pick and pack services. Those are the complementary of warehousing, transportation, and logistics offerings.

Order processing and fulfillment: 3PL companies offer order processing and fulfillment services. Order processing and order fulfillment are in the most general sense the complete process from point of sales inquiry to delivery of a product to the customer.

2.3.1.3 Custom Services

Custom Services consist of;

Custom Brokerage: 3PL companies offer custom brokerage services to their customers. Customs Brokerage is a profession that involves the 'clearing' of goods through customs barriers for importers and exporters (usually businesses). This involves the preparation of documents and/or electronic submissions, the calculation (and usually the payment) on behalf of the client of taxes, duties and excises, and facilitating communication between the importer/exporter and governmental authorities. However custom brokers (sometimes known as customs agents) can also become involved in a multitude of complex customs & legal issues[11].

Duty Drawback: 3PL companies offer duty drawback services to their customers. In law in commerce, paying back a duty previously paid on exporting excisable articles or on re-exporting foreign goods. The object of a drawback is to let commodities which are subject to taxation be exported and sold in a foreign country on the same terms as goods from countries where they are untaxed[12].

2.3.1.4 Freight Finance Services (Freight Audit and Freight Bill Payment)

3PL companies offer freight audit and freight bill payment services to their customers. They are capable of auditing and paying freight bills on any transportation movements regardless of the origin or destination on a freight bill.

A freight finance service usually consists of one or more levels of combined services. They may include freight audit that examines, adjusts and verifies freight bills for accuracy, information reporting for logistics, freight bill payment and work with a combination of both Electronic Data Interchange, and paper freight bills. Many

[11] http://en.wikipedia.org/wiki/Customs_Brokerage
[12] http://en.wikipedia.org/wiki/Drawback

companies providing freight payment service are now offering audit for both small parcel and small package carriers, such as FedEx, UPS, and DHL Worldwide.

2.3.1.5 IT Support

IT Support services consist of:

EDI Capability: 3PL companies offer IT support to their customers. Electronic Data Interchange (EDI) is a set of standards for structuring information to be electronically exchanged between and within businesses, organizations, government entities and other groups. The standards describe structures that emulate documents, for example purchase orders to automate purchasing. The term EDI is also used to refer to the implementation and operation of systems and processes for creating, transmitting, and receiving EDI documents.

Despite being relatively unheralded, in this era of technologies such as XML services, the Internet and the World Wide Web, EDI is still the data format used by the vast majority of electronic commerce transactions in the world[13].

Logistics Information System and other software: 3PL companies offer logistics information systems or other software to their clients. Information logistics is concerned with the supply of information to individuals and aims to optimize it by targeted delivery in accordance with requirements in such a way that the substantively correct and actually necessary information is available where and when it is needed. This information should be transformed in line with users' needs, depending on the communication media and users' preferences, in order to aid custom processing of it. Information is created throughout the entire product creation

[13] http://en.wikipedia.org/wiki/Electronic_Data_Interchange

process. The goal of information logistics is to optimize the content and format of the information, reduce throughput times and achieve a high degree of parallel processing[14].

Web-based solution: 3PL companies offer web-based solution to their customers. The World Wide Web is a system of interlinked, hypertext documents accessed via the Internet. With a Web browser, a user views Web pages that may contain text, images, and other multimedia and navigates between them using hyperlinks[15].

2.3.1.6 Product Support Services

3PL companies offer product support services to their customers. This service consists of;

Reverse Logistics: 3PL companies offer reverse logistics services to their clients. Reverse logistics is the logistics process of removing new or used products from their initial point in a supply chain, such as returns from consumers, over stocked inventory, or outdated merchandise and redistributing them using disposition management rules that will result in maximized value at the end of the items original useful life. A reverse logistics operation is considerably different from forward logistics[16].

Value-added services (package, label, mark, test, assembly etc.): 3PL companies offer value-added services such as packaging, labelling, marking, testing and assembling of products in order to support the activities of their customers.

[14] http://en.wikipedia.org/wiki/Information_logistics
[15] http://en.wikipedia.org/wiki/Web-based
[16] http://en.wikipedia.org/wiki/Reverse_logistics

2.3.1.7 Logistics Management/Consulting

3PL companies manage logistics activities of their customers and act as a consultant. This service consists of;

Fleet Operation: 3PL companies offer fleet operation services to their customers. Fleet management is the management of a company's vehicle fleet. Fleet management includes vehicle tracking, mechanical diagnostics, management of ships and driver behavior tracking[17].

Distribution network design: 3PL companies offer distribution network design services to their customers. Distribution network design plays a key role in controlling the cost of doing business. And, in a world of shrinking margins, controlling the cost of doing business can be the factor that puts companies ahead of their competitors. An optimal distribution network is intelligently designed to minimize costs by providing the customer the right goods, in the right quantity, at the right place, and at right time. In most organizations, controlling distribution costs involves striking a balance between warehousing and transportation. While more distribution centers drives down the cost of transportation, the opposite holds true as well.

Carrier Selection/negotiation/routing: 3PL companies offer carrier selection, negotiation and routing services to their customers in order to select the right carrier for the mentioned shipment and plans the most cost effective route for the carrier.

[17] http://en.wikipedia.org/wiki/Fleet_management

Facility location analysis/selection/design: 3PL companies offer facility location analysis, selection and design services to their customers. **Facility location**, also known as **location analysis**, is a branch of operations research concerning itself with mathematical modeling and solution of problems concerning the placement of facilities in order to minimize transportation costs, avoid placing hazardous materials near housing, outperform competitors' facilities, etc[18].

Inventory Management: 3PL companies offer inventory management services to their customers. Inventory is a list of goods and materials, or those goods and materials themselves, held available in stock by a business. Inventory are held in order to manage and hide from the customer the fact that manufacture delay is longer than delivery delay, and also to ease the effect of imperfections in the manufacturing process that lower production efficiencies if production capacity stands idle for lack of materials. Inventory Management handles all functions related to the tracking and management of material. This would include the monitoring of material moved into and out of stockroom locations and the reconciling of the inventory balances[19].

After analyzing the types of services that third party logistics service providers offer, it is better to evaluate the classification of them in order to have a deeper sight regarding the term.

[18] http://en.wikipedia.org/wiki/Facility_location
[19] http://en.wikipedia.org/wiki/Inventory_management

2.3.2 Classification of Third Party Logistics Service Providers

Muller (1993) appears to be the first to propose two basic types of contract logistics service providers, i.e., operations-based and information-based third-party logistics vendors. Later, Muller (1993) himself modified this classification scheme by suggesting the following four types of vendors:

(1) Asset-based vendors: Companies which offer dedicated physical logistics services primarily through the use of their own assets, typically a truck fleet or group of warehouses or both.

(2) Management-based vendors: Involved in offering logistics management services through systems databases and consulting services, often acting as a subcontracted traffic department, either for part, or all, of a client's business segments. These firms do not own transportation or warehouse assets.

(3) Integrated vendors: These companies own assets, typically trucks, warehouses or a combination of both. They are not, however, limited to using those assets, and will contract with other vendors on an as-needed basis.

(4) Administration-based vendors: Firms which mainly provide administrative management services such as freight payment.

This classification scheme is similar to a more recent one proposed by Africk and Calkins (1994) endorsing that asset-based and non-asset-based providers are the two main types of third-party logistics service providers along with a third type providing

hybrid services. The asset-based providers could either be capacity-dedicated or assets-dedicated. In the capacity-dedicated situations, the provider commits to meeting certain volume and service levels specified by the buyer, but will use its assets to serve multiple customers. In the assets-dedicated situations, the equipment or facilities service only one customer. The buyer makes a trade-off between a lower price for the capacity-dedicated project and greater assurance of meeting service requirements with assets-dedicated undertakings. In contrast, the non-asset based providers generally do not own or lease physical assets but provide human resources and systems to manage the buyer's logistics functions. The hybrid service providers are subsidiaries of asset-based contract logistics companies generally specializing in project-based services with some of the physical services offered by the parent company. In terms of their service offerings and relationships with buyers, the hybrids lie somewhere between the asset-based and non-asset-based competitors.

Arfick and Calkins (1994) list the benefits of choosing asset-based service providers as below:

- They have the knowledge and experience in handling and maintaining equipment, facilities, and physical operations;
- They can pass on savings to users; and
- They help to reconfigure operations to improve efficiency, reduce costs and/or improve service.

(Razzaque and Sheng, 1998, p.93-94)

Regon and Song (2000) states that now, the vast majority of 3PLs appear to be non-asset based but working closely with asset based carriers or warehouse managers.

These tend to be either management and knowledge-based consulting companies. Rather than handling the physical distribution themselves, these companies appear to focus on strategic or tactical level. (Regon and Song, 2000, p. 5)

Hertz and Alfredson (2003) classify the TPL providers as ranging from relatively high to high in both the dimension of customer adaptation and in a general problem-solving ability. This implies that balancing these dimensions would be one of their main tasks for their strategic development.

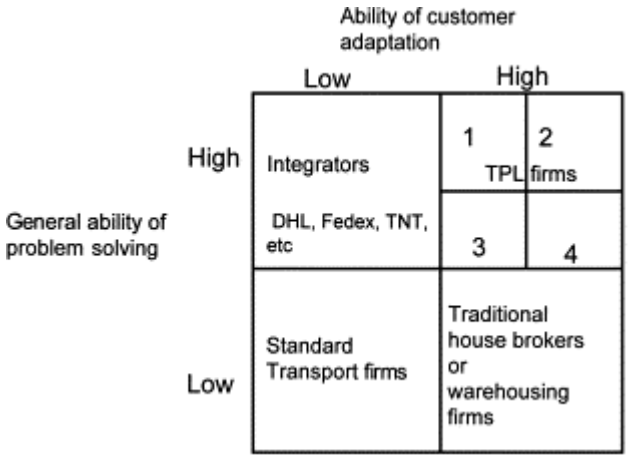

Figure 2.7: Problem-solving abilities-TPL provider position

Source: Hertz and Alfredson, 2003, p.142

Therefore, these two dimensions should be a useful way of further dividing TPL firms into subgroups each with different demands on customer coordination and adaptation and problems solution ability. This division would also illustrate a possible differentiation of TPL firms based on their customer development. Hertz and Alfredson (2003) have divided them into standard TPL provider, service developer, customer adapter, and customer developer as it is in Figure 2.8.

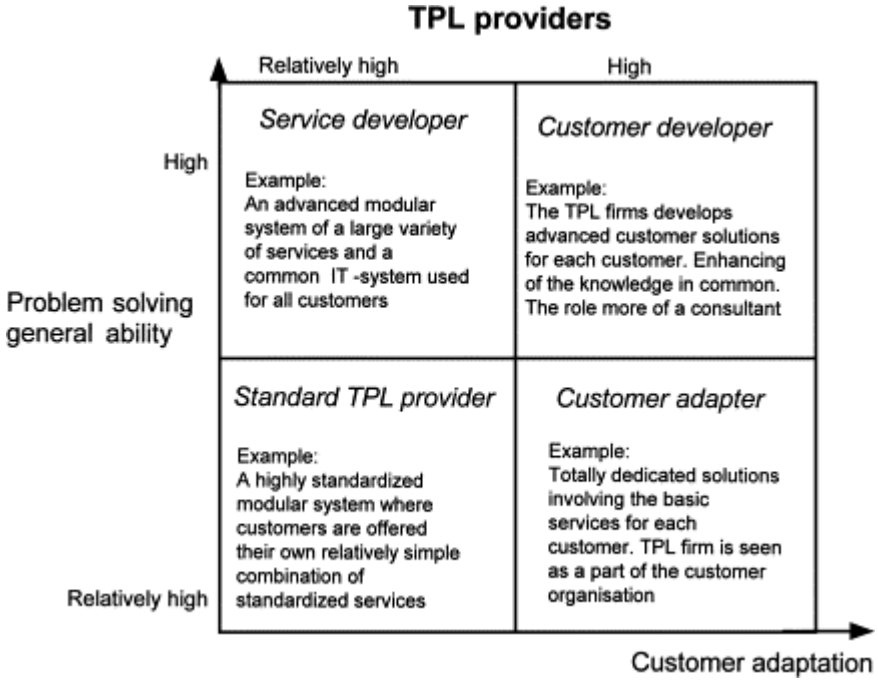

Figure 2.8: TPL firms classified according to abilities of general problem solving and customer adaptation

Source: Hertz and Alfredson, 2003, p.142

The *standard TPL provider* could be seen as supplying the standardized TPL services like warehousing, distribution, pick and pack, etc. This firm would often offer these services at the side of their normal business.

The TPL as *service developer* is seen as offering advanced value-added services. This could involve differentiated services for different customers, forming specific packaging, cross-docking, track and trace, offer special security systems, etc. An advanced service package often involves several sets of more standardized activities turned into modules that could be combined according to each customer demands. An advanced IT system facilitates such a development. The focus would be more on creating economies of scale and scope.

The *customer adapter* could be described as the TPL firm taking over customers' existing activities and improving the efficiency in the handling but actually not making much development of services. This type of provider might take over customers' total warehouses and the logistics activities and relies on a few very close customers.

The *customer developer* is the most advanced and difficult form. It involves a high integration with the customer often in the form of taking over its whole logistics operations. The possibilities to coordinate customers rather lie in the know-how, the methods, the knowledge development, and the design of the supply chain. The number of customers would be limited and the work for each customer extensive. The customer developer or "logistics integrator" or "complexity manager" would be similar to what Anderson Consulting calls 4PL. Such a firm is sharing the risk and rewards of the logistics management with the customer.

Other authors have divided TPL providers as focusing on either value-added services and/or solutions. Berglund et al., who made an extensive survey of Dutch, English, German, and Swedish TPL firms and shippers, divided the TPL industries into different segments based on mission statements of TPL firms. (Hertz and Alfredson, 2003, p.142-143)

2.3.3. Advantages of Using Third-Party Logistics Service Providers

Since the late 1970s the quality of logistics service providers has improved significantly and the range of services they offer has greatly expanded. Many factors have encouraged manufacturers, wholesalers, and retailers to outsource some or all of their logistics activities to 3PLs. These include:

- The standards of logistics service providers have risen and their efficiency has improved greatly. The specialist management and knowledge-based skills and operational experience offered by third-party operators may result in improved services at lower costs.
- Gaining access to the latest technology and equipment employed by the third-party provider.
- Financial conditions in the 1980s encouraged firms to concentrate capital investments in their core competencies and to pay for ancillary activities, such as distribution, on a current cost basis.
- There is one less business variable to worry about. By subcontracting a portion of the business and ensuring that acceptable standards are built into the contract, senior management can focus their attention on their core competencies.
- There are potential cost reductions, for example:
  (a) shared use may give better utilization of vehicles and warehouses, leading to lower unit costs due to the consolidation of different customers' demands;
  (b) the specialization of the contractor may allow volume buying of vehicles, warehouses, and mechanical handling-equipment and systems;

(c) the labor costs of a third-party operator may be lower; and

(d) third-party companies may exist on a lower return on capital than that expected of major manufacturing and retailing companies.

- There is increased flexibility in terms of short-term changes in locations, fleet mix, warehouse types, and staffing levels. This allows retailers and manufacturers to be more responsive as market or customers needs change (e.g. during seasonal peaks).
- The need for investment in new equipment and premises is avoided.
- There has been a proliferation of regulations relating to vehicle operations and product handling.
- There has been a rapid rate of technological change.
- International industrial relations problems can be overcome.
- There are external back-up systems in the event of strikes.

(Brewer, Button and Hensher, 2001, p.259-260)

Tanyeri and Tavmergen (2004) list the advantages of using 3PL as below.

- 3PLs find new ideas, implement these ideas quickly and are good in innovation and agile logistics thinking. They can easily trace the trends, observe the market, follow up the forces of change and provide firms with new distribution ideas.
- By doing many tasks, 3PLs freeing up staff and capital to focus on core logistics activities such as marketing and manufacturing.
- 3PLs create economic benefits by the expertise they have and shared services. Lower logistics costs, reduced average order cycle time, lower inventory

levels and improved services are quantifiable measures of benefits when 3PL's services are utilized.

- 3PL's have greater visibility and control over service levels, costs and inventory.
- 3PL's offer a continuous flow of information with a high degree of in-transit visibility. Also start-up costs are almost negligible as applications have been tested and proved over previous customer bases.
- 3PLs know what is the trend, what customers want and what is bringing value to retail customer relationships. (Tanyeri and Tavmergen, 2004, p.18)

Maloni and Carter (2006) lists the three reasons as (1) cost reduction recognized from expertise and economies of scale of 3PL providers (Zineldin and Bredenlow 2003; Wilding and Juriado 2004); (2) service improvements resulting from 3PL provider focus and efficiency (Greaver II 1999; Lynch 2004); and (3) buyer focus on core competencies (Razzaque and Sheng 1998; Boyson et al. 1999). A detailed review of existing 3PL literature yields numerous additional reasons; such as asset reduction (Sink et al. 1996; Razzaque and Sheng 1998); headcount reduction (Bardi and Tracey 1991; Daugherty et al. 1996), complexities of global trade (Lynch 2004, Wilding and Juriado 2004), increased flexibility (Laarhoven et al. 2000; Skjoett-Larsen 2000), and technology improvements (Sheffi 1990; Rao and Young 1994) (Maloni and Carter, 2006, p.23)

In determining whether or not to utilize third parties in the logistics process, management must decide where the greatest value to the customer lies. Will outsourcing a particular task lead to better customer service, lower costs, or provide

some other meaningful benefit? If not, that activity should probably remain in-house. (Gourdin, 2005, p. 221)

Third party logistics providers can enhance value creation for customers leading them to become more competitive and profitable through speedy and superior customer service. Value creation involves the understanding of the dynamics interaction within the customer's supply chain. One of the most important reasons for employing third-party logistics providers is their ability to provide their clients with expertise and experience that otherwise would be difficult to acquire, or costly in – house. (Hertz and Alfredsson, 2003, p. 141) (Taskin and Güneri, 2004, p.258)

Gourdin (2005) shows the most frequently cited benefits related to use of third party logistics services as below:

Table 2.3: Most Frequently Citied Benefits Related to use of 3PL services, 1995

Benefits	**% of respondents indicating that benefit**
Lower cost	38
Improved expertise/market knowledge and access to data	24
Improved operational efficiency	11
Improved customer service	9
Ability to focus on core business	7
Greater flexibility	5

Source: Gourdin, 2005, p.222

Similar research conducted in Australia. The respondents were almost unanimous in claiming that outsourcing had positive effects on logistics costs, logistics systems performance, customer satisfaction and employee morale. (Gourdin, 2005, p.221)

Beside these advantages, there are also some disadvantages of using third party logistics service providers. These are explained in the following part.

2.3.4. Disadvantages of Using Third-Party Logistics Service Providers

Although the dominant trend since the 1980s has been towards the out-sourcing of road transport and other logistics activities, many companies still choose to operate either all or part of their logistics activities in-house. The decision to retail logistics activities in house has not been widely addressed in much of the literature. However, Fernie (1990) has highlighted the main reasons for keeping some in-house logistics activities:

1. Cost issues:

(a) operations at cost plus could be run more cheaply in-house, assuming other variables remain equal, because the third party logistics company needs to make a profit on its operations;

(b) switching costs will be incurred by contracting out (e.g.; redundancy costs; asset disposals or write-offs);

(c) monitoring and control costs is easier when the distribution function remains in-house (good information systems and clearly agreed service standards with the third-party operator may overcome this issue, but most of the large multiple retailers still

retain an in-house presence to provide a benchmark of costs and operations for their contracted distribution operations);

(d) the cost of monitoring the performance of the logistics can be high and is also sometimes difficult to achieve effectively; and

(e) some companies do not have the necessary information or expertise to assess which logistics providers are offering good services at competitive prices

2. Control Issues: The view is that in-house logistics and distribution operations can provide the company with more control over important customer service considerations, such as delivery reliability, and a degree of compatibility with other company activities and practices. Flexibility of operations is also seen as a possible advantage of retaining an in-house distribution function, with the loyalty of the distribution operation not torn between several customers. There is also the concern that out-sourcing could result in a loss of security and that confidential information will be passed to competitors.

3. Economies of Scale: Many in-house operations are large enough to benefit from economies and derive similar buying power over their suppliers that the third-party specialists enjoy.

4. Innovation through specific expertise: Larger or specialist in-house operators can claim to have much more expertise in particular sectors than logistics specialists. For example, distribution of frozen foods or deliveries to special delivery locations. (Brewer, Button and Hensher, 2001, p. 260-261)

Taskin and Güneri (2004) list the disadvantages of using 3PL as below:

- Loss of control to third party providers appears to be the most commonly cited reservation that inhibits firms from using contract logistics.
- The lack of advanced information technology linking manufacturer, carrier, warehouse and customer operations has caused hindrance to contract logistics management.
- Failure to select or manage 3PL's
- Unreliable promises of the 3PL's
- Inability of 3PLs to respond to changing requirements
- 3PLs' lack of understanding of the buyer's business goals
- Difficulty of obtaining organizational support
- Firms' logistics people apprehensive about their job security.

(Taskin and Güneri, 2004, p.259)

Gourdin (2005) states that in an effort to assess the extent of third-party involvement in logistics, a survey was sent to the 500 largest manufacturers in the United States. Based upon the 92 completed questionnaires that were returned, some interesting findings emerged. As might be expected, the initial consideration of third-party logistics providers as substitutes for in-house job performance may make managers nervous. The study found that the three most common concerns are the potential loss of direct control of logistics activities, uncertainties about the service levels to be provided by the outside company, and questions concerning the true costs of using a third party. Other concerns expressed included job security, data security, the

questionable expertise of third-party companies, and the difficulties inherent in attempting to build new working relationships. (Gourdin, 2005, p. 221)

Once the decision to outsource is made, implementation may prove troublesome as well. Typical start-up problems include overcoming resistance to change, difficulties encountered in teaching third-party personnel about the company's business requirements and systems, cultural differences between the firms, and the need to integrate computer and information systems. Furthermore, a lack of clear performance criteria, the need to communicate internal expectations, and slow reactions by third-party providers to rapidly changing customer needs are also issues that may require management's attention. (Gourdin, 2005, p. 221)

After evaluating advantages and disadvantages of using third party logistics service providers in literature, it is seen that a company has to decide to outsource their logistics activities to a third party specialist via taking these advantages and disadvantages into consideration. If the company decide that they gain the benefits of outsourcing to a third party specialist, then it is important to determine the degree of relationship between the third party logistics providers. In the next part, contractual agreements between logistics providers and their customers are explained and analyzed accordingly.

2.3.5. Contractual agreements between logistics providers and their customers

Bowersox et. al (1989) place the relationship between the buyer and seller of logistics functions on a continuous scale, going from single transaction to integrated service agreements as shown in Figure 2.9.

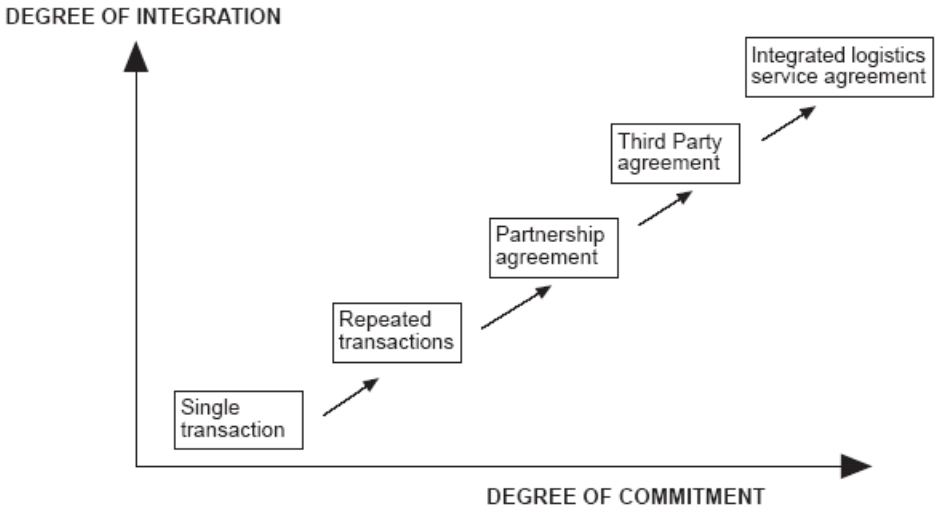

Figure 2.9: Relationships between shipper and TPL provider

Source: Larsen, 2000, p.114

The left part of the scale is focused on single transactions and corresponds to the traditional relationship between buyer and seller on the transport market. The agreements are normally short term and informal and carry no commitment except the specific transaction. The price is the main leverage. Moving towards the right, the agreement becomes more formalized and the mutual obligations increase. The three forms of cooperation on the right side of the scale may be viewed as forms of strategic alliances. (Larsen, 2000, p.113-114)

In partnerships the partners try to maintain their independence, while simultaneously collaborating to develop more efficient systems and procedures. Normally, the client will maintain the planning and management functions internally and externalize the logistics functions, while the provider tries to make standard solutions to the client requirements. (Larsen, 2000, p.114)

Third party agreements are more formalized and binding than partnerships. Services are much more tailored to the requirements of a specific client. An agreement often requires specific investments in equipment, plant or employee training to meet the service requirements of the client. Cooperation is based on mutual trust and free information interchange. Sometimes, the agreement stipulates that the service provider fully or partly assume responsibility for the personnel, equipment and plant of the client. (Larsen, 2000, p.114)

Integrated service agreements are the most extensive means of cooperating, both in terms of formality and mutual obligations. In integrated service agreements, the provider offers to take over the whole or large parts of the logistics process, including management and personnel administration. The logistics solution will be tailored to the requirements of the client and typically include a number of value-adding services. Partial integration of the parties' information systems will often occur, and inter-organizational teams of employees from the affected functions will be established. (Larsen, 2000, p.114)

Third party logistics as all logistics service relationships include partnerships, third party agreements and integrated service agreements. Partnership represents the

weakest from of third party logistics whereas integrated service agreements represent the strongest from. (Larsen, 2000, p.115)

Cox (1996) suggests a typology of external contractual relationships spanning internal contracts and incentives (hierarchy) to adversarial leverage (market exchange). According to Cox, core skills should always be controlled through internal contracts. Complementary skills of medium asset specify will be outsourced through close external contracts based on various forms of alliance. Low asset specificity skills will be outsourced through arm's length contracts.

Cox uses this typology to classify various types of buyer-supplier relationships. It is illustrated in the Figure 2.10.

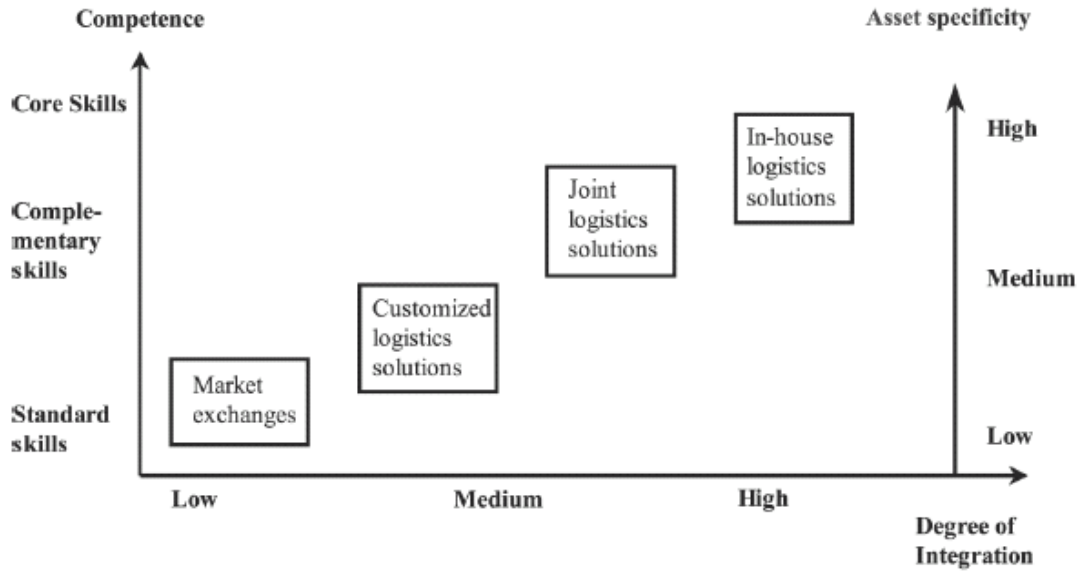

Figure 2.10: TPL in a competence perspective

Source: Halldorsson and Larsen, 2004, p.195

At the lowest level of collaboration, there are shippers who buy transport and logistics services on the spot market. The relations between the logistics service providers and their clients are short-term and adversarial. The focus is on prices. Assets specify is low and the services offered by the logistics service providers are standard skills. (Halldorsson and Larsen, 2004, p.195)

At the next level, customized logistics solutions (e.g. Van Hoek, 2000), the logistics service provider offers a broad range of standard services from which the customer can select a "package" of modules. Assets specify is low/medium, because the services can easily be adjusted to other clients. The skills can be seen as complementary to the customers. The duration of the relationship is typically limited to one year or less. Information sharing and joint problem solutions are limited. The shipper's focus is on cost-efficiency and service improvement. There are only minor adjustments to the customer's specific requirements. The advantage for the TPL provider is primarily economies of scale and scope. (Halldorsson and Larsen, 2004, p.195)

At the third level, joint logistics solutions, the shipper and the logistics service provider jointly develop a logistics solution that is unique for the particular TPL relationship. The shipper and the TPL provider look at the collaboration as a win-win relationship. They have long-term expectations and are willing to share information and solve problems jointly. The asset specificity is medium/high-often involving human assets (e.g. knowledge and experience transformation, exchange of personnel) and physical assets (e.g. information technology and warehouse facilities). The TPL provider's competencies are complementary to the shipper's core competencies.

