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# **NETWORKS AND PARTNERSHIPS IN THIRD PARTY LOGISTICS SERVICE PRODUCTION**

Master's Thesis  
in International Business

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# 1 INTRODUCTION

## 1.1 Background to the study

Third party logistics (TPL), and third party logistics providers (TPLP) and the services they offer have grown substantially in the last twenty years. Lieb and Bentz (2005, 6) for instance have surveyed a growth in the use of TPL services, from 38% in 1991 to 80% in 2004, within the Fortune 500 manufacturers in America. Third party logistics has also attracted more and more interest from the academic world (see, e.g. Berglund 1997; Bolumole 2001; Marasco 2008), and has become one of the major elements when discussing supply chain management and outsourcing non-core operations.

In addition to the increased use of TPL, their role as a strategic function within the supply chain has grown. As the world is becoming more global, the operations of individual companies are more international. The international operations have ultimately an effect in the supply chains and access to international markets is a key decision area for companies (Hollensen 2004, 524).

As TPL providers are used to manage supply chain activities and provide added value to the customers, also TPL operators are seeking to outsource some of their operations. In these cases the main focus is on networking and partner-like relationships, where the partners are used to improve the service offering and quality of already existing services, and to widen the offered service portfolio.

Even though there has been extensive research on third party logistics providers, and regular industry reviews within the logistics industry, a closer research in the area of partner selection and network models in the TPL industry is missing. In previous TPL studies only 6% exist at the network level, as most of the studies (67%) focus on the firm level (Selviaridis & Spring 2007, 127). Networking and the importance of well managed networks in value creation and efficient operations are neither a new topic. The new perspective of expanding the network research into logistics service providers will provide important information on the possibilities and strengths in co-operation within this type of service industry, where some services might even be considered products. In addition the research will be beneficial for any TPLP operating in the industry, as the results might provide new and unique ideas to compete in the markets.

## 1.2 Purpose and structure of the study

The purpose of the research is to *analyze partnerships and networks in the third party logistics industry* in order to define whether there are benefits that can be achieved through building networks and partnerships, and how networks are utilized in third party logistics markets. Furthermore the sub-objectives are to

1. find out what kind of networks and partnerships are already in place
2. analyze what have been the reasons behind the partner selection
3. determine what have been the results and outcomes of the partnerships.

With the second sub objective the goal is to find out whether correct partner selection will provide new opportunities in the markets. Due to the scope and limitations of the study, the research implications are focused on networks and partnerships of the main TPLPs in the Finnish markets. Some of the networks and partnerships might include international partners but the focus of the research is on the TPLPs rather than all the players involved in networks and partnerships. The research of existing partnerships and networks already in place will cover a wider population than only examples from the Finnish markets.

After the introduction the study is divided into four main chapters. The second chapter presents discussion on defining third party logistics and analyzes the main reasons and benefits of outsourcing logistics operations to third party logistics providers. In addition, the main TPL providers in the Finnish markets are discussed. Third chapter of the study concentrates on the networks and partnerships of third party logistics providers. After the theoretical basis of the study is introduced in the second and third chapter, the research methodology is presented, and the trustworthiness of the study is evaluated. In the following chapter the findings of the study are analyzed. Following the analysis of the research findings conclusions are drawn. A summary of the study is presented in the last chapter.

## 2 THIRD PARTY LOGISTICS PROVIDERS

### 2.1 Definition of third party logistics providers

Third party logistics providers are organizations that offer services to satisfy the logistical needs between a shipper and a recipient. These services can be of a very simple nature of delivering one item to the desired recipient, or in the other end involve a complex agreement on providing added value to the product along the entire value chain or managing the entire supply chain. Due to the wide range of the services offered and the heterogeneity of the organizations, there is no single definition for the term TPL. Third party logistics providers on the other hand are easier described as companies providing TPL services.

Third party logistics, as well as supply chain management (SCM), were relatively new terms and fields of interest in the early 1990s (Berglund 1997; Bask 1999). This has not changed to this day and these terms still arouse interest among academicians and practitioners. Consequently, the term third party logistics is widely used and still lacks a single consistent definition. (Marasco 2008, 128; Knemeyer & Murphy 2005, 710.)

Various terms alongside third party logistics are used to describe the phenomenon of outsourcing logistics activities. In addition to the ones mentioned above, there are a few other definitions which roughly go under the categories of alliances: “logistics alliances” (Bowersox 1990, 36) and “operational alliances in logistics”<sup>1</sup>; and contracting: “contract logistics”<sup>2</sup> and “contract distribution”<sup>3</sup> (Berglund et al. 1999, 59). These mentioned are only a few used synonyms of the term. For clarity the term third party logistics will be used throughout this thesis to refer to all the synonyms of activities relating to outsourcing logistics activities.

The field of definitions for third party logistics is even vaster than the scale of terms describing the activities. Berglund (1997, 17) describes the phenomenon of third party logistics simply as: “the outsourcing or subcontracting of logistics operations to external service suppliers.” This simple definition of Berglund (1997,17) is rather broad and includes logistics activities from single delivery contract to long-term relationships be-

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<sup>1</sup> Original source: van Laarhoven, Peter – Sharman, Graham (1994) Logistics Alliances: The European Experience. *The McKinsey Quarterly*, No.1, 39-49.

<sup>2</sup> Original source: AT Kearney (1995) A Shippers Approach to Contract Logistics. *AT Kearney Management Reports*, No. 44.

<sup>3</sup> Original source: Wilson, Philip R.S. (1989) Distribution – The Contract Approach. *International Journal of Physical Distribution and Logistics Management*, Vol. 19, No. 6, 26-30.



tween the provider and buyer. As can accordingly be assumed, the definitions and interpretations of TPL vary from arm's length sourcing of warehousing and transportation to outsourcing more complex operations that can encompass the entire logistics process (Marasco 2008, 128).

Berglund (1997, 18) defines third party logistics providers broadly: "A TPL provider is a company that for external clients manages, controls, and delivers logistical operations." Bagchi and Virum (1996, 93) point out that the number of outsourced services and the depth of the logistics relationship vary in every case. They consider third party logistics as a more of an alliance than a pure contract based relationship of providing a service. Bagchi and Virum (1996, 95) define these third party alliances as: "...a close and long-term relationship between a customer and a provider encompassing the delivery of a wide array of logistics needs. In logistics alliances, the parties ideally consider each other as partners."

In this thesis the definition used will be closer to the broad definition of Berglund, although including the perspective of a relationship longer than one time agreement. Murphy and Poist (1998, 26) argue that logistical activities such as transportation and warehousing have already been outsourced for a long time on a transaction-by-transaction bases. This view brings to attention that third party logistics services are more than just basic transactions of services. Consequently third party logistics in this thesis is defined by adding also the recipients' perspective to a definition by Murphy and Poist (1998, 26):

*a relationship between a shipper[, or a recipient,] and third party, which compared with basic services, has more customized offerings, encompasses a broader number of service functions, and is characterized by a longer-term, more mutually beneficial relationship.*

In recent literature, the concepts of Lead Logistics Provider (LLP) and fourth party logistics (4PL) providers have been emerging more and more. The term fourth party logistics was created in 1996 by Andersen Consulting (now Accenture) to describe a more advanced form of third party logistics (Ojala, Andersson & Naula 2006, 9). These types of operators are non-asset based logistics providers, who concentrate on the management of the information flows and coordination of the supply network (Huemer 2012, 260).

Even though 4PL and LLP are commonly used intertwined, a distinction between these two terms can be made. Whereas 4PL is considered non-asset based integrator for the entire supply chain, the LLPs own assets like the TPLs but they are able to complement their own service offering by integrating services provided by other TPLs (Bhatti,

Kumar & Kumar 2010, 276). Therefore it can be concluded that a LLP provides a comprehensive supply chain solution by integrating and managing its own services, technology and abilities with those of complementary service providers<sup>4</sup> (Bhatti et al. 2010, 276).

Even though 4PL providers and LLPs are often defined as separate from the TPLs, there are also views linking them more closely to the existing TPL definition and the same position in the logistics value chain. Cui and Hertz (2011, 1005) group TPLs, 4PLs and LLPs into the same category and argue that all of the above logistics provider types' activities overlap with each other. As can be seen from the view by Bhatti et al. above, this observation is supported even by the distinction made above: as 3PLs, 4PLs, and LLPs aim to integrate supply chain offering for their customers.

In this thesis the view of Cui and Hertz (2011, 1005) is adopted and the 4PL providers are not discussed separately but are considered as an advanced type of TPLP. The same view to TPL and 4PL discussion has been used as well in other literature evaluating the logistics providers (see e.g. Olander & Norrman 2012, 675), and it has in addition been argued that the line between TPL and 4PL is indistinct (Love 2004, 18). Therefore the chosen view for the approach in this study is justified since even though the 4PL providers are focused merely on the management and coordination, their activities overlap with third party logistics providers to a large extent (Cui & Hertz 2011, 1005) and the line between the two cannot be clearly drawn.

## **2.2 Development of the usage and services of third party logistics providers**

The use of TPL providers is already substantial, but is nevertheless still growing in the future (see e.g. Bask 1999, 85; Berglund 1997, 3; Lieb & Bentz 2005, 6; Long 2003, 330). It has been argued that already almost 40% of global logistics is outsourced (Lieb & Bentz 2005, 12; Wong, Maher, Nicholson & Gurney 2000, 9). The services that third party logistics providers offer have grown alongside the industry from the basic transportation and warehousing to cover a wider scope of logistics activities to fulfill the needs of potential customers (Berglund et al. 1999, 62). The growth of the third party logistics markets has derived from developments in both the demand and supply sides of TPL services (Berglund 1997, 27). Berglund (1997, 28) continues to distinguish the developments on the supply side to deregulation of the transportation industry, technical

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<sup>4</sup> Original source: Xu, J. (2002) New pattern of supply chain management - the fourth distribution channel. *Policy-making Reference*, Vol. 15, No. 1, 11-15.

development of information and communications technology, and declining profit margins in basic services (i.e. freight transport). The demand side developments on the other hand include aspects like increased competitive pressure which has made customer orientation and inventory reductions necessary, globalization of the world economy, and higher demands on logistics in terms of performance and cost. (Berglund 1997, 28.)

Due to the developments, cost has become one of the major forces, alongside the need to optimize operations and to outsource those which are not within the core competencies, of a company that have been driving the use of third party logistics (see, e.g. Berglund et al. 1999, 60; Hollensen 2004, 542). The reasons why companies have decided to use TPL services and to outsource their logistics operations can also be categorized under the internal and external drivers in their operations. These reasons will be discussed in the following sections, where the reasons for outsourcing will be looked at from the outsourcing company's perspective.

### **2.2.1 *Internal drivers***

With internal drivers is understood the reasons that come from inside the company and are aimed at improving intra-company operations, processes and performance. Lynch (2004) introduces several reasons of why to outsource logistics operations: return on assets, personnel productivity, flexibility, labor considerations, cost, easier to manage providers than individual functions internally, customer service and specialized services. Bolumole (2001, 88) as well emphasizes the importance of cost reduction and core business processes but also adds to the reasons with effective capital utilization. As mentioned above, it is often argued that cost reduction and focusing on core competencies are the main reasons for outsourcing. Wilding and Juriado (2004, 629) agree on this partly by naming cost reductions as the most important reason, but then in contrast state that focus on core competencies is not amongst the top three reasons to outsource.

From the long lists of the authors above, few most important internal aspects and drivers affecting the decision to outsource should be emphasized. These are cost based reasons, focusing purely on company's core competencies, improving service levels, and flexibility in operations. Even though companies outsourcing decisions derive from the internal reasons and strategies, they will eventually have an external impact in the long run (Bolumole 2001, 94).

### 2.2.2 *External drivers*

When companies outsource due to external drivers, the reasons are mainly strategic orientation and the focus is external. In external focus the company is not only considering purely its own benefits but sees the benefits to be gained from a wider perspective. An important external driver to outsource is the integration and improvement of the supply chain (Bolumole 2001, 94), and the strategic orientation for a more efficient supply chain management.

In addition to the strategic aspect of the supply chain integration, the awareness that outsourcing can help a company gain market advantage by better management of the external environment is argued to be one of the most important reasons for the growth of the use of TPL services (Boyson et al. 1999, 92). In many cases TPL providers have expertise in the foreign market, and already possess in-place networks with resources and experience to improve global capabilities of the outsourcer (Hollensen 2004, 542; Lynch 2004, 50). Adding to the perspective of competitive environment and entering new markets, is the view that by outsourcing companies seek also to differentiate themselves in the market to gain advantage (Lieb & Bentz 2005, 5).

The expertise third party logistics providers have does not restrict to only the markets they are operating in. Utilizing a provider that has necessary information systems already in place can prove beneficial to a company, especially if its resources in developing required systems are scarce. (Lynch 2004, 50.) Few years back the traditional services of third party logistics industry were in the growth stage (Bask 1999, 84), but nowadays the industry is reaching its maturity and the service providers are dynamic and managed by professionals (Lynch 2004, 50-51) which leads to better qualified distribution and logistics management.

