

Logistics outsourcing and the role of logistics service providers from an industrial network perspective

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Keywords: Logistics service providers, Outsourcing, Interaction, Industrial network approach

Abstract: The aim of this paper is to analyse logistics outsourcing and third party logistics from an industrial network perspective. The analysis of outsourcing from a network view clearly illustrates that outsourcing of logistics is not only about moving an activity from one firm to another. Owing to network interdependencies other activities and the links between these will be affected. Moreover, logistics outsourcing will impact on prevalent resource constellations and actor webs. In our analysis a particular emphasis is placed on the various roles of a logistics service provider and the interaction with the outsourcing company. We explore the variety of the roles of a logistics service provider and discuss these findings in relation to the approach of outsourcing firms. Our analysis showed that an interactive approach between the logistics service provider and the outsourcing firm would lead to benefits in several respects; for example (1) in the decision phase, (2) in determining the scope of the outsourcing arrangement, (3) in the regular provision of the services, and (4) with regard to the fact that the conditions for outsourcing arrangements and relationships change over time.

1. Introduction

1.1. A changing field in need of supplementary conceptualizations

Logistics outsourcing and third-party logistics originated in the 1980s as important means for improving supply chain effectiveness (Maloni and Carter, 2006). Third-party logistics was initially defined as “the use of external companies to perform logistics functions that have traditionally been performed within an organization. The functions performed by the third party can encompass the entire logistics process or selected activities within this process” (Lieb, 1992:29). Like other outsourcing arrangements third-party logistics got widespread attention and the new approach spread rapidly. Estimations indicate that the proportion of companies in the United States that have implemented third-party logistics (TPL) has increased by 5-8 per cent annually (Ashenbaum et al, 2005). According to a 2004 survey no less than 80% of the Fortune 500 Companies said they rely on TPL, and two-thirds of these companies had been involved in TPL for more than five years (Lieb and Bentz, 2005a).

The 2004 survey revealed some ongoing changes of great magnitude. These changes occurred at various levels of TPL-arrangements. One of these concerned the whole industry and it was concluded that it “has undergone significant changes....as a result of mergers, acquisitions, company failures and the entry of many new competitors into niche markets” (ibid. p. 5). Moreover “the geographic coverage and service offerings of the major providers has expanded dramatically” (p. 5). These re-arrangements caused problems for TPL-firms since “the scale and geographical coverage involved in many recent 3PL-contracts has made it increasingly difficult for one provider to meet those requirements” (p. 6). The combined outcome of these changes is that “many 3PL-relationships are increasingly complex, and management of those relationships is quite challenging to both parties” (p. 6). Some of these dynamics relate to ongoing changes of the logistics function as a whole which is claimed to have “evolved from a passive, cost-absorbing function to that of a strategic factor which provides a unique competitive advantage” (Chapman and Soosay, 2003:639).

These changing conditions have caused modifications in the view of what TPL actually represents, as well as a shift in the view of the firms involved in TPL (Bolumolu et al, 2003; Kim et al, 2006). According to Selviaridis and Spring (2007) third-party logistics service providers emerged out of companies previously involved in warehousing and transportation. In the early 1990s firms formerly specializing in express parcel

deliveries entered the arena (e.g. DHL, UPS, TNT and FedEx). These were later accompanied by firms originally focusing on financial services, IT-services, and management consulting, which brought their competencies in information system and supply chain planning. For these reasons an alternative definition of TPL has been launched: “[3PL is] a relationship between a shipper 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” (Murphy and Poist, 2000:121). This extended definition of TPL takes some of the changing conditions into consideration, like the greater scope of the services required by customers and the enhanced role of the relationship between the parties involved.

When it comes to academic research, however, the focus seems to have stayed mainly with the buyer of the logistics services. For example, Berglund et al (1999:59) conclude that “relatively little has been written about outsourcing from the providers’ point of view”. Similarly, a more recent review of previous studies found that provider-focused research has lagged behind buyer research both in quantity and scope (Maloni and Carter, 2006). These conditions seem to have changed somewhat and logistics service providers have come more into focus (e.g. Lieb and Bentz, 2005b; Carbone and Stone, 2005; Yeung et al, 2006). However, what still seems to be quite an unexplored area is the relationship between buyer and provider. Maloni and Carter (2006:30) conclude that “very few studies have attempted to look at both buyers and providers simultaneously”. This is somewhat surprising since the crucial role of relationships is acknowledged in several studies as will be shown in this paper.

On the basis of these observations Maloni and Carter claim that academic researchers should respond with complementary approaches and analyses in order to best serve practitioners. They therefore advocate the employment of alternative frameworks and conceptualizations for a better understanding of TPL. The authors recommend three alternative approaches: transaction-cost theory, social exchange theory, and organizational behaviour. We respect these suggestions but in this paper we apply a fourth perspective on issues related to logistics outsourcing, TPL, and logistics service providers. This perspective is the industrial network approach as described in Hakansson and Snehota (1995). We will explain the main reasons for this choice later in the paper.

1.2. Aim and scope of the paper

The basic aim of this paper is to analyse logistics outsourcing and third party logistics from an industrial network perspective. In this analysis a particular emphasis is placed on the various roles of a logistics service provider and the interaction with the outsourcing company. We begin the paper with a review of previous studies of TPL and conclude that these arrangements are not always successful. On the basis of the reasons for these shortcomings we show why and how the industrial network approach would be an appropriate framework for enhanced understanding of logistics outsourcing. We then apply this framework and explore what outsourcing of a logistics activity implies for the three network layers: activities, resources and actors. We continue by exploring the variety of the roles of a logistics service provider through an empirical example and through literature and discuss these findings in relation to the approach of outsourcing firms. We conclude that both parties would gain from a more interactive relationship than usually is employed. This is followed by an exploration of potential implications of increased buyer-provider interaction and in which ways enhanced relationship involvement would be beneficial to the performance of TPL-arrangements. Finally we bring up some implications of logistics outsourcing for the overall business landscape.

2. Some problems in third-party logistics

Despite the huge amount of literature advocating outsourcing of logistics the actual realization of potential benefits is far less well documented. In this respect the situation is similar to what has been observed concerning outsourcing in general, where it is claimed that cost savings and other benefits “tend to be taken for granted, but detailed analyses