Innovation capabilities and development of new competencies in the relationship are considered essential. (Halldorsson and Larsen, 2004, p.195-196)

The fourth stage is in-house logistics solutions. Here, logistics is seen as a core skill in the company and the asset specificity is normally high, e.g. in terms of dedicated assets or specialized know-how among the staff. It applies to the competence theory, which recommends keeping core competencies in-house and outsourcing non-core competencies. (Halldorsson and Larsen, 2004, p.196)

Brewer, Button and Hensher (2001) also state that relationships between logistics providers and their customers are increasingly typified by contractual agreements rather than by a series of transactions. This can lead to the logistics provider acting in much the same way as manufacturing co-makership arrangements. This more stable and long-term concept only becomes possible when firms deal with fewer providers, so there is a strong link with the trend to reducing the number of logistics suppliers. Moreover, the more sophisticated service requirements of users will mean that it becomes harder to but services at short notice from a variety of logistics providers on the basis primarily of price. The service requirements may simply be too complicated to allow that. Long –term contracts have become more usual, spelling out the terms of service and performance. This trend has been reinforced by the growing reliance on information and communication systems, which can have the effect of tying together the logistics provider and customer. This is beginning to result in companies that out-source logistics activities looking to develop collaborative, strategic partnerships with the third-party providers. (Brewer, Button and Hensher, 2001, p.262-263)

Murphy and Wood (2004) mention that first there tend to be formal contracts between providers and users that are at least one year (typically three to five years) in duration. 3PL provider views its customer as a party with whom it is going to have a long-term, as opposed to short-term relationships. In addition, 3PL providers and users actively seek out policies and practices such as cost reduction, that can benefit both parties. Finally the nature and scope of customized offerings can be specified in the relevant contract, and they often require both parties to make specific investments in order to fulfill the relationship. (Murphy and Wood, 2004, p.48)

After evaluating the relationship between the third party logistics service providers and their customers, it is important to examine the requirements of a successful logistics partnership in order to make it long term and built on trust. The following part examines the successful logistics partnership.

2.3.6. Successful Logistics Partnership

A successful partnership is like a marriage. Neither just happens: both relationships require constant hard work from the parties involved. Both parties must understand each other's needs and must be compatible with shared values. A successful logistics partnership requires open communications, mutual commitment to the partnership, fairness and flexibility. Successful partnerships are co-operative and collaborative. They are long-term and built on trust (Tate, 1996, p.7)

Bowersox (1992) has identified five factors that are critical to the success of a logistics partnership:

1. selective matching-all organization have compatible corporate cultures and values;

2. information sharing-partners openly share strategic and operational information;

3. role specification-each party in the partnership is clear about the specifics of its role;

4. ground rules-procedures and policies are clearly spelled out; and

5. exit provisions- a method for terminating the partnership is defined.

(Brewer, Button and Hensher, 2001, p.263)

Tate (1996) lists the ingredients for a long-term relationship as below.

- Compatibility: Shared culture and values is one of the keys to a successful partnership identified by Bowersox.
- Understanding Business Needs: Each party must clearly understand its partner's business needs from the outset.
- Open Communications: How well partners share information can make the difference between success and failure.
- Mutual Commitment: Bowersox identifies uneven commitment to the logistics partnership as one of the reasons of a logistics partnership fails.
- Flexibility: While not cited by Bowersox or Gardner and Cooper as an essential ingredient in a logistics partnership, flexibility is a very important element in the real world.
- Fairness: According to Cooper and Gardner, a long-term logistics partnership shares benefits and burdens. Both partners must be perceived by the other as being fair on all levels.
- Trust: Lack of trust is identified by Bowersox as one of the factors contributing to failure of an alliance. According to Ludvigsen and Dodd, trust between partners is critical to the success of a long-term relationship.

> Understanding, communications, commitment, flexibility and fairness are the building-blocks which provide the foundation for trust. Without trust, there can be no partnership. (Tate, 1996, p.7-13)

Ballou suggestions (2004) for the company's successful long-term relationship with a 3PL are as below.

1. Determine your current supply chain costs and service levels as a baseline for comparing performance with that of the 3PL.
2. Develop the necessary metrics and invest in the proper technology to accept and evaluate the information received from the 3PL.
3. Invest the time to make sure that you and the 3PL are in strategic alignment.
4. Establish trust by meeting promises, owning up to and working through mistakes, and accepting responsibility as appropriate.
5. Develop relationship management capabilities, especially strategic and organizational change management skills, necessary to manage relationships with 3PLs.
6. Measure performance of the 3PL in terms of costs, but also attempt to measure the 3PL's contribution to increased sales.
7. Be a good customer by treating the 3PL as a partner rather than a vendor.
8. Communicate openly and honestly.
9. Share both risk and reward.
10. Recognize the 3PL's team who is working on your behalf.
11. Work through the difficult situations rather than quickly changing providers.
12. Explore the frontiers for performance improvement as the relationship matures. (Ballou, 2004, p.720-721)

Tanyeri and Tavmergen (2004) state that 3PL partnerships have high performance and productivity benefits if the conditions stated below are adapted.

1. to understand customers' requirements and the capabilities of the 3PL. To ensure an effective relationship with 3PL partner, firms should establish specific, measurable, attainable and realistic performance targets.
2. to develop a working environment based on trust and collaboration.
3. 3PL service providers should be free bringing the efficiencies to logistics operations and to adapt the firms' internal process to that of the 3PL's.
4. to transfer knowledge of the operation to the 3PL. By doing so firms can avoid complications that may happen. By transitioning operational knowledge to 3PL partners, firms can work collaboratively in implementing the right process change at the right time. (Tanyeri and Tavmergen, 2004, p.18)

Logistics partnerships are based on the idea of the parties working closely together to create highly competitive supply chains. In such a partnership, logistics systems rather than simply performing the operations. The mutual trust and exchange of information and ideas that typifies a close working relationship can help bring about logistics benefits such as reduced inventory levels, improved delivery reliability, and enhanced customer service and quality. (Brewer, Button and Hensher, 2001, p.263)

The requirements to have a successful logistics partnership are given in this part. It is seen that most of the researchers evaluate that the mutual trust and exchange of information are very important in order to make the partnership to be long-term

besides the other requirements. After establishing this successful partnership with these requirements, there are some factors in the evaluation of third party logistics companies during the period of this partnership. The next part examines these success factors.

2.3.7. Success factors in logistics outsourcing and the evaluation of third party logistics companies

Despite the trend towards increased out-sourcing, it is important to recognize that the contracting out of non-core activities does not always prove to be a successful strategy (Peisch, 1995). Some research has suggested that a majority of managers who have outsourced logistics activities have been dissatisfied with the outcome (Lonsdale, 1999). However, rather than this being due to an inherent problem with outsourcing itself, it is more likely to be due to one or more of the following factors:

1. making the wrong decision to outsource a logistics activity in the first place (i.e., the activity should have been kept in-house);
2. poor selection of the third-party provider
3. poor management of the relationship with the third-party; and
4. a lack of suitable performance measurement tools (i.e. methods with which to monitor the success of out-sourcing). (Brewer, Button and Hensher, 2001, p.265)

In approaching the decision of selecting logistics activities that could be out-sourced and the logistics companies that could perform these activities on their behalf, companies need to address the following issues:

1. identification of the specific logistics activities that could potentially be out-sourced;

2. evaluation of which of these activities should be out-sourced

3. appraisal of the likely positive and negative effects of out-sourcing these activities on the company and its core business

4. specification of the level of service required from a logistics company with respect to each activity to be out-sourced;

5. identification of the logistics companies with the necessary capabilities to provide these services; and

6. negotiation with shortlisted logistics companies to determine the company that is best suited to achieving the required service standard at a competitive price.

(Brewer, Button and Hensher, 2001, p.265-266)

Before evaluating the third-party logistics specialists, the companies have to pay attention to the above factors at the time of outsourcing decision by prohibiting the problems that can be caused because of their wrong decisions.

After taking the precautions in order to avoid facing possible problems, it is important to evaluate the third party logistics service providers as per the factors that are summarized in the Table 2.4.

Table 2.4: Factors that are frequently included in the evaluation of third-party logistics companies

*Ability to provide suitable logistics data before, during, and after good shipments
*Business arrangements (e.g., performance incentives, short-and long-term plans of the company, asset replacement strategy
*Business success and development (e.g., accounts gained and lost by the company)
*Business experience and qualities (e.g., company history, quality of employees)
*Capabilities and competencies (i.e., ability to meet company's needs)
*Compatibility of technology for the required service
*Financial strength and stability
*Standards (i.e., Are they sufficiently high and are they improving?)
*Location/coverage (i.e., Does the provider's network match the requirements)
*Management structure
*Opportunities to develop long-term relationships
*Price
*Reliability
*Reputation
*Service quality
*Speed
*Supplier Certification
*Support Services
*Systems flexibility and capacity

Source: Razzaque and Sheng, 1998; Brewer, Button and Hensher, 2001, p.265

The factors that are frequently included in the evaluation of third party logistics companies are ability to provide sustainable logistics data before, during, and after goods shipments, business arrangements such as performance incentives, short and

long term plans of the company, asset replacement strategy, business success and development such as accounts gained and lost by the company, business experience and qualities such as company history, quality of the employees, capabilities and competencies as ability to meet company's needs, compatibility of technology for the required service, financial strength and stability, standards as they are sufficiently high and they are improving, location/coverage as the provider's network match the requirements, management structure, opportunities to develop long-term relationships, price, reliability, reputation, service quality, speed, supplier certification, support services, systems flexibility and capacity.

In this chapter, outsourcing, outsourcing logistics activities and third party logistics service providers are explained and analyzed accordingly. Due to global competition, pressure to reduce costs, downsizing and focus of the firm's core competencies, the firms start to seek outside suppliers for the services or goods that have been provided in-house. This trend causes to arise of a new concept that is outsourcing. "Outsourcing" refers to the strategic decision to contract out one or more activities required by the organization to a third-party specialist. The decision about whether or not to outsource an activity currently performed in-house by the organization is often referred to as make or buys decision. It is the most critical decision because it defines the organization's core competencies. It is better for a firm to outsource all other activities that are neither a critical need nor special capabilities. The core activities should be performed in-house. If the activity is strategic, it must be kept in-house. In recent years there has been a market trend towards logistics outsourcing among many companies. Because logistics is defined as falling outside of core competencies. Outsourcing all or much of a company's operations to a specialized company cause

to occur of a new concept that is third party logistics service providers. Third party logistics service provider is a firm that provides multiple logistics services for use by customers. There are a wide range of logistics activities that can be provided by third party logistics service providers. These services are explained in detail in this chapter. The classification of the third party logistics service providers is examined. The advantages and disadvantages of using third party logistics service providers are listed as per the literatures regarding this topic. Relationship between a third party logistics service providers and its customers is analyzed in a contractual base. It is found out that a successful logistics partnership must be based on trust and information exchange and must be long term. Finally the success factors in logistics outsourcing and evaluating the third party companies are examined.

This chapter provides a theoretical background regarding the outsourcing and third party logistics service providers.

In the following chapter, pervious researches regarding the third party logistics service providers which are similar to this study are examined. The researches that have been performed in USA, Europe and Turkey are analyzed and summarized briefly as a literature research.

CHAPTER III

LITERATURE RESEARCH

The aim of this chapter is to analyze the previous researches regarding the 3PL companies and the logistics sector that have been performed in order to clarify the base point of this study. Because the study is performed as taking similar researches that will be analyzed, reviewed and summarized in this chapter into consideration.

In the first part of the chapter, the researches that have been done in USA and Europe are analyzed and reviewed. In the following part, the researches that have been done in Turkey are analyzed and reviewed. Brief summary of each research is given.

3.1 PREVIOUS RESEARCHES REGARDING THE LOGISTICS SECTOR AND 3PL COMPANIES IN THE USA AND EUROPE

Third-party logistics (3PL) has been the subject of academic investigation and analysis in the United States since the late 1980s and early 1990s. In particular, the use of 3PL has been assessed both in single studies (Bardi&Tracey 1991, Maltz 1993, Rabinovich et al. 1999, Sheffi 1990, Sink&Langley 1997) and in annual repeated surveys (Armstrong 2003, 2004; Langley 1996, 1997; Langley et al. 1998, 1999; Langley et al. 2000; Langley et al. 2001, 2002; Langley et al 2003; Langley et

al. 2004; Lieb and Peluso 1999; Lieb et al. 2000; Lieb and Kendrick 2002; Lieb and Bentz 2003, 2004; Lieb 2000; Lieb and Randall 1996) (Ashenaum, Maltz and Rabinovich, 2005, p.39).

Longitudinal studies are important to assess trends and changes in the industry. The Lieb et al. (1993; 1996; 1999-2003; 2004a) and Langley et al. (2003; 2004) series have provided high-level evaluations of industry trends, but only a few other papers provide longitudinal views (Laarhoven et al. 2000; Sohal et al. 2002) (Maloni and Carter; 2006, p.30)

According to Maloni and Carter's research (2006); it is revealed that the provider focused research has been lagged behind buyer research in quantity and scope. They examined forty-five papers and more than two-thirds focused solely on buyers. (Maloni and Carter; 2006; p.30)

Over the past nine years some researches have been done from the provider side of the 3PL industry by conducting annual surveys of the CEOs of many of the largest companies within the industry based on sales volume (Lieb and Randall 1999, p. 28-41; Lieb, Cooper and et al., 1998, p.9-26).

Lieb and Randall (1997), Lieb and Randall (1999), Lieb and Peluso (2000) prepares articles in order to receive the CEO perspectives on the current status and future prospects of the third party logistics industry in the United States. They discuss insights gained from a multi-year survey of chief executive officers of the largest 3PL providers in the United States.

Key findings reported in the paper are the following:

- most of the companies surveyed are autonomous subsidiaries of companies in the transportation and warehousing business;
- most have significantly increased their international operations in the past few years;
- most are increasingly forming strategic alliances with other 3PL companies as well as companies primarily involved in warehousing, trucking, freight forwarding and custom brokerage[20].

That studies are followed an earlier study by Lieb and Keendrick (2002), survey regarding the examine the results of a survey of the CEO of eighteen of the largest 3PL companies in the U.S. These companies are Airborne Logistics services, APL Logistics, Cardinal Logistics, C.H. Robinson Co., Danzas, DSC Logistics, Eagle Global Logistics, Exel Logistics, Landstar, Menlo Logistics, Penske Logistics, Ryder, Tibbett and Britten Group North America, TNT Logistics, Transplace.com, UPS logistics Group, USF Logistics, Inc., USCO Distribution Services, Inc.

Most of the companies have their roots in the U.S. They face a competition in the U.S. by a number of large foreign-based 3PL providers who have become significant players in the market.

[20] www.uctc.net/papers/634.pdf

Mergers and acquisitions are substantially increasing. Eleven of the companies made significant acquisitions during the past year.

The revenue growth pattern is also asked and it is seen that due to economic slowdown, nine of the eighteen companies failed to meet their revenue growth protections for the past year.

The CEOs were asked to identify and rank the most important industry dynamics currently operating in the market for 3PL services. Those dynamics were continued downward pressure on pricing, and growing customer interest in outsourcing a broader array of logistics activities. Please see the Table 3.1.

Table 3.1: CEO Perception of the Three Most Important Industry Dynamics, 2002 Data and Comparison with Three Previous Years

Industry Dynamic	# of CEOs Ranking It #1, 2002	Total Points 2002	Total Points 2001	Total Points 2000
Continued downward pressure on pricing	7	26	17	20
Growing interest in outsourcing broader array of services	2	16	19	15
Increased pressures to internationalize	3	14	23	8
Increased CEO/CFO participation	2	13	22	7
Large-scale 3PL mergers	2	13	7	5
Movement of foreign 3PL providers into U.S.	1	6		
Increased security concerns		6	3	11
Emergence of collaborative inter-enterprise planning		5	7	
Performance pressure from parent company		1	8	5

Source: Lieb and Kendrick, 2003, p. 11

The CEOs surveyed were also asked to identify the three most significant opportunities available to 3PL providers. Those opportunities are further IT supply chain integration, continued globalization and broadened integrated supply chain service offerings.

Table 3.2: CEO Perception of the Three Most Significant Opportunities for 3PL Providers, 2002 Data and Comparison with previous Years

Opportunity	# of CEOs Ranking It #1, 2002	Total Points 2002	Total Points 2001	Total Points 2000
Further IT supply chain integration	5	23	27	
Continued globalization	2	15	35	20
Broadened integrated supply chain service offerings	2	15		
Selling more services to existing customers	2	6	7	18

Source: Lieb and Kendrick, 2003, p. 12

The most significant problems identified by the CEOs were continued downward pressure on pricing, the ability to find and keep qualified people and the increasing technology demand of customers.

Table 3.3: The Most Important Problems facing the 3PL Industry, 2002

Category	# of CEOs Ranking It #1	# of CEOs Ranking It #2	Total Weighted Points
Pricing pressure	4	4	21
Finding/keeping talent	4	3	20
Increasing technology demands of customers	4	2	20
Provider overselling of capabilities	1	1	6
Sustaining operational excellence	1	1	5

Source: Lieb&Kendrick, 2003, p. 12

The CEOs were also asked to identify what they believed to be the three most significant developments within their companies and within the 3PL industry during the past year. Those developments are company upgrades of IT capabilities, company progress in integrating merged entities and the expansion of company service offerings.

Those surveyed were also asked what major changes they expected to take place in the 3PL industry during the next three years. Seven CEOs predicting that the movement will continue to accelerate not only in the domestic marketplace but also in the international arena. Four predicted large scale globalization efforts among the major providers and three other CEOs predicted the development of increasingly complex IT systems. Among the other major changes anticipated by at least two CEOs were continued pricing pressures, greater emphasis on security issues, expansion of 4PL and LLP services, and the growth of more complex, longer-term 3PL projects.

Finally the CEOs were asked to estimate annual company and industry revenue growth rates for the next year and the next three years. Despite the continued economic slowdown, the CEOs are quite bullish about the next three years with respect to company growth, but are considerably more conservative with respect to industry growth prospects over that same period.

Lieb and Benz (2004) conducted a survey to the CEOs of 13 of the largest third-party logistics companies serving the European marketplace. These companies are Caterpillar Logistics Services, DHL, Exel Logistics, Geodis, GeoLogistics, Kuehne&Nagel Logistics, Inc., Penske Logistics, Ryder, Schenker, Schneider Logistics, TPG, UPS Supply Chain Solutions, UTI. The survey aimed to examine the industry's dynamics, market opportunities, and problems. CEO estimates of future company and industry revenue growth rates are also highlighted.

CEO's were asked about their companies' success in meeting revenue growth projections during 2003. Two companies reported exceeding their revenue targets for the year, seven said they met their targets, and three companies failed to meet their revenue projections.

CEOs were asked if their companies had participated in any significant merger or acquisition activity during the past year, six of the 12 companies that responded to the questions said "yes." The CEOs whose companies had acquired other companies during the past year indicated that five of the acquisitions had involved other 3PL providers, three acquired warehousing operations, three had acquired freight forwarders/customs brokers, and one had acquired a transportation service provider.

CEOs were asked if their companies operate in a specific industry or not. 11 respondents have targeted the automotive industry, and the same number focuses on the high technology/electronics industry. The next most frequently mentioned industries were manufacturing, which was mentioned by seven CEOs, and consumer goods and retailing which were each mentioned six times.

Table 3.4: Number of Companies Targeting Specific Industries for Sales/Marketing Efforts

Industry	Number of Companies Targeting That Industry
Automotive	11
High tech/electronics	9
Manufacturing	7
Retail	6
Consumer goods	6
Chemicals	4
Healthcare	2
Pharmaceuticals	2
Wholesale	2

Source: Lieb and Benz, 2004, p.23[21]

While the CEOs of 3PL providers serving the U.S. 3PL market have long lamented their problems with finding and keeping management talent, their European counterparts appear to have fewer problems in this area. Less than half the CEOs participating in the European 3PL market survey indicated this was a problem in their organizations.

CEOs were also asked to identify the most significant problems facing 3PL service providers in Europe.

- Client pressure to continuously reduce costs in an environment in which provider costs are rising,
- Weak economic growth in Europe,
- Poor asset utilization,

[21] www.web.cba.neu.edu/~rlieb/2004Europeanceopaper.doc

- An oversupply of logistics services and assets in the "old" Europe,
- Chronic labor shortages, particularly in trucking operations,
- Difficulties encountered in attempting to deliver consistent results across different geographies and cultures,
- Increasing *commoditization* of 3PL service offerings in Europe,
- Difficulties related to changes in distribution patterns in Europe,
- Integration problems caused by recent acquisitions,
- Low profitability in the European 3PL industry,
- *The high cost and low rate of return on IT investments.*

The CEOs were asked to identify, and rank order, the three most important industry dynamics that are driving the European marketplace for 3PL services. These are summarized in Table 3.5.

Table 3.5: CEO Perception of the Three Most Important European Industry Dynamics

Industry Dynamic	# of CEOs Ranking It #1, 2004	# of CEOs Ranking It #2, 2004	# of CEOs Ranking It #3, 2004	Total Weighted Points 2004
Continuing downward pressure on pricing	4	2	2	20
Large-scale mergers of 3PL companies	2	2	2	14
Increased pressure to internationalize	1	2	2	10
Increased CEO/CFO participation in 3PL decision-making process		2	3	7
Formation of business alliances to broaden service offerings	1	1	1	7

Source: Source: Lieb and Benz, 2004, p.24[22]

CEOs were also asked to identify the three most significant opportunities available to providers in the European 3PL marketplace at the time of the survey. The most frequently mentioned opportunities included provision of 3PL services to the emerging Eastern European "new" economies, provision of pan-European 3PL services, increased participation in the global 3PL marketplace, expansion of integrated logistics services to be sold along the supply chains of existing customers, and expansion of integrated IT service offerings.

The CEOs were also asked to identify what they believed to be the most significant developments that had taken place within their companies and within the European 3PL industry during the previous year. Those are expansion of their logistics

[22] www.web.cba.neu.edu/~rlieb/2004Europeanceopaper.doc

networks throughout Europe, particularly into Eastern Europe, broadening of company service offerings, upgrading management talent within their organizations, improvements in growth rates and profitability, and successful integration of acquired companies into their organizations.

Those surveyed were also asked what major changes they expected to take place in the European 3PL industry during the next three years. Those are significant increase in the use of Eastern European subcontractors, substantial growth of Eastern European 3PL markets, greater emphasis of European customers upon multi-country inbound and outbound operations support from 3PL providers, manufacturing going further East toward the Ukraine, Russia, the Baltics and Belorus, Greater reliance upon multimodal/intermodal services within Europe due to rising fuel costs, the emergence of more restrictive European environmental regulations, extensive roll out of RFID technology throughout Europe, increased CEO/CFO involvement in the supply chain management field, as it becomes even more critical to improving profitability.

Finally, the CEOs were asked to estimate annual company and industry revenue growth rates for the next year and the next three years. The CEOs included in this survey were very optimistic with respect to the revenue growth prospects of their companies over the next three years.

Lieb and Bentz (2004) prepared an article from the buyer side that reports and evaluates the findings of a survey conducted during 2004 as part of an annual research that examines 3PL service use by U.S. Fortune 500 manufacturers. The first

survey in the series was conducted in 1991, and annual survey commenced in 1994. Each year, a questionnaire is developed and mailed to the chief executive of the 500 largest American manufacturing companies in order to gather data concerning the use of 3PL services by those companies. The data generated each year not only provide an overview of current use patterns, but also provide a basis for comparison with the results of the earlier annual surveys. The survey data shows that the percentage of those companies using such services is at a record high level, and that users are giving a steadily increasing percentage of their logistics operating budgets to 3PL service providers. Many 3PL relationships are long-term in nature, and the service providers continue to deliver value to their clients. The movement of large American manufacturers into other geographies for sourcing, manufacturing, and sales has led many of their 3PL service providers to expand into those areas that support those activities.

Large American manufacturers typically buy multiple logistics services from their providers. Most frequently outsourced logistics functions in 2004 were direct transportation services (67 percent), custom brokerage (58 percent), freight payment services (54 percent), freight forwarding (46 percent), warehouse management (46 percent), shipment consolidation (42 percent), tracking/tracing (42 percent), carrier selection (38 percent), order fulfillment (33 percent), reverse logistics (33 percent), and cross docking (33 percent).

Table 3.6: The Most Frequently Used 3PL Services, 2004 and Three Previous Years

Logistics Service	Percent citing use 2001	Percent citing use 2002	Percent citing use 2003	Percent citing use 2004
Freight payment	53	63	72	54
Shipment consolidation	49	49	66	42
Direct transportation service	61	56	62	67
Customs brokerage	41	67	62	58
Warehouse management	59	42	60	46
Freight forwarding	45	59	53	46
Carrier selection	43	51	51	38
Tracking/tracing	33	44	51	42
Measurement of carrier performance			47	29
Rate Negotiation	37	47	38	29
Relabeling/repackaging	25	23	38	25
Order fulfillment	33	33	34	33
Product returns	25	23	30	29
Reverse logistics			26	33
Operation of IT systems	20	16	21	13
Merge in transit			19	17
Fleet management/operations	20	23	19	17
Order processing	8	9	17	17
Customer spare parts	10	9	17	25
Selection of software	8	9	15	4
Contract manufacturing	10	12	13	8
Assembly/installation	10	5	11	8
Consulting services	25	21	9	25
Purchase of materials	4	7	8	13
After sales service			6	
Product testing			2	4

Source: Lieb and Bentz, 2004, p.8

Supporting results were found by similar research conducted in Australia. There the majority of respondents to a survey investigating outsourcing among the country's largest corporations reported that their organizations use third-party logistics services. The services commonly contracted included fleet management, warehouse management, shipment consolidation, order fulfillment, and product returns. (Gourdin, 2005, p.221)

In this part, the researches that have been performed in USA and in Europe are taken into consideration. Especially the articles regarding the CEO perspectives' on the current status and future prospects of the third party logistics industry in the United States and Europe direct this study to concentrate on third party logistics service providers in Turkey and their perspectives to the logistics sector in Turkey . Some parts in the survey are prepared via taken these articles into consideration.

In the following part, as a complementary to these researches, the studies that have been performed in Turkey will examined.

3.2 PREVIOUS RESEARCHES REGARDING THE LOGISTICS SECTOR AND 3PL COMPANIES IN TURKEY

Generally the tendency of the researches that have been done in Turkey is evaluating the perspectives from the buyers. Most of the surveys have been made to them. There are few researches that focus on the providers. Sometimes, the satisfaction of the buyers is measured, sometimes the service quality of the providers is measured from the view points of the buyers, and sometimes the percentage of their outsourcing logistics activities is measured via making surveys to them. There are so many theses, articles that are held on the conferences and researches regarding these topics.