### 2.2.3 *Synthesis*

There are several reasons, internal and external, for companies to outsource their logistics operations and to use third party logistics providers in doing so. The process of outsourcing is nonetheless not a simple decision or procedure. Despite the reasons and drivers why to outsource, logistics outsourcing is dependent on the providers meeting specified criteria the outsourcing organization has set (Bolumole 2001, 88). Meeting the criteria is one determinant to a successful relationship. Along with it important are considered dependability and customer orientation (Murphy & Poist 1998, 27).

It is also important to note that organizations that outsource for operational and cost based reasons are more likely to restrict TPL involvement to basic logistics functions. In

contrast those who are motivated to outsource for the purpose of integration of supply chain members tend to recognize the TPL function as an integral part of supply chain strategy. (Bolumole 2001, 94.)

### **3 A NETWORK VIEW TO THIRD PARTY LOGISTICS PROVIDERS**

Usually logistics service providers (LSPs) or third party logistics providers (TPLPs), in a network are considered from the viewpoint of a firm in a supply chain outsourcing its logistics operations to third party logistics companies (Selviaridis & Spring 2007, 127). In relation to the objectives of this study and also in general, this view is insufficient. As the TPLPs are the focal firms in this study, the networks they are in and the networks and partnerships TPLPs form to provide their services need to be looked at from the logistics service provider's view. In order to efficiently analyze the existing networks of TPLPs, both of the above mentioned views of TPL networks need to be understood.

#### **3.1 Traditional network views**

As mentioned above, TPL providers have been considered as a part of a supply chain from the perspective of the outsourcing company. The supply chain has often been regarded as a simple linear system where firms interacting through dyadic relationships create an event dependent series (Cox, Sanderson & Watson 2001, 29). This linear view of the supply chain oversimplifies the multitude of the actors' relationships and interdependencies in the network, which creates the actual modern supply chain (Hearnshaw & Wilson 2013, 442; Choi, Dooley & Rungtusanatham 2001, 363). In the more common academic research approach the TPL provider is rather seen as a part of the outsourcing company's supply chain than a network forming party. The use of logistics service providers in an outsourcing company's network can be viewed through several different theoretical frameworks and approaches.

Oliver and Ebers (1998, 554) recognized 17 different theoretical frameworks in literature studying networks. In their analysis, Oliver and Ebers (1998, 554) suggest that the main five theoretical frameworks used so far in inter-organizational network research are resource dependency, network, political power, exchange and institutional theories. The suggestion of these theories in relevance is made based on the Bonachich eigenventure centrality and the Betweenness centrality. The theories used in inter-organizational networking studies have lacked the evaluation of networks from the point of view of possible consequences of networking (Oliver & Ebers 1998, 566). Based on the analysis of networking studies by Oliver and Ebers (1998) it is eminent that resource based view is one of the key theories used to evaluate networking. As resource based approach is seen key in analyzing networks, it is selected as one of the approaches for the analysis also in this study. As the research questions of this study are concerned with the reasons

for, and outcomes of networking and partnerships, the selection of strategic approach to analyze these questions is also relative. As mentioned above, the consequences of networking has not been among the driving forces of networking studies so far, and one of the theories addressing this question is the strategic approach (Oliver & Ebers 1998, 566).

For the purposes of this research's review of networks, a detailed analysis of all 17 different theoretical approaches is not necessary. Based on the characteristics of the researched area in this study, the research concentrates on analyzing network theories through their strategic nature, as well as utilizing a resource based view. The use of these two theoretical approaches for the purposes of this study is justified as discussed above.

### **3.1.1 Strategic network**

Strategic theories describe how firm strategies impact inter-organizational relationships or networks, or on the other hand how networks influence the strategic position and comparative advantage of a company (Oliver & Ebers 1998, 574). Strategic theories usually focus on justifying the benefits of networks in addition to explaining the formation of networks (Vuorinen 2005, 11).

One of the most important strategic theories is the *value chain theory*<sup>5</sup> by Porter (1991, 103). Porter's model (1991, 103) aids in analyzing a company's value and activities increasing competitive advantage. The configuration of different activities is defined by the firm's strategy, and can include activities such as products being assembled, salespeople making sales visits, and orders being processed (Porter 1991, 102). Linking the value chain perspective into the traditional network view of LSPs, the LSP is seen as a part of value chains of different products and companies.

Porter (1991, 102) also stresses that performing the activities in a value chain requires tangible and intangible assets. This view of value chains has later been addressed and approached from the perspective of value networks (see, e.g. Allee 2008; Normann & Ramirez 1993). According to Allee (2008, 6) the internal value network of a company consists of its core processes and intra-company relationships, whereas the external network comprises of its various interest groups such as customers, competitors and suppliers. It has also been discussed that the competitive advantage between companies is related to the investments in the relationship, knowledge transfer and effective gov-

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<sup>5</sup> Original source: Porter, Michael E. (1985) *Competitive Advantage: Creating and Sustaining Superior Performance*. Free Press, New York.

ernance of the relationship (Dyer & Singh 1998, 676). The strategic aspect of the value chain concept relates partially to the industrial network approach of the Uppsala networking theory, as one of the main variables in industrial network according to this view is also the activities of a company.

The industrial network approach in logistics complements the supply chain management literature by introducing the concept of indirect connections between relationships instead of just the sequential linkages in the traditional approach of supply chains (Jahre & Fabbe-Costes 2005, 145). The industrial network approach is concerned about the relationships on how the business units are connected. There are three variables in the relationships of an industrial network: actors, activities and resources (Håkansson & Johanson 1997, 129). Actors control the activities and/or resources, and are individuals, groups of individuals, parts of firms, firms, or groups of firms (Håkansson & Johanson 1997, 130). In relation to this approach, it can be argued that LSPs control resources and perform activities, which the outsourcing company wants to benefit from in order to achieve value and cost advantage (Christopher 2005, 14).

### **3.1.2 *Resource based view***

Some authors argue that the myth of independence distinguishes the industrial network approach from the resource based view (RBV) (Ford, Gadde, Håkansson & Snehota 2003, 8-9). On the other hand, if the relationships and networks of a company are seen as its resources, these two views have something in common (Baraldi, Brennan, Harrison, Tunisini & Zolkiewski 2007, 885). The resource based view assumes that firms are heterogeneous based on their control of important strategic resources, and that firms are different due to their performance (Baraldi et al. 2007, 884; Vuorinen 2005, 60). The performance differences are consequences, or results, of the varying resources of the firm. In addition the resources are not seen as perfectly mobile between firms (Baraldi et al. 2007, 884). The strength of the resources is determined by their ability to produce competitive advantage on at least one market (Vuorinen 2005, 64). The resource based view is focusing on the ability of the firm's internal factors (resources), while other strategic views (such as planning and positioning approaches) focus on external factors (Baraldi et al. 2007, 884).

Barney (1991, 101) considers firm resources to include all assets, capabilities, organizational processes, firm attributes, information, knowledge, and all other attributes which provide the company with the ability to plan and execute strategies improving the firm's efficiency and effectiveness. The resources can be further classified into three categories: physical capital resources, human capital resources, and organizational capi-



tal resources (Barney 1991, 101). Physical capital resources can include the technology used, plants and equipment, location and access to raw materials. Human capital resources include training, experience, judgment, intelligence, relationships, and insight of the managers and workers of the firm. Organizational capital resources include formal reporting structure of the firm, planning, controlling and coordinating systems, as well as internal and external contacts. (See, e.g. Barney 1991, 101; Vuorinen 2005, 65-66; Baraldi et al. 2007, 884.) As mentioned above, networks can also be viewed as resources which could be classified either under human capital resources based on the nature of individual relationships in the network, or under organizational capital resources based on the organizational character of strategic networks.

The resource based view gives an explanation to why all firms do not seek, or are not able to implement the most profitable strategy in the markets (Vuorinen 2005, 77). The main goal is to exploit the existing resources as well as possible in order to fulfill the strategy of the firm (Vuorinen 2005, 77). In order to maximize one's value and profitability, firms can benefit from networks by gaining access to wider array of resources by being able to utilize the resources of others in the network (Vuorinen 2005, 85). In the traditional view of LSPs, where the network is viewed from the focal perspective of a manufacturing company, it is clear that resource based view justifies and gives reasons for including LSPs in a company's network in order to gain access to resources not readily available for the company. In the view where the focal company is not an LSP, the strategic aspect in networking relates to the outsourcing of logistical activities to an entity, to which these activities are core resources.

In addition to the above discussed resources, Hartmann and de Grahl (2011, 64) introduce flexibility of the LSP as another resource to achieve competitive advantage. It is argued that flexibility is a resource specific for LSPs (Hartmann & de Grahl 2011, 64). Even though LSPs have not been considered as the focal firm in many studies relating to resource based view, Hartmann and de Grahl (2011) are taking the steps toward filling this research gap and to utilize the resource based view to create a conceptual model to analyze the competitive advantage created for LSPs by flexibility. Also Lai (2004, 387) summarizes that in the context of LSPs the tangible resources can comprise equipment, plants, fleets and hardware, and the intangible resources could include among others organizational processes, skills, know-how and reputation.

Lai (2004, 387) further suggests that the capability to create competitive advantage is dependent on how the LSP is able to leverage the resources. By effectively allocating the possessed resources the LSP can develop its service capabilities, which from the resource based view is considered as a potential source of competitive advantage (Lai 2004, 387). The improvement of service capabilities, then in addition, may provide the LSP with more flexibility to meet the customer requirements and differentiate based on

the ability to serve wider selection of services. When discussing flexibility and the ability to meet customer needs, it has been demonstrated that customer-focused capabilities (segmental focus, relevancy, responsiveness, and flexibility) are a driver for increased company performance (Zhao, Dröge & Stank 2001, 92). For the LSP to attain the customer-focused capabilities, it is required to improve its services to better respond to the growing customer demands (Lai 2004, 387).

In the above discussed perspective for the need to improve service offering and through better flexibility and customer responsiveness, the resources and capabilities of an LSP are in core focus. The flexibility and the broadening of the service offering can be acquired through horizontal or vertical partnerships within the logistics supply chain and the network of the LSP. In the following chapter the traditional network theories will be applied to evaluate the LSP as the focal firm in the network, and the creation of its horizontal and vertical partnerships from that perspective.

### **3.2 Third party logistics provider as a focal firm in a network**

As discussed above, it is common to view TPL companies as a part of an outsourcing firm's network or value chain. In this view, the focal firm in the network and analyses is the industrial firm outsourcing and building a relationship with the TPL firm. In practice, the TPL firm may not carry out all the logistics activities by itself, but instead further outsource certain activities to other logistics firms with different assets, components and networks (Cui & Hertz 2011, 1005). This research perceives the logistics firm as the focal firm in the network.

The network where the logistics company is the focal player is the logistics service supply chain or logistics service network. Logistics service providers can be categorized into three groups: sub-contract carriers, third party logistics providers, and logistics service intermediaries (Cui & Hertz 2011, 1004; Stefansson 2006, 85). Logistics intermediary firms are often non-asset based, and they focus on coordinating and connecting different logistics actors, such as freight forwarders and brokers, and their activities (Cui & Hertz 2011, 1005). Third party logistics firms act as a middleman between the buyer and the seller, while providing a bundle of services in an integrated way (Berglund 1997, 18). These services can include for example warehousing and value added services. Regarding the logistics service supply chain, the TPL firm is as of the core interest of this research. Cui & Hertz (2011, 1010) argue that TPL firms develop their core capabilities to manage the logistics network and physical flows along the client's supply chain. Figure 1 illustrates the idea of a focal industrial firm outsourcing to a TPL firm

which interacts with interdependent logistics service providers to form networks according to the view of Cui and Hertz (2011, 1006).

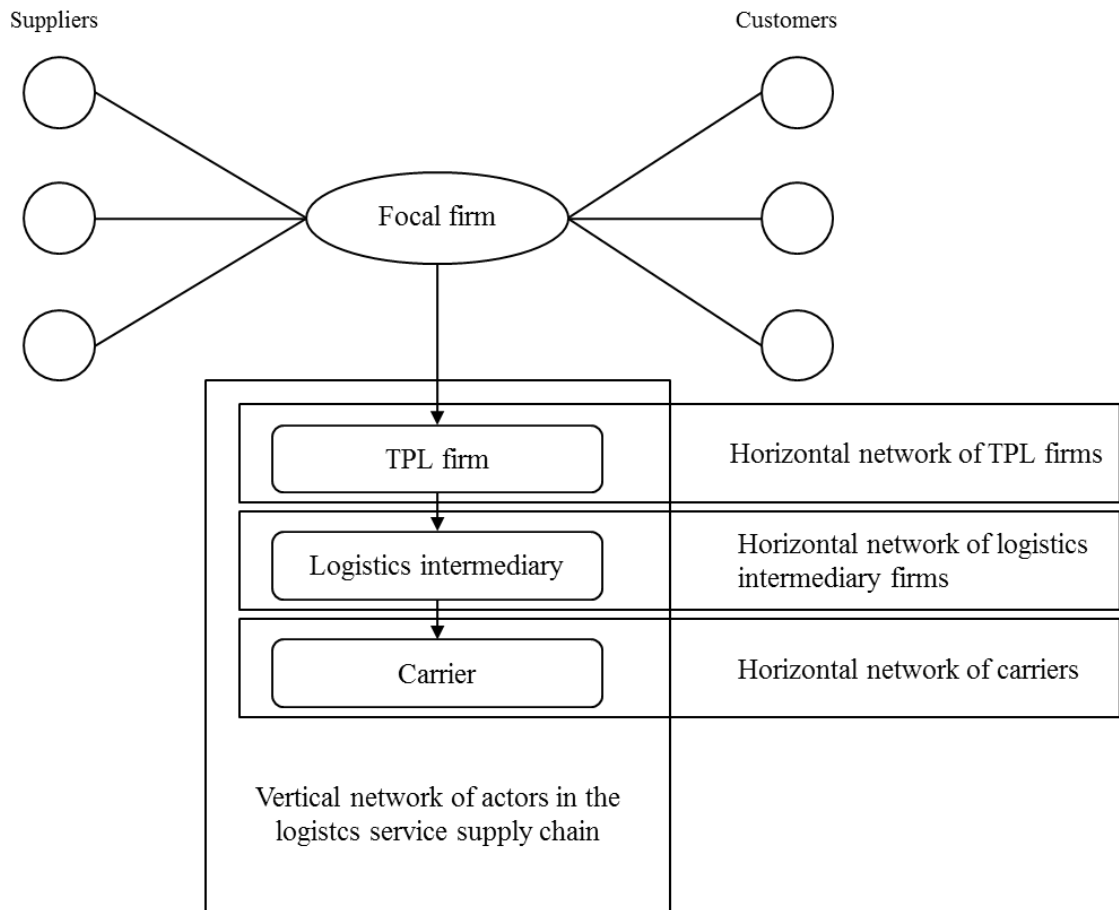


Figure 1 Industrial supply chain and the logistics firms' network of interaction (modified from Cui & Hertz 2011, 1006)

Another form of networking which broadens the network of interaction as defined by Cui and Hertz (2011, 1006) in Figure 1 is the option that the TPL firm outsources its activities in value adding or supportive services. In these cases the activities outsourced are not of the core competence of the TPL firm, and are not the type of activities outsourced to other logistics companies, but firms in different industries. By outsourcing to other companies, or acquiring the knowledge from different industries, the TPL provider may be able to expand its value offering to its customers. Increasing ones portfolio of service offering, the TPL firm can gain competitive advantage. Gaining competitive advantage through knowledge acquisition in addition requires the collective use of knowledge, through which companies will be able to implement innovative methods by utilizing the adaptation and deployment of technological innovations (Chapman, Soosay & Kandampully 2003, 641). This type of networking or partnerships is rarely

studied in the literature and therefore mostly disregarded in the discussions about logistics networks – even when the TPL firm is considered the focal firm. Cui and Hertz (2011, 1004) define vertical partnership from the point of view of a supply chain network, where the three different logistics provider types discussed above form a logistics service supply chain. In this research a modified view of the logistics supply chain of Cui and Hertz (2011, 1006) is used, where all the types of logistics service providers are considered to be on the same level and therefore to form horizontal relationships with each other (see Figure 2).

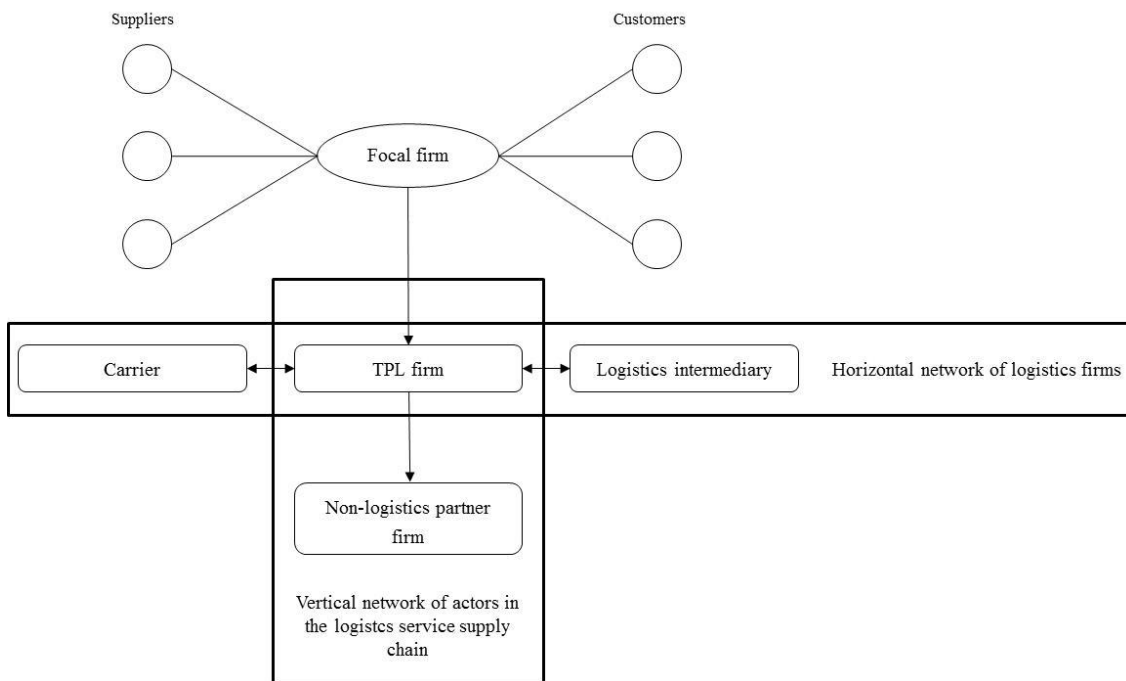


Figure 2 Third party logistics provider's network of interaction

The vertical partnerships, as understood in this research, comprises the third party logistics provider and another company that the TPL provider is outsourcing part of its processes, or partnering with in order to provide the service it is offering to its customers. The companies in vertical partnerships, which the TPL is using for its service offering, are in this research considered as the type of companies that are not typically, or alone, acting as providers of any type of logistics services. This vertical network of actors in the logistics supply chain is illustrated in Figure 2.

### 3.2.1 *Horizontal partnerships*

As discussed above, the horizontal partnerships are viewed as partnerships between all types of logistics players within the industry. In this context horizontal partnerships are found also within competing operators in the markets as well as between unrelated companies (Cruijssen, Dullaert & Fleuren 2007b, 24). In all its simplicity by looking for and creating horizontal partnerships, the companies within the same level of the supply chain are seeking to identify and take advantage of win-win situations to allow the companies involved to increase their performance (Cruijssen et al. 2007b, 23), or gain other non-direct benefits from the partnership.

The increased competition in global markets and the more demanding customer expectations have forced all types of logistics firms to find and develop these beneficial relationships with each other (Cruijssen, Cools & Dullaert 2007a, 129). There are several types of networks in partnerships of logistics firms. Cui and Hertz (2011, 1007-1008) discussed the capabilities of logistics firms to manage different types of networks in the horizontal partnership context and they have identified three types: geographical network (which they call the network of actors), network of logistics systems, and network of clients' physical flow.

In terms of geographical span of horizontal networks, the structure of the network, and the types of the logistics firms in the network, determines largely the width of the network. When looked at from the point of view of the different types of logistics firms, carriers have a varying geographical coverage due to their fixed destinations and thus vary based on the number of actors within the network. On the other hand logistics intermediaries have a wide geographical coverage as they tend to establish subsidiaries or alliances with local partners. The narrowest network within a certain type of logistics firm is with the TPLPs as they are relying on their other type of logistics firm partners (intermediaries and carriers) to perform the connecting and operating logistics activities. (Cui & Hertz 2011, 1007.) As the width of the network within single types of logistics firms differ greatly, the width of the entire horizontal network of logistics firms depends on which types of firms are involved in the network. Therefore the geographical coverage of horizontal partnerships differs greatly case by case.

The geographical coverage of the horizontal partnership network is only one example of the ways the structure of the partnerships affect in terms of different benefits and service capabilities. The next type of network is the network of logistics service systems (Cui & Hertz 2011, 1007), which is closely related to the resource based view of network theory as it has been argued that a logistics network is a set of closely connected resources (Jahre & Fabbe-Costes 2005, 146). The network of logistics service system includes resources (such as physical systems, traffic systems or service systems) that are

required by or available to the service process in order to be able to provide the service concept (Cui & Hertz 2011, 1007). According to Cui & Hertz (2011, 1007-1008) the different types of logistics firms have different type of service concepts:

- Carriers move physical goods from one point to another, focusing on how well it is done (efficiency). Their knowledge is within operating the physical systems and transport equipment, and their capability in operating networks of logistics systems is high.
- Logistics intermediary firms service concept and business idea is in consolidating physical goods. They focus on coordinating a multitude of clients and carriers, and providing related value-added services. Therefore it is argued that their capability of operating networks of systems is lower than of carriers'.
- TPL firms in comparison seek to provide integrated services. This is achieved through coordinating clients, logistics intermediaries and carriers. Their focus on operating network of logistics services is on effectiveness, and therefore the capability of operating this type of network is the lowest.

The service concept within the horizontal partnership network can be within a single type of logistic firm's concept or encompass the combination of two or all of the types of logistics firms and their capabilities discussed above.

The third network type identified is the network of client's physical flows. Especially the TPL firms are active in and have the capability to manage the physical flows along a specific supply chain (Cui & Hertz 2011, 1008). This is due to their smaller amount of clients than of carriers and logistics intermediaries. Even though the management of the specific network is not of core capability of the carriers or the logistics intermediaries, by forming horizontal partnerships within the logistics firms they can also be able to gain access to the capabilities in this network.

The above mentioned benefit of cooperation in regard to the network of client's physical flows is only one benefit that can be achieved through partnerships within the horizontal network. The benefits can be categorized according to the two discussed network theories in the previous chapter to strategic benefits, and resource based benefits to justify the development of horizontal partnerships. This categorization is shown in Table 1.

Table 1 Benefits of horizontal partnerships

| <b>Strategic benefits</b>                                         | <b>Resource based benefits</b>                               |
|-------------------------------------------------------------------|--------------------------------------------------------------|
| Expansion to new markets                                          | Responsiveness to demand fluctuations                        |
| Market coverage, competitive power, increased service             | Access to complementing resources, knowledge and information |
| Economies of scale                                                | Capability and resource allocation                           |
| Increased brand awareness, customer loyalty, and increased demand |                                                              |

Many examples of different kind of benefits from cooperation can be found in recent literature. In Table 1 some benefits linking especially to horizontal partnerships in the logistics context are categorized under the above discussed network theories. These benefits discovered include: expansion to new markets by combining resources (Möller, Rajala & Svahn 2004, 25); market coverage, competitive power and increased service in the network (Möller et al. 2004, 23); responsiveness to demand fluctuation by using partners to adapt to capacity changes (Vakaslahti 2004, 45); economies of scale (Möller et al. 2004, 23); access to complementing resources, knowledge and information (Vuorinen 2005, 85); capability and resource allocation within the network (Vakaslahti 2004, 22); increased brand awareness, customer loyalty and increased demand through service network (Möller et al. 2004, 24)..

### 3.2.2 *Vertical partnerships*

Where the horizontal partnership is seen as cooperation between, or within, different types of logistics companies, the vertical partnerships are viewed as partnerships between LSPs and non-logistics related companies (cross-industry partnerships) as discussed in Chapter 3.2. In the view of this research the vertical partnerships are considered as cooperation in order to provide the requested service for the LSP's customer. With vertical partnerships, the LSPs are trying to create differentiation and advantages by expanding the offered service portfolio and to create innovations to benefit their customers. As a result of the development in the industry, and the competitive pressure for the LSP's customers to seek lower labor and manufacturing costs around the world, the supply chains are becoming more complicated (Langley 2012, 15). This in turn is leading for the LSP's customers to seek providers, which can offer more innovative supply chain solutions that reduce costs and add value (Langley 2012, 15). As vertical partnerships are considered cross-industry partnerships, the main resources sought in these types of partnerships, are not in the nature of traditional logistics services. In this retro-

spective the vertical partnerships can be approached from the view of creating new innovations to improve the service offerings. In innovation creation and cross-industry partnerships, knowledge identification and acquisition is of key focus (Chapman et al. 2003, 646).

If the LSP is trying to create completely new innovations to respond to the demand of their current or potential clients, this could be approached through focusing on unrelated cross-industry knowledge sources further away from the related knowledge resources (Enkel & Heil 2014, 255). On the other hand, in case the target in cross-industry partnerships is to improve existing service or product, the sought knowledge resources in partnerships are considered to be closer to the industry relation of the partnership seeking industry (Enkel & Heil 2014, 255), in this case the logistics industry. The co-utilization of resources and creating specific knowledge is required for the development of skills, competencies and to gain scale (or scope) advantages that are required for the TPL to provide added value to their customers (Hertz & Alfredsson 2003, 139). In addition to the development of service offering, sustaining economic progress through developing, using and leveraging knowledge is critical for any organization (Chapman et al. 2003, 636).

The knowledge resource seeking perspective discussed by Enkel & Heil (2014) is closely related to the RBV approach to seeking and creating partnerships. In this perspective the decision to seek vertical partnerships demonstrate the goal to accessing complementing resources, knowledge and information (Vuorinen 2005, 85). The two above mentioned perspectives (creating completely new innovations, and improving existing services) can be used to discuss the vertical partnerships of the LSPs from the point of view of distance in industry relativity between the logistics industry and the industry of the partner company. Further, these ideas can be applied to the framework of resource based and strategic decisions in partner selection.