Aktas and Uluengin (2005) prepared a research in order to determine the situation of outsourcing logistics activities in Turkey. Survey analysis was conducted with 250 of the top 500 Turkish firms specified by the Istanbul Chamber of Commerce for the year 2001. A total of 48 questionnaires were returned, representing a 19.2 percent response rate. The focus of the part of the survey is basically in the following areas: logistics functions outsourced by Turkish firms; the extent to which logistics functions in general and transportation functions in particular are outsourced by Turkish firms; and the criteria used to select and evaluate the performance of the outsourcing firms. The performance of the first three outsourcing firms currently used by Turkish firms. In a majority (47 percent) of the respondent firms, purchasing, supply, inventory management, order fulfilling, customer services, production scheduling and negotiations with salespersons are accepted as in-house logistics activities. In a three-year time period, these firms do not consider outsourcing the logistics activities mentioned above. Similarly, warehousing

activities are held by the firm itself in 76 percent of the firms. Only 24 percent outsource warehousing to other logistics firms and 23.5 percent of the respondents intend to outsource their logistics activities within a three-year time period. Nearly 93.5 percent of the respondents outsource their transportation activities. It can be seen that Turkish firms in particular outsource transportation activities and the direct participation of manufacturer firms in transportation is expected to decrease visibly within a three-year time period. Therefore the current 3PLs, in fact, play the role of freight transporters. This study shows that the power of third party logistics (3PL) firms in Turkey is underestimated. The firms that outsource their logistics activities in Turkey are 95 percent foreign capitalized. Turkish businessmen think that they should do their business themselves and they are not aware of the benefits of outsourcing logistics activities. In fact, in selecting the transportation carrier, they consider different criteria but the general tendency is either to select the carrier that has a good reputation and/or the one which is easy to collaborate with. (Aktas and Uluengin, 2005, p.316-329)

Akyildiz (2004) prepared a paper whose aim is to explore how logistics concept was perceived by Turkish firms, what level of logistics outsourcing were, what kind of logistical services were used of outside and what level of anticipated logistics outsourcing will be in the next three or five years. For this purpose, a prepared survey was conducted with the 800 manufacturing firms registered of the Union of Chambers and Commodity exchanges, which is located in Ankara. The collected data was analyzed by using descriptive and non-parametric statistics. The results indicated that transportation and customs process are the most commonly outsourced. Although the level of logistics outsourcing is 77 percent, logistics partnerships are at

low levels sustained with very weak ties. All logistics functions saving transportation and custom brokerage are anticipated to increase concerning subject for outsourcing. (Akyildiz, 2004, p.1)

Sevim, Cetinoglu and Vatansever (2004) prepared a research in order to determine whether services that are given by third party logistics firms meet with expectations of customers or not and if not determining the reasons of this difference to provide a consensus and to develop the standards of service quality. This study will be a model for firms that either perceive or provide logistics services to improve their own understanding of service quality. (Sevim, Cetinoglu and Vatansever, 2004, p.1165)

Tosun, Gungor and et al. (2004) prepared a research that examined whether or not the customers satisfied with the logistics service providers activities; logistics companies understand the exact need of the customers. In their research, they try to find answers to such questions from the customers' points of view. A questionnaire was sent to companies getting logistics services. The results are evaluated with SPSS. All of these yielded a detailed explanation of what customers want from logistics companies. (Tosun, Gungor and et al., 2004, p.467)

Oren, Tosun and et al. (2004) prepared a research that aimed at defining a degree of relationship between logistics companies and their customers in Turkey. A questionnaire was sent both logistics companies and to customers. Data gathered from these questionnaires were evaluated by using SPSS. Results illuminate how wide a gap exists between a well intentioned customer oriented strategy and

manifestation of that strategy in day-to-day operations. (Oren, Tosun and et. al, 2004, p.34)

Taskin and Guneri (2004) prepared a study that examined an outsourcing project. An oil company establishes alliance with logistics service provider in order to satisfy their logistics requirements. The main target of this project is to carry out the logistics of products that is given as gifts with the least workforce and the least error. (Taskin and Guneri, 2004, p.255)

Babacan and Eris (2004) prepared a research in order to examine the situation of the logistics sector during times of crisis in Turkey, and presents marketing policies applied and the precautions taken by logistics companies. (Babacan and Eris, 2004, p.23)

Buyukozkan, Bahceci and et al. (2004) prepared a research whose objective is to build a cognitive map for the Turkish logistics sector in order to find out the most important critical success factors that will provide the healthy development of this sector. Finally, based on the analysis results, possible strategies are developed to enhance Turkish logistics sector. (Buyukozkan, Bahceci and et al., 2004, p.235)

Ersoy (2006) prepared an article with the name *Logistics and the Position of Turkey*. In that article, a SWOT analysis has been performed in order to evaluate the Turkish logistics sector. The analysis is as in the Table 3.7.

Table 3.7: SWOT Analysis

Strengths	**Weaknesses**
Strategic and geographical position of Turkey	Lack of educated personnel
Well-experienced marketing economy	Lack of technological infrastructure
Increase in productivity	Closed to new technology and developments
Young and dynamic population	Insufficiency in railway and seaway transportation
Three sides of the country are enclosed with sea and suitable for to construct ports	Old-aged fleets
Have a competitive fleet in road transportation	Problems in competition and lack in business ethics
The low cost considerations	Insufficiency in legal regulations and academic researches
Language advantage	Low economies of scale
	Insufficiency in capital and inefficient performances
Threats	**Opportunities**
Entrance of foreign companies into the market	Strategic and geographical position of Turkey
The uncertainty in economy	Well-experienced marketing economy
The southeast crisis	Increase in productivity
Terrorism	Young and dynamic population
Political chaos	Three sides of the country are enclosed with sea and suitable for to construct ports
Political interventions	Have a competitive fleet in road transportation
The cost considerations in energy	The Balkans, Arabians, CIS markets
The insufficiency in coordination between railways seaways and road transportations	The European Union
	The GAP Project

Source: Ersoy, 2006, p.29[23]

[23]http://www.turktrade.org.tr/durum/durum_ocak_2006/durumocak2006_word/mehmet_sakir_ersoy.doc

In Turkey, there are too few research investigating problems and solutions of the sector. Ernst&Young-IBS (2002) expressed that legislation, insufficient investment on ICT, difficulties in custom regulation, lack of educated and qualified personnel are the most important problems of the sector. Erdal and Canci (2003) studied logistics opportunities and threads theoretically. According to them, some of the problems are legal regulations, education and customs. Kaya (2003) stressed the importance of legislation for developing logistics sector in Turkey. (Baki, Tanyas and Ozkok, 2004, p.963)

Baki, Tanyas and Ozkok (2004) have made the research in order to meet this gap by taking both the buyers and the providers into consideration. Also Baki, Tanyas and Ozkok's research regarding the determining problems of the logistics sector in Turkey and bringing solutions to them with a descriptive method is the base for this study.

They aim to determine the viewpoints of the manufacturing firms (buyers) to the problems of the sector and the solution suggestions, to determine the viewpoints of the transportation/logistics firms (provider) to the problems of the sector and the solution suggestions, to determine whether the viewpoints of the manufacturing and the logistics firms to the problems of the sector and the solution suggestions are different or not.

The population of the study for the manufacturing firms compromise 500 major industrial firms determined by Istanbul Industry Chamber for 2002. The

questionnaire had been sent to these firms. The response rate was 14.3%. The population of the study for the transportation/logistics firms compromise 1500 firms whose details are taken from UND (International Transporters Association), UTIKAD (International Freight Forwarders Association in Turkey), RODER (International Ship Administrators and Combine Transporters Association), KARID (Cargo Administrators Association), TND (Turkey Transporters Association). The response rate was 10.45%. Most of the survey questions in this study are taken from Baki, Tanyas and Ozkok's questionnaire.

The most important problems of the sector have been determined as "That the highway has more heavy in transportation sector" for the manufacturing firms and "Educated and qualified workforce lack in logistics" for the transportation/logistics firms as they are seen from the below Tables 3.8 and 3.9.

Table 3.8: The Viewpoint of The Manufacturing Firms to the Problems Regarding Logistics Sector

	Average	Strongly Disagree (%)	Disagree (%)	Agree in part (%)	Agree (%)	Strongly Agree (%)
That the highway has more heavy in transportation sector	4,21	*	4(6,5)	6(9,7)	25 (40,3)	27 (43,5)
Legal improvements and hardships in custom regulation	4,16	*	1(1,6)	10(16,4)	28 (45,9)	22 (36,1)
Coordination shortage in law and instructions	4,1	*	1(1,6)	11(18,0)	30 (49,2)	19 (31,1)
Educated and qualified work force lack in logistics	4,07	*	4(6,6)	9(14,8)	27 (44,30)	21 (24,4)
That sufficient investments on technology and IT are not made	4,05	*	4(6,6)	8(13,1)	30 (49,2)	19 (31,1)
Lack of infrastructure of ports	3,88	1(1,7)	1(1,7)	14(23,8)	31 (52,5)	12 (20,3)

Source: Baki, Tanyas and Ozkok, 2004, p.966

Table 3.9: The Viewpoint of the Transportation/Logistics Firms to the Problems Regarding Logistics Sector

	Average	Strongly Disagree (%)	Disagree (%)	Agree in part (%)	Agree (%)	Strongly Agree (%)
Educated and qualified work force lack in logistics	4,24	2(1,5)	4(3,0)	16 (12,0)	49 (36,8)	62 (46,6)
That sufficient investments on technology and IT are not made	4,23	*	3(2,3)	19 (14,4)	54 (40,9)	56 (42,4)
Legal improvements and hardships in custom regulation	4,19	1(0,7)	3(2,2)	23 (17,2)	50 (37,3)	57 (42,5)
Coordination shortage in law and instructions	4,17	1(0,8)	3(2,3)	24 (18,0)	50 (37,6)	55 (41,4)
Lack of infrastructure of ports	4,02	2(1,5)	5(3,8)	29 (21,80)	50 (37,6)	47 (35,3)
That the highway has more heavy in transportation sector	3,79	6(4,5)	13(9,7)	25 (18,70)	49 (36,6)	41 (30,6)

Source: Baki, Tanyas and Ozkok, 2004, p.966

While the problem of "That the highway has more heavy in the transportation sector" is the first rank for the manufacturing firms, it's the last rank for the logistics firms and it is interesting. This case can be commented that the manufacturing firms are looking for the type of the option transportation with the aim of reducing the costs and that most of the transportation/logistics firms prefer highway transportation. While the problem of "That sufficient investment on technology and IT are not made" is fifth rank for the manufacturing firms, it's second rank for the logistics firms. This can be commented that the Transportation/Logistics firms need more investments on Information and Communication Technology. The other surprising

point is that the problem of "Educated and qualified work force lack in logistics" is first rank for the Transportation/Logistics firms.

In the solution of the problems that the sector encounters, the suggestions of "Forming a regular transportation politics" by the manufacturing firms and "Improvement of the logistics education and training" by the logistics firms have been determined as the most favorite solution methods as they are seen from the Table 3.10 and 3.11.

Table 3.10: The Solution Suggestions of the Manufacturing Firms Regarding Sector

	Average	Strongly Disagree (%)	Disagree (%)	Agree in part (%)	Agree (%)	Strongly Agree (%)
Forming a regular transportation politics	4,38	*	*	5 (8,2)	28 (45,9)	28 (45,9)
Developing the transportation infrastructure	4,36	*	*	4 (6,8)	30 (50,9)	25 (42,4)
The use of logistics information system must be increased	4,34	*	*	2 (3,2)	37 (59,7)	23 (37,1)
Instead of highway, port and railroads must be dwelled on	4,34	*	2 (3,2)	5 (8,1)	25 (40,3)	30 (48,4)
Improvement of the logistics education and training	4,3	*	*	4 (6,7)	34 (56,7)	22 (36,7)
Collaboration between university and sector must be increased	4,08	1 (1,7)	4 (6,7)	6 (10,0)	27 (45,0)	22 (36,7)
National/International seminars must be held.	3,85	*	5 (8,3)	12 (20,0)	30 (50,0)	13 (21,7)

Source: Baki, Tanyas and Ozkok, 2004, p.967

Table 3.11: The Solution Suggestions of the Transportation/Logistics Firms Regarding the Sector

	Average	Strongly Disagree (%)	Disagree (%)	Agree in part (%)	Agree (%)	Strongly Agree (%)
Improvement of the logistics education and training	4,42	*	*	10 (7,5)	58 (43,3)	66 (49,30)
Developing the transportation infrastructure	4,34	*	*	13 (9,6)	63 (4,7)	59 (43,7)
Forming a regular transportation politics	4,3	*	1 (0,8)	12 (9,1)	66 (50,0)	53 (40,2)
The use of logistics information system must be increased	4,31	*	1 (0,8)	11 (8,3)	67 (50,4)	54 (40,6)
Collaboration between university and sector must be increased	4,2	*	5 (3,7)	21 (15,4)	52 (38,2)	58 (42,6)
National/International seminars must be held.	4,09	*	1 (0,7)	27 (20,1)	65 (48,5)	41 (30,6)
Instead of highway, port and railroads must be dwelled on	3,78	5 (3,7)	13 (9,6)	26 (19,3)	54 (40,0)	37 (27,4)

Source: Baki, Tanyas and Ozkok, 2004, p.968

When two sides are considered the main solutions are improvement of the logistics education and training, developing the transportation infrastructure, forming a regular transportation politics, the use of logistics information systems must be increased.

Baki, Tanyas and Ozkok (2004) also applied t-test for both determination of the differences in the viewpoints of manufacturers and the transportation/logistics firms to the problems regarding logistics sector and determination of the differences in the viewpoints of the manufacturing and transportation/logistics firms to the solution suggestions.

In this chapter, the previous researches regarding the third party logistics service providers and logistics sectors are analyzed and explained.

In the first part, the researches that have been performed in USA and Europe have been analyzed. It is found out that Third-party logistics (3PL) has been the subject of academic investigation and analysis in the United States since the late 1980s and early 1990s. So many single studies and annual repeated surveys have been performed. Especially, Lieb et al. (1993; 1996; 1999-2003; 2004a) and Langley et al. (2003; 2004) series have provided high-level evaluations of industry trends. The most important articles that have to be taken into consideration are the ones that emphasize the CEO perspectives' on the current status and future prospects of the third party logistics industry in the United States and the Europe. Because these are the articles which direct this study to concentrate on third party logistics service providers in Turkey and their perspectives' in the logistics sector. So these articles have been examined in detail.

In the second part the researches that have been performed in Turkey have been analyzed. However it is seen that most of the researches generally concentrate on the buyers not the providers. The number of researches regarding the third party logistics service providers and the logistics sector is too low. Baki, Tanyas and Ozkok's study is one of the most important ones that is regarding the viewpoints of manufacturer firms and the logistics firms regarding to the problems of the sector and the suggested solutions. The viewpoints of logistics firms are taken into consideration in this study.

As a complementary of this chapter, the third party logistics service providers in Turkey will be analyzed and their perspectives' regarding the problems of the sector and suggested solutions will be explained in the following chapters.

In the next chapter, brief information regarding the sector will be given and the research methodology will be explained in detail.

CHAPTER 4

AN OVERVIEW TO THE SECTOR & THE RESEARCH METHODOLOGY

This chapter aims to give brief information regarding the logistics sector and some of the main third party logistics service providers in Turkey as taking the third party logistics service providers in Turkey into consideration via evaluating their perspectives' regarding the sector problems and the suggested solutions in the following chapter.

The objective of this study and the methodology approach is also given in this chapter accordingly.

4.1. LOGISTICS AND TURKEY

Logistics sector has been a proceeding sector in Turkey in the last ten years. Turkish logistics market is a promising market with a high expansion potential and attracts attention of foreign companies. Turkey, being located in a region with 400 million populations, has a powerful position and has favorable labor and land possibilities.

Besides traditional agriculture-based exports and textile, exportation of high technology and automotive products, which have considerably increased in last

years, has helped the logistics sector to develop. Agro-industrial products have also contributed to this development.

In the last years, the term “logistics” was adopted quickly but it was not participated as it should be. Many transportation companies wanted to provide logistics services and claimed to accomplish it but only a few succeeded. It is not yet well understood that logistics requires more intensive information technology, sectoral specialization, project management, and more investment. It is not correct to consider companies that provide transportation or storage services nationwide or worldwide in logistics sector. It is also possible to say that, logistics is a newly developing sector, and its rules and standards have not yet well established.

Although it is hard to find comprehensive academic and sectoral studies, according to the results of various studies, current value of Turkish logistics sector is between 2 and 3 billion dollars. In our country the production and product movement is around 20-25 billion and 10-12% percent of this has a logistics market potential and 85% of this is met by the production and sale firms, while only 15% is met by logistics companies. (Baki, Tanyas and Ozkok, 2004, p.963)

Recently, the logistics sector is grown with a % 10 in Europe, %15 in USA and %10-15 in Turkey. Although its percentage within the GDP is %12 in USA, it is around %1.5 in Turkey. (FIATA 2002 World Congress)

The 3PLs in our country have grown with a percentage of 25-30 in 2004. As the result of this increase, the logistics market reaches to 7 billion USD in 2005.

The number of third-party logistics firms in Turkey is approximately 300. Almost all of them are responsible for delivery (mainly highway), loading, unloading and warehousing operations. These corporations have transported five million tons of piece loads per year domestically. (Uluengin and Uray, 1999, p.24)

Some of the main 3PL companies operating in the sector are summarized as below in order to give an idea regarding their structures, services and operations. Most of these companies are the participants of the survey.

Borusan Lojistik: Borusan Logistics was first established in 1973 as Boru Nakliyat to provide services to Borusan Group Companies, later extending its coverage to include non-Group companies[24]. Borusan Logistics has 3 Strategic Business Units.

Port Management: Borusan Logistics can carry out various projects integrated in its port. It has 61% market share in general cargo, 33% market share in container (volume) in Gemlik Bay (15% in general cargo, 3.1% in container of Turkey)

Integrated Logistics: Borusan Logistics has been working towards establishing market awareness in terms of the vitality of outsourcing all logistics needs, leading to an extensive logistics approach.

Customs Clearance: They are offering speed, quality and transparency through extended coverage, integrated systems and online connection to customs[25].

[24] http://en.borusanlojistik.com/hakkimizda.aspx?sectionid=2

[25] http://en.borusanlojistik.com/hakkimizda.aspx?SectionId=4

Horoz Lojistik: Horoz Forwarding was founded in 1942, to operate on land and railway transportation and warehouse keeping and stockpiling. The Company turned its face to transportation on international roads making a number of huge investments on a fleet in 1970s. Closely tracing the global developments over time, Horoz Forwarding lastly restructured its business with a change in name toward Horoz Logistics establishing its International Maritime Transport, International Air Courier and Customs Clearing Departments in 1997, which was followed by the introduction of Warehouse Management, Inventory Management and Added Value Services Functions and the Partial Distribution Network in 1998.

In 2000, the Company partnered SDV, a world forwarding giant and subsequently initiated integrated solution offerings for its customers, getting maximal use of the business experience and accumulations of its partner in the particular categories of maritime and air transport. In 2005, reaching an annual turnover of USD 233 million, Horoz Logistics more scrutinized its position in the industry, becoming one of the most major logistics companies of Turkey[26].

Balnak Lojistik: The foundations of a great holding are laid by Balnak International Transport and Commerce Limited with a German partner, Ballauf in 1986. Taking part in the sector by land freight first, Balnak proves a considerably fast development in that field until 1988 becoming one of the biggest institutions in the sector. Then, it starts realizing air and sea freight organizations and gets the I.A.T.A. license in 1990.

Transformed into a one hundred percent Turkish company, in 1995, it moves to the building being its own property and begins the bonded warehouse management in

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[26] http://www.horoz.com.tr/eng/tarihce.asp

addition to overland, air, sea and rail freight. In 2002, Balnak took part among the 3 best logistics companies, in the research "Successful companies in their sectors of the Year" made by Dünya newspaper[27].

Omsan Lojistik: Established as a subsidiary of OYAK group in 1978, OMSAN started international land transportation with a fleet of 15 vehicles in 1982. The scope of services and business volume expanded rapidly in line with emerging concepts such as “integrated logistic services” and “supply chain management”. Today OMSAN designs and delivers a wide range of logistics services to their clients within the most modern and contemporary perspective like a modern fleet equipped with satellite integrated management system, land, air and sea transport, related consulting and track-and-trace services, warehousing, bonded warehousing operations; all customs clearance services, value-added services such as order / stock management through the supply chain, packing / re-packing, manipulation, distribution and insurance. OMSAN employs around 1222 qualified personnel, and has scored revenue of $ 260 million in 2005. OMSAN has clinched its leadership position in the sector, and will remain so by constant and healthy growth[28].

A brief summary has been made regarding to the sector and some lead-3PL companies in the sector are mentioned. In the following part, the objective of the study will be emphasized and the methodology approach will be given accordingly.

[27] http://www.balnak.com.tr/index.php?c=tarihce
[28] http://www.omsan.com.tr/en/sirpro.asp

4.2. OBJECTIVE

The main objective of this study is to analyze the 3PLs operating in Turkey and evaluate 3PL perspectives regarding the problems of the Turkish Logistics Sector and regarding the suggested solutions.

More specifically, this objective comprises:

- Determine the current status of 3PL companies in Turkey in terms of their capital structure, operating period and number of employees.
- Determine the sectors that 3PLs serve.
- Determine the current status of 3PL companies in Turkey in terms of their logistics management activities.
- Overview the organizational and managerial decisions of 3PL companies in terms of mergers and acquisitions.
- Determine the viewpoints of the 3PL companies to the problems of the sector and the solution suggestions.

Some specific activities associated with the preliminary objectives include:

- Conducting research to determine the capital structure, the operating period in Turkish logistics sector and the number of employees of 3PLs.
- Executing research in order to determine the sectors in which they are operating in.
- Collecting and analyzing data for 3PLs in order determine which logistics services are given and mostly performed.

- Reviewing the 3PLs managerial decisions in terms of merger and acquisition activities.
- Researching third party logistics service providers' perspectives in order to determine the problems of the sector and bringing solution suggestions to them.
- Preparing reports, presentations and recommendations for 3PL companies which inquire the survey results.

4.3. METHODOLOGY APPROACH

A research can be divided into different types of research designs: exploratory, explanatory, conclusive; which can be either descriptive or causal. (Kinnear and Taylor, 1991, p.79)

The explorative research method is the most appropriate when knowledge of the subject is relatively small. This is a form of pre-examination where necessary knowledge is acquired in order to precise the task and the problem definition, and to enter more deeply into the subject. (Kinnear and Taylor, 1991, p.81)

In an explanatory research method, the aim is to search further for connections between cause and effect. An explanatory study can be done with different focus as the following: "in-depth" by focusing on specific research unities, "in breadth" by focusing on different connections or "over time" by focusing on the development and changes over time. (Kinnear and Taylor, 1991, p.81)

When it is desirable to provide information for the evaluation of alternative research approaches, the descriptive research approach within the conclusive research is often used. The descriptive research method requires more basic knowledge of the subject than the explorative one. A descriptive study is characterized by a clearly defined problem to be explored, specified objects of exploration, a detailed need of information and a detailed and well-structured research design. Facts and state of things are surveyed and the properties of a number of objectives are described. The aim of a descriptive research is to describe how things are, for instance, by mapping or observations without explaining why and that must not only be viewed as a fact gathering expedition. It covers an array of research interests and requires skilful planning if they are to be used effectively in decision-making. Data collection methods are surveys, studies of primary and secondary data. (Kinnear and Taylor, 1991, p.82)

This research is a descriptive study in the way that 3PLs companies are observed and all the data are gathered, listed and then sorted in different ways. The problems and suggested solutions are obviously determined and the facts on the subject have been surveyed. The theoretical platform provides a descriptive background and the sources of data in this type of research include surveys and primary data.

In the next chapter, complementary to this objective and the methodology approach, survey analysis and the findings will be given accordingly.

CHAPTER 5

SURVEY ANALYSIS& FINDINGS

5.1 METHOD OF ANALYSIS

In this research, SPSS (Statistical Package for Social Sciences) software, Version 15.00 was used for the analysis and evaluation. Descriptive statistics were conducted. These descriptive statistics included frequencies and cross-tabs. Frequencies will tell the readers and researchers that how many firms replied to each question in the survey that provide a general idea. Cross-tabs produce tables showing the joint distribution of two or more variables (Pallant, 2003, p.51-63).

5.2 DATA COLLECTION PROCEDURE AND SAMPLING

In this study, which is based on a descriptive research model, the population is selected from 331 members of International Freight Forwarders Association in Turkey (UTIKAD) via taking the lead 120 units of 3PL companies into consideration.

The electronic mail was mostly benefited in sending the questionnaire to the participants and in gathering the data from them. Questionnaires were sent by e-mail twice with a 2-months interval between. Despite the repeated mailing and the following up by phone, only 32 questionnaires were sent back with a 26,67 percent

return rate which is near the world standard for return and, thus acceptable. The participants are general managers, vice general managers, logistics managers, department managers, logistics and sales representatives.

5.3 PRE-TESTING

A pre-test was conducted with five firms before the questionnaire was revised to avoid in applicable questions and ambiguous wording. Clear instructions are provided throughout the questionnaires. After pre-testing and further fine-tuning, the variables were operationalized.

5.4 FINDINGS OF THE SURVEY

The findings of the survey are presented in 5 parts. These parts are firstly organizational structure of the 3PL companies which includes the capital structure of the companies, the number of employees, the operating period in the sector, secondly the determination of the sectors that 3PLs serve, thirdly the logistics capabilities of 3PLs which is explained in detail in further parts, fourthly the mergers and acquisitions trends within 3PLs in the sector and finally evaluation of the sector problems and suggested solutions.

5.4.1. Structure of 3PL companies

Q3: The structure of 3PL companies is analyzed according to their capital structure. The result for the question 3 is as follows;

Table 5.1: Capital Structure of 3PLs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fully Turkish Capital	20	62,5	62,5	62,5
	Fully Foreign Capital	2	6,3	6,3	68,8
	Partly Foreign Capital	10	31,3	31,3	100,0
	Total	32	100,0	100,0	

As seen from the Table 5.1, it is obviously identified that 62.5 percent of the participants which corresponds to 20 units of the total have Fully Turkish Capital Structure. Besides, 10 firms which are equal to 31.3 percent have Partly Foreign Capital. The rest of 2 firms have fully foreign capital with a 6.3 percent.

It can be said that Fully Turkish Capital firms dominate the Turkish Logistics Sector. Moreover, due to lack of adequate capital and transportation rules and regulations which is provided by Ministry of Transportation, some Turkish firms tend to merger and acquisitive, which will be deeply analyzed in question 8, with foreign companies that this new type of behavior shows us new constitutions. The sector also leads the Fully Foreign Capital firms into the country due to the high development potential of the sector. However their numbers are low when compared to the others in our sample.

Q4: The operating period of the firms in the sector were asked to the companies in question 4. The result is shown as below

Table 5.2: Operating period of 3PLs in the sector

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than a year	1	3,1	3,1	3,1
	Between 1 and 5 years	5	15,6	15,6	18,8
	Between 6 and 10 years	5	15,6	15,6	34,4
	More than 10 years	21	65,6	65,6	100,0
	Total	32	100,0	100,0	

From the Table 5.2, it is seen that the companies operating in the sector for more than 10 years have a 65,6 percent which is more than half of the total sample. The percentage of firms with between 6 and 10 years and between 1 and 5 years are same with a 15,6 percent. Only one participant (3,1%) declares that they have been operating in the logistics sector for less than a year. The reason of not operating all of them in the sector more than 10 years may be that it is a newly developing sector in Turkey. It can be said that the ones which operate more than 10 years are more experienced and competitive in the market.

Q5: The numbers of the employees were asked to the participants in question 5.

Table 5.3: The number of employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 50	9	28,1	28,1	28,1
	Between 50 and 149	8	25,0	25,0	53,1
	Between 150 and 499	9	28,1	28,1	81,3
	Between 500 and 999	3	9,4	9,4	90,6
	Between 1000 and 2000	3	9,4	9,4	100,0
	Total	32	100,0	100,0	

From the Table 5.3, it is seen that the firms which have less than 50 employees is 28,1 percent, the firms which have between 50 and 149 employees is 25,0 percent, the firms which have between 150 and 499 employees is 28,1 percent, the firms which have between 500 and 999 employees is 9,4 percent and the ones which have between 1000 and 2000 employees is 9,4 percent. It can be said that the tendency in the sector is around between 150 and 499 employees.

5.4.2 Sectors that 3PLs Serve

Q6: The type of this question is different from the previous questions. It can be described as an open ended question. In this part of the survey the participants are asked to serve to the target sector or not. The sectors are automotive, retail, wholesale, consumer goods, manufacturing, healthcare, chemical, textile, electronics, food, packaging, plastic, computer hardware and software, construction, agriculture, metal and mining, mineral and fertilizer.

According to the answers the obtained result is as Figure 5.1. Also please see the Appendix C for detailed tables.

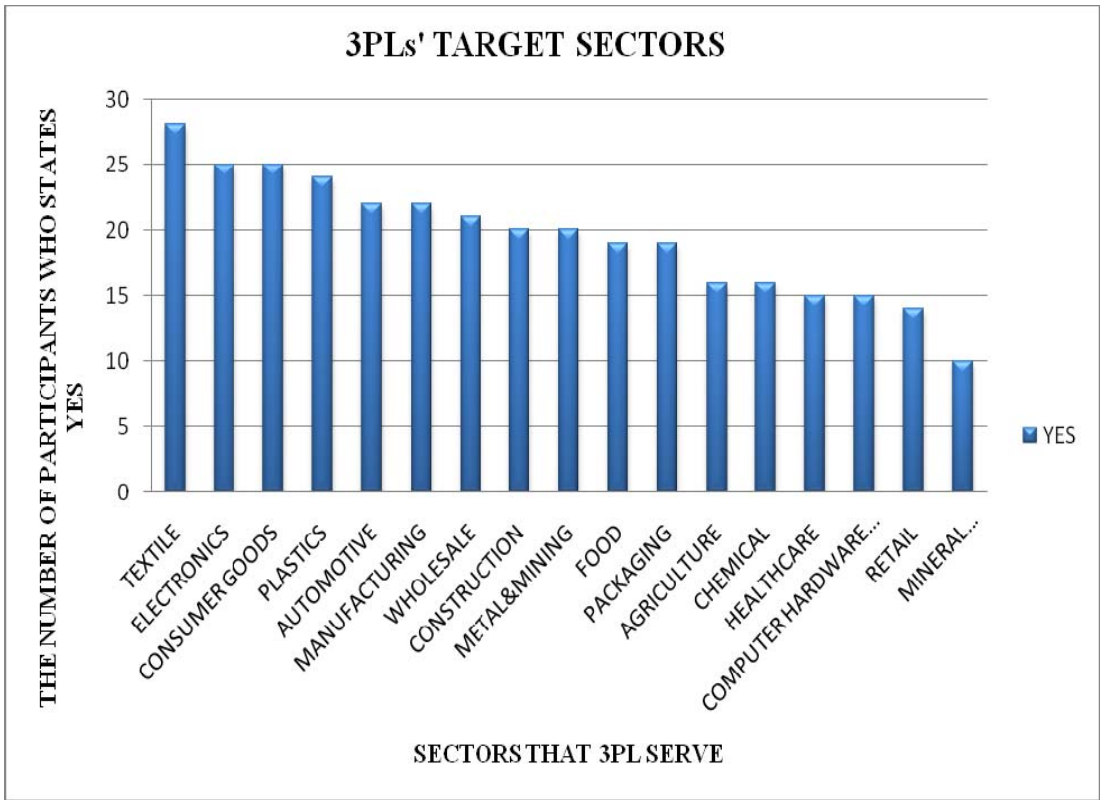

Figure 5.1: The Sectors that 3PL serve

According to the Figure 5.1, it is seen that mostly served industries are textile, automotive, wholesale, consumer goods, manufacturing, electronics, plastics.

In 1990, the lead sectors that made the logistics sector developed were textile, ready wear and machinery sector. At the present day, besides these sectors, automotive, retailing and electronics sectors have a huge contribution to the development of the logistics sector. But automotive sector has the biggest part within these sectors. Although textile sector continues to grow, it lost its former power. The textile export volume was 5.5 billion USD in 2002; it passed 8.7 billion USD in 2005. Ready-wear export volume also increased from 6.6 billion USD to 9.9 Billion USD at the same period. Automotive sector size has increased from 3.6 billion USD to 10.2 billion USD within the years 2002 and 2005. Automotive export volume got e head of textile and ready-wear sectors with a 10.2 billion USD in 2005. Also the domestic sales in the sector strengthened this situation. As a result, the proportion of automotive in logistics sector has increased almost 3 times within 5 years. So the reason of this finding may be these developments in the other sectors.

5.4.3 Logistics Capabilities of 3PL Companies

In this part of the survey, the services that are offered by 3PLs are deeply examined and following questions are asked to the participants as below. These questions are prepared in likert scale measures. The scale used is 1 to 3. The scale descriptions are as follows: 1=Never, 2=Sometimes, 3=Always.

5.4.3.1 Transportation/Distribution

In this section, the questions relating to transportation/distribution services that are provided by 3PLs are already considered.

Q7.1 Participants were asked to provide General Trucking Service (TL, LTL) or not. The result is as follows;

Table 5.4: General Trucking Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sometimes	8	25,0	25,0	25,0
	Always	24	75,0	75,0	100,0
	Total	32	100,0	100,0	

It is obviously obtained that all of the participants provide general trucking service to their customers. According to the answers given, 24 of the participants (75%) always offer this service. However, 8 of them (25%) stated that they sometimes offer this service.

Due to Turkey's governments' transportation policy decisions, road transportation infrastructure is supported and developed rapidly. As a result of this regulation, it is not a surprise that we see that general trucking service is provided by all of the respondents.

Q7.2 Participants were asked to provide Intermodal Transportation Service or not. The result is as follows.

Table 5.5: Intermodal Transportation Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sometimes	12	37,5	37,5	37,5
	Always	20	62,5	62,5	100,0
	Total	32	100,0	100,0	

It is clearly seen that all of the participants offer intermodal transportation service to their customers. According to the table; 20 of them (62,5%) stated that they always provide this service, 12 of them (37,5%) stated that they sometimes provide.

Nowadays, to be competitive in the logistics market, 3PLs need to diversify their transportation modes according to customer demands. Competition within the market is very fierce due to customers' tendency towards the new concept such as supply chain management. So in order to deliver the customers products from the origin to the consumption point on time, the firms are using a combination of different ways of transportation.

Q7.3 Participants were asked to provide Specialized Services or not.

The result is as follows.

Table 5.6: Specialized Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	4	12,5	12,5	12,5
	Sometimes	17	53,1	53,1	65,6
	Always	11	34,4	34,4	100,0
	Total	32	100,0	100,0	

It is obtained that most of the participants offer this service. However there are some respondents which never provide this service. According to the results, 11 participants (34,4%) always provide this service, 17 participants (53,1%) sometimes offer and the rest 4 of them (12,5%) never provide.

The specialized services include the transportation and distribution of bulk, tank, hazardous materials, refrigerated goods and etc. The reason of this finding may be that some of them do not tend to expertise in that area due to their capital investment policies that the transportation of these specialized materials requires high cost and investment.

Q7.4 Participants were asked to provide Time-Constraint Services or not.

The result is as follows.

Table 5.7: Time-Constraint Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	6	18,8	18,8	18,8
	Sometimes	17	53,1	53,1	71,9
	Always	9	28,1	28,1	100,0
	Total	32	100,0	100,0	

It is seen that the most of the participants sometimes offer this service. According to the results; 9 of the participants (28,1%) always provide this service, 17 of them (53,1%) sometimes provide and 6 of them (18,8%) never provides.

The Time-Constraint Services includes JIT, overnight and same day deliveries. The reason of the high percentage of the sometimes answer may be the 3PLs' customers' demand tendencies. The customers generally from automotive sector demands JIT, the customers from retailing sector demands same day or overnight deliveries. The demand from other sectors is not enough to correspond high investments like investments in air craft's in order to perform same day and overnight deliveries. Due to this low demand from the customers, 3PLs sometimes offer this service. Also it can be said that the customers that are in need of this type of services have their own fleets and perform these operations in-house.

Q7.5 Participants were asked to provide Shipment Tracking and Tracing Services or not.

The result is as follows;

Table 5.8: Shipment Tracking and Tracing Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sometimes	7	21,9	21,9	21,9
	Always	25	78,1	78,1	100,0
	Total	32	100,0	100,0	

It is obtained that all of the participants offers tracing and tracking services. 25 of them (78,1%) always offer and 7 of them (21,9%) stated that they sometimes offer.

Shipment tracking and tracing is one of the fundamental part of logistics. To perform logistics service in an exemplary way, shipment tracking and tracing is a must, and evaluated as the core of the transportation, distribution, warehousing and all related activities. So it is seen from the Table 5.8, all of them offer this service.

5.4.3.2 Warehousing/Distribution

In this section, the questions relating to warehousing/distribution services that are provided by 3PLs are already considered.

Q7.6 Participants were asked to provide Public/Contract/Regional Warehousing Services or not.

The result is as follows;

Table 5.9: Public/Contract/Regional Warehousing Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	9,4	9,4	9,4
	Sometimes	10	31,3	31,3	40,6
	Always	19	59,4	59,4	100,0
	Total	32	100,0	100,0	

It is found that more than half of the participants provide public/contract/regional warehousing services. 19 of them (59,4%) stated that they always provide this service. 10 of them (31,3 %) stated that they sometimes provide this service and 3 of them (9,4%) never performed this service.

The tendency towards warehouse utilization along customers generally comprises outsourcing of warehousing. The fierce competition within sectors directs companies to outsource this service instead of performing it in-house. Companies invest in their core activities instead of investing in warehouses. Consequently this seems to be an expected result.

Q7.7 Participants were asked to provide Operational Technology Services or not. The result is as follows;

Table 5.10: Operational Technology Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	13	40,6	40,6	40,6
	Sometimes	12	37,5	37,5	78,1
	Always	7	21,9	21,9	100,0
	Total	32	100,0	100,0	

It is found that most of the 3PLs do not provide this service. Only 7 of them (21,9%) stated that they always provide this activity. 12 of them (37,5%) sometimes provide this activity, and rest of them which equals to 13 (40,6 %) with a high percentage never provide.

Operational technology which consists of bar coding and radio frequency is crucial for establishing best practices of performing warehouse and distribution activities. Generally high-tech products relating to computer hardware and software, electronics, healthcare and automotive sector demand and require RFID systems. For 3PLs, capital investment on RFID systems is a complex issue because only specific sectors demand this kind of operational technology service. Besides it is known that bar-coding technology is more appropriate for the rest of the industries due to low-capital investment and easy execution of system.

Q7.8 Participants were asked to provide Value-Added Services or not.

The result is as follows;

Table 5.11: Value-Added Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	6	18,8	18,8	18,8
	Sometimes	15	46,9	46,9	65,6
	Always	11	34,4	34,4	100,0
	Total	32	100,0	100,0	

It is obtained that approximately 80 percent of the 3PLs provide value-added services to their customers. 11 of them (34,4%) stated that they always provide this service. 15 of them (46,9%) sometimes provide and 6 of them (18,8%) never provide these services.

Value added services typically include cross-docking, freight consolidation, pick and pack operations. These types of services can be defined as a complementary of main service. In case of a need, they are required by customers. Hence, the response to the "sometimes" scale has the highest proportion among the participants.

Q 7.9 Participants were asked to provide Order Processing and Fulfillment Services or not.

The result is as follows;

Table 5.12: Order Processing and Fulfillment Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	9	28,1	28,1	28,1
	Sometimes	9	28,1	28,1	56,3
	Always	14	43,8	43,8	100,0
	Total	32	100,0	100,0	

More than half of the participants provide this service to their customers. 14 of them (43,8%) stated that they always provide this service, 9 of them (28,1%) sometimes provide and 9 of them (28,1%) never provide.

Generally companies which outsource their warehousing operations tend to outsource also their order processing and fulfillment activities due to obtain accuracy regarding the orders, gain cost advantage and specialize on their core activities. The expertise firms, 3PLs perform these activities on the behalf of them. This can be viewed as logistics consultancy.

5.4.3.3 Custom Services

In this section, the questions relating to custom services that are provided by 3PLs are already considered.

Q 7.10 Participants were asked to provide Custom Brokerage Services or not.

The result is as follows;

Table 5.13: Custom Brokerage Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	11	34,4	34,4	34,4
	Sometimes	10	31,3	31,3	65,6
	Always	11	34,4	34,4	100,0
	Total	32	100,0	100,0	

It is seen that 3PLs generally do not tend to provide this service. 11 of them (34,4%) stated that they always provide, 10 of them (31,3%) sometimes provide and 11 of them (34,4%) never provide.

Generally in Turkey, custom brokerages services have arranged by agreements between private custom brokers and enterprises. As per the demands from customers, 3PLs tend to offer this service. But it isn't a necessity for them.

Q 7.11 Participants were asked to provide Duty Drawback Services or not.

The result is as follows;

Table 5.14: Duty Drawback Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	13	40,6	40,6	40,6
	Sometimes	13	40,6	40,6	81,3
	Always	6	18,8	18,8	100,0
	Total	32	100,0	100,0	

It is found that generally 3PLs do not provide this service. 6 of them (18,8%) stated that they always provide this service, 13 of them (40,6%) sometimes provide and 13 of them (40,6%) never provide.

Relating to the previous question, it is seen that custom brokers or the firms themselves collect these duty drawback based on their agreements and 3PLs occasionally do not concentrate on this service.

5.4.3.4 Freight Finance Services

In this section, the questions relating to freight finance services that are provided by 3PLs are already considered.

Q 7.12 Participants were asked to provide Freight Audit Services or not.

The result is as follows;

Table 5.15: Freight Audit Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	3,1	3,1	3,1
	Sometimes	8	25,0	25,0	28,1
	Always	23	71,9	71,9	100,0
	Total	32	100,0	100,0	

It is seen that nearly 100 percent of the 3PLs offer this service. 23 of the participants (71,9%) stated that they always provide this service, 8 of them (25,0%) sometimes provide this service and 1 of them (3,1%) never provides this service.

In order to obtain smooth financial and accounting flows between the 3PLs' and their customers, the finance audit service has to be done definitely. Accounting and finance departments of 3PLs works in a way that they always keep benefits for both of the sites.

Q 7.13 Participants were asked to provide Freight Bill Payment Services or not. The result is as follows;

Table 5.16: Freight Bill Payment Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	6,3	6,3	6,3
	Sometimes	5	15,6	15,6	21,9
	Always	25	78,1	78,1	100,0
	Total	32	100,0	100,0	

It is seen that nearly 95 percent of the 3PLs provide this service. 25 of them (78,1%) stated that they always provide this service, 5 of them (15,6 %) sometimes provide and 2 of them (6,3%) never provide.

As a complementary to freight auditing, accounting and finance departments of 3PLs provide freight bill payment services to their customers in order to keep the accounts of both sides correctly and make the customers to pay on time.

5.4.3.5 IT Support

In this section, the questions relating to IT Support that are provided by 3PLs are already considered.

Q 7.14 Participants were asked to provide EDI Capability Service or not.

The result is as follows;

Table 5.17: EDI Capability Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	10	31,3	31,3	31,3
	Sometimes	12	37,5	37,5	68,8
	Always	10	31,3	31,3	100,0
	Total	32	100,0	100,0	

It is seen that the 3PLs do not mostly provide this service. 10 of them (31,3%) stated that they always provide this service, 12 of them (37,5%) sometimes provide, 10 of them (31,3%) never provide.

EDI as an information-technology tool is very expensive and difficult to implement. As a result of this, it can be said that only 30 percent of the 3PLs which have a strong capital structure provide this service according to their customer demands.

Q 7.15 Participants were asked to provide Logistics Information System & Other software Service or not.

The result is as follows;

Table 5.18: Logistics Information System & Other Software Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	6,3	6,3	6,3
	Sometimes	17	53,1	53,1	59,4
	Always	13	40,6	40,6	100,0
	Total	32	100,0	100,0	

It is found that most of the 3PLs provide Logistics Information System and Other Software Services. 13 of them (40,6%) stated that they always provide this service, 17 of them (53,1%) sometimes provide and 2 of them (6,3%) never provide.

Nowadays, technology improvements on information systems increase the efficiency and effectiveness of logistics services. Logistics can't be evaluated without IT. Thus, utilization of logistics information system is a primary key in order to increase the competitive advantage of 3PLs.

Q 7.16 Participants were asked to provide Web-Based Solution Services or not. The result is as follows;

Table 5.19: Web-Based Solution Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	4	12,5	12,5	12,5
	Sometimes	11	34,4	34,4	46,9
	Always	17	53,1	53,1	100,0
	Total	32	100,0	100,0	

It is obtained that most of the companies offer Web-Based Solution Services to their customers. 17 of them (53,1%) state that they always provide, 11 of them (34,4%) sometimes provide and 4 of them (12,5%) never provide.

With the development of World-Wide-Web, it is easier for 3PLs to interact with their customers. Widely usage of WWW open new horizons both 3PLs and their customers and shortens the time length for the logistics information services offered.

5.4.3.6 Product Support Services

In this section, the questions relating to Product Support Services that are provided by 3PLs are already considered.

Q 7.17 Participants were asked to provide Reverse Logistics Services or not.

The result is as follows;

Table 5.20: Reverse Logistics Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	17	53,1	53,1	53,1
	Sometimes	11	34,4	34,4	87,5
	Always	4	12,5	12,5	100,0
	Total	32	100,0	100,0	

It is seen that most of the 3PLs do not provide Reverse Logistics Services. Only 4 of them (12,5%) stated that they always provide this service, 11 of them (34,4%) sometimes provide, 17 of them (53,1%) never provide.

The reason of this finding may be that this service requires specialization due to difficulties in implementation. It is a newly developing concept in Turkey. Reverse logistics is all activity associated with a product/service after the point of sale. Types of activities that 3PLs provide common with reverse logistics includes: logistics, warehousing, repair, refurbishment, recycling, e-waste, after market call center support, reverse fulfillment, field service and many others.

Q 7.18 Participants were asked to provide Value-Added Services or not.

The result is as follows;

Table 5.21: Value-Added Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	15	46,9	46,9	46,9
	Sometimes	9	28,1	28,1	75,0
	Always	8	25,0	25,0	100,0
	Total	32	100,0	100,0	

Most of the 3PLs never provide this service. 8 of them (25,0%) stated that they always provide, 9 of them (28,1%) sometimes provide and 15 of them (46,9%) never provide.

Generally manufacturing firms evaluate packaging, labeling, marking, test and assembly of products as core activities and do not tend to outsource these activities. They perform these activities in house. However, in the logistics sector, there is a rapid growth in terms of offering these services.

5.4.3.7 Logistics Management/Consulting

In this section, the questions relating to Logistics Management/Consulting Services that are provided by 3PLs are already considered.

Q 7.19 Participants were asked to provide Fleet Operation Services or not.

The result is as follows;

Table 5.22: Fleet Operation Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	9,4	9,4	9,4
	Sometimes	10	31,3	31,3	40,6
	Always	19	59,4	59,4	100,0
	Total	32	100,0	100,0	

From the Table 5.22, it is seen that most of the 3PLs provide Fleet Operation Services. 19 of them (59,4%) stated that they always provide this service, 10 of them (31,3%) sometimes provide and 3 of them (9,4%) never provide.

In Turkey, the road transportation infrastructure is developed more than any other transportation choices. So, it affects all transport mode selections among all 3PLs that is serving to variety of industries. 3PLs give priority to this transportation mode. It is not surprised that most of them have this service. However managing and organizing truck fleet department is a very complex issue. This consists of tracking fleets under GPS satellite based software systems, conducting reservations,

coordination of vehicle drivers and provide the whole coordination between overland transport departments.

Q 7.20 Participants were asked to provide Distribution Network Design Services or not.

The result is as follows;

Table 5.23: Distribution Network Design Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	8	25,0	25,0	25,0
	Sometimes	12	37,5	37,5	62,5
	Always	12	37,5	37,5	100,0
	Total	32	100,0	100,0	

It is seen that more than half of the 3PLs provide Distribution Network Design Services. 12 of them (37,5%) stated that they always provide this service, 12 of them (37,5%) sometimes provide and 8 of them (25,0%) never provide.

The reason of this finding may be that in order to reach an optimal decision for both transportation and warehousing and gain cost advantage, the customers of the 3PLs demand this specialized service from them. It reflects a substitution effect among choosing a transport mode instead of locating DCs' even a cut off can be evaluated as cost consideration. Both 3PL and its customer must decide upon on this subject fundamentally. It is a very critical decision to select the best location for DC/warehouse or to determine the best transport mode.

Q 7.21 Participants were asked to provide Carrier Selection/Negotiation/Routing Services or not.

The result is as follows;

Table 5.24: Carrier Selection/Negotiation/Routing Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	3,1	3,1	3,1
	Sometimes	13	40,6	40,6	43,8
	Always	18	56,3	56,3	100,0
	Total	32	100,0	100,0	

It is seen that most of the 3PLs provide Carrier Selection/Negotiation/Routing Services. 18 of them (56,3%) stated that they always provide, 13 of them (40,6%) sometimes provide and only one of them (3,1%) never provides.

This type of service can be considered as a consultancy service. From customers' point of view, especially in this position, 3PL is acting and operating logistics services on behalf of its clients. In Turkey, generally, carrier selection and price negotiations are based mostly on cost considerations, reliability, dependability, and also on-going relationships.

Q 7.22 Participants were asked to provide Facility Location Analysis/Selection/Design Services or not.

The result is as follows;

Table 5.25: Facility Location Analysis/Selection/Design Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	14	43,8	43,8	43,8
	Sometimes	11	34,4	34,4	78,1
	Always	7	21,9	21,9	100,0
	Total	32	100,0	100,0	

It is seen that nearly half of the 3PLs do not provide this service. Only 7 of them (21,9%) stated that they always provide this service, 11 of them (34,4%) sometimes provide and 14 of them (43,8%) never provide.

The reason of this high percentage of never answer may be that when compared to other services given, it can be evaluated as a multi-disciplinary issue that includes different types of engineering which requires deep experience. Thus the number of expertise firms is low.

Q 7.23 Participants were asked to provide Inventory Management Services or not. The result is as follows;

Table 5.26: Inventory Management Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	16	50,0	50,0	50,0
	Sometimes	6	18,8	18,8	68,8
	Always	10	31,3	31,3	100,0
	Total	32	100,0	100,0	

It is seen that half of the 3PLs do not provide Inventory Management service. Only 10 of them (31,3 %) stated that they always provide, 6 of them (18,8%) sometimes provide and 16 of them (50,0 %) never provide.

According to the obtained results, it can be evaluated as the tendency among the firms in Turkey is to perform this activity in-house. To keep up the accurate database for their inventories and to generate coordination between production, sales and marketing departments, firms tend to perform this activity by themselves.

5.4.4 Merger and Acquisition Trends within 3PLs

Q 8.1 In this part of the survey the respondents are asked to participate in any merger or acquisition. The result is as follows;

Table 5.27: Merger and Acquisition Trends

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	18	56,3	56,3	56,3
	Yes	14	43,8	43,8	100,0
	Total	32	100,0	100,0	

The 43,8 percent of the respondents answered as yes and 56,3 percent answered as no. It is seen that the tendency regarding the mergers and acquisitions within the sector is half but more close to acting as being alone

Participants who responded the above question as yes were requested to reply the following questions in order to determine which kinds of businesses they have been mergered or acquisited.

Q 8.2 Respondents were asked to participate a merger or acquisition activity with another 3PL.

The result is as follows;

Table 5.28: Merger or Acquisition Activity with Another 3PL

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	25	78,1	78,1	78,1
	Yes	7	21,9	21,9	100,0
	Total	32	100,0	100,0	

7 of them (21,9%) stated that they have been participated in a merger or acquisition activity with another 3PL.

Q 8.3 Respondents were asked to participate a merger or acquisition activity with a freight forwarder.

The result is as follows;

Table 5.29: Merger or Acquisition activity with a Freight Forwarder

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	29	90,6	90,6	90,6
	Yes	3	9,4	9,4	100,0
	Total	32	100,0	100,0	

3 of them (9,4%) stated that they have been participated in a merger or acquisition activity with freight forwarder.

Q 8.4 Respondents were asked to participate a merger or acquisition activity with a custom broker.

The result is as follows;

Table 5.30: Merger or Acquisition Activity with a Custom Broker

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	30	93,8	93,8	93,8
	Yes	2	6,3	6,3	100,0
	Total	32	100,0	100,0	

2 of them (6,3%) stated that they have been participated in a merger or acquisition activity with custom broker.

Q 8.5 Respondents were asked to participate a merger or acquisition activity with a transportation company

The result is as follows;

Table 5.31: Merger or Acquisition Activity with Transportation Company

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	27	84,4	84,4	84,4
	Yes	5	15,6	15,6	100,0
	Total	32	100,0	100,0	

5 of them (15,6%) stated that they have been participated in a merger or acquisition activity with transportation company.

Q 8.6 Respondents were asked to participate a merger or acquisition activity with an IT company

The result is as follows;

Table 5.32: Merger or Acquisition Activity with an IT Company

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	32	100,0	100,0	100,0

None of them stated that they have been participated in a merger or acquisition activity with an IT company.

It is seen from the above results; 3PL service providers in Turkey have expanded the scope of their operations and broadened the range of services offered through acquisitions and mergers. When asked if they had participated in any significant merger or acquisition, 14 of the 32, nearly half of the participants, responded to the question as “yes.”

5.4.5 Evaluation of the Sector Problems and Suggested Solutions

In order to evaluate the sector problems and suggested solutions, the following questions are asked to the participants and the following results are obtained. These results are given in an objective manner directly without any change or interruption of the participants' responses.

Our comments regarding this crucial topic will be held on later in conclusion and recommendation chapter.

5.4.5.1 Evaluation of Sector Problems

These questions are prepared in likert scale measures. The scale is used as from 1 to 5. The scale descriptions are as follows: 1=Strongly Agree, 2=Agree, 3=Agree in part, 4=Disagree, 5=Strongly Disagree

Q 9.1 Participants are requested to evaluate "Lack of using the strategic position of the country" can be considered as a problem for the sector or not.

The results are as below.

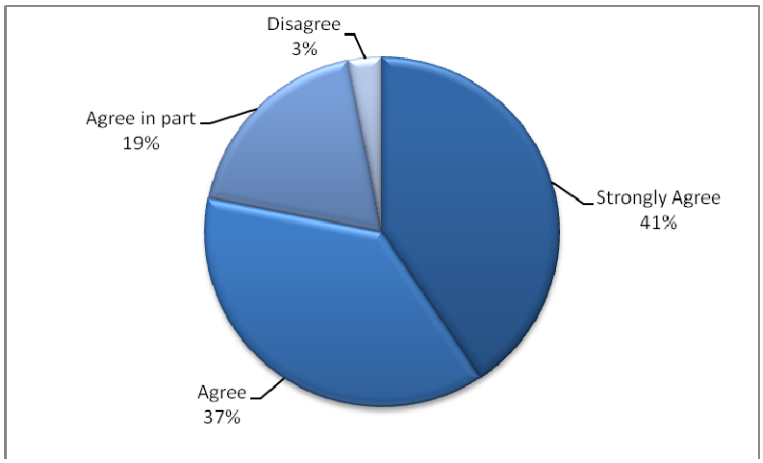

Figure 5.2: Lack of using the strategic position of the country

According to the Figure 5.2, it is seen that most of the participants that is 41 percent of them strongly agree, 37 percent of the participants agree, 19 percent of them agree in part and only 3 percent of them disagree.

Q 9.2 Participants are requested to evaluate "Weak economic growth" can be considered as a problem for the sector or not.

The results are as below.

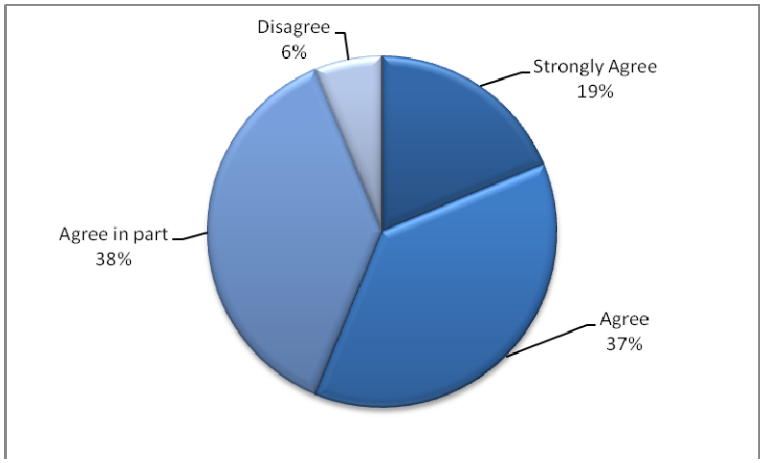

Figure 5.3: Weak economic growth

According to the Figure 5.3, it is seen that 19 percent of the participants strongly agree, 37 percent of them only agree, 38 percent of them agree in part and 6 percent of them disagree.

Q 9.3 Participants are requested to evaluate “Low profitability of the industry” can be considered as a problem for the sector or not.

The results are as below.

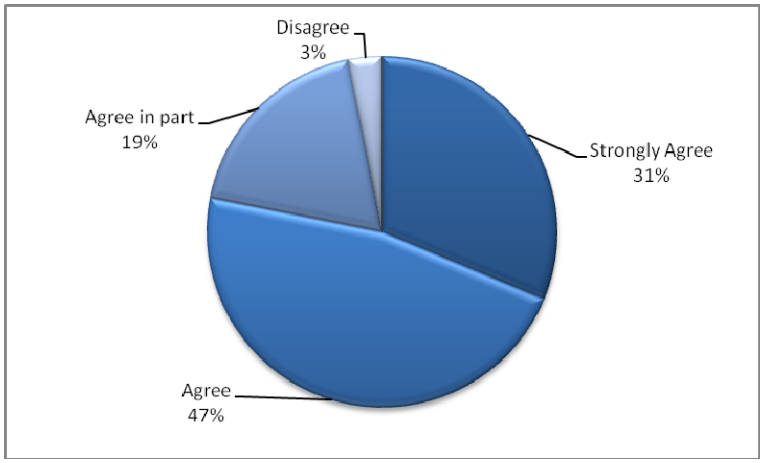

Figure 5.4: Low profitability of the industry

According to the Figure 5.4, it is seen that 31 percent of the participants strongly agree, 47 percent of them only agree, 19 percent of them agree in part and 3 percent of them disagree.

Q 9.4 Participants are requested to evaluate “Educated and qualified work force lack in logistics” can be considered as a problem for the sector or not.

The results are as below.