The deliberate engagement to identifying and gaining benefit from distant knowledge for innovation creation is commonly seen as a strategic decision for a company (Enkel & Heil 2014, 250). The desired innovations through the vertical network can be broadly categorized to three types: technological innovation, organizational innovation, and market innovation<sup>6</sup> (Chapman et al. 2003, 632). In the TPL context, the logistics industry is seen more as a service industry than the logistics company offering products for their customers. When looking at the desired service innovations, they are often considered to be non-technical in nature, even though the technology can be used to activate or enhance the process (Chapman et al. 2003, 633). The strategic aspect of innovation de-

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<sup>6</sup> Original source: Tidd, J. – Bessant, J. – Pavitt, K. (2001) *Managing Innovation: Integrating Technological, Market and Organizational Change*. John Wiley & Sons, New York, NY.



velopment is evident in the broader organizational context, as successful cross-industry innovations require a company to exhibit high potential absorptive capacity, which will improve the ability to understand and evaluate the value and recognize beneficial spillovers from other industries (Enkel & Heil 2014, 244).

The pursuit of innovation through distant cross-industry collaboration requires a certain mindset from the TPLP. The logistics company must constantly look for new knowledge, and start proactively to think for the customer to meet the evolving needs (Chapman et al. 2003, 646). In the end it is not the developments in the service offering through innovation itself that is of the greater significance and brings the advantage in the product or service, but the value of the innovation as perceived by the customer (Chapman et al. 2003, 646). Further Chapman et al. (2003, 646) summarize the outcome of innovation creation aptly by stating that when the firm is able to focus on thinking on behalf of the customer, and creating outcomes that exceeds the present expectations of superior value of the customer, a service innovation results.

Recruiting personnel from different niche industries can create customer specific know-how (Hertz & Andersson 2003, 144), which then can be used to improve the service and bring added value for the customer. Another way of acquiring customer specific know-how can be achieved through partnerships within the niche industries, or the industry the customer is operating in. Depending on the industry relation distance, the knowledge acquisition can be seen either as improving an existing service for an existing customer, as in the example by Hertz & Andersson (2003, 144), or a creation of new innovative service to respond to the market demand. Expertise of new knowledge can be sought through the effective use of extended cross-industry networks (Chapman et al. 2003, 636), and using the recognized benefits to form cross-industry partnerships. This knowledge resource seeking perspective also discussed by Enkel & Heil (2014) can be applied to the RBV approach through acquiring knowledge resources to improve the efficiency and effectiveness of the company through being more appealing to the customers.

In addition to looking for new service solutions and improving existing services, vertical partnerships can allow the LSPs to focus on their core activities by outsourcing the non-core activities to its partners (Vakaslahti 2004, 43), simultaneously being able to provide more extensive service offering to its customers. Even though the customers of LSPs are looking for more innovative solutions, and it has been argued that a supply chain system of heterogeneous firms is likely to possess the properties of a scale-free network within a competitive marketplace (Hearnshaw & Wilson 2013, 453), there are limitations and hesitations on the LSP side which might cause the LSPs not to actively seek these types of partnerships. It has been argued that the transaction costs of cross-industry partnerships within the vertical network are higher than the ones within a hori-

zontal, within the industry, partnerships due to the differing interests and functions of the industries and the firms operating in these industries (Hearnshaw & Wilson 2013, 456). In addition, available resources in looking for non-traditional partnership opportunities might be generally limited, especially during the times of focusing in core operations. As resource availability is in the core of recognizing, adapting and maintaining external vertical partnerships especially the greater the distance between the industries (Enkel & Heil 2014, 255), it might cause a resource threshold in seeking vertical partnerships.

## 4 DOCUMENT ANALYSIS

### 4.1 Research approach

In the existing literature of TPL providers the majority of existing research has been based on surveys (51%) and case studies (15%), and been of a qualitative nature, rather than quantitative (Selviaridis & Spring 2007, 127). A qualitative approach was also selected for this research since the objectives of the research are of qualitative nature: to analyze partner selection and networks in TPL industry. As this study aims at understanding factors affecting network formation and outcomes in a complex and little researched area, qualitative approach supports the aim by seeking to understand meanings and experiences (Eriksson & Kovalainen 2008, 5). A qualitative approach was needed since quantitative analysis would not have provided adequate information on the researched factors.

For the research of this study, a document analysis will be utilized. Since the target is to discover existing partnerships and networks within TPL providers, an analysis of existing documentation and communication about formed partnerships is relevant. In addition, document analysis was chosen because a questionnaire or an interview approach would presumably not have provided enough, or correct information. This is due to the fact that the research is done as a commission to one of the major third party logistics service providers in Finland, and thus other players in the industry might not be willing to share their strategic partnership insights for the research.

The use of document analysis as a research method is the use of secondary data. In comparison to primary data, which is data personally collected by the researcher, secondary data involves the use of already existing empirical data. Secondary data can include both textual data that exists without any specific collection activities, and visual material. This kind of data, that needs no specific collection and exists irrespective of the researcher's actions, is in qualitative research referred as naturally occurring data (Eriksson & Kovalainen 2008, 78). This research will utilize different kinds of documentation, which are specified in Chapter 4.2.

The research method of document analysis is considered unobtrusive and nonreactive to the presence of the investigator (Berg 1995, 143; Forster 1994, 148). A positivist approach to the analyzed documents will be used instead of interpretative or linguistic approaches, as the purpose of the study is to discover reasons in the modes of partner selection and networks (Eriksson & Kovalainen 2008, 90-91). The positivist approach considers the nature of the text objective and the role of the researcher as an outsider (Eriksson & Kovalainen 2008, 90-91).

## 4.2 Data collection

The qualitative data for the research will be collected by using a document analysis. The analyzed documents will include public, company created documents and sources such as corporate press releases and company websites. In addition the data will be collected from partnership examples in journal articles and related researches. Combining the database services with Internet searches provides somewhat different results complementing each other as a source for data search (Eriksson & Kovalainen 2008, 97). Since the initial search conducted in the fall of 2011 for the relative analyzed content gave indication that available documentation was not extensively available for the information researched in this thesis, the analyzed documents will be gathered by using a convenience selection.

The initial search for data to be analyzed consisted of keyword searches in online Finnish newspaper databases (Helsingin Sanomat, Ilta-Sanomat, Talous Sanomat) available for students at the University of Turku, and keyword searches in search engines. The approach used for the search and collection of the data is the following: firstly the searches are made using the names of the main Finnish TPL service providers in addition with keywords such as “yhteistyö” (collaboration, cooperation), “partnership” and “network”; secondly the relevance of the results are evaluated from the first ten pages of results in the Internet search engine. Due to the scope and limitations of this study, the TPL service providers considered as the main Finnish TPL operators were selected for the research queries. Based on a discussion with a Key Account Manager in one of the leading TPL firms in Finland, the main competitors in Finland for the TPL markets, especially in value-added service production, are considered to include:

- DB Schenker
- DHL Supply Chain
- DSV Solutions
- Geodis Wilson
- Hub Logistics
- Itella Logistics
- Kuehne & Nagel
- Posten Logistik / PostNord Logistics
- UPS Supply Chain Solutions

DB Schenker (DBS), DHL Supply Chain (DSC), Geodis Wilson (GW), Kuehne & Nagel (K&N) and UPS Supply Chain Solutions (UPS) represent global companies with a representation in Finland. DSV Solutions and PostNord Logistics are larger Nordic companies with a presence in Finland. Including the above mentioned in the research queries might provide beneficial results from data outside of Finland in order to get a

more complete picture of the current partnerships in place. Itella Logistic is the largest Finnish firm on the TPL markets in Finland and is therefore of interest in the focus of this study. All the above mentioned operators have a vast variety of services offered. Hub Logistics is a smaller Finnish operator with a narrower offering, but their focus is strongly in value added service production. The inclusion of Hub Logistics is justifiable to get a more comprehensive view of the markets into the research, as partnerships in smaller companies might differ from those of the bigger competitors.

The purpose of the study is to analyze partnerships and networks in third party logistics industry through its sub-objectives. For this analysis research areas were identified based on the sub-objectives of the study and the relevant theoretical background. These themes included aspects such as: what has been outsourced, how much partnerships can be identified, what were the expected gains found, has the service offering changed as a result of partnerships, and what were the communicated outcomes discovered. The research areas are assigned to their respective sub-objectives in Table 2.

Table 2 Operationalization chart

| Objective of the study                                   | Sub-objectives                                                             | Theoretical background                                               | Research themes                                                                                |
|----------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| To analyze partnerships and networks in the TPL industry | What kinds of networks and partnerships have been used to create services? | Definition of the TPL industry, traditional networks in the industry | What parts of the service creation have been outsourced? How much partnerships have been used? |
|                                                          | What were the reasons behind the partnerships?                             | Strategic or resource based decisions in partnerships/networks       | Expected gains of networking                                                                   |
|                                                          | What are the results and outcomes of the partnerships?                     | Networks, partnerships, possible advantages                          | Change in service portfolio, communicated outcomes                                             |

As a basis for the convenience selection of the data to be analyzed, the research areas determined in the operationalization chart (Table 2) were used as criteria. The found documents that seemed relevant for the purpose of the study were initially skimmed to see if they matched the determined research areas. If there were indication of data concerning these areas, the found documents were included in the collection of documents to be analyzed.

The collected articles in electronic journals available through the journal databases for the students at the University of Turku were searched and retrieved during a three-

month time period between February and May in 2014. In order to gain the most relevant and up-to-date networking and partnering solutions in the TPL industry the articles selected needed to range from the year 2000 until the present day. The same time period of relevance was also used for the material found online through the search engine queries. A detailed breakdown of the documents collected per company can be found in Table 3. The small amount of documents selected is justifiable because of the qualitative nature of this study, as the purpose of the study is to analyze the reasons and usage of partnerships and networks in TPL industry.

Table 3 Distribution of horizontal and vertical examples

| Company                              | Number of documents | Search engine queries (No.) |          | Journal database (No.) |          |
|--------------------------------------|---------------------|-----------------------------|----------|------------------------|----------|
|                                      |                     | Horizontal                  | Vertical | Horizontal             | Vertical |
| DB Schenker                          | 6                   | 4                           | 2        |                        |          |
| DHL Supply Chain                     | 7                   | 2                           | 5        |                        |          |
| Geodis Wilson                        | 2                   | 2                           |          |                        |          |
| Hub Logistics                        | 1                   |                             | 1        |                        |          |
| Itella Logistics                     | 8                   | 4                           | 4        |                        |          |
| Kuehne & Nagel                       | 2                   | 1                           | 1        |                        |          |
| Posten Logistik / PostNord Logistics | 2                   | 1                           | 1        |                        |          |
| UPS Supply Chain Solutions           | 5                   | 2                           | 2        |                        | 1        |

The collected data categorized in Table 3 consists of altogether thirty-three documents (see list of the documents in Appendix 1 used documents). The distribution between documents discussing vertical and horizontal partnerships was found to be almost equal: seventeen of the documents discuss examples about vertical partnerships, and sixteen documents about horizontal partnerships (see Table 3).

When conducting the document search for the most important TPL players in the Finnish markets via online search engines with the above mentioned key words, results for some companies displayed only partnership results with companies outsourcing their operations to the TPL firm (e.g. DSV Solutions). These activities are considered normal business operations for the TPL firms and are therefore not linked to the partnership and network aspect from the focus of a TPL firm. Since the focus of this study is on the TPL, and its networks, these results were not included in the data to be analyzed. As mentioned above, only hits with significance to the areas defined in the operationalization chart (Table 2) were regarded as analyzable data for the purposes of the study.

The most documents collected for analysis per company was eight for Itella Logistics and seven for DHL Supply Chain. For DB Schenker six documents were collected to be analyzed. For UPS Supply Chain Solutions five documents of relevance were discovered. Relevant document findings for Kuehne & Nagel (2), Geodis Wilson (2), Post-Nord Logistics (2), and Hub Logistics (1) were not greatly extensive and together the analyzable documents of these four companies represent only 21 % of all the documents found to be analyzed for the purposes of this study. More documents regarding the companies researched, especially DHL Supply Chain and UPS Supply Chain Solutions, were discovered, but they were found to discuss same issues without providing extra insight as the ones used, and were therefore disregarded. As mentioned above, for DSV Solutions no relevant partnership documents were discovered. Table 4 below summarizes the sources for the collected documents per company.

Table 4 Summary of collected data based on source

| Company                              | Press releases | Company sites | News sites | Case examples | Publications |
|--------------------------------------|----------------|---------------|------------|---------------|--------------|
| DB Schenker                          | 1              | 2             | 2          | 1             |              |
| DHL Supply Chain                     | 3              | 1             | 2          |               | 1            |
| Geodis Wilson                        | 1              |               | 1          |               |              |
| Hub Logistics                        | 1              |               |            |               |              |
| Itella Logistics                     | 5              | 1             | 1          | 1             |              |
| Kuehne & Nagel                       | 1              |               | 1          |               |              |
| Posten Logistik / PostNord Logistics |                | 1             | 1          |               |              |
| UPS Supply Chain Solutions           | 1              |               | 2          | 1             | 1            |

As can be seen from Table 4, in total fourteen documents are company press releases, eleven of the collected documents are news articles in online news services, three documents are case examples on partner websites, or a site visit analysis of a consulting group (UPS), and two documents are publications; one a company white paper (DSC) and one a journal article (UPS). The results of the findings from these collected documents will be further discussed in Chapter 5.

### 4.3 Data analysis

In qualitative research there are scarcely any recognizable standardized ways to analyze the collected data (Puusa 2011, 114) since in qualitative research the visibility of the researcher's creativity in the results is considered creditable (Tesch 1990, 96). The analysis should nevertheless be systematic and comprehensive (Tesch 1990, 95). It is typical for a qualitative research that the data is collected in multiple phases which effects in that the data is being constantly analyzed throughout the research (Puusa 2011, 114; Tesch 1990, 95). Miles and Huberman (1994, 10-11) distinguish three stages in data analysis. The first is *data reduction*, where the collected data is chosen, specified and compressed. This stage occurs already in the process of data collection, since the researcher has to select which data is to be collected, and which to be neglected. This overlapping stage occurred also in this research as described in the previous chapter concerning data collection. The second phase is *data display*, where the collected data is presented in a compact and understandable manner. The third phase is *conclusion drawing and verification*, which has its roots already in the data collection phase as the researcher notices patterns and explanations to the researched subject. The verification of the conclusions is as well an ongoing process as the selected choices are argued, and the reliability and validity of the results are evaluated throughout the analysis process.

The purpose of this study is to analyze the existing partnerships and networks of TPL service providers. The data is therefore analyzed based on themes of horizontal networks of logistics service providers taking into account the vertical logistics supply chain (described in Chapter 3.2), and the vertical partnerships from the point of view of the TPL provider in order to enhance its service offering and performance. In addition the reasons for the partnerships are sought to be understood.

### 4.4 Trustworthiness of the study

Reliability is a crucial characteristic in research, which requires a good quality study based on reliable results (Aaltio & Puusa 2011, 153). It is characteristic for a qualitative research that reliability cannot be indicated as an estimate of an objective and quantitative instrument (Aaltio & Puusa 2011, 153). Classical evaluation criteria often used in research in social sciences are reliability and validity of the research (Eriksson & Kovalainen 2008, 292). According to Mäkelä (1990, 47-55) the same evaluation methods used in quantitative research cannot be applied to qualitative research. Instead of using reliability and validity as basis of evaluation, he recommends using the significance and social or cultural position of the data, sufficiency of data, coverage of the analysis, and



the measurability and repeatability of the analysis as foundation of the evaluation. Qualitative researchers and literature on methods are divided upon the usability of reliability and validity as the right criteria to evaluate qualitative research (Eriksson & Kovalainen 2008, 292).

A parallel concept of *trustworthiness* to reliability and validity was introduced by Lincoln and Guba (1985). The concept of trustworthiness contains four aspects: credibility, transferability, dependability, and conformability (Lincoln & Guba 1985). This study will be evaluated on the concept of trustworthiness, and its aspects listed above.

*Credibility* is associated with the familiarity of the researcher with the research topic and whether the data is extensive and adequate to justify the presented claims. In addition the logic of links between the observations and categories made need to be strong enough. Demand for logic also requires that other researchers can come to similar conclusions based on the same materials. (Lincoln & Guba 1985, 301-305; Eriksson & Kovalainen 2008, 294.) In this research the study was conducted during a time period of several months, what guarantees that the researcher has familiarized himself with the topic of the study. The academic articles used in the study can be regarded as creditable and relevant in the field of partnerships and networks of TPL service providers. The research areas and focuses of the data collection and analysis were formulated on the basis of the research questions and the existing research on the topic.

*Transferability* is concerned about finding a connection between the conducted research and other previously existing research (Kovalainen & Eriksson 2008, 294), and on how the results could be transferred to a different context (Tynjälä 1991, 390). According to Tynjälä (1991, 390) the evaluation and conclusions about the transferability of the results cannot be made solely by the researcher, but also those applying the results of the study. In order for others to be able to evaluate the transferability of the results to a different context, the researcher must adequately describe the data and the research (Tynjälä 1991, 390). In this research transferability is assured by using similar researches in the literature and efficiently describing the analyzed data and the process of the research. In addition, part of the analyzed documentation comes from academic articles, which have drawn attention to the same phenomena as this research. Transferability of the results of this research is believed to be transferable to other contexts as well, since the benefits and expectations of partnerships and networks are to certain extent common in separate industries.

*Dependability* of the study refers to the responsibility of the researcher to provide information about the research process, which needs to be logical, traceable and documented (Eriksson & Kovalainen 2008, 294). In this study the data collection process was described carefully. Selected methods for the research were explained and justified, as well as the collected data was adequately referenced. Since this study utilized a docu-

ment analysis, all the empirical evidence used in this study is in written form and traceable to its origin. This allows repeating of the analysis based on the same material.

*Conformability* of the study is about linking the findings and interpretations to the data so that it is easily understandable by the reader (Eriksson & Kovalainen 2008, 294). The findings of this study are discussed in the following chapter. The documents are analyzed under their relevance to the two types of networks (horizontal and vertical) from the point of a TPL operator. The interpretations and findings of this study are linked to the analyzed documents and relevant literature is referenced in order to tie the findings to the theoretical grounds of the research. Since the data used in this study is documents the linkages can be clearly referenced which enhances the conformability of the study.

## 5 THIRD PARTY LOGISTICS PARTNERSHIPS

### 5.1 Horizontal partnerships

As discussed in Chapter 3.2 it is common for a TPL operator to further outsource the logistics operations to other players in its network. If all types of logistics operators are considered to be on the same level in the distribution network, is this type of partnership considered horizontal. Cui and Hertz (2011, 1006) introduced a logistics service supply chain with different type of logistics service providers. This is an alternative and a more detailed way to view the horizontal cooperation between logistics operators. In their model the three types of logistics operators form a vertical logistics service supply chain where are also integrated horizontal networks within the specified types of operators (TPL firms, Logistics intermediaries, and carriers) (Cui & Hertz 2011, 1006). For the purposes of this analysis, the logistics service supply chain is considered to be a part of the bigger picture and a description of horizontal partnerships and cooperation as discussed and presented in Chapter 3.2.

#### 5.1.1 Existing partnerships

The evidence found in the analyzed documents (see Appendix 1 for document references) supports the theoretical framework of horizontal cooperation, which can be found between competing same type logistics operators in the markets, as well as between indirectly competing logistics operators (Cruijssen et al. 2007b, 24). When looking at the horizontal partnerships and cooperation, fifteen documents were found relative. The types of partnerships found in the research can be analyzed based on the connection of the types of logistics operators in the partnerships.

Within the fifteen documents, three were found to illustrate horizontal partnerships in the form of joint ventures. Two of these three were very similar in nature (Air Cargo News; Arabian Supply Chain) and concerned the same company (DB Schenker). In both cases DB Schenker had established a joint venture with its former partner, one in Abu Dhabi, and the other in Oman. The both examples are of similar type as they are partnerships between two TPLPs strengthening their partnerships in growing markets. In the third joint venture partnership Kuehne & Nagel was partnering with another TPLP to form a new TPLP focusing in high tech services (Frost & Sullivan). Two more horizontal partnerships were found through partner company websites to discuss DB Schenker. In both of these DB Schenker was partnering with logistics intermediary to

expand service coverage: one in Tanzania and the other in Zimbabwe (Forwardair; Key Logistics). Table 5 below summarizes the types of discovered partnerships within the analyzed documents.

Table 5 Horizontal partnerships

| Company                    | Partner                     | Partnership          | Operator relation |
|----------------------------|-----------------------------|----------------------|-------------------|
| DB Schenker                | Salem Freight International | Joint venture        | TPL-TPL           |
|                            | Khimji Ramdas               | Joint venture        | TPL-TPL           |
|                            | Forwardair                  | Partner              | TPL-Intermediary  |
|                            | Key Logistics               | Partner              | TPL-Intermediary  |
| DHL Supply Chain           | Faxion network              | Distribution network | TPL-TPL           |
|                            | DHL Express                 | Distribution         | TPL-Carrier       |
| Geodis Wilson              | Palletline                  | Distribution         | TPL-Carrier       |
| Itella Logistics           | Fashionet                   | Distribution network | TPL-TPL           |
|                            | Mainfreight USA             | Partner              | TPL-TPL           |
|                            | VR Transpoint               | Distribution         | TPL-Carrier       |
|                            | VR Transpoint               | Distribution         | TPL-Carrier       |
| Kuehne & Nagel             | FM Logistics                | Joint venture        | TPL-TPL           |
| PostNord Logistics         | Fashionet                   | Distribution network | TPL-TPL           |
| UPS Supply Chain Solutions | Polar Speed                 | Acquisition          | TPL-TPL           |
|                            | Total Delivery Systems      | Subcontractor        | TPL-TPL           |

In three cases the research was directed to a distribution network's website. As can be seen from Table 5, these findings involve DHL Supply Chain, Itella Logistics, and PostNord Logistics. The partnerships discovered were European distribution and service networks for fashion logistics. It was found that DHL Supply Chain was involved in one network (Faxion Network) competing against the other (Fashionet), where Itella Logistics was a partner for services in Finland and PostNord Logistics a partner for services in Sweden. The other result of horizontal partnership regarding DHL Supply Chain was found on an online news site, describing how DHL Supply Chain have tightened their intragroup cooperation with DHL Express by opening an end of runway storage facility at the DHL Express Leipzig main hub allowing faster deliveries to their customers worldwide (Post & Parcel b).

Two press releases by Itella Logistics describe different types of horizontal cooperation. The analyzed documents provided evidence of a partnership being formed by the Finnish TPL provider Itella Logistics and a multinational TPL operator Mainfreight USA (Itella news a). Another type of horizontal partnership was seen between two government-owned companies seeking to deepen their already existing cooperation. In this case the TPLP was partnering with a carrier on domestic markets (Itella news b), and

another found press release concluded that the plans to collaborate on certain segment on the markets between two Finnish state owned companies had moved forward and a letter of intent regarding business acquisition by Itella had been signed (VR Transpoint news).

Another type of TPL and carrier partnership was found regarding Geodis Wilson in Auckland, where they had decided to partner with a local delivery company to cover a specific section of the country after maintaining their own fleet in the same area (Pallet-line). Two more examples of partnerships in the horizontal network were found involving UPS Supply Chain Solutions. The first one was a press release on a UPS Supply Chain Solutions partner's website, announcing to be providing warehousing services for UPS Supply Chain Solutions in Virginia (Total Delivery Systems). The other was found to be a business extension by acquiring a UK based TPLP with specific knowledge in temperature-sensitive supply chain solutions (Kauppalehti). This example is not purely a partnership in nature but was decided to be included since many logistics companies have been, and are, growing and expanding their geographical scope and knowledge through mergers and acquisitions (Bask, Tinnilä & Rajahonka 2010, 165-166).

### ***5.1.2 Reasons behind the partner selection***

It can be argued that in broad perspective horizontal partnerships are formed to take advantage of win-win situations and for the companies involved to increase their performance (Cruijssen et al. 2007b, 23). The reasons behind the partner selection can be addressed from the point of view of expected gains and benefits from the partnership. To evaluate the researched documents from the perspective of why the partnering has happened, the relevant documents can be analyzed using the benefit classification for strategic and resource based benefits (Table 1 in Chapter 3.2.1), and the capabilities to manage different type of networks. Based on the capabilities to manage different types of networks in the horizontal partnership, three types of networks can be identified: geographical network, network of logistics systems, and network of clients' physical flow (Cui and Hertz 2011, 1007-1008). The above types of networks were discussed in more detail in Chapter 3.2.1.

Out of the fifteen documents analyzed for the horizontal partnerships, eleven demonstrated a goal to either strengthen or expand geographical coverage. These eleven examples of partnerships were found within DB Schenker, DHL, Itella, PostNord and UPS. There were six partnership examples which can be categorized purely under geographic network. Two of these partnerships (Forwardair; Key Logistics) were related to expanding the geographical span of the network by partnering with logistics intermedi-

aries which are argued to have wide geographical coverage through local partners (Cui & Hertz 2011, 1007). The other four examples in managing a geographical network were found to be between two TPL operators. All four horizontal partner examples regarding DB Schenker were found to be concerning on expanding geographical coverage, either through joint ventures with another TPLP (Air Cargo News; Arabian Supply Chain) or by partnering with a logistics intermediary. In the articles about the joint venture operations, DB Schenker emphasized the importance of the future growth in the Middle East and Africa (Air Cargo News). This suggests a strategic choice in where the expansions were targeted and the chosen methods reflect on the state of development and stability in the market areas.

The remaining two examples that fall into the category of managing geographical networks concerned UPS and Itella. In the UPS example they had partnered with another TPL offering warehousing services. Even though it was not clearly stated in the document, why this partner was chosen, there were implications that within that region the warehousing activities offered by UPS had for a longer period of time been performed by a partner (Total Delivery Systems). The partnership involving Itella and an American TPLP demonstrates horizontal partnership within the same type of logistics operator to broaden each other's service- and market coverage (Itella news a). The reasons given in the document regarding this partnership are to strengthen the Finnish operator's position in the US market. According to the document, the reason why the specified American partner was chosen lies in the product- and service selection and the strategy of the new partner, which are expected to suit Itella's trade needs and business plans.