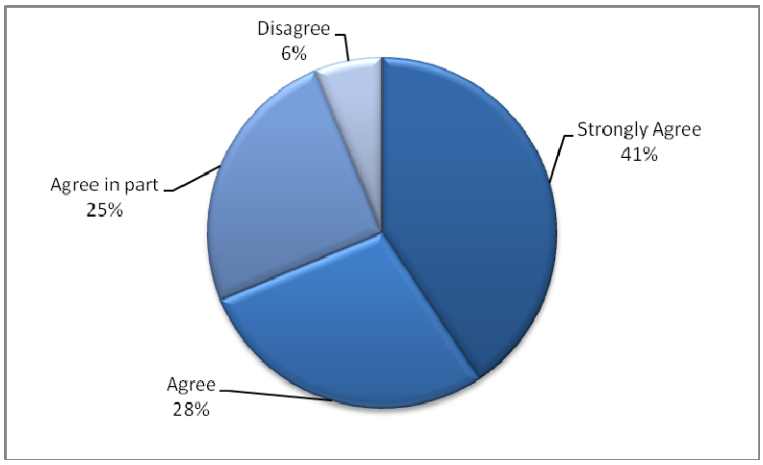

Figure 5.5: Educated and qualified work force lack in logistics

According to the Figure 5.5, it is seen that 41 percent of the participants strongly agree, 28 percent of them only agree, 25 percent of them agree in part and 6 percent of them disagree.

Q 9.5 Participants are requested to evaluate "That sufficient investment on technology and IT are not made" can be considered as a problem for the sector or not.

The results are as below.

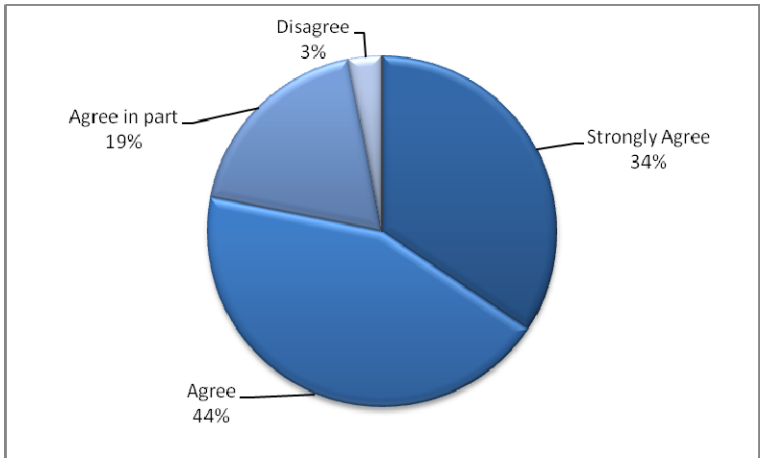

Figure 5.6: That sufficient investment on technology and IT are not made

According to the Figure 5.6, it is seen that 34 percent of the participants strongly agree, 44 percent of them only agree, 19 percent agree in part and 3 percent of them disagree.

Q 9.6 Participants are requested to evaluate "Lack of infrastructure of ports" can be considered as a problem for the sector or not.

The results are as below.

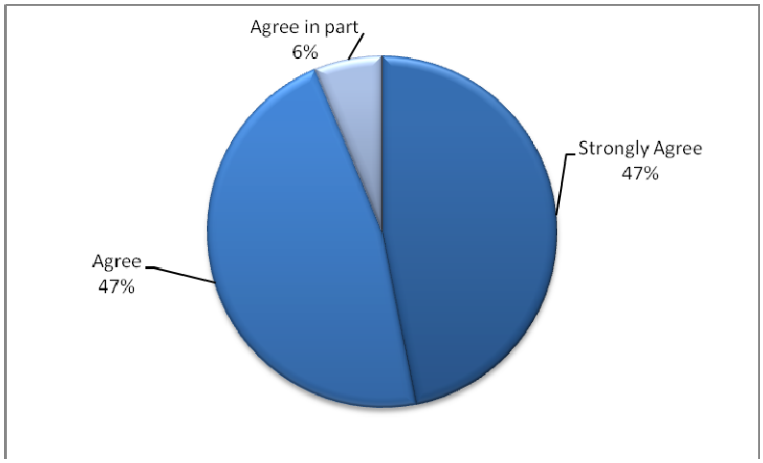

Figure 5.7: Lack of infrastructure of ports

According to the Figure 5.7, it is seen that most of the participants that is 47 percent strongly agree, 47 percent only agree and 6 percent agree in part. There isn't any participant who disagrees.

Q 9.7 Participants are requested to evaluate "Coordination shortage in law and instructions" can be considered as a problem for the sector or not.

The results are as below.

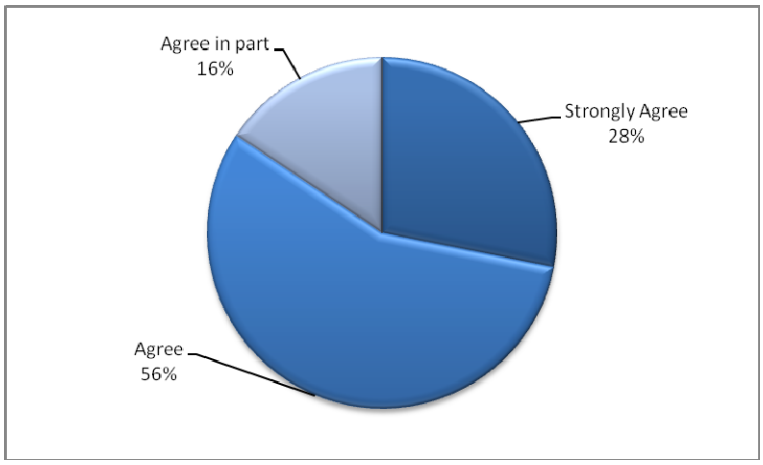

Figure 5.8: Coordination shortage in law and instructions

According to the Figure 5.8, it is seen that 28 percent of the participants strongly agree, 56 percent only agree and 16 percent agree in part. There isn't any participant who disagrees.

Q 9.8 Participants are requested to evaluate "Legal improvement and hardships in custom regulations" can be considered as a problem for the sector or not.

The results are as below.

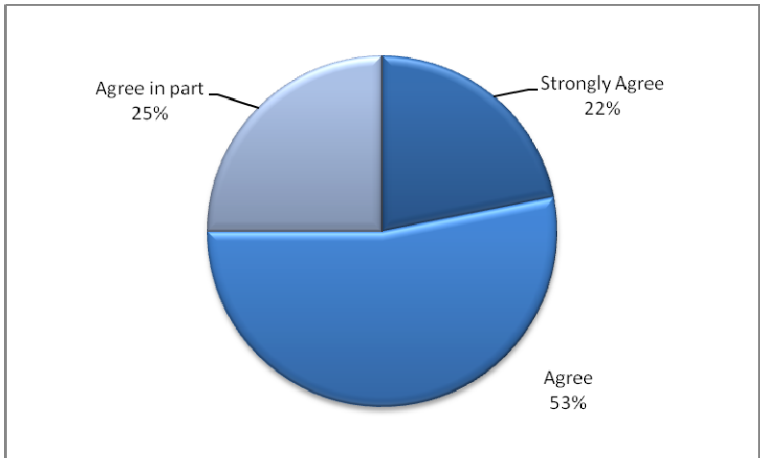

Figure 5.9: Legal Improvement and Hardship in Custom Regulations

According to the Figure 5.9, it is seen that 22 percent of the participants strongly agree, 53 percent only agree and 25 percent agree in part. There isn't any participant who disagrees.

Q 9.9 Participants are requested to evaluate "That the highway has more heavy in transportation sector" can be considered as a problem for the sector or not. The results are as below.

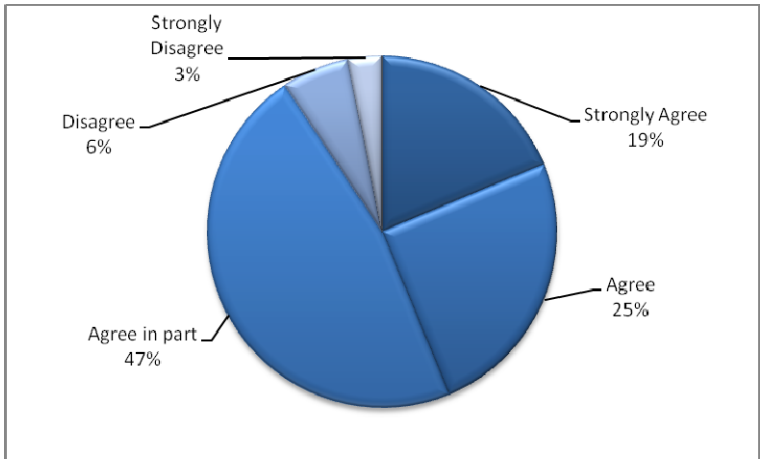

Figure 5.10: That the highway has more heavy in transportation sector

According to the Figure 5.10, it is seen that 19 percent of the participants strongly agree, 25 percent only agree, 47 percent agree in part, 6 percent of them disagree and 3 percent of them strongly disagree.

5.4.5.1 Evaluation of Suggested Solutions

These questions are prepared in likert scale measures. The scale is used as from 1 to 5. The scale descriptions are as follows: 1=Strongly Agree, 2=Agree, 3=Agree in part, 4=Disagree, 5=Strongly Disagree

Q 10.1 Participants are requested to evaluate "Strategic position of the country must be used." can be considered as a solution for the problems of the sector or not.

The results are as below.

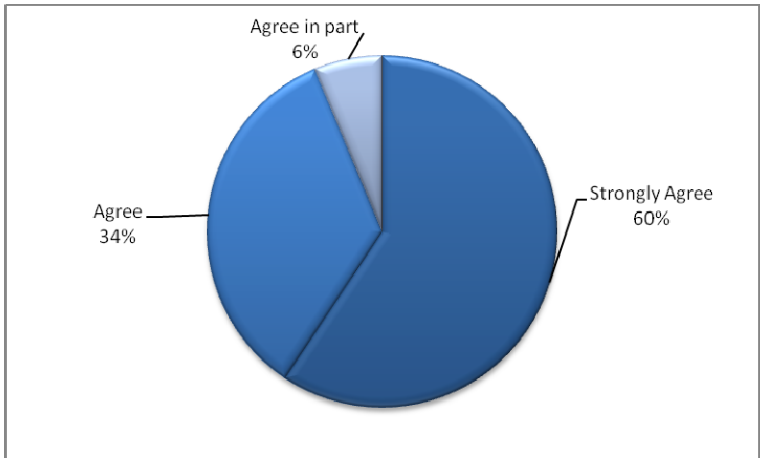

Figure 5.11: Strategic position of the country must be used

According to the Figure 5.11, most of the participants that are 60 percent of them strongly agree, 34 percent of them agree and 6 percent of them agree in part.

Q 10.2 Participants are requested to evaluate "Outsourcing must be increased by the firms instead of doing on their owns" can be considered as a solution for the problems of the sector or not.

The results are as below.

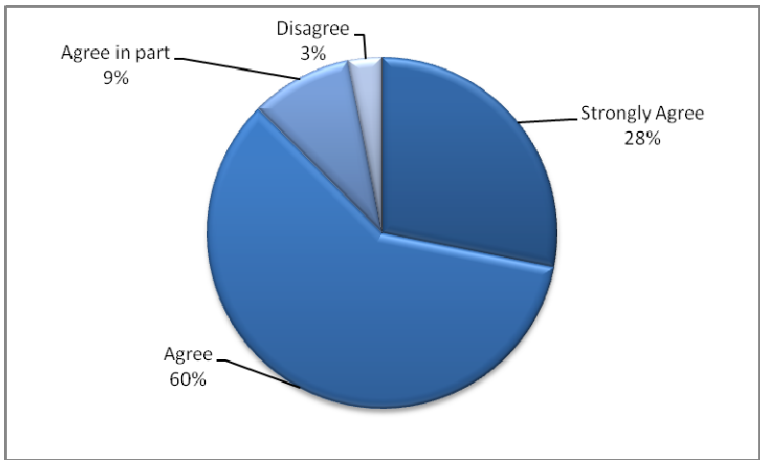

Figure 5.12: Outsourcing must be increased by the firms instead of doing on their owns

According to the Figure 5.12, it is seen that 28 percent of the participants strongly agree, 60 percent of them agree, 9 percent of them agree in part and 3 percent of them disagree

Q 10.3 Participants are requested to evaluate "The definition of 3PL company must be done clearer in order to make customers confuse the term" can be considered as a solution for the problems of the sector or not.

The results are as below.

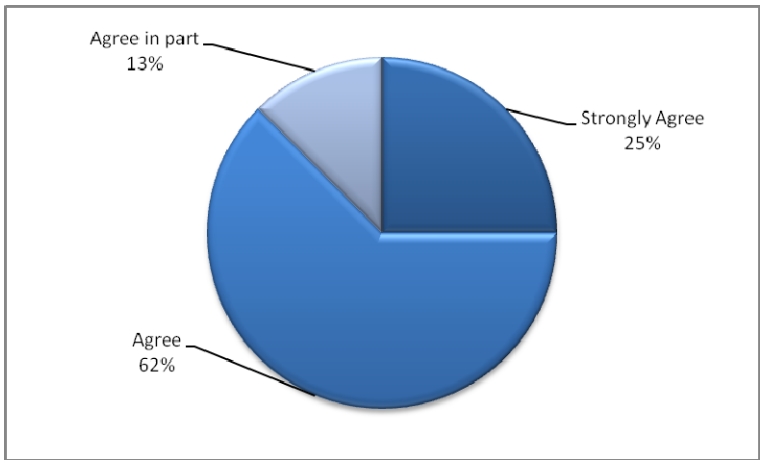

Figure 5.13: The definition of 3PL Company must be done clearer in order to make customers confuse the term

According to the Figure 5.13, 25 percent of the participants strongly agree, 62 percent of them agree, 13 percent of them agree in part.

Q 10.4 Participants are requested to evaluate "Forming a regular transportation policies" can be considered as a solution for the problems of the sector or not.

The results are as below.

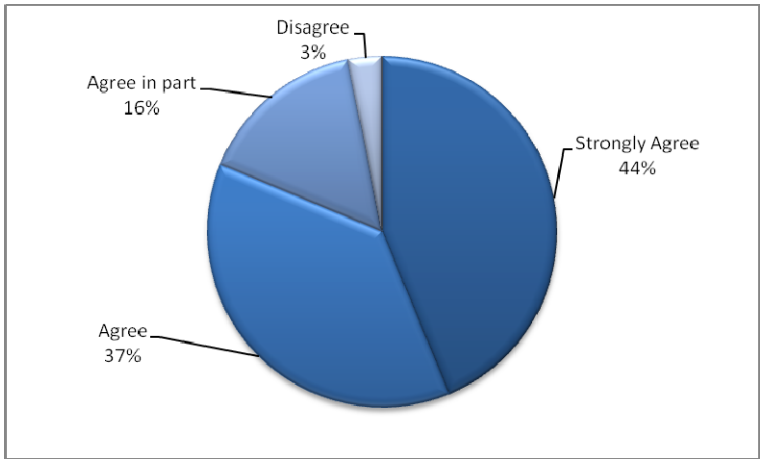

Figure 5.14: Forming regular transportation policies

According to the Figure 5.14, most of the participants that are 44 percent of them strongly agree, 37 of them agree, 16 of them agree in part and 3 percent of them disagree.

Q 10.5 Participants are requested to evaluate "Developing the transportation infrastructure" can be considered as a solution for the problems of the sector or not.

The results are as below.

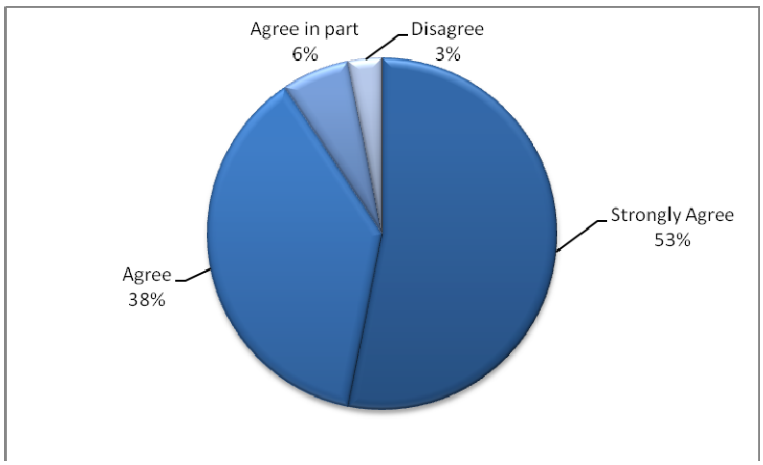

Figure 5.15: Developing the transportation infrastructure

According to the Figure 5.15, 53 percent of the participants strongly agree, 38 percent of them agree, 6 percent of them agree in part and 3 percent of them disagree.

Q 10.6 Participants are requested to evaluate "The use of logistics information systems must be increased" can be considered as a solution for the problems of the sector or not.

The results are as below.

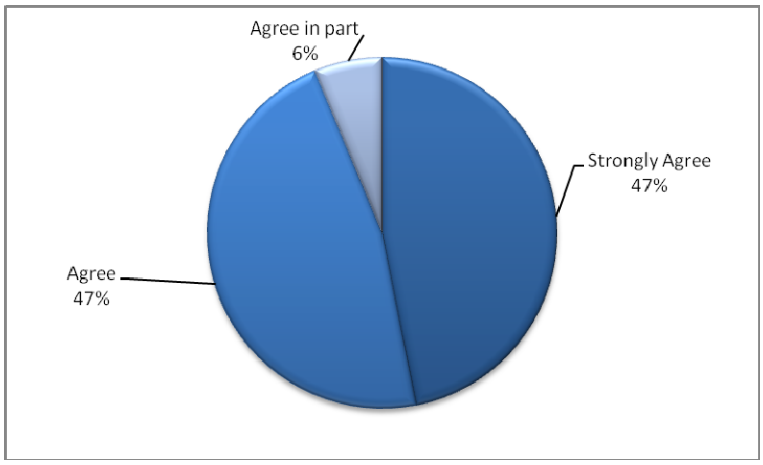

Figure 5.16: The use of logistics information systems must be increased

According to the Figure 5.16, it is seen that 47 percent of the participants strongly agree, 4 percent of them agree and 6 percent of them agree in part.

Q 10.7 Participants are requested to evaluate "Instead of highway, ports and railways must be dwelled on" can be considered as a solution for the problems of the sector or not.

The results are as below.

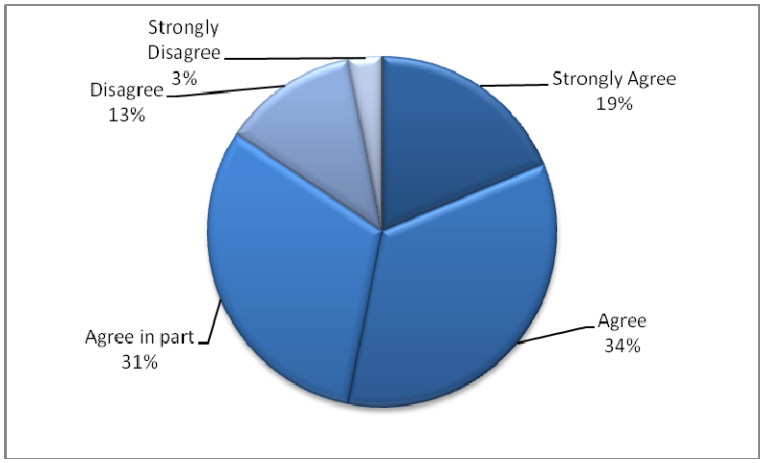

Figure 5.17: Instead of highway, ports and railways must be dwelled on

According to the Figure 5.17, it is seen that 19 percent of the participants strongly agree, 34 percent of them agree, 31 percent of them agree in part, 13 percent of them disagree and 3 percent of them strongly disagree.

Q 10.8 Participants are requested to evaluate "Improvement of the logistics education and the training" can be considered as a solution for the problems of the sector or not.

The results are as below.

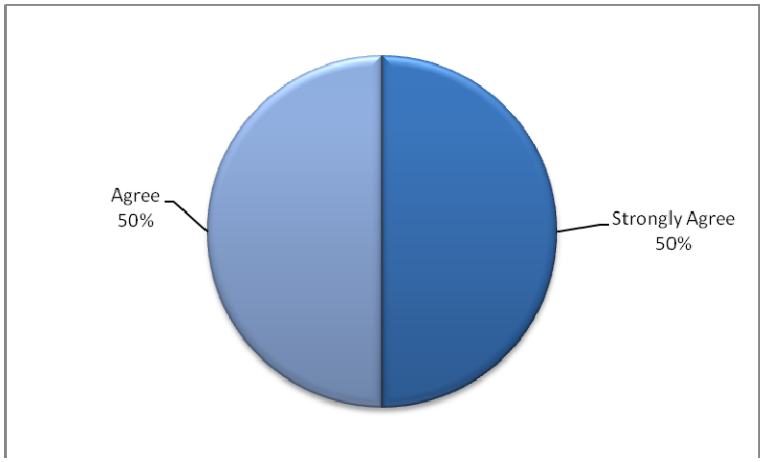

Figure 5.18: Improvement of the logistics education and the training

According to the Figure 5.18, half of the participants strongly agree and the half of them agree.

Q 10.9 Participants are requested to evaluate "Collaboration between the university and the sector must be increased" can be considered as a solution for the problems of the sector or not.

The results are as below.

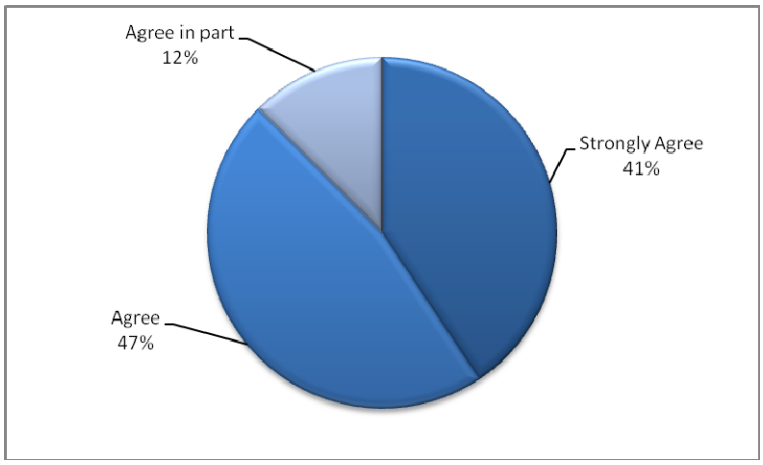

Figure 5.19: Collaboration between the university and the sector must be increased

According to the Figure 5.19, 41 percent of the participants strongly agree, 47 percent of them agree and 12 percent of them agree in part.

Q 10.10 Participants are requested to evaluate "National/International Seminars must be held" can be considered as a solution for the problems of the sector or not.

The results are as below.

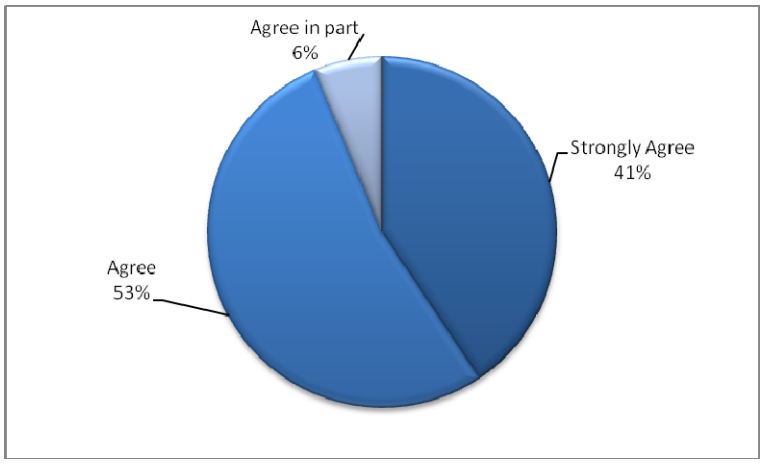

Figure 5.20: National/International Seminars must be held

According to the Figure 5.20, it is seen that 41 percent of the participants strongly agree, 53 percent of them agree and 6 percent of them agree in part.

5.5 FURTHER FINDINGS

The aim of this part is to reveal that the fully foreign capital 3PLs are more sophisticated than partly foreign capital and fully Turkish capital 3PLs in terms of operating period in the sector, the number of employees and the logistics capabilities. The cross tab analysis is conducted to questions 3 and 4, 3 and 5, 3 and 7.

5.5.1 Capital Structure/Operating Period Relationship Analysis

Basically, the capital structure of 3PLs is divided into three groups. These are Fully Turkish Capital, Fully Foreign Capital and Partly Foreign Capital. The left part of the Table 5.33 shows the capital structure of 3PLs. And the operating period lies on four dimensions. These include less than a year, between 1 and 5 years, between 6 and 10 years, more than 10 years. The upper part of the cross tab table shows these operating periods.

Table 5.33: Question 3 and Question 4 Crosstabulation

			Q4				
			Less than a year	Between 1 and 5 years	Between 6 and 10 years	More than 10 years	Total
Q3	Fully Turkish Capital	Count	1	4	2	13	20
		% within s3	5,0%	20,0%	10,0%	65,0%	100,0%
		% of Total	3,1%	12,5%	6,3%	40,6%	62,5%
	Fully Foreign Capital	Count	0	0	0	2	2
		% within s3	,0%	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	0	1	3	6	10
		% within s3	,0%	10,0%	30,0%	60,0%	100,0%
		% of Total	,0%	3,1%	9,4%	18,8%	31,3%
Total		Count	1	5	5	21	32
		% within s3	3,1%	15,6%	15,6%	65,6%	100,0%
		% of Total	3,1%	15,6%	15,6%	65,6%	100,0%

It is seen that fully foreign capital 3PLs are operating for more than 10 years in the sector. However the fully Turkish capital and partly Turkish capital 3PLs are operating generally less than 10 years. The majority of operating period for them is between 5 and 10 years. The reason of this finding may be that fully foreign capital 3PLs realize the logistics potential of Turkey and enter into the market previously. With the development of the sector, partly foreign and fully Turkish capital 3PLs start to take place in the market. So it can be said that the fully foreign capital 3PLs are more sophisticated than partly foreign and fully Turkish capital 3PLs' in terms of their operating period in the sector.

5.5.2 Capital Structure/Number of Employees Relationship Analysis

The left part of the Table 5.34 shows the capital structure of 3PLs. The upper part of the table shows the number of employees in 5 parts. They are less than 50, between 50 and 149, between 150 and 499, between 500 and 999, between 1000 and 2000.

Table 5.34: Question 3 and Question 5 Crosstabulation

			Q5					
			Less than 50	Between 50 and 149	Between 150 and 499	Between 500 and 999	Between 1000 and 2000	Total
Q3	Fully Turkish Capital	Count	7	4	6	2	1	20
		% within s3	35,0%	20,0%	30,0%	10,0%	5,0%	100,0%
		% of Total	21,9%	12,5%	18,8%	6,3%	3,1%	62,5%
	Fully Foreign Capital	Count	0	0	0	1	1	2
		% within s3	,0%	,0%	,0%	50,0%	50,0%	100,0%
		% of Total	,0%	,0%	,0%	3,1%	3,1%	6,3%
	Partly Foreign Capital	Count	2	4	3	0	1	10
		% within s3	20,0%	40,0%	30,0%	,0%	10,0%	100,0%
		% of Total	6,3%	12,5%	9,4%	,0%	3,1%	31,3%
Total		Count	9	8	9	3	3	32
		% within s3	28,1%	25,0%	28,1%	9,4%	9,4%	100,0%
		% of Total	28,1%	25,0%	28,1%	9,4%	9,4%	100,0%

It is seen that fully foreign capital 3PLs have more than 500 employees and they are operating with their large teams. However the fully Turkish capital and partly foreign

capital 3PLs have generally less than 500 employees. Fully Turkish capital 3PLs have generally less than 50 employees. The majority of partly foreign capital 3PLs have between 50 and 149 that is greater than fully Turkish capital. The reason of this finding may be that the fully foreign 3PLs have more experienced and large teams based on their long operating period and dealing with larger projects, partly foreign and fully foreign ones have generating their teams justly based on their operating period and experience in the sector. So it can be said that the fully foreign capital 3PLs are more sophisticated than partly foreign and fully Turkish capital 3PLs' in terms of the number of employees.

5.5.3 Capital Structure/Logistics Capabilities Relationship Analysis

Capital Structure and Logistics Capabilities relationship are analyzed in 7 parts. These are Capital Structure/Transportation and Distribution Services Relationship Analysis, Capital Structure/Warehousing and Distribution Services Relationship Analysis, Capital Structure/Custom Services Analysis, Capital Structure/Freight Finance Services Relationship, Capital Structure/IT Support Services Relationship, Capital Structure/Product Support Services Relationship, Capital Structure/Logistics Management/Consulting Relationship.