The researched documents regarding forming horizontal partnerships for being more capable of managing geographical networks give indication that the choices for partnership have been strategic (Air Cargo News, Itella news a). When reflecting the geographical expansion as a reason for building networks to the possible benefits from horizontal partnership, it can be seen that the benefits would include both strategic side benefits as well as resource based benefits: expansion to new markets (strategic); market coverage, competitive power and increased service (strategic); access to complementing resources, knowledge and information (resource based).

The above six researched documents were found to suit purely the benefits for building capabilities to manage geographical networks. Two documents regarding expansion of geographical network, but also including the aspect of having the capabilities to manage logistics systems were discovered. First of these two is a press release from a local carrier, with which Geodis Wilson had decided to partner for a specific region distribution in Australia (Palletline). In this example GW had previously been operating its own fleet of two trucks in Auckland, but had decided to partner with a local player to enhance delivery performance (Palletline). This gives indication and support to the theo-

retical framework discussed in Chapter 3.2.1 that carriers focus on efficiency in delivering goods, and have knowledge in operating physical systems and transport equipment, and therefore having a high capability in operating networks of logistics systems (Cui & Hertz 2011, 1007-1008). By partnering with the local carrier GW was able to acquire higher capabilities to manage the network of logistics systems in that area, while maintaining its geographical coverage network. The benefits gained by GW with the partnership includes as well strategic as resource based ones: market coverage, competitive power and increased service (strategic); responsiveness to demand fluctuations (resource based); access to complementing resources, knowledge and information (resource based).

The other researched document giving evidence for increasing capabilities in both geographical network and logistics systems management was the acquisition by UPS of a UK based TPLP with specific knowledge in temperature-sensitive supply chain solutions (Kauppalehti). While it has been argued that TPL operators do not have as high capability to operate the network of logistics systems (Cui & Hertz 2011, 1007-1008), the acquired TPLP can be also considered a carrier as it manages its own fleet in addition to providing other logistics services such as warehousing and value added service. With the acquisition UPS also gains market presence in the UK, expanding its healthcare dedicated network. This researched market expansion demonstrates that UPS is strategically looking to be more capable of managing a vast geographical network, in addition to acquiring knowledge to efficiently manage the network of logistics systems. When looking at the expected benefits behind this partnership, the following can be identified: expansion to new markets (strategic); market coverage, competitive power and increased service (strategic); economies of scale (strategic); access to complementing resources, knowledge and information (resource based); capability and resource allocation (resource based).

Two researched documents concerning the same partnership case between Finnish logistics operators Itella (TPL) and VR Transpoint (carrier) were the only horizontal examples to provide an example of a partnership that was targeting only to increase capability in managing logistics systems. The expected benefits derive from the common use of terminals and a more efficient use of transport capacity. The reasons behind this partnership comes also from the fact that both of the companies are state-owned and the plans for both logistics companies for the future should be appropriate in relation to each other (Itella news b). Eventually, as the more recent document shows, the partnership was handled through an acquisition where Itella purchased the groupage logistics business of VR Transpoint to eliminate the overlap between the two state-owned companies (VR Transpoint news). Reflecting this case to the theoretical framework, it can be concluded that even though the state was actively involved in this cooperation, Itella

gained further capabilities to manage logistics systems through acquiring additional knowledge. The expected benefits in the strategic and resource based thinking appear to be the following: market coverage, competitive power, increased services (strategic); economies of scale (strategic); access to complementing resources, knowledge and information (resource based).

When looking at partnerships where the reasons did not seem to indicate sought benefits from expanding capabilities to manage geographical networks, two documents were categorized to this. The first was the joint venture between Kuehne & Nagel, and one of their previous partners, also a TPLP. Since both companies were already performing services in partnership, the joint venture to provide focused services for high technology markets was created to increase the competencies, especially in product completion. The joint venture was created as a strategic and technical response to the markets (Frost & Sullivan). The aspect in this joint venture that indicates it to be having formed to look for benefits in networks of logistics systems is the technical aspect, to gain capabilities that would better match the targeted market sector. Complementary capabilities were also mentioned as key drivers behind this partnership (Frost & Sullivan). Matching the mentioned benefits from the above researched partnerships to the benefit categories identified in this research, the benefits alongside improving capabilities in managing networks of logistics systems would include: market coverage, competitive power and increased service (strategic); access to complementing resources, knowledge and information (resource based); and capability and resource allocation (resource based).

The other cooperation also belonging to only the logistics systems network capability category is the collaboration of DHL Supply Chain in opening a new facility next to its sister division DHL Express's main hub (Post & Parcel b). The benefits sought from this cooperation were stated to improve service to customers by later cut-off times, reduced lead times to recipients, and faster turn-around time for products sent to repair at the facility. In addition DSC spokesperson is expecting the close collaboration to provide up to 25 % cost savings in transportation and warehousing costs with this solution to DSC customers (Post & Parcel b). By partnering with a carrier DSC increased its capabilities to comprehensively manage networks of logistics systems, as carriers have a vaster knowledge and capability in operating these types of networks (Cui & Hertz 2011, 1007-1008). In addition to acquiring capabilities of operating networks of logistics systems, DSC had clear benefits they were after with this cooperation. When linking the stated benefits to the strategic and resource based benefits from the theoretical analysis, the following benefits would apply for this partnership: market coverage, competitive power and increased service (strategic); economies of scale (strategic); increased brand awareness, customer loyalty and increased demand through service net-



work (strategic); access to complementing resources, knowledge and information (resource based).

The last three of the found partnerships were related to European wide fashion logistics networks (Faxion Network; Fashionet). In these cases the TPL provider had partnered in a larger TPL network to gain access to geographical networks, networks of logistics systems, and network of clients' physical flow. From the researched documents concerning horizontal partnerships and networks, these three types of cooperation were the only ones where the TPL operator in question was seeking to expand capabilities of managing all of the three different types of networks mentioned above. In addition these collaborations were the only ones that were networks, instead of dyadic partnerships in the other researched documents.

The companies involved in these distribution and service networks were DSC in Faxion Network, Itella in Fashionet as a partner in Finland, and PostNord in Fashionet as a partner in Sweden. Even though Itella and PostNord are competing against each other in the Finnish markets, they are collaborating through the Fashionet network regarding customers involved in the network. Alongside the network benefits, the reasons behind joining these networks from a strategic and resource based perspectives include: expansion to new markets (strategic); market coverage, competitive power and increased service (strategic); economies of scale (strategic); increased brand awareness, customer loyalty and increased demand through service network (strategic); responsiveness to demand fluctuations (resource based); access to complementing resources, knowledge and information (resource based); capability and resource allocation within the network (resource based). As can be seen, these network partnerships can have many benefits and have covered the all listed in this research. As mentioned in Chapter 3.2.1 there are many reasons and benefits of cooperation, and the ones used in this research are just some of them.

When discussing the above types of cooperation from the view of acquiring capabilities to manage different types of network, it was noticed that most of the examples were related to being capable of managing geographical or logistics systems networks. Only few examples of partnerships for the purpose to gain access to capabilities to manage the clients' physical flows were present. This is understandable as the specific capability in terms of forming networks was considered to be high for the TPLPs (Cui & Hertz 2011, 1008), which were in focus in this research, the companies the researched documents were searched for. In conclusion it can be seen that the benefits from the horizontal partnerships are usually both strategic and resource based in nature, and greatly dependent on the types of partnerships the logistics operator is involved in.

### **5.1.3 Results and outcomes of the partnerships**

The documents analyzed provided good information regarding the expected outcomes and reasons for the partnerships. On the other hand the documents analyzed for the horizontal partnership do not provide validated information regarding the outcomes of the partnerships, as all of the documents are informing about newly formed cooperation. Therefore it is not possible to analyze the results and outcomes of the horizontal partnerships, which was one of the objectives of the study. This was not the case though with vertical partnerships, where also the area of results and outcomes from partnerships will receive empirical evidence to provide insight regarding the third sub-objective of this study.

## **5.2 Vertical partnerships**

Vertical partnership from the point of a logistics service provider deals with the operator outsourcing some of its operations to another company or creating new elements to its service offering. These operations in this study refer to non-core activities, which are not considered to be logistics activities since these were already discussed in the horizontal cooperation context. As discussed in Chapter 3.2 by engaging in vertical partnerships the LSP may focus on its core business, but also try to expand its service offering with partnerships of companies from different industries. Vertical partnerships can be approached from the angle of either improving current services or creating new service extensions through innovations. In this context the industry-relation is considered to be further away in seeking innovation and closer when looking for improving services (Enkel & Heil 2014, 255). Analyzing the researched documents, this aspect of industry relation will also be covered. Some documents supported each other by providing similar information on service portfolio expansions, but others supported also the usage of partners to improve operations. A list of the analyzed documents to which the references in this chapter are can be found in Appendix 1.

### **5.2.1 Existing partnerships**

The researched documents provide evidence to the theoretical background discussed in Chapter 3.2.2. It was found that there are multiple ways for LSPs to cooperate vertically with companies not in the logistics industry. There was evidence of close industry relations as well as further away from the related knowledge resources. For the analysis of

vertical cooperation, eighteen of the thirty-three analyzed documents provided examples and information.

Of the eighteen documents analyzed, two researched press releases provided partnership information on vertical partnerships with an LSP and a party supplying the LSP with packaging materials. The companies involved in these types of partnerships were Hub Logistics and Kuehne & Nagel. In the case of Hub Logistics, the LSP had decided to acquire a packaging company to improve its service offering to its customers (Hub Logistics news). K&N on the other hand partnered with the provider of pallets they use in transportation. The partner company had together with K&N developed a special aircraft friendly pallet for K&N (Palletkraft news). These two researched modes of cooperation were the only ones found in the researched documents between and LSP and its supplier of physical perishables to the LSP.

From the remaining documents regarding vertical partnerships, six of the found partnerships were related to developing new warehouse management systems (WMS) for the LSPs. The furthest a development of WMS system was taken was found in a DHL Supply Chain's customer's press release concerning a fully automated warehouse in Singapore. In this cooperation DSC had partnered with a provider of automated logistics solutions to implement an automated storage and order picking system along with the operating system (WMS) for its customer's product distribution center located in DSC's hub (TI News Center). The researched documents regarding the remaining five partnerships included one case example (Softeon) and four internet news sites (Post & Parcel a; 3PL News; Manufacturing & Logistics IT; Taloudenvuosi). The companies that were engaged in these partnerships were DB Schenker (Softeon), DHL Supply Chain (Post & Parcel a), Geodis Wilson (3PL News), Itella Logistics (Manufacturin & Logistics IT) and PostNord Logistics (Taloudenvuosi). In the cases of DSC, GW, Itella and PostNord the companies were looking for a main WMS for their operations. In these partnerships DSC, GW and Itella were looking for a solution to be taken into use globally, while the document relating to PostNord did not give such indication rather than illustrating the use of the new system in their operation in Finland. DB Schenker on the other hand was looking for an easily implementable WMS solution to match the needs of their smaller customers on a global scale. This sought solution was to be implemented alongside the company's main WMS.

In the above mentioned partnership of PostNord the created solution included also a Pick-by-Voice (PbV) module to manage picking and other warehousing activities through voice guidance, instead of traditional printed picking lists (Taloudenvuosi). Another partnership which involved a PbV solution was discovered with Itella Logistics. This partnership involved the same provider to the LSP as for PostNord. The researched document was a case example on the provider's web site, and provided information on

the objectives and benefits of the partnership (Optiscan). Besides the WMS system partnership and PbV solutions, many partnerships related to different IT solutions and developments were found in the researched documents. In addition to the above introduced seven partnerships, another three documents were direct partnerships related to improve IT capabilities. In addition to improving IT solutions with new supply chain platform, and PbV solution, according to its partner's press release Itella is also implementing another planning solution for pick-up and delivery planning, freight haulage and depot sorting planning (Quintiq news). As Itella is a LSP operating its own distribution fleet, this solution is expected to improve efficiency in that sector of its operations. Another LSP engaged in improving fleet management, truck routing and warehousing processes is DB Schenker, which has formed a partnership with a research center to undertake multiple improvement projects together in the future (NICTA news).

Another document concerning partnerships regarding IT platforms was found as a press release from DSC's partner. In this partnership the partnership is not only about providing a suitable reverse logistics system module, but DSC's partner will also be responsible for the actual repair and re-engineering capabilities within DSC facility for DSC's customers (DEX news). The partnership DSC had formed to provide high quality repair services is not one of a kind. Four more documents describe two similar examples of vertical partnerships, where the LSP has acquired repair knowledge, either through partnerships with knowledgeable companies, or by hiring staff and partnering with the customer to train the hired staff. Three of these documents describe the UPS Supply Chain Solutions' Louisville logistics center (Armstrong & Associates; Business Today; Verespej 2002), where UPS has hired technicians to repair its customers' devices at the end-of-runway facility. DSC on the other hand announced in its press release that it has partnered with multiple strategic partners to perform selected repair activities at its premises in various global locations (DPDHL news).

The following two partnership examples demonstrate new services beyond the traditional logistics activities. The first one involves Itella, who partnered with a technology support company to provide end customers with installation services with the deliveries (Itella news b). This cooperation illustrates cross-industry collaboration outside the traditional thinking of LSP services. The partnership is designed to improve the service to consumer customers receiving household appliances delivered by Itella Logistics. In the service extension concept enabled by the partnership, the customer will receive his/her household appliances or electronic equipment ordered online or from a domestic appliance store delivered to the customer by Itella. With the partnership Itella's partner's Helpson mechanic will be accompanying the delivery and installs it for the customer, making the purchase to operate with a turnkey concept.

The other service is a Supply Chain risk management solution that DSC developed with its partners. The tool allows DSC's customers to evaluate critical nodes in their specific supply chain and to build a risk profile for the entire supply chain based on the information available. In addition it provides the customers using it risk and resiliency reports for long term planning, as well as real-time incident monitoring that allows rapid response to emerging situations. The tool links information on natural disasters, geopolitical and other risks with the customer's global manufacturing and distribution network. (Harrington 2014, 22.) The partnership in the DSC example is triadic: involving the customer, who provides information of critical sites and transportation lanes; DSC's partners, who provide the risk information; and DSC, who provides the supply chain expertise.

### ***5.2.2 Reasons behind the partner selection***

By expanding one's service offering the LSP is able to attract customers in the selected segment and benefit from the gained expertise in the selected field. As mentioned in Chapter 5.2 the benefits in vertical partnerships reside either within being able to focus on core business, or to increase service capabilities by improving existing services or creating completely new innovations. In Chapter 3.2.2 it was argued that vertical partnerships are formed to gain access to complementing resources, knowledge and information (Vuorinen 2005, 85). This view was linked to be both strategic and resource based in theoretical reasoning. The knowledge intensive aspect as well as the industry relation in regard of the increased capability being an improvement or innovation, will be taken into account when analyzing the expected benefits that have affected the formation of the researched partnerships. The vertical partnerships for the researched companies are summarized in below Table 6 according to their partnership goals and the knowledge intensiveness of the partnership.

Table 6 Vertical partnerships

| Company                    | Partner              | Partnership goal                | Knowledge aspect |
|----------------------------|----------------------|---------------------------------|------------------|
| DB Schenker                | NICTA                | IT development                  | Improvement      |
|                            | Softeon              | WMS development                 | Improvement      |
| DHL Supply Chain           | DEX                  | IT development & repair service | Innovation       |
|                            | Multiple             | Repair service                  | Innovation       |
|                            | Multiple             | Service extension               | Innovation       |
|                            | RedPrairie           | WMS development                 | Improvement      |
|                            | Swisslog             | WMS & WH development            | Improvement      |
| Geodis Wilson              | Cargowise            | WMS development                 | Improvement      |
| Hub Logistics              | Kenane               | Packaging solution              | Improvement      |
| Itella Logistics           | Quintiq              | IT development                  | Improvement      |
|                            | Optiscan             | Pick by Voice                   | Improvement      |
|                            | Helpson              | Service extension               | Innovation       |
|                            | Manhattan Associates | WMS & IT development            | Improvement      |
| Kuehne & Nagel             | Palletkraft          | Packaging solution              | Improvement      |
| PostNord Logistics         | Optiscan             | WMS development & Pick by Voice | Improvement      |
| UPS Supply Chain Solutions | Toshiba              | Repair service                  | Innovation       |
|                            | Multiple             | Repair service                  | Innovation       |
|                            | Multiple             | Repair service                  | Innovation       |

As summarized in Table 6, out of the eighteen documents analyzed for vertical partnerships, eleven had evidence of partnerships being more of service improvement in nature than innovation. These types of cooperation were also noted to have closer industry relation with the logistics industry. This finding supports the theoretical discussion related to the vertical partnerships and their nature. The eleven examples which are considered more of service improvements include the examples of packaging solutions (Hub Logistics news; Palletkraft news), WMS development (Softeon; Post & Parcel a; TI News Center; 3PL News; Manufacturing & Logistics IT; Taloudenvuosi), IT development (NICTA news; Quintiq news), and other technical solutions (Optiscan; Taloudenvuosi) to improve the logistics operations currently undertaken by the LSP.

Even though the two documents analyzed for the packaging related partnerships were similar in the nature of improving capabilities within the same relating industry, the reasons behind the two partnerships differ greatly. Hub Logistics was aiming for better and more comprehensive service for its customers (Hub Logistics news), whereas Kuehne & Nagel was partnering to create improve solution to reduce the weight of pallets used and through weight reductions gain cost savings of approximately 3,5 million euros on a yearly level, along with reduced CO2 emissions (Palletkraft news).

The benefits found in the four researched partnerships regarding the development of a main WMS for the companies' operations include: better supply chain designs and inventory holding systems in order to improve services for customers (Post & Parcel a); simplifying and automating logistics processes, and supportive processes (3PL News); gain technical competitive advantage (3PL News); improve operational efficiency and optimize supply chain processes (Manufacturing & Logistics IT); improved operations and increased customer satisfaction (Taloudenvuosi). In addition in the document concerning Itella's partnership it was stated that the selection was made because of the experienced staff, wide knowledge in different industry sectors, and the trust in the provided solution and the support for it globally (Manufacturing & Logistics IT). The sought benefits found in the researched documents regarding core WMS development were all pretty similar and can be summarized to the LSPs aiming for improved customer service and satisfaction through improved operations by simplifying and automating logistics processes.

The remaining two partnerships in WMS development are slightly different in their solution complexity and service/product outcome as the above. In the partnership with DSC and Swisslog, the automated warehouse was expected to improve productivity and capacity of the used facility (TI News Center). In DB Schenker's partnership the expected benefits were as well much customer oriented as in the above examples. DBS wanted to better meet the market demand by providing an easier to implement and lower cost solution for small and medium sized companies (Softeon). Even though the solution outcomes of the partnerships differed slightly, the targeted benefits were well aligned with the other partnerships in WMS development.

Two other types of technical partnerships were found in documents relating to using PbV solutions by PostNord and Itella. In these partnerships the LSP had chosen to implement an improvement to their operating processes by conducting picking and guiding activities using voice guidance. The expected benefits from these partnerships were found to include: increased customer service in visibility and real time information (Taloudenvuosi); more efficient operations (Taloudenvuosi; Optiscan); improved picking accuracy and developing the transparency of the working process (Optiscan). Out of the eleven service improvement type partnerships, the two that were targeted in developing solutions for planning and processes were the partnerships of Itella with Quintiq and DB Schenker with NICTA. From the press release concerning Itella's partnerships, the LSP was looking for benefits in increasing customer service levels, optimizing efficiency, and reducing the company's costs and carbon footprint. DB Schenker was targeting rather similar benefits: improving productivity, gain cost efficiencies and reductions in CO2 emissions. The partnership between DBS and NICTA is of different nature

than the other technical partnerships discussed above, as it is a collaborative study of DBS's IT systems and processes.

In addition to the documents regarding the above described IT developments, DSC had partnered not only to develop a suitable platform for returns logistics, but in addition to retain knowledge in repair and re-engineering services (DEX news). The benefits DSC is looking with this partnership to itself and its customers is reducing turnaround time for repair services by up to five days and eliminating transport legs. Reducing unnecessary transport can be gained as the technical services are performed in the DSC facility. The elimination of transport legs will lead to reduced transport costs and CO2 emissions for DSC's customers. With the IT modules provided by DSC's partner, the LSP is looking for benefits in providing better customer service through full visibility of the operations, including inventory data, engineering information, failure analysis and parts consumption data within the returns and repairs process (DEX news).

Other partnerships within the researched documents involved another example from a partnership by DSC and multiple documents analyzing the partnership at UPS facility in Louisville. Regarding these four documents analyzed, the both companies were seeking benefits through expanding their service offering outside the traditional scope of logistics. The expected benefits mentioned for the partnership with DSC and multiple repair partners included improving aftermarket service reputation to differentiate in the markets, and by integrating repair within the warehouse to achieve estimated 25 % cost savings for its customers (DPDHL news). In addition to the expected benefits, also a stated reason for selecting these specific collaboration partners was mentioned in the researched document to be their capabilities in repair services and geographical scope. The reasons for the partner selection were rather similar than what the documents (Amstornig & Associates; Business Today; Verespej 2002) analyzed for the UPS partnerships revealed. UPS was as well looking for differentiation through improving its service offering. In addition UPS expected this partnership to reduce turnaround times for the devices sent for repair.

From the existing two researched documents regarding Itella and DSC with their partners, indication was found for these partnerships to be more creative and non-traditional in nature than even the repair service partnerships discussed above. In the case of Itella partnering with a company providing installation and customer services for end consumers for household appliances to match the changed demand of the end customers, the expected benefits driving the partnership were found to be in improving service offering to vendors and consumers by providing the service through one stop (Itella news b). In the partnership of DSC with research institutions to create the Resilience 360 risk management solution, it can be seen that this is a new service offered to DSC's customers. The benefits DSC is looking to gain with the partnerships involved in



the cooperation are to increase service offering, and by doing so improving their overall supply chain services to their customers (Harrington 2014, 22). In addition it can be seen that creating services like this can enhance the image of DSC as an innovative logistics company.

The last examples, starting with the five documents comprising of two companies (DSC & UPS) expanding traditional logistics services with returns repair on site, and ending with the last two researched documents (Itella & DSC), can be understood as creating new services rather than improving existing ones. In this perspective, these last examples can be seen as innovative. In addition they support the thought when creating new services through innovation, the cross-industry distance is larger than when improving existing services (Enkel & Heil 2014, 255). In these last examples the industry relation between the knowledge sources is further as the industry relation between technological maintenance, installation services and information collecting and providing research groups are not considered to be close industries with the logistics industry. Most of the vertical partnerships involved technological aspects, but the more innovative the service as a result of the partnership was, the more non-technical in nature they were. Even though the innovations in service industries are not considered to be technical in nature, the examples involving creation of new services through innovation also included technical aspects, which supports the view by Chapman et al. (2003, 633) that technology might be behind the service innovation to activate or enhance it.

### ***5.2.3 Results and outcomes of the partnerships***

Unlike with document regarding horizontal partnerships, where no results from the analyzed documents were found, the documents researched for vertical partnerships provided some information on results and outcomes from the above described and discussed partnerships. As most of the analyzed documents also in the area of vertical partnerships and service extension were press releases or news on electronic news services, there weren't many documents providing information on results. From the eighteen documents concerning vertical partnerships, six documents included information on results of the partnerships. Using the same classification as earlier in this chapter, four of the six documents were related to benefits received from service improvements in comparison to two documents providing information on results from service innovations. Even though the amount of documents analyzable for this section was not many, they provide a comprehensive overview of the different types of service improvements and service innovations discussed earlier. These areas of service development cover results from WMS development (improvement), warehouse development (improve-

ment), technical solutions for operations (improvement), and two different service extensions (innovation).

Two researched documents giving insight into results were related to WMS development. These documents included the partnership involving DB Schenker to provide a SME oriented, easy to implement WMS solution, and the partnership of DHL Supply Chain to create and operate an automated warehouse. For the DBS partnership the results were matching the expected benefits, as the LSP was able to gain better market responsiveness through a solution which was faster to implement, yet scalable to customer needs, as well as being cost effective (Softeon). The configuration of the WMS now takes only days to match the requirements of DBS customers. With DSC and its partnership to create a facility to improve productivity and capacity usage, the results matched the needs and expectations so that the productivity was improved by 40 %, and the capacity was increased four times compared to the previous solution (TI News Center).

The two remaining analyzed documents in service improvements are partnerships for technical development in operations, and include both examples of using the PbV solution by Itella and PostNord. In both partnerships the benefits were realized in reducing errors in picking (Optiscan; Taloudenvuosi). In addition the document analyzed for Itella's partnership provided evidence of results also in increased efficiency of 10-30 %, a more transparent working process enabling better supervision, and higher mobility of staff due to inclusion of customer specific instruction in the system (Optiscan).

The last two document providing information on results of the partnerships were within innovative new service development. These two documents shared results on UPS Supply Chain Solutions's service extension to providing repairs within storage facility, and DHL Supply Chain's partnership to provide its customers a tool to analyze supply chain resiliency. The UPS example of service expansion on one hand discussed the partnership based on UPS's customers, but on the other hand provided outcomes from the perspective of UPS as well. Based on the analyzed document (Business Today), the arrangement by UPS for its customers has provided the customers with competitive advantage and enabled UPS to focus, and gain expertise in the high-tech repair's handling. The turnaround time for a laptop being repaired has been reduced to four days or less from the past 2-3 weeks. This has led to increased customer satisfaction, which would not have been possible without the contribution and created service of the TPL provider. In addition the partnership has helped UPS to create a new revenue stream and a way to differentiate itself in the markets. Even though the result or UPS was the ability to differentiate, this research has provided examples of other major LSPs also expanding in this servicing sector (DEX news; DPDHL news).