5.5.3.1 Capital Structure/Transportation and Distribution Services Relationship Analysis

Transportation/Distribution Services consist of General Trucking Services (TL, LTL), Intermodal Transportation Services, Specialized Services, Time Constraint Services and Shipment Tracking and Tracing Services.

Table 5.35: Question 3 and Question 7_1 Crosstabulation

			Q7_1		
			Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	5	15	20
		% within s3	25,0%	75,0%	100,0%
		% of Total	15,6%	46,9%	62,5%
	Fully Foreign Capital	Count	0	2	2
		% within s3	,0%	100,0%	100,0%
		% of Total	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	3	7	10
		% within s3	30,0%	70,0%	100,0%
		% of Total	9,4%	21,9%	31,3%
Total		Count	8	24	32
		% within s3	25,0%	75,0%	100,0%
		% of Total	25,0%	75,0%	100,0%

According to the Table 5.35, it is seen that fully foreign capital 3PLs always provide general trucking services to their customers. Also fully foreign capital 3PLs and partly foreign capital 3PLs provide this service. However their responses also consist of the sometimes option.

Table 5.36: Question 3 and Question 7_2 Crosstabulation

			Q7_2		
			Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	8	12	20
		% within s3	40,0%	60,0%	100,0%
		% of Total	25,0%	37,5%	62,5%
	Fully Foreign Capital	Count	0	2	2
		% within s3	,0%	100,0%	100,0%
		% of Total	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	4	6	10
		% within s3	40,0%	60,0%	100,0%
		% of Total	12,5%	18,8%	31,3%
Total		Count	12	20	32
		% within s3	37,5%	62,5%	100,0%
		% of Total	37,5%	62,5%	100,0%

According to the Table 5.36, it is seen that fully foreign capital 3PLs always offer intermodal transportation services. Although most of the fully Turkish capital and

partly foreign capital ones always offer this service, they also indicate the sometimes option.

Table 5.37: Question 3 and Question 7_3 Crosstabulation

			Q7_3			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	4	10	6	20
		% within s3	20,0%	50,0%	30,0%	100,0%
		% of Total	12,5%	31,3%	18,8%	62,5%
	Fully Foreign Capital	Count	0	1	1	2
		% within s3	,0%	50,0%	50,0%	100,0%
		% of Total	,0%	3,1%	3,1%	6,3%
	Partly Foreign Capital	Count	0	6	4	10
		% within s3	,0%	60,0%	40,0%	100,0%
		% of Total	,0%	18,8%	12,5%	31,3%
Total		Count	4	17	11	32
		% within s3	12,5%	53,1%	34,4%	100,0%
		% of Total	12,5%	53,1%	34,4%	100,0%

According to the Table 5.37, it is seen that specialized services such as transportation and distribution of bulk, tank, hazardous and refrigerated goods aren't offered in dense by all of the 3PLs. Even the fully foreign capital 3PLs' sometimes offer or always offer. Most of the fully Turkish capital 3PLs never offer and partly foreign ones sometimes or always offer this service to their customers.

Table 5.38: Question 3 and Question 7_4 Crosstabulation

			Q7_4			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	5	9	6	20
		% within s3	25,0%	45,0%	30,0%	100,0%
		% of Total	15,6%	28,1%	18,8%	62,5%
	Fully Foreign Capital	Count	0	1	1	2
		% within s3	,0%	50,0%	50,0%	100,0%
		% of Total	,0%	3,1%	3,1%	6,3%
	Partly Foreign Capital	Count	1	7	2	10
		% within s3	10,0%	70,0%	20,0%	100,0%
		% of Total	3,1%	21,9%	6,3%	31,3%
Total		Count	6	17	9	32
		% within s3	18,8%	53,1%	28,1%	100,0%
		% of Total	18,8%	53,1%	28,1%	100,0%

According to the Table 5.38, it is seen that fully foreign capital 3PLs sometimes offer or always offer time-constraint services to their clients. It is observed that never option is selected by fully Turkish capital and partly foreign capital 3PLs'. The percentage of never option is 25 within the fully Turkish capital firms. Partly foreign ones indicate mostly that they sometimes offer this service with a percentage of 70 within itself.

Table 5.39: Question 3 and Question 7_5 Crosstabulation

			Q7_5		
			Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	5	15	20
		% within s3	25,0%	75,0%	100,0%
		% of Total	15,6%	46,9%	62,5%
	Fully Foreign Capital	Count	0	2	2
		% within s3	,0%	100,0%	100,0%
		% of Total	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	2	8	10
		% within s3	20,0%	80,0%	100,0%
		% of Total	6,3%	25,0%	31,3%
Total		Count	7	25	32
		% within s3	21,9%	78,1%	100,0%
		% of Total	21,9%	78,1%	100,0%

It is seen that all of the 3PLs offer shipment tracking and tracing services to their customers. Fully foreign capital 3PLs always offer. However fully Turkish capital and partly foreign capital 3PLs indicate that they sometimes or always provide.

5.5.3.2 Capital Structure/Warehousing and Distribution Services Relationship Analysis

Warehousing/Distribution Service consist of Public/Contract/Regional Warehouse, Operational Technology, Value-Added Services such as cross-docking, freight consolidation etc., and Order processing and Fulfillment Services.

Table 5.40: Question 3 and Question 7_6 Crosstabulation

			Q7_6			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	3	6	11	20
		% within s3	15,0%	30,0%	55,0%	100,0%
		% of Total	9,4%	18,8%	34,4%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	0	4	6	10
		% within s3	,0%	40,0%	60,0%	100,0%
		% of Total	,0%	12,5%	18,8%	31,3%
Total		Count	3	10	19	32
		% within s3	9,4%	31,3%	59,4%	100,0%
		% of Total	9,4%	31,3%	59,4%	100,0%

It is seen that fully foreign capital 3PLs always provide public/contract/regional warehousing services. However within itself 15 percent of the fully Turkish capital firms indicate that they never provide. The rest of them sometimes provide or always provide. Also partly foreign capital ones indicate that they sometimes or always provide this service to their customers.

Table 5.41: Question 3 and Question 7_7 Crosstabulation

			Q7_7			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	12	4	4	20
		% within s3	60,0%	20,0%	20,0%	100,0%
		% of Total	37,5%	12,5%	12,5%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	1	8	1	10
		% within s3	10,0%	80,0%	10,0%	100,0%
		% of Total	3,1%	25,0%	3,1%	31,3%
Total		Count	13	12	7	32
		% within s3	40,6%	37,5%	21,9%	100,0%
		% of Total	40,6%	37,5%	21,9%	100,0%

It is seen that fully foreign capital 3PLs always provide operational technology such as bar coding and radio frequency to their customers. Most of the fully Turkish capital firms that is 60 percent indicate that they never provide. Only 40 percent of

them state that they sometimes provide or always provide. Also most of the partly foreign capital ones that are 80 percent state that they sometimes provide this service to their customers.

Table 5.42: Question 3 and Question 7_8 Crosstabulation

			Q7_8			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	5	9	6	20
		% within s3	25,0%	45,0%	30,0%	100,0%
		% of Total	15,6%	28,1%	18,8%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	1	6	3	10
		% within s3	10,0%	60,0%	30,0%	100,0%
		% of Total	3,1%	18,8%	9,4%	31,3%
Total		Count	6	15	11	32
		% within s3	18,8%	46,9%	34,4%	100,0%
		% of Total	18,8%	46,9%	34,4%	100,0%

It is seen that fully foreign capital 3PLs always provide value-added services such as cross-docking, freight consolidation, pick and pack to their customers. However 25 percent of the fully Turkish capital 3PLs indicate that they never provide. The 45 percent of them state that they sometimes provide and the rest of them state that they always provide. Most of the partly foreign capital 3PLs that are 60 percent indicate that they sometimes provide this service to their customers. Partly foreign capital ones offer this service more often than fully Turkish capital firms.

Table 5.43: Question 3 and Question 7_9 Crosstabulation

			Q7_9			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	9	4	7	20
		% within s3	45,0%	20,0%	35,0%	100,0%
		% of Total	28,1%	12,5%	21,9%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	0	5	5	10
		% within s3	,0%	50,0%	50,0%	100,0%
		% of Total	,0%	15,6%	15,6%	31,3%
Total		Count	9	9	14	32
		% within s3	28,1%	28,1%	43,8%	100,0%
		% of Total	28,1%	28,1%	43,8%	100,0%

It is seen that fully foreign capital 3PLs always offer order processing and fulfillment to their customers. However 45 percent of the fully Turkish capital firms indicate that they never provide. 20 percent of them state that they sometimes provide and 35 percent of them always provide. Partly foreign capital 3PLs sometimes offer or always offer in half.

5.5.3.3 Capital Structure/Custom Services Relationship Analysis

Custom service consists of custom brokerage and duty drawback services.

Table 5.44: Question 3 and Question 7_10 Crosstabulation

			Q7_10			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	11	3	6	20
		% within s3	55,0%	15,0%	30,0%	100,0%
		% of Total	34,4%	9,4%	18,8%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	0	7	3	10
		% within s3	,0%	70,0%	30,0%	100,0%
		% of Total	,0%	21,9%	9,4%	31,3%
Total		Count	11	10	11	32
		% within s3	34,4%	31,3%	34,4%	100,0%
		% of Total	34,4%	31,3%	34,4%	100,0%

It is seen that fully foreign capital 3PLs always provide custom brokerage service. However it is seen that most of the fully Turkish capital firms that is 55 percent never provide. 15 percent of them sometimes provide and 30 percent of them always provide. Partly foreign capital ones indicate that they sometimes provide with a percentage of 70 and the rest of them state that they always provide.

Table 5.45: Question 3 and Question 7_11 Crosstabulation

			Q7_11			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	11	5	4	20
		% within s3	55,0%	25,0%	20,0%	100,0%
		% of Total	34,4%	15,6%	12,5%	62,5%
	Fully Foreign Capital	Count	0	1	1	2
		% within s3	,0%	50,0%	50,0%	100,0%
		% of Total	,0%	3,1%	3,1%	6,3%
	Partly Foreign Capital	Count	2	7	1	10
		% within s3	20,0%	70,0%	10,0%	100,0%
		% of Total	6,3%	21,9%	3,1%	31,3%
Total		Count	13	13	6	32
		% within s3	40,6%	40,6%	18,8%	100,0%
		% of Total	40,6%	40,6%	18,8%	100,0%

It is seen that fully foreign capital 3PLs sometimes offer or always offer duty drawback service. It is seen that 55 percent of the fully Turkish capital 3PLs never provide this service. Only 25 percent of them sometimes provide and 20 percent of them always provide this service. 20 percent of partly foreign capital ones never offer this service, 70 percent of them sometimes offer and only 10 percent of them always offer this service to their customers.

5.5.3.4 Capital Structure/Freight Finance Services Relationship Analysis

Freight finance service consists of freight audit and freight bill payment services.

Table 5.46: Question 3 and Question 7_12 Crosstabulation

			Q7_12			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	1	5	14	20
		% within s3	5,0%	25,0%	70,0%	100,0%
		% of Total	3,1%	15,6%	43,8%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	0	3	7	10
		% within s3	,0%	30,0%	70,0%	100,0%
		% of Total	,0%	9,4%	21,9%	31,3%
Total		Count	1	8	23	32
		% within s3	3,1%	25,0%	71,9%	100,0%
		% of Total	3,1%	25,0%	71,9%	100,0%

It is seen that fully foreign capital 3PLs always provide freight audit service to their customers. Only 5 percent of the fully Turkish capital firms indicate that they never provide. 25 percent of them indicate that they sometimes provide and 70 percent of them state that they always provide. 30 percent of the partly foreign capital 3PLs sometimes provide and the rest of them always provide this service to their customers.

Table 5.47: Question 3 and Question 7_13 Crosstabulation

			Q7_13			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	2	4	14	20
		% within s3	10,0%	20,0%	70,0%	100,0%
		% of Total	6,3%	12,5%	43,8%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	0	1	9	10
		% within s3	,0%	10,0%	90,0%	100,0%
		% of Total	,0%	3,1%	28,1%	31,3%
Total		Count	2	5	25	32
		% within s3	6,3%	15,6%	78,1%	100,0%
		% of Total	6,3%	15,6%	78,1%	100,0%

It is seen that fully foreign capital 3PLs always provide freight bill payment service to their customers. However 10 percent of the fully Turkish capital 3PLs indicate that they never provide. 20 percent of them state that they sometimes provide and 70 percent of them state that they always provide. Most of the partly foreign capital 3PLs state that they always provide, only 10 percent of them state that they sometimes provide this service to their customers.

5.5.3.5 Capital Structure/IT Support Services Relationship Analysis

IT support services consist of EDI Capability, Logistics Information System and other software, and Web-based solution.

Table 5.48: Question 3 and Question 7_14 Crosstabulation

			Q7_14			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	8	6	6	20
		% within s3	40,0%	30,0%	30,0%	100,0%
		% of Total	25,0%	18,8%	18,8%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	2	6	2	10
		% within s3	20,0%	60,0%	20,0%	100,0%
		% of Total	6,3%	18,8%	6,3%	31,3%
Total		Count	10	12	10	32
		% within s3	31,3%	37,5%	31,3%	100,0%
		% of Total	31,3%	37,5%	31,3%	100,0%

It is seen that fully foreign capital 3PLs always provide EDI services to their customers. However 40 percent of fully Turkish capital firms indicate that they never provide. 30 percent of them state they sometimes provide. Only 30 percent of them state that they always provide as it is evaluated as low. 20 percent of the partly foreign capital 3PLs indicate that they never provide this service. 60 percent indicate

that they sometimes provide and 20 percent state that they always provide this service to their customers.

Table 5.49: Question 3 and Question 7_15 Crosstabulation

			Q7_15			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	1	12	7	20
		% within s3	5,0%	60,0%	35,0%	100,0%
		% of Total	3,1%	37,5%	21,9%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	1	5	4	10
		% within s3	10,0%	50,0%	40,0%	100,0%
		% of Total	3,1%	15,6%	12,5%	31,3%
Total		Count	2	17	13	32
		% within s3	6,3%	53,1%	40,6%	100,0%
		% of Total	6,3%	53,1%	40,6%	100,0%

It is seen that fully foreign capital 3PLs always provide Logistics Information System and other software to their customers. Most of the fully Turkish capital 3PLs that is 60 percent always provide, 35 percent of them always provide and only 5 percent of them indicate that they never provide. 50 percent of the partly foreign capital 3PLs sometimes provide, 40 percent of them always provide and only 10 percent of them state that they never provide this service to their customers.

Table 5.50: Question 3 and Question 7_16 Crosstabulation

			Q7_16			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	3	7	10	20
		% within s3	15,0%	35,0%	50,0%	100,0%
		% of Total	9,4%	21,9%	31,3%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	1	4	5	10
		% within s3	10,0%	40,0%	50,0%	100,0%
		% of Total	3,1%	12,5%	15,6%	31,3%
Total		Count	4	11	17	32
		% within s3	12,5%	34,4%	53,1%	100,0%
		% of Total	12,5%	34,4%	53,1%	100,0%

It is seen that fully foreign capital 3PLs always provide web-based solution to their customers. 50 percent of the fully Turkish firms always provide, 35 percent of them sometimes provide and 15 percent of them never provide. 50 percent of the partly foreign capital 3PLs always provide, 40 percent of them sometimes provide and 10 percent of them never provide this service to their customers.

5.5.3.6 Capital Structure/Product Support Services Relationship Analysis

Product Support Services consist of Reverse Logistics and Value-added services such as package, label, mark, test, assembly etc.

Table 5.51: Question 3 and Question 7_17 Crosstabulation

			Q7_17			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	13	5	2	20
		% within s3	65,0%	25,0%	10,0%	100,0%
		% of Total	40,6%	15,6%	6,3%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	4	6	0	10
		% within s3	40,0%	60,0%	,0%	100,0%
		% of Total	12,5%	18,8%	,0%	31,3%
Total		Count	17	11	4	32
		% within s3	53,1%	34,4%	12,5%	100,0%
		% of Total	53,1%	34,4%	12,5%	100,0%

It is seen that fully foreign capital 3PLs provide reverse logistics services to their customers. However it is a newly developing for the fully Turkish capital firms. So Most of them that is 65 percent state that they never provide this service. 25 percent of them sometimes offer and only 10 percent of them state that they always provide. It is also same for partly foreign capital firms. 40 percent of them state that they never provide and only 60 percent of them state that they sometimes provide this service to their customers.

Table 5.52: Question 3 and Question 7_18 Crosstabulation

			Q7_18			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	10	5	5	20
		% within s3	50,0%	25,0%	25,0%	100,0%
		% of Total	31,3%	15,6%	15,6%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	5	4	1	10
		% within s3	50,0%	40,0%	10,0%	100,0%
		% of Total	15,6%	12,5%	3,1%	31,3%
Total		Count	15	9	8	32
		% within s3	46,9%	28,1%	25,0%	100,0%
		% of Total	46,9%	28,1%	25,0%	100,0%

It is seen that fully foreign capital 3PLs always provide value added services such as package, label, mark, test, assembly to their customers. Most of the fully Turkish capital 3PLs that is 50 percent state that they never provide, 25 percent of them sometimes provide and 25 percent of them always provide. 50 percent of the partly foreign capital 3PLs state that they never provide, 40 percent of them sometimes provide and 10 percent of them never provide.

5.5.3.7 Capital Structure/Logistics Management and Consulting Services Relationship Analysis

Logistics Management and Consulting Services consist of Fleet Operation, Distribution Network Design, Carrier Selection, Negotiation, Routing, Facility Location Analysis, Selection, Design and Inventory Management.

Table 5.53: Question 3 and Question 7_19 Crosstabulation

			Q7_19			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	2	8	10	20
		% within s3	10,0%	40,0%	50,0%	100,0%
		% of Total	6,3%	25,0%	31,3%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	1	2	7	10
		% within s3	10,0%	20,0%	70,0%	100,0%
		% of Total	3,1%	6,3%	21,9%	31,3%
Total		Count	3	10	19	32
		% within s3	9,4%	31,3%	59,4%	100,0%
		% of Total	9,4%	31,3%	59,4%	100,0%

It is seen that fully foreign capital 3PLs always provide fleet operation services to their customers. 10 percent of fully Turkish capital 3PLs state that they never provide, 40 percent of them state they always provide and 50 percent of them state that they always provide. 10 percent of the partly foreign capital 3PLs indicate that they never provide, 20 percent of them sometimes provide and 70 percent of them always provide.

Table 5.54: Question 3 and Question 7_20 Crosstabulation

			Q7_20			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	7	7	6	20
		% within s3	35,0%	35,0%	30,0%	100,0%
		% of Total	21,9%	21,9%	18,8%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	1	5	4	10
		% within s3	10,0%	50,0%	40,0%	100,0%
		% of Total	3,1%	15,6%	12,5%	31,3%
Total		Count	8	12	12	32
		% within s3	25,0%	37,5%	37,5%	100,0%
		% of Total	25,0%	37,5%	37,5%	100,0%

It is seen that fully foreign capital 3PLs always provide Distribution Network Design service to their customers. Fully Turkish Capital firms state that 35 percent of them never provide, 35 percent of them sometimes provide and 30 percent of them always provide. Partly foreign capital 3PLs indicate that 10 percent of them never provide, 50 percent of them sometimes provide and 40 percent of them always provide this service to their customers.

Table 5.55: Question 3 and Question 7_21 Crosstabulation

			Q7_21			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	0	8	12	20
		% within s3	,0%	40,0%	60,0%	100,0%
		% of Total	,0%	25,0%	37,5%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	1	5	4	10
		% within s3	10,0%	50,0%	40,0%	100,0%
		% of Total	3,1%	15,6%	12,5%	31,3%
Total		Count	1	13	18	32
		% within s3	3,1%	40,6%	56,3%	100,0%
		% of Total	3,1%	40,6%	56,3%	100,0%

It is seen that fully foreign capital 3PLs always provide Carrier Selection/Negotiation/Routing services to their customers. Partly foreign capital firms state that 10 percent of them never provide, 50 percent of them sometimes provide and 40 percent of them always provide. All of the fully Turkish capital firms indicate that they provide this service. 40 percent of them sometimes provide, 60 percent of them always provide.

Table 5.56: Question 3 and Question 7_22 Crosstabulation

			Q7_22			
			Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	10	6	4	20
		% within s3	50,0%	30,0%	20,0%	100,0%
		% of Total	31,3%	18,8%	12,5%	62,5%
	Fully Foreign Capital	Count	0	0	2	2
		% within s3	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	4	5	1	10
		% within s3	40,0%	50,0%	10,0%	100,0%
		% of Total	12,5%	15,6%	3,1%	31,3%
Total		Count	14	11	7	32
		% within s3	43,8%	34,4%	21,9%	100,0%
		% of Total	43,8%	34,4%	21,9%	100,0%

It is seen that fully foreign capital 3PLs always provide Facility location analysis/selection/design service their customers. Most of the fully Turkish Capital firms that is 50 percent state that they never provide this service. 30 percent of them state that they sometimes provide and 20 percent of them state that they always provide this service. Partly foreign capital 3PLs indicate that 40 percent of them never provide, 50 percent of them sometimes provide and 10 percent of them always provide this service to their customers.

Table 5.57: Question 3 and Question 7_23 Crosstabulation

			Q7_23				
			,00	Never	Sometimes	Always	Total
Q3	Fully Turkish Capital	Count	1	12	1	6	20
		% within s3	5,0%	60,0%	5,0%	30,0%	100,0%
		% of Total	3,1%	37,5%	3,1%	18,8%	62,5%
	Fully Foreign Capital	Count	0	0	0	2	2
		% within s3	,0%	,0%	,0%	100,0%	100,0%
		% of Total	,0%	,0%	,0%	6,3%	6,3%
	Partly Foreign Capital	Count	0	3	5	2	10
		% within s3	,0%	30,0%	50,0%	20,0%	100,0%
		% of Total	,0%	9,4%	15,6%	6,3%	31,3%
Total		Count	1	15	6	10	32
		% within s3	3,1%	46,9%	18,8%	31,3%	100,0%
		% of Total	3,1%	46,9%	18,8%	31,3%	100,0%

It is seen that fully foreign capital 3PLs always provide Inventory Management service to their customers. Most of the fully Turkish Capital firms that is 60 percent state that they never provide this service. 10 percent of them state that they sometimes provide and only 30 percent of them state that they always provide this service. Partly foreign capital 3PLs indicate that 30 percent of them never provide, 50 percent of them sometimes provide and 20 percent of them always provide this service to their customers.

As it is seen from all above the findings, the participated fully foreign capital 3PLs' response as always to the services that they provide. The participated fully Turkish capital 3PLs generally response as never and sometimes. The participated partly foreign capital 3PLs response mostly as sometimes. Their response percentages are better than fully Turkish capital firms.

The reason of this finding may be that 3PL is a newly developing concept in Turkey. It is a concept that was born in abroad. So the fully foreign capital firms provide these services more often based on their deepest experienced in this sector. Fully

Turkish capital firms' service range will increase day by date as being direct proportionally with their experience in the sector. It is expected that they response as never for providing most of the services. Because most of these services are being started to apply in Turkey.

The response percentage of partly foreign firms is better than fully Turkish capital firms. Partly foreign capital 3PLs occur in the sector via merging or acquiring with the Turkish capital 3PLs. Both of the sides benefit from this merger and acquisition. Because Turkish firms use the experience of their foreign partners in the sector and the foreign partners merger and acquire the local firms in order to decrease the risks while entering into a market instead of being alone and operating in a foreign country. So the service range of partly foreign capital firms is expected to be more than fully Turkish capital 3PLs.

According to the above results, it can be said that fully foreign capital 3PLs are more sophisticated than partly foreign capital and fully Turkish capital 3PLs in terms of their logistics capabilities, operating period in the sector and the number of employees.

In this chapter the findings of the survey are analyzed and explained accordingly. The next chapter will be the conclusion.

CHAPTER 6

CONCLUSION

This study is an attempt to illustrate the structure of third party logistics service providers in Turkey in terms of their capital structure, operating period in the sector, number of employees, the target sectors that they serve, their logistics service capabilities and their perspectives' regarding the problems of the logistics sector in Turkey and suggested solutions as the main objective of this study. Although the study is based on a small sample (32 firms), due to the low return rate of the questionnaires, it represents a benchmark for the further studies regarding the logistics sector and third party logistics service providers in Turkey and other countries.

As per the objective, the current status of 3PL companies in Turkey in terms of their capital structure, operating period and number of employees, the sectors that 3PLs serve, the current status of 3PLs companies in Turkey in terms of their logistics management activities are determined. Organizational and managerial decision of 3PL companies in terms of mergers and acquisitions are overviewed. The viewpoints of the 3PL companies to the problems of the sector and the solution suggestions are determined via taking some specific activities associated with the preliminary objective into consideration as conducting a survey and evaluating the findings.

As a conclusion, these findings are given with the illustrated figures as below.

The study reveals that most of the third party logistics providers that is 62,5 percent have fully Turkish capital. The next is the partly foreign capitals ones with a 31,3 percent and fully foreign capital ones follow them with a 6,3 percent as may be seen from the Figure 6.1.

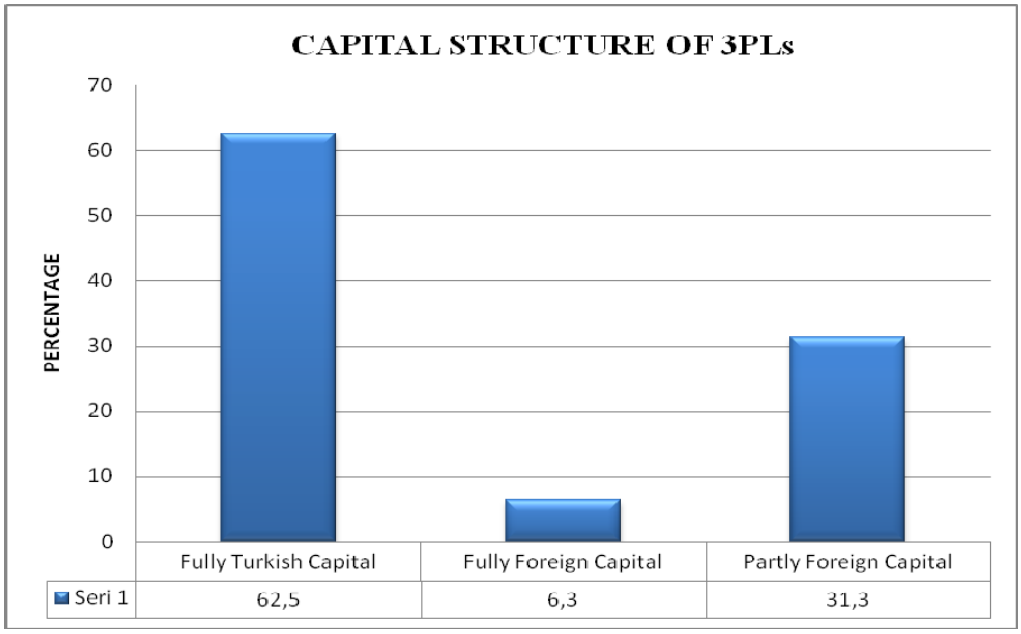

Figure 6.1: Capital Structure of 3PLs

The study reveals that most of the of third party logistics service providers (65,6%) operate more than 10 years in the sector as it is seen from Figure 6.2.

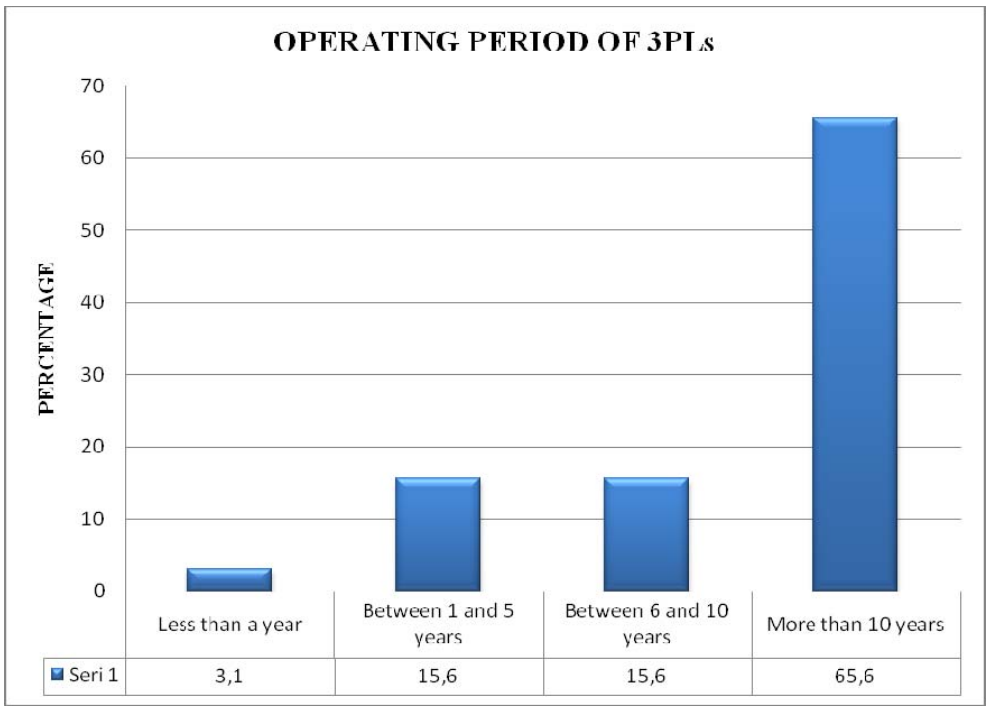

Figure 6.2: Operating Period of 3PLs

The study reveals that the number of employees in third party logistics service providers is between 150 and 499 and less than 50 as it is seen from Figure 6.3.

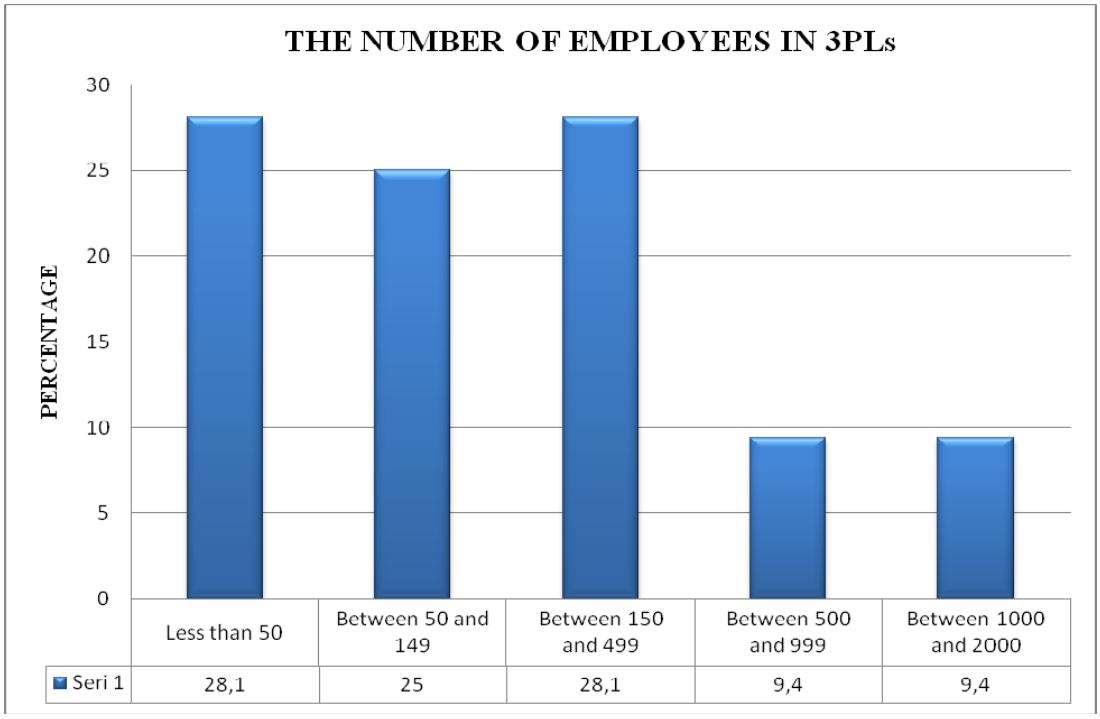

Figure 6.3: The Number of Employees in 3PLs

It is also found out that the target sectors that third party logistics service providers serve are textile, automotive, wholesale, consumer goods, manufacturing, electronics, and plastics.

After obtaining the findings regarding the capital structure of 3PLs, operating period in the sector, employee numbers and target sectors that they serve, the logistics service capabilities of third party logistics service providers are searched.

The study reveals that shipment tracking and tracing services, general trucking services and the intermodal services are the most frequent offered services within the transportation and distribution services. It is seen that time constraint services and transportation and distribution of specialized goods are the least provided services as it is given in the Figure 6.4.

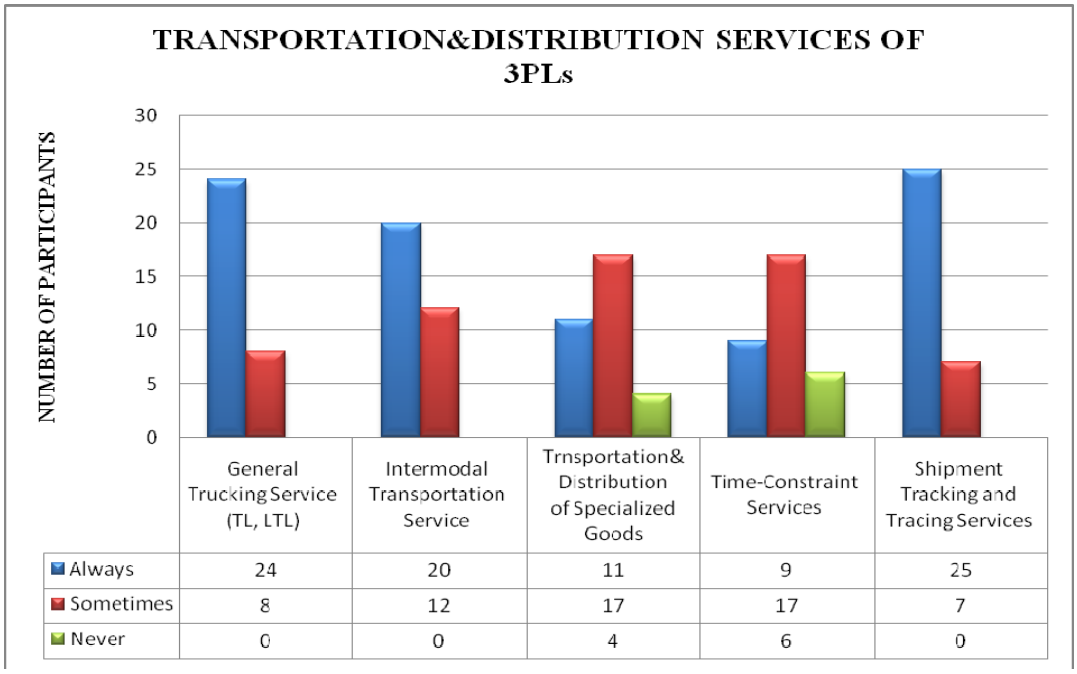

Figure 6.4: Transportation and Distribution Services of 3PLs

It is found out that the most frequently offered service is public/contract/regional warehousing within the warehousing and distribution services of 3PLs. It is followed by order processing and fulfillment services, value-added services in warehousing/distribution and operational technology services. It is also given in Figure 6.5.

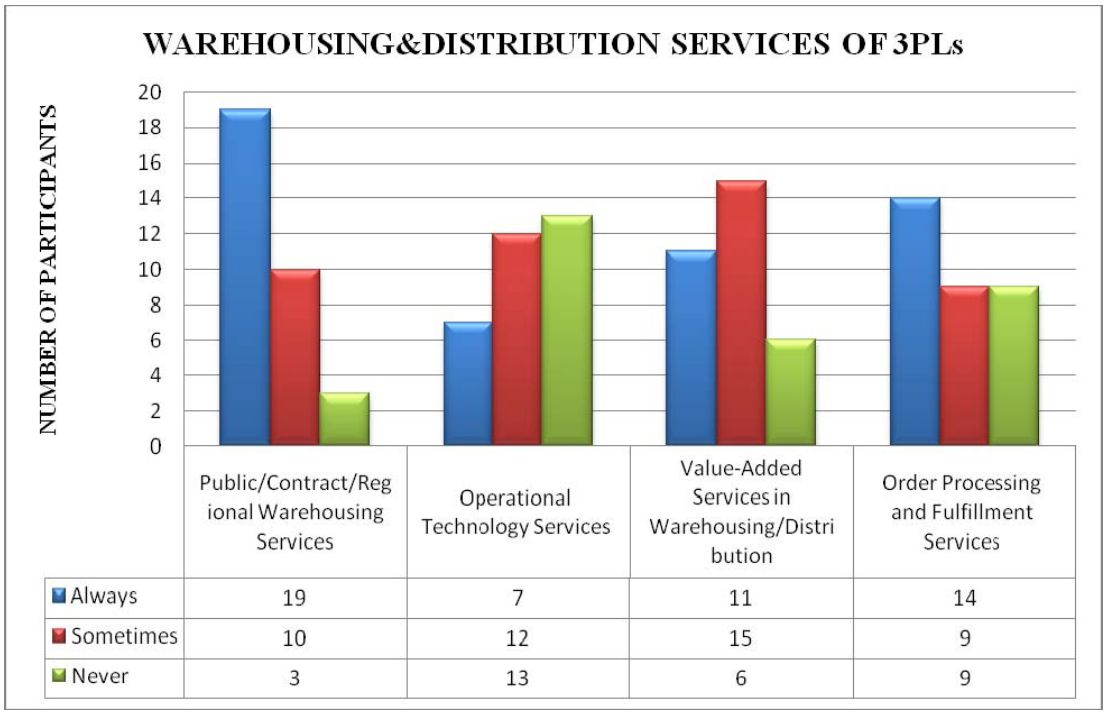

Figure 6.5: Warehousing and Distribution Services of 3PLs

It is obtained that the most frequently offered service within the custom services of 3PLs is custom brokerage service as it is seen from Figure 6.6.

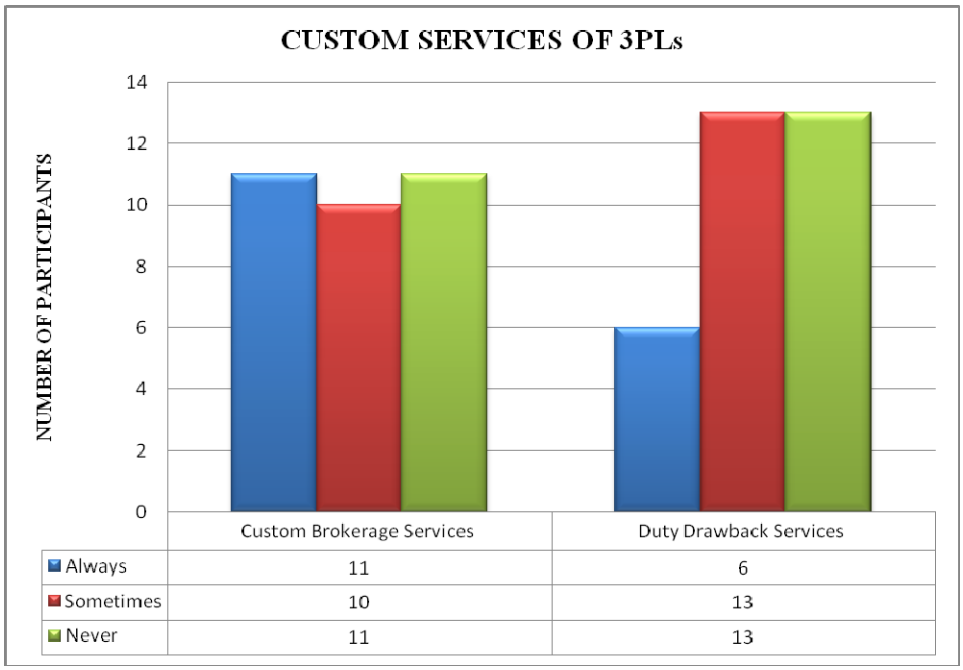

Figure 6.6: Custom Services of 3PLs

The study reveals that freight bill payment service is the most frequently provided service within the freight finance services of 3PLs as it is seen from Figure 6.7

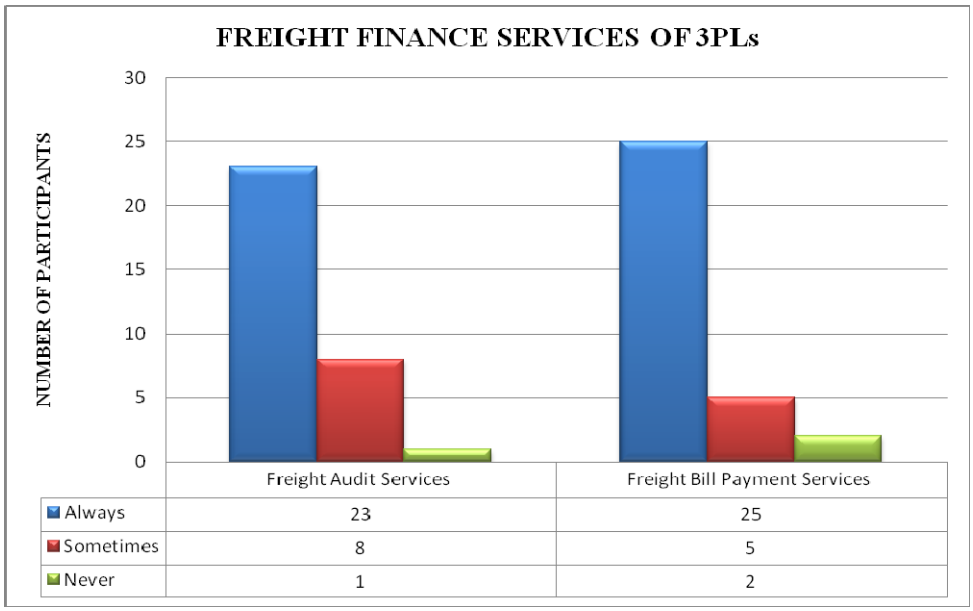

Figure 6.7: Freight Finance Services of 3PLs

The study reveals that logistics information system and other software service and web based solution services are the most frequently offered services within the IT support services of 3PLs. EDI capability service is the least provided service as it is seen from the Figure 6.8.

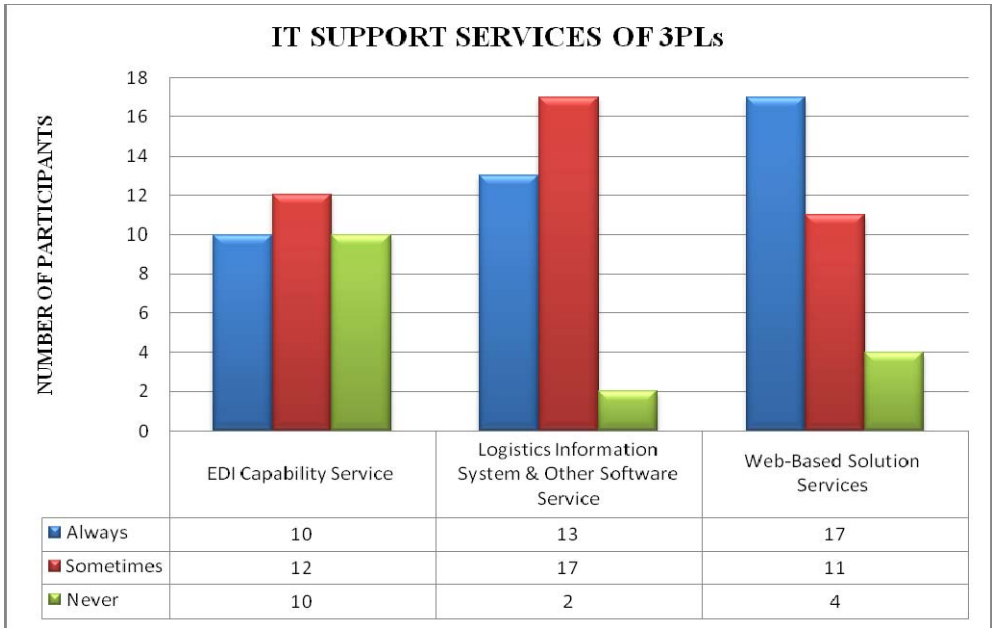

Figure 6.8: IT Support Services of 3PLs

The study revals that reverse logistics is the least offered service within the product support services whereas the value added services is the most offered one as it is seen from the below Figure 6.9.

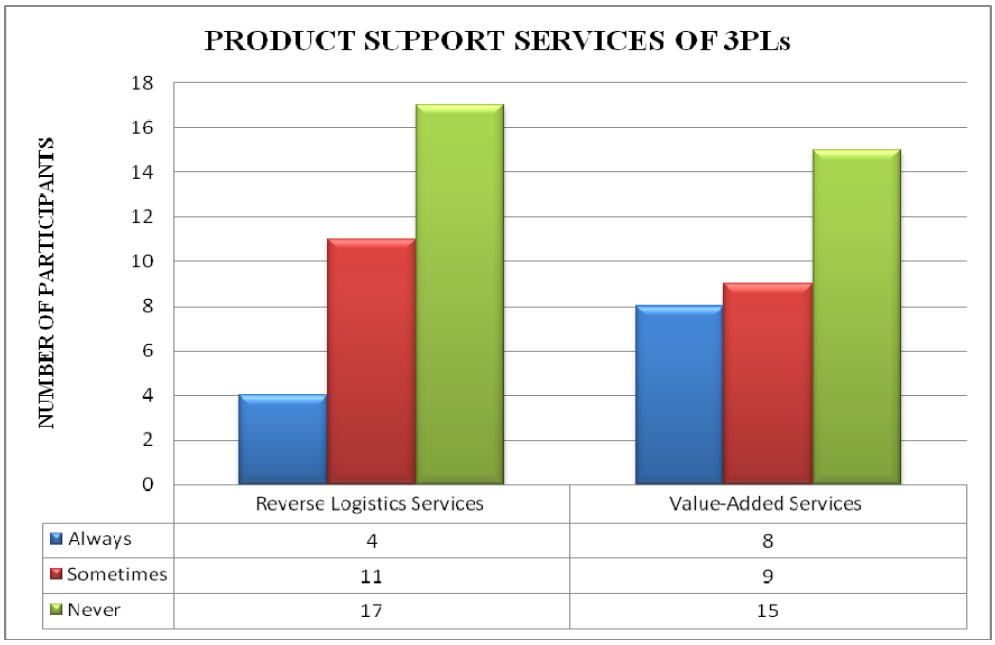

Figure 6.9: Product Support Services of 3PLs

It is found out that the most frequently offered services within the logistics management and consultancy services are fleet operation services and carrier selection/negotiation and routing services. Distribution network design services, facility location analysis/selection/design services and inventory management are the least provided service as it can be seen from Figure 6.10.

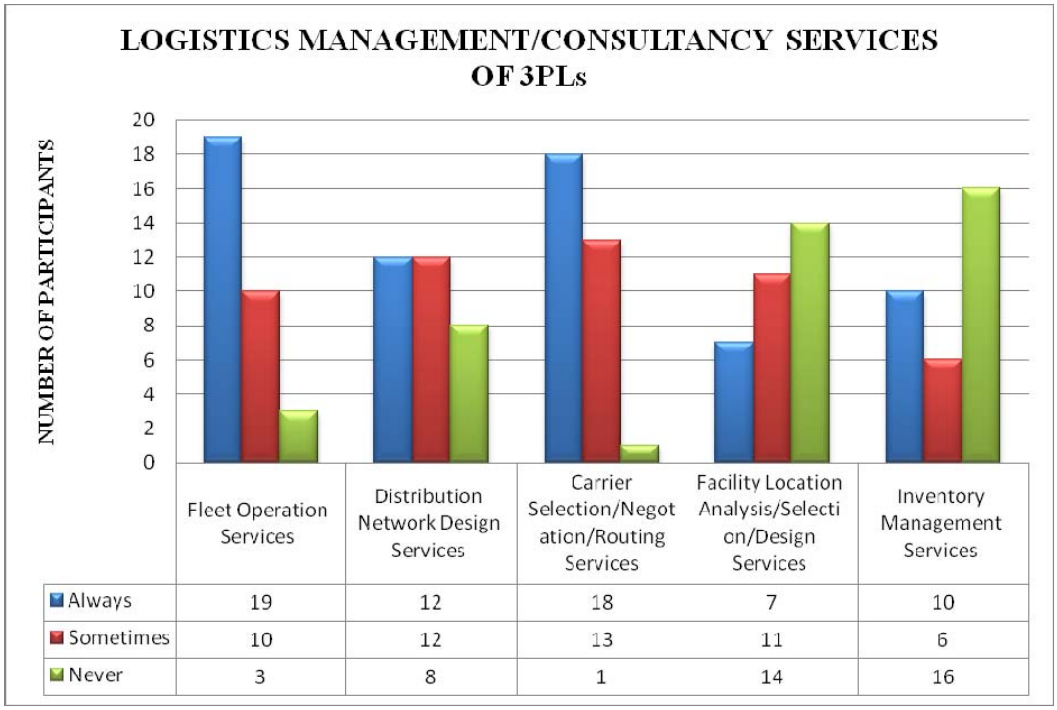

Figure 6.10: Logistics Management/Consultancy Services of 3PLs

As a summary, the most frequently offered services are general trucking services, intermodal transportation services, shipment tracking and tracing services. They are followed by carrier selection/negotiation/routing services, freight audit services, freight bill payment services, logistics information system and other software services, fleet operation services, public/contract/regional warehousing services, transportation and distribution of specialized goods, web-based solution services, time constraint services, value-added services in warehousing/distribution, distribution network design services, order processing and fulfillment services, EDI capability services, custom brokerage services, duty drawback services, operational technology services. Facility location analysis/selection/design services, value added services in product support, inventory management services and reverse logistics services are the least provided logistics services as they can be also from the below Figure 6.11.

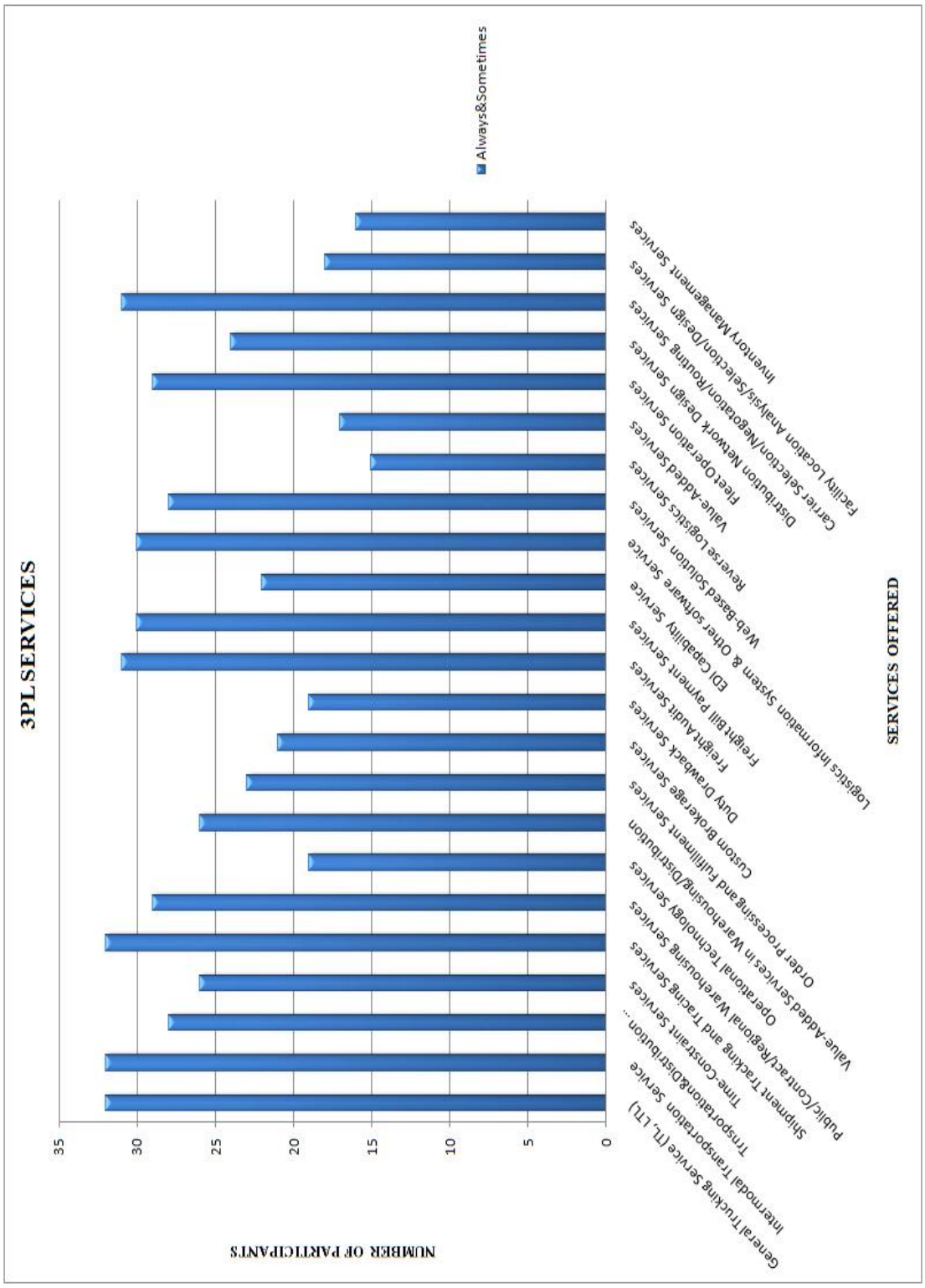

Figure 6.11: 3PL Services

The study reveals that the respondents whose companies had acquired or mergered with other companies indicated that seven of the acquisitions or mergers had involved other 3PL providers, three acquired or mergered with freight forwarders, two of them with customs brokers, and five of them with transportation company as it is seen from the below Figure 6.12. The merger and acquisition movement continues to change 3PLs' competitive market via providing broader service offerings.

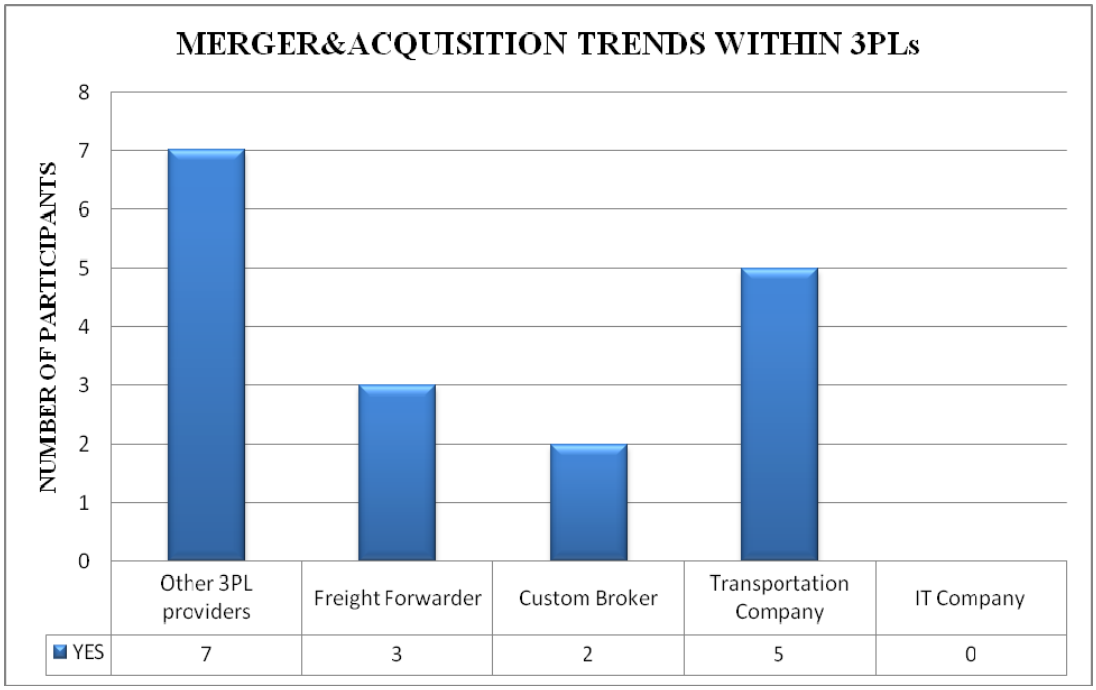

Figure 6.12: Merger and Acquisition Trends within 3PLs

The study reveals the 3PL perceptions of sector problems. These are summarized in Table 6.1.