The other document describing a cross-industry partnership where the LSP was looking for completely new innovations to its traditional service offering was the white paper discussing DSC's Resilience 360 risk management solution (Harrington 2014, 22). The document discussed more the benefits to the DSC customers, than the actual LSP. The realized benefits mentioned for the users of the solution included identifying, and quantifying, risks within the supply chain. This allowed the customer to develop the contingency planning related to the issues raised by the solution, therefore being able to prepare for possible disruptions better in the future (Harrington 2014, 22). This partnership solution allows DSC to expand its service offering and by demonstrating innovative solutions better serve its customers and attain new revenue stream, as well as differentiate itself from the competition.

The above discussed results and outcomes of the partnership are well in line with what literature on partnerships expect. As was discussed, LSP's customers are looking for providers to offer more innovative solutions reducing costs and adding value (Langley 2012, 15). Cost reduction and effectiveness aspects were clear with the partnerships for improving existing services. On the other hand, especially with the innovative service extension, the results were found in achieving differentiation and creating additional value to the customers. The results of the partnerships have been analyzed from the perspective of the LSP, but in some instances the results were shown in the perceived value and benefit for the customer of the LSP. The benefits for the LSP's customers are as important aspect as the benefits for the LSP itself, as the created service through the innovation itself is only an approach to improve customer experience – the value of the innovation as perceived by the customer (Chapman et al. 2003, 646).

## 6 CONCLUSIONS

The purpose of this study was to analyze partnerships and networks in the third party logistics industry in order to define whether there are benefits that can be achieved through building networks and partnerships, and how networks are utilized in third party logistics markets. Next the answers given by the researched data to the sub-objectives will be discussed. The first sub-objective was to *find out what kind of networks and partnerships are already in place*. The partnerships and networks that third party logistics providers are involved in can be either horizontal or vertical, depending on the other companies involved in the relationship. In this study a modified view of logistics firms' horizontal and vertical networks of interaction by Cui & Hertz (2011, 1006) was used to consider partnerships within any type of logistics operators horizontal interaction, and cross-industry cooperation as vertical interaction.

Based on the collected data, it can be seen that both horizontal and vertical partnerships exist among third party logistics providers. The formed partnerships in horizontal interaction included cooperation between TPL providers and carriers, TPL providers and logistics intermediaries, as well as networks and cooperation between competing TPL providers. The nature of the partnerships varied depending on the type of logistics operators involved in the partnership. In the researched data regarding TPLP and carrier partnerships, the nature of the partnerships was in retaining a complementing service to the existing service portfolio. Looking at the structure of the logistics industry, where three different types of logistics operators operate in, it would have been expected that more data on partnerships between TPL operators and carriers would have been found due to their different nature as logistics operators. In addition there were also fewer examples evident of TPLP partnering with logistics intermediaries. The nature in these TPLP and logistics intermediary partnerships was representation agencies in developing regions. The researched data provided most information on partnerships and networks within different TPL operators. These collaborations were deeper in nature than of the ones concerning TPL partnerships with carriers and logistics intermediaries. These, within TPL operator, partnerships included joint ventures, strategic geographical partnerships, as well as multi TPL operator distribution and service networks.

Regarding the types of partnerships and networks in vertical interaction of TPL operators few main trends were evident in what type of operations were involved in forming the partnerships. The vertical partnerships were looked at from the point of cross-industry relation between the TPL operator and the other company in the partnership. It was argued by the theoretical framework that in case of improving existing services, the industry relation to the related knowledge resource is shorter than when creating new services from completely new innovations (Enkel & Heil 2014, 255). The researched

data supported this argument as service improvements were sought through knowledge resources in industries supporting logistics industry. These types of improvements were found to include partners in information technology industry and manufacturing industry for packaging used in TPL operations. In comparison, the partnerships that were considered further away from the logistics industry included technology service industry for repair and installation of technical devices and appliances, and information creating industry in the form of research groups focusing in information on natural disasters, theft, global geopolitical and other risks.

*As a conclusion to the first sub-objective it can be stated that the partnerships of third party logistics providers are evident in horizontal and vertical interactions varying in geographical coverage as well as in the depth of the relationship, therefore supporting the arguments made in the theoretical discussion. It can also be concluded that the partner in the cooperation varied based on the nature of the relationship, as well in horizontal partnerships as in vertical partnerships. In horizontal interaction the partnerships were discovered in retaining complementing services and geographical coverage. In vertical interactions the partnerships were more in nature of knowledge acquisition in technological developments or, when creating innovative new services, in knowledge further away from the logistics industry.*

The second sub-objective of the study was to *analyze what have been the reasons behind the partner selection*, and whether correct partner selection will provide new opportunities in the markets. As mentioned above, the horizontal and vertical partnerships connect operators and companies from different geographic regions and industrial sectors to create mutually beneficial interactions. The analysis of the reasons behind partner selection was approached from the perspective of expected benefits from the partnerships. With regard to horizontal partnerships, the expected benefits found from the researched documents were categorized under the strategic and resource based benefits identified in the theoretical discussion. In addition the aspect of acquiring capabilities in managing geographical networks, networks of logistics systems, and networks of clients' physical flows were taken into account in assessing the expected benefits from the horizontal partnerships.

When looking closer at the horizontal partnerships, it was noted that all partnerships included benefits from both strategic and resource based aspects. The researched documents gave indication that the expected benefits varied to some extent based on the type of capabilities the TPL operator was looking in gaining through the partnerships. When the goal was to improve capabilities in managing geographical network, the expected benefits included expansion to new markets (strategic); market coverage, competitive power and increased service (strategic); access to complementing resources, knowledge and information (resource based). In accessing capabilities to manage networks of logis-

tics systems, the expected benefits were found to be in gaining market coverage, competitive power, increased services (strategic); responsiveness to demand fluctuations (resource based); economies of scale (strategic); capability and resource allocation (resource based); access to complementing resources, knowledge and information (resource based). The aspect of managing networks of clients' physical flow was present only in the examples regarding the service and distribution networks involving multiple different TPL operators. In these examples the TPLP was looking to gain all three types of network managing capabilities, and therefore clear conclusion on expected benefits falling under capabilities of managing network of clients' physical flow only added capability and resource allocation within the network (resource based) to the above mentioned benefits that were sought already within the other two types of capabilities. *Regarding the horizontal partnerships it can be concluded that the researched data provided evidence of all different types of expected benefits being sought as in the theoretical discussion. In addition based on the expected benefits, the reasons for partner selection were in all cases based on strategic decision making, as well as aspects supporting the resource based view in partnerships and networks.*

Unlike in research of the documents regarding horizontal partnerships, when looking at the reasons and expected benefits of vertical partnerships, the same classification of expected benefits was not used. For vertical partnerships it was argued that the benefits in vertical partnerships reside either within being able to focus on core business (Vakaslahti 2004, 43), or to increase service capabilities by improving existing services or creating completely new innovations (Hertz & Alfredsson 2003, 139). In vertical partnerships the expected benefits were found to include both above mentioned categories of benefits. In general the benefits were recognized to involve goals to increase service capability and being able to better serve the customers of the TPL operator involved in the partnership. *The expected benefits within service improvements involving technological developments (development of warehouse management systems, IT platforms for operations planning, technological solutions to improve efficiency within operations, and packaging solutions) on the way to achieve the above mentioned end goals were found to be focused on different aspects and means of improving productivity and efficiency of operations.*

*The expected benefits in creating new services through innovations were found to be more focused on the aspects of being able to differentiate in the markets by either increased reputation, or offering a new service concept or solution to the customers.* In vertical partnerships focusing on innovative solutions the aspect of increased customer service was also in key focus. With regard to the vertical partnerships and networks it was argued that the expected benefits are closely linked in gaining access to complementing resources, knowledge and information (Vuorinen 2005, 85), linking the vertical

interaction decisions to resourced based thinking. In addition the choice to look for knowledge in distant cross-industry relation for innovation creation is seen as a strategic decision (Enkel & Heil 2014, 250). Therefore it was concluded that with vertical partnerships aiming for creating new services through innovations, the reasons were both strategic and resource based in nature.

The third sub-objective of the study was to determine *what have been the results and outcomes of the partnerships*. The results of partnerships are the realized outcomes of the expected benefits. Due to the nature of researched documents, they did not provide information on results for all of the partnerships analyzed in this study. Results and outcomes for partnerships were in addition discovered only in the researched documents about vertical partnerships. The partnership types providing evidence for results were found in service developments in WMS development, warehouse development, technical solutions for operations, and two different service extensions. The results of the partnerships were comparable to the expected benefits the LSP had for the respective cooperation. In general the results of the partnerships matched also the benefits from partnerships mentioned in literature. *The discovered results in this study included cost reduction and effectiveness in the partnerships for improving existing services. On the other hand, especially with the innovative service extension the results were found in achieving differentiation and creating additional value to the customers.*

Combining the results from the three sub-objectives, this study has answered to its purpose of analyzing the partnerships and networks in the third party logistics industry. This has been done by examining the existing partnerships, evaluating the reasons for partnerships through expected benefits, and determining to the available extent the communicated outcomes of the partnerships for the third party logistics provider. *In conclusion it can be stated that the researched documents provide proof for the literature based discussion on achieving benefits through networks and partnerships in logistics service production. Further this study has demonstrated that the reasons behind the partnerships are strategic as well as resource based.* This research has given, through answering the sub-objectives, an overview of what types of partnerships and collaborations are currently in place to allow third party logistics providers the ability to offer required services to their customers' growing demands.

## 7 SUMMARY

As the economy has globalized, and companies are seeking lower manufacturing and labor costs around the world, the supply chains of companies in various industries have become more complicated. This has led to companies to find logistics service providers, which can offer innovative supply chain solutions that reduce costs while adding value. Even though the third party logistics industry has grown substantially in the last twenty years and has also attracted more interest in the academic world, the capabilities and aspects of partnerships and networks in this service productions has received less attention. In addition there has been extensive research on outsourcing activities to TPL service providers, but the focus in previous studies has been one of the outsourcing companies. This study took the TPL operator as the focal firm in the partnerships and networks in the logistics industry. To provide innovative supply chain solutions, the third party logistics operators need to look for solutions and innovations outside the traditional scope of logistics industry. This study has aimed closing this research gap by expanding the knowledge on partnerships in logistics service production, as well as the reasons for, and outcomes from such partnerships.

The purpose of this study was to analyze partnerships and networks in the third party logistics industry. The sub-objectives of the study were to 1.) *find out what kind of networks and partnerships are already in place* 2.) *analyze what have been the reasons behind the partner selection* and 3.) *what have been the results and outcomes of the partnership*.

Answering the sub-objectives was approached through theoretical background discussion and an empirical study. The empirical analysis of TPL partnerships consisted of a qualitative document analysis of partnership examples involving companies present in the Finnish TPL markets. For the research, existing documents providing secondary data on types of partnerships, reasons for the partnerships, and outcomes of the partnerships were searched from available online sources.

After the introduction of the logistics industry and the concept of third party logistics providers, the theoretical framework of this study was formed based on common theories in studying networks and partnerships in accordance with models of horizontal and vertical partnerships. The theories applied to the framework and context of this study included the strategic network view and the resource-based view. Applying these two network theories to the position and networks of third party logistics providers in an industrial supply chain, a theoretical model for analyzing the horizontal and vertical partnerships where the TPL provider is in focus was structured.

For this study a sample of thirty-three documents were analyzed to find answers to the objectives of the study. The researched documents included fourteen company press



releases, eleven news articles in online news services, two case examples on partner websites, one site visit analysis of a consulting group, and two publications; a company white paper and a journal article. The researched documents were searched by relevance to the selected main TPL players in the Finnish market, and discussing partnerships. Most of the empirical findings were not of examples in the Finnish markets, as this information was not readily available. The partnership examples globally illustrated possible actions that could be undertaken by TPL operators in Finland. A wider perspective to the analysis was intentional, and provided results that might not have been discovered in only local context, allowing also Finnish TPL providers to benefit from this study.

The purpose of this study was to analyze the partnerships in third party logistics service production through theoretical expectations and framework. The results of this study support the presented theoretical framework. In this research several partnerships in logistics service production were discovered. The research provided evidence on expected benefits and reasons for the found partnerships, as well as outcome to part of the researched partnerships. It can be concluded that benefits and competitive advantage can be created through building partnerships in order to expand service offering and seeking synergies.

As a conclusion to the first sub-objective it can be stated that the partnerships of third party logistics providers are evident in horizontal and vertical interactions varying in geographical coverage and the depth and nature of the relationship. The reasons for the partnerships were looked at from the point of view of the expected benefits. All benefits introduced in the theoretical discussion were found to be evident in the research. For the decisions aspect of the partnerships, it can be concluded that both, the strategic aspects as well as the resource based view were supported by the research. For the third sub-objective, it was concluded that the discovered results of the partnerships in this study included cost reduction and effectiveness in the partnerships for improving existing services. In addition in partnerships created for innovative service extension, differentiation, and creation of additional value were discovered to have emerged as results of the cooperation.

In comparison to the purpose of this study to analyze partnerships and networks in the TPL industry in order to define whether there are benefits that can be achieved through building networks and partnerships, and how networks are utilized in TPL markets in Finland, the study provided beneficial results for the basis of further research and the TPL companies operating in Finland. The results of this study can be used by third party logistics operators for further developing service offering and partnerships based on the collective information provided in this study in the form of examples, reasons, and results. Further valuable research in this field could be conducted through case stud-

ies of TPL companies, which are engaged in partnerships and solutions to provide comprehensive contract logistics.

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