Table 6.1: Problems of the sector

	Sum of Strongly Agree &Agree (%)	Strongly Agree (%)	Agree (%)	Agree in part (%)	Disagree (%)	Strongly Disagree (%)
Lack of using the strategic position of the country	25 (78,1)	13 (40,6)	12 (37,5)	6 (18,8)	1 (3,1)	*
Weak economic growth	18 (56,3)	6 (18,8)	12 (37,5)	12 (37,5)	2 (6,3)	*
Low profitability of the industry	25 (78,2)	10 (31,3)	15 (46,9)	6 (18,8)	1 (3,1)	*
Educated and qualified work force lack in logistics	22 (68,7)	13 (40,6)	9 (28,1)	8 (25,0)	2 (6,3)	*
That sufficient investment on technology and IT are not made	25 (78,2)	11 (34,4)	14 (43,8)	6 (18,8)	1 (3,1)	*
Lack of infrastructure of ports	30 (93,8)	15 (46,9)	15 (46,9)	2 (6,3)	*	*
Coordination shortage in law and instructions	27 (84,4)	9 (28,1)	18 (56,3)	5 (15,6)	*	*
Legal improvement and hardships in custom regulation	24 (75,0)	7 (21,9)	17 (53,1)	8 (25,0)	*	*
That the highway has more heavy in transportation sector	14 (43,8)	6 (18,8)	8 (25,0)	15 (46,9)	2 (6,3)	1 (3,1)

The most important problem identified by the 3PLs was lack of infrastructure of ports. The second one is coordination shortage in law and instructions, the third ones are low profitability of the industry, that sufficient investment on technology and IT are not made, lack of using the strategic position of Turkey. The fourth one is legal improvement and hardship in custom regulation. These are followed by educated and qualified work force lack in logistics, weak economic growth and that the highway has more heavy in transportation sector.

In Baki, Tanyas and Ozkok (2004)'s research, the transportation and logistics firms evaluate the educated and qualified work force lack in logistics is the most important problem concerning the logistics sector. It is followed by that sufficient investment on technology and IT are not made, legal improvements and hardships in custom regulation, coordination shortage in law and instructions, lack of infrastructure of ports, that the high way has more heavy in transportation sector.

It is seen that the viewpoints of the third party logistics service providers has changed from the year 2004 to 2007. The reason of evaluating the lack of infrastructure of ports as the most important problem in 2007 may be that the starting of the period regarding the privatization of the Izmir port. This hot topic in 2007 may affect the perception of 3PLs regarding the sector problems.

In fact all of them can be evaluated as the main problems of the sector. Because logistics sector is a newly developing sector in Turkey. The regulations haven't been clearly identified yet regarding this sector. All of these determined problems have to be evaluated in detail in order to make Turkey as a one of the most important logistics center of the world.

In further researches, the determined problems can be broadened via taking the perspectives' of the larger samples. All of them can be analyzed in detail by taking one by one into consideration which gives detail information to the reader regarding to the problems of the sector in deeply.

The study reveals the 3PLs perceptions regarding to the suggested solutions to the sector as it is in Table 6.2.

Table 6.2: Suggested Solutions

	Sum of Strongly Agree &Agree (%)	Strongly Agree (%)	Agree (%)	Agree in part (%)	Disagree (%)	Strongly Disagree (%)
Strategic position of the country must be used	30 (93,8)	19 (59,4)	11 (34,4)	2 (6,3)	*	*
Outsourcing must be increased by the firms instead of doing on their owns	28 (87,5)	9 (28,1)	19 (59,4)	3 (9,4)	1 (3,1)	
The definition of 3PL company must be done clearer in order to make customers confuse the term	28 (87,5)	8 (25,0)	20 (62,5)	4 (12,5)	*	*
Forming a regular transportation policies	26 (81,3)	14 (43,8)	12 (37,5)	5 (15,6)	1 (3,1)	*
Developing the transportation infrastructure	29 (90,6)	17 (53,1)	12 (37,5)	2 (6,3)	1 (3,1)	*
The use of logistics information systems must be used	30 (93,8)	15 (46,9)	15 (46,9)	2 (6,3)	*	*
Instead of highway, ports and railways must be increased	17 (53,2)	6 (18,8)	11 (34,4)	10 (31,3)	4 (12,5)	1 (3,1)
Improvement of the logistics education and the training	32 (100,0)	16 (50,0)	16 (50,0)	*	*	*
Collaboration between the university and the sector must be increased	28 (87,5)	13 (40,6)	15 (46,9)	4 (12,5)	*	*
National/International Seminars must be held	30 (93,7)	13 (40,6)	17 (53,1)	2 (6,3)	*	*

The most important suggested solution identified by 3PLs is improvement of the logistics education and the training. The next ones are strategic position of the country must be used, the use of logistics information systems must be used and the national/international seminars must be held. Developing the transportation infrastructure is in the third rank. The ones in the fourth rank are outsourcing must be increased by the firms instead of doing on their owns, the definition of 3PL company must be done clearer in order to make customers confuse the term, collaboration between the university and the sector must be increased. These are followed by forming regular transportation policies and instead of highway, ports and railways must be increased.

In Baki, Tanyas and Ozkok (2004)'s research, it is also evaluated that improvement of the logistics education and training is the most important suggested solutions. These are followed by developing the transportation infrastructure, forming a regular transportation politics, the use of logistics information systems must be increased, collaboration between the university and sector must be increased, national and international seminars must be held, instead of highway, port and railways must be dwelled on.

It is seen from both of the researches that instead of highway, port and railways must be increased is the least preferred suggested solution. The reason may be that especially fully Turkish capital 3PLs was established as freight companies and they broadened their services and started to operate as third party logistics service providers later. So they have a very competitive fleet and services based on the usage of the highways. Also it again proofs that our highway transportation is very

developed according to the ports and railways although lack of port infrastructure is evaluated as the most important problems of the sector. Besides the highways, ports and railways also have to be developed in order to make Turkey one of the most important centers in the world. With the new improvements especially regarding the ports, these developments are started to experience.

Besides, education and the training have a big role in the development of logistics sector in our country. Without educated personnel both in companies and in the government foundations, it is impossible to make the country develop in the logistics sector. Especially this role belongs to our country's universities and related departments.

In further researches, the suggested solutions can be broadened via taking the perspectives' of the larger samples. All of them can be analyzed in detail by taking one by one into consideration which gives detail information to the reader regarding to the suggested solutions in deeply.

Furthermore, the study reveals that fully foreign capital 3PLs are more sophisticated than fully Turkish capital and partly foreign capital 3PLs in terms of their operating period in the sector, number of employees and the logistics capabilities based on their deepest world-wide experiences.

This study should be considered as a pilot study to highlight a field where there has been lack of detailed studies regarding the third party logistics service providers in Turkey and their perspectives' regarding the problems of the sector and the

suggested solutions. Furthermore it can be a useful guide in analyzing the status of 3PLs operating in Turkey and regarding the logistics sector.

Future studies with larger samples can be carried out. Some studies can be performed periodically as Lieb et al. (1993; 1996; 1999-2003; 2004a) and Langley et al. (2003; 2004) series. If it is possible, the CEO perspectives' of the third party logistics service providers can be evaluated as Lieb et al. (1993; 1996; 1999-2003; 2004a) studies in USA and Europe.

The content of the survey can be broadened. As it is in Lieb et al. (1993; 1996; 1999-2003; 2004a) studies, the revenue growth pattern should be asked, the participants should be asked to rank the most important industry dynamics currently operating in the market for 3PL services. They can be asked to identify the significant opportunities available to 3PL providers. They can be asked to identify the most significant developments within their companies and within the 3PL industry during the past years. They can be asked what major changes they expect to see in the sector during the next years. They can be asked to estimate the annual company and industry revenue growth rates for the next years. By taking these points into consideration, the further researches will be similar to Lieb et. al (1993; 1996; 1999-2003; 2004a) series which can be performed every year.

With this future studies, the development of logistic sector and the third party logistics service providers can be followed in detail. Because third party logistics service providers is one of the dynamic of the logistics sector which can add a huge value while aiming to make Turkey as one of the logistics centers of the world. So it

is important to follow the developments of third party logistics service providers via taking their perspectives' regarding the problems of the sector and suggested solutions for the future researches.

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APPENDIX A

QUESTIONNARIE IN ENGLISH

Dear Participant,

The following is a survey form I have prepared for the purpose of evaluating the Turkey Logistics sector by determining the problems and bringing solution suggestions by considering the perspectives of 3PL companies operating in the sector.

The information that you provide will be entirely kept private and the questionnaire that you fill will be used only for my Logistics Management Post Graduate Studies in Izmir University of Economics. The results will be used only in the abstract format in my thesis statement for academic purposes. At no time, your organization will be identified and your responses will be combined with several other participants.

Also, if you ask the results of the questionnaires by e-mail I can communicate the results.

Best regards

Ayca CEZAYIRLI

CONTACT DETAILS:

E-MAIL: aycacezayirli@hotmail.com, ayca@laraint.com

CELL-PHONE: 0 532 661 37 92

1. Name of the Company:

   Phone Number:

   Web Address:

   (This information will be used for not taking more than one survey from the same company)

2. Name, Surname and the Title of the authority who fills out the form:

3. What is the Capital Structure of your company?

Fully Turkish Capital	
Fully Foreign Capital	
Partly Foreign Capital	

If partly foreign capital and fully foreign capital, please state the country: ……

4. How long has your firm been operating in Turkey?

Less than a year	
Between 1 and 5 years	
Between 6 and 10 years	
More than 10 years	

5. The Number of the employees in your company?

Less than 50	
Between 50 and 149	
Between 150 and 499	
Between 500 and 999	
Between 1000 and 2000	
More than 2000	

6. Please mark your target industries that you are giving service to your customers from these industries.

Automotive	
Retail	
Wholesale	
Consumer Goods	
Manufacturing	
Healthcare	
Chemicals	
Textile	
Electronics	
Food	
Packaging	
Plastics	
Computer hardware and software	
Construction	
Agriculture	
Metals and Mining	
Mineral and Fertilizer	

Please state if there is any others: ……

7. Which of the following services that you offer to your customers?
   Please give the frequencies using the scale which 1 meaning “never”, 2 meaning “sometimes”, 3 meaning “always”.

	1(Never)	2(Sometimes)	3(Always)
***Transportation/Distribution**			
General Trucking Service (TL, LTL)			
Intermodal Transportation Service (rail, ocean, air freight)			
Specialized Services (bulk, tank, hazardous material, refrigerated goods etc.)			
Time-constraint services (JIT, over night, same day etc.)			
Shipment tracking&tracing			
***Warehousing/Distribution**			
Public/Contract/Regional Warehouse			
Operational Technology (bar coding, radio frequency etc.)			
Value-added services (cross-docking, freight consolidation, pick&pack etc.)			
Order processing and fulfillment			
***Custom Services**			
Custom Brokerage			
Duty Drawback			
***Freight Finance Services**			
Freight Audit			
Freight Bill Payment			
***IT Support**			
EDI Capability			
Logistics Information System&other software			
Web-based solution			
***Product Support Services**			
Reverse Logistics			
Value-added services (package, label, mark, test, assembly etc.)			
***Logistics Management/Consulting**			
Fleet Operation			
Distribution network design			
Carrier Selection/negotiation/routing			

Facility location analysis/selection/design			
Inventory Management			

Please specify if there is anything else.

8. Have you ever participate in any significant merger or acquisition activity?

YES……. NO…….

If yes please mark the party that you participated in merger or acquisition.

Other 3PL providers	
Freight Forwarder	
Custom Broker	
Transportation Company	
IT Company	

Please specify if there is anything else.

9. Please evaluate if the following are the problems of the sector.
Please give the frequencies using the scale which 1 meaning "strongly agree", 2 meaning "agree", 3 meaning "agree in part", 4 meaning "disagree", 5 meaning "strongly disagree"

	1(Strongly Agree)	2(Agree)	3(Agree in part)	4(Disagree)	5(Strongly Disagree)
Lack of using the strategic position of the country					
Weak economic growth					
Low profitability of the industry					
Educated and qualified work force lack in logistics					
That sufficient investment on technology and IT are not made					
Lack of infrastructure of ports					
Coordination shortage in law and instructions					
Legal improvement and hardships in custom regulations					
That the highway has more heavy in transportation sector					

Please specify if there is anything else.[29]

[29] Baki, Tanyas and Ozkok, 2004, p.962-970, items 4 to 9 of this question belong to this reference.

10. Please evaluate if the following are the solutions in order to solve the problems of the sector.

    Please give the frequencies using the scale which 1 meaning "strongly agree", 2 meaning "agree", 3 meaning "agree in part", 4 meaning "disagree", 5 meaning "strongly disagree"

	1(Strongly Agree)	2(Agree)	3(Agree in part)	4(Disagree)	5(Strongly Disagree)
Strategic position of the country must be used.					
Outsourcing must be increased by the firms instead of doing on their owns					
The definition of 3PL company must be done clearer in order to make customers confuse the term.					
Forming a regular transportation policies					
Developing the transportation infrastructure					
The use of logistics information systems must be increased					
Instead of highway, ports and railways must be dwelled on					
Improvement of the logistics education and the training					
Collaboration between the university and the sector must be increased					
National/International Seminars must be held					

Please specify if there is anything else.[30]

[30] Baki, Tanyas and Ozkok, 2004, p.962-970, items 4 to 10 of this question belong to this reference.

APPENDIX B

QUESTIONNARIE IN TURKISH

Sayın Katılımcı;

Aşağıdaki anket Türkiye lojistik sektörünün, sektörde faaliyet gösteren üçüncü parti lojistik firmalarının görüşleri dikkate alınarak değerlendirilmesi, problemlerinin belirlenmesi ve bu problemlere çözüm önerileri getirilmesini amaçlamaktadır. Verdiğiniz bilgiler tamamen gizli tutulacak ve dolduracağınız anket sadece İzmir Ekonomi Üniversitesi Lojistik Yönetimi Yüksek Lisans Programı bitirme tezimde akademik amaçlı kullanılacaktır. Hiç bir zaman, firmanızın ismi sunumlarda ve tezimde belirtilmeyecek anket cevaplarınız anketi sunacağım diğer firmaların cevapları ile birlikte birleştirilecektir.

Ayrıca, sonuçlar hakkındaki dileğinizi bana e-mail yolu ile iletmeniz halinde, sizlere memnuniyetle cevap vereceğim.

Yardımlarınız ve ilginiz için şimdiden çok teşekkür ederim.

Saygılarımla;

Ayça CEZAYIRLI

IRTIBAT:

E-MAIL: aycacezayirli@hotmail.com, ayca@laraint.com

CEP TEL: 0 532 661 37 92

1. Firma Unvanı:

   Telefon Numarası:

   Web Adresi:

   (Bu bilgi aynı firmadan birkaç anket cevabı almamak amacıyla sorulmuştur.)

2. Anketi dolduran yetkilinin Adı, Soyadı ve Firmadaki Unvanı:

3. Firmanızın sermaye yapısı nasıldır?

Tamamen Türk Sermayeli	
Tamamen Yabancı Sermayeli	
Kısmen Yabancı Sermayeli	

Eğer tamamen yada kısmen yabancı sermayeli ise lütfen mensubu olunan ülkeyi belirtiniz:.....

4. Firmanız kaç seneden beri Türkiye'de faaliyet göstermektedir?

1 yıldan az	
1 yıl ile 5 yıl arası	
6 yıl ile 10 yıl arası	
10 yıldan fazla	

5. Firmanızda kaç kişi çalışmaktadır?

50'den az	
50 ile 149 arası	
150 ile 499 arası	
500 ile 999 arası	
1000 ile 2000 arası	
2000'den fazla	

6. Lütfen servis verdiğiniz müşterilerinizin bulunduğu hedef sektörleri işaretleyiniz.

Otomotiv	
Perakende	
Toptan	
Tüketim Malları	
Üretim	
Sağlık	
Kimya	
Tekstil	

Elektronik	
Gıda	
Ambalaj	
Plastik	
Bilgisayar donanım ve yazılım	
İnşaat	
Tarım	
Maden	
Mineral ve Gübre	

Başka sektörler varsa lütfen belirtiniz: ……

7. Aşağıda belirtilen servislerden hangilerini müşterilerinize sunmaktasınız?

   Lütfen aşağıdaki 3 dereceli likert ölçeğine göre sıklığını belirtiniz. 1, "asla" anlamında, 2 "bazen" anlamında, 3 "her zaman" anlamındadır.

	1(Asla)	2(Bazen)	3(Her zaman)
*** Nakliye/ Dağıtım**			
Genel Kamyon hizmeti (TL dolu kamyon ve LTL de bir kamyonu doldurmayan yük)			
Intermodal Taşımacılık Hizmeti (demiryolu, deniz, hava yükü)			
Özel Hizmetler (dökme, tanker, tehlikeli madde, dondurulmuş ürünler vb.)			
Zaman kısıtına dayalı servisler (Tam zamanında yaklaşımı (JIT, bir gece içinde, aynı gün vb.)			
Sevkıyat izleme/takip			
*** Depolama/Dağıtım**			
Umumi/Sözleşmeli/Bölgesel Depolar			
Eylemsel/operasyonel teknoloji (bar kod , radyo frekansı v.b.)			
Katma değer hizmetler (çapraz sevkıyat, navlun birleştirilmesi, toplama ve paketleme vb.)			
Sipariş işleme ve yerine getirme			
*** Gümrük Hizmetleri**			
Gümrük Komisyonculuğu			
Gümrük vergilerinin iadesi			
***Navlun Finansman Hizmetleri**			
Navlun denetimi			

Navlun fatura ödemesi			
***Bilgi Teknolojileri Desteği**			
EDI/ Elektronik veri transfer kapasitesi			
Lojistik bilgi sistemi & diğer yazılımlar			
Web bazlı çözümler			
*** Ürün destek hizmetleri**			
Ters Lojistik			
Katma değer hizmetler (paketleme, etiket, işaretleme, test, montaj v.b)			
*** Lojistik Yönetimi/ Danışmanlık**			
Filo işletilmesi			
Dağıtım ağı dizaynı			
Taşıyıcı seçimi/müzakereler/rota			
Tesis konum analizi/seçim/dizayn			
Envanter Yönetimi			

Başka hizmetler varsa lütfen belirtiniz.

8. Firmanız hiç bir firma ile birleşme yada başka bir firmayı satın alma faaliyetinde bulundu mu?

   EVET…… HAYIR…….

   Evetse lütfen birleştiği yada satın aldığı firma tipini aşağıdan işaretleyiniz.

Başka bir üçüncü parti lojistik firması	
Freight Forwarder/Taşıma işleri aracısı/Navlun Komisyoncusu	
Gümrük Müşaviri/Komisyoncusu	
Nakliye firması	
Bilgi Teknolojileri firması	

   Başka bir firma tipi varsa lütfen belirtiniz.

9. Lütfen aşağıdakileri sektörün sorunları olup olmamasına göre değerlendiriniz.

   Lütfen aşağıdaki 5 dereceli likert ölçeğine göre sıklığını belirtiniz. 1, "kesinlikle aynı fikirdeyim" anlamında, 2 "aynı fikirdeyim" anlamında, 3 "kısmen aynı fikirdeyim" anlamında, 4 "aynı fikirde değilim", 5 "kesinlikle aynı fikirde değilim" anlamındadır.

	1(Kesinlikle aynı fikirdeyim)	2(Aynı fikirdeyim)	3(Kısmen aynı fikirdeyim)	4(Aynı fikirde değilim)	5(Kesinlikle aynı fikirde değilim)
Ülkenin stratejik konumunu kullanmadaki eksiklik					
Ekonomik büyümenin zayıf olması					
Sektördeki kar marjının düşük olması					
Eğitimli ve kalifiye iş gücünün azlığı					
Teknolojiye ve bilgi teknolojilerine yeterli yatırımın yapılmaması					
Limanlardaki alt yapının eksik olması					
Kanun ve yaptırımlardaki koordinasyon eksikliği					
Yasal düzenlemeler ve gümrük mevzuatındaki sıkıntılar					
Karayolu kullanımının sektörde yoğun olması					

Lütfen sektörde bunlardan başka gördüğünüz sorunlar varsa belirtiniz.

10. Lütfen aşağıdakileri sektörde görülen problemler için sunulan çözüm önerileri olup olmamalarına göre değerlendiriniz.

    Lütfen aşağıdaki 5 dereceli likert ölçeğine göre sıklığını belirtiniz. 1, "kesinlikle aynı fikirdeyim" anlamında, 2 "aynı fikirdeyim" anlamında, 3 "kısmen aynı fikirdeyim" anlamında, 4 "aynı fikirde değilim", 5 "kesinlikle aynı fikirde değilim" anlamındadır.

	1(Kesinlikle aynı fikirdeyim)	2(Aynı fikirdeyim)	3(Kısmen aynı fikirdeyim)	4(Aynı fikirde değilim)	5(Kesinlikle aynı fikirde değilim)
Ülkenin sahip olduğu stratejik konum kullanılmalıdır.					
Firmalar dış kaynak kullanımlarını arttırmalıdırlar.					
Üçüncü parti lojistik firma tanımı müşterilerin kafasında karışıklığa izin vermeyecek şekilde açıkça yapılmalıdır.					
Kurallara uygun nakliye politikası oluşturulmalıdır.					
Nakliye alt yapısı geliştirilmelidir.					
Lojistik bilgi sistemlerinin kullanılması arttırılmalıdır.					
Karayolu yerine limanlar ve demiryolları kullanılmalıdır.					
Lojistik eğitimi ve öğretimi geliştirilmelidir.					
Üniversiteler ve sektör arasındaki işbirliği arttırılmalıdır.					
Ulusal ve Uluslar arası seminerler düzenlenmelidir.					

Lütfen başka çözüm önerileriniz varsa belirtiniz.

APPENDIX C

FREQUENCY TABLES OF QUESTION 6

Q6 Please mark your target industries that you are giving service to your customers from these industries.

According to the answers the obtained results are as below.

1st industry is Automotive. The result is as follows:

Automotive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	22	68,8	100,0	100,0
Missing	System	10	31,3		
Total		32	100,0		

22 of the 32 firms, which is equal to 68,8 percent, declared that they are serving to the automotive industry.

2nd industry is Retail. The result is as follows:

Retail

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	14	43,8	100,0	100,0
Missing	System	18	56,3		
Total		32	100,0		

14 of 32 firms, which is equal to 43,8 percent, declared that they are serving to the retail industry.

3rd industry is wholesale. The result is as follows:

Wholesale

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	21	65,6	100,0	100,0
Missing	System	11	34,4		
Total		32	100,0		

21 of 32 firms, which is equal to 65,6 percent, declared that they are serving to the wholesale industry.

4th industry is Consumer Goods. The result is as follows:

Customer Goods

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	25	78,1	100,0	100,0
Missing	System	7	21,9		
Total		32	100,0		

25 of 32 firms, which is equal to 78,1 percent, declared that they are serving to the consumer goods industry.

5th industry is Manufacturing. The result is as follows:

Manufacturing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	22	68,8	100,0	100,0
Missing	System	10	31,3		
Total		32	100,0		

22 of 32 firms, which is equal to 68,80 percent, declared that they are serving to the manufacturing industry.

6th industry is Healthcare. The result is as follows:

Healthcare

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	15	46,9	100,0	100,0
Missing	System	17	53,1		
Total		32	100,0		

15 of 32 firms, which is equal to 46,90 percent, declared that they are serving to the healthcare industry.

7th industry is Chemicals. The result is as follows:

Chemicals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	16	50,0	100,0	100,0
Missing	System	16	50,0		
Total		32	100,0		

16 of 32 firms, which is equal to 50, 00 percent, declared that they are serving to the chemicals industry.

8th industry is Textile. The result is as follows:

Textile

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	28	87,5	100,0	100,0
Missing	System	4	12,5		
Total		32	100,0		

28 of 32 firms, which is equal to 87,50 percent, declared that they are serving to the textile industry.

9th industry is electronics. The result is as follows:

Electronics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	25	78,1	100,0	100,0
Missing	System	7	21,9		
Total		32	100,0		

25 of 32 firms, which is equal to 78,10 percent, declared that they are serving to the electronics industry.

10th industry is food. The result is as follows:

Food

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	19	59,4	100,0	100,0
Missing	System	13	40,6		
Total		32	100,0		

19 of 32 firms, which is equal to 59,40 percent, declared that they are serving to the food industry.

11th industry is packaging. The result is as follows:

Packaging

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	19	59,4	100,0	100,0
Missing	System	13	40,6		
Total		32	100,0		

19 of 32 firms, which is equal to 59,40 percent, declared that they are serving to the packaging industry.

12th industry is plastics. The result is as follows:

Plastics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	24	75,0	100,0	100,0
Missing	System	8	25,0		
Total		32	100,0		

24 of 32 firms, which is equal to 75,00 percent, declared that they are serving to the plastic industry.

13th industry is computer hardware and software. The result is as follows:

Computer hardware and software

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	15	46,9	100,0	100,0
Missing	System	17	53,1		
Total		32	100,0		

15 of 32 firms, which is equal to 46,90 percent, declared that they are serving to the computer hardware and software industry.

14th industry is construction. The result is as follows:

Construction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	20	62,5	100,0	100,0
Missing	System	12	37,5		
Total		32	100,0		

20 of 32 firms, which is equal to 62,50 percent, declared that they are serving to the construction industry.

15th industry is agriculture. The result is as follows:

Agriculture

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	16	50,0	100,0	100,0
Missing	System	16	50,0		
Total		32	100,0		

16 of 32 firms, which is equal to 50,00 percent, declared that they are serving to the agriculture industry.

16th industry is metals and mining. The result is as follows:

Metals and Mining

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	20	62,5	100,0	100,0
Missing	System	12	37,5		
Total		32	100,0		

20 of 32 firms, which is equal to 62,50 percent, declared that they are serving to the metals and mining industry.

17th industry is mineral and fertilizer. The result is as follows:

Fertilizer

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	10	31,3	100,0	100,0
Missing	System	22	68,8		
Total		32	100,0		

10 of 32 firms, which is equal to 31,30 percent, declared that they are serving to the mineral and fertilizer industry.

APPENDIX D

FREQUENCY TABLES OF QUESTION 9

Frequency Table of Question 9_1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	13	40,6	40,6	40,6
	Agree	12	37,5	37,5	78,1
	Agree in part	6	18,8	18,8	96,9
	Disagree	1	3,1	3,1	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 9_2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	6	18,8	18,8	18,8
	Agree	12	37,5	37,5	56,3
	Agree in part	12	37,5	37,5	93,8
	Disagree	2	6,3	6,3	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 9_3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	10	31,3	31,3	31,3
	Agree	15	46,9	46,9	78,1
	Agree in part	6	18,8	18,8	96,9
	Disagree	1	3,1	3,1	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 9_4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	13	40,6	40,6	40,6
	Agree	9	28,1	28,1	68,8
	Agree in part	8	25,0	25,0	93,8
	Disagree	2	6,3	6,3	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 9_5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	11	34,4	34,4	34,4
	Agree	14	43,8	43,8	78,1
	Agree in part	6	18,8	18,8	96,9
	Disagree	1	3,1	3,1	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 9_6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	15	46,9	46,9	46,9
	Agree	15	46,9	46,9	93,8
	Agree in part	2	6,3	6,3	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 9_7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	9	28,1	28,1	28,1
	Agree	18	56,3	56,3	84,4
	Agree in part	5	15,6	15,6	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 9_8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	7	21,9	21,9	21,9
	Agree	17	53,1	53,1	75,0
	Agree in part	8	25,0	25,0	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 9_9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	6	18,8	18,8	18,8
	Agree	8	25,0	25,0	43,8
	Agree in part	15	46,9	46,9	90,6
	Disagree	2	6,3	6,3	96,9
	Strongly Disagree	1	3,1	3,1	100,0
	Total	32	100,0	100,0	

APPENDIX E

FREQUENCY TABLES OF QUESTION 10

Frequency Table of Question 10_1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	19	59,4	59,4	59,4
	Agree	11	34,4	34,4	93,8
	Agree in part	2	6,3	6,3	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 10_2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	9	28,1	28,1	28,1
	Agree	19	59,4	59,4	87,5
	Agree in part	3	9,4	9,4	96,9
	Disagree	1	3,1	3,1	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 10_3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	8	25,0	25,0	25,0
	Agree	20	62,5	62,5	87,5
	Agree in part	4	12,5	12,5	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 10_4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	14	43,8	43,8	43,8
	Agree	12	37,5	37,5	81,3
	Agree in part	5	15,6	15,6	96,9
	Disagree	1	3,1	3,1	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 10_5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	17	53,1	53,1	53,1
	Agree	12	37,5	37,5	90,6
	Agree in part	2	6,3	6,3	96,9
	Disagree	1	3,1	3,1	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 10_6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	15	46,9	46,9	46,9
	Agree	15	46,9	46,9	93,8
	Agree in part	2	6,3	6,3	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 10_7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	6	18,8	18,8	18,8
	Agree	11	34,4	34,4	53,1
	Agree in part	10	31,3	31,3	84,4
	Disagree	4	12,5	12,5	96,9
	Strongly Disagree	1	3,1	3,1	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 10_8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	16	50,0	50,0	50,0
	Agree	16	50,0	50,0	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 10_9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	13	40,6	40,6	40,6
	Agree	15	46,9	46,9	87,5
	Agree in part	4	12,5	12,5	100,0
	Total	32	100,0	100,0	

Frequency Table of Question 10_10

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	13	40,6	40,6	40,6
	Agree	17	53,1	53,1	93,8
	Agree in part	2	6,3	6,3	100,0
	Total	32	100,0	100,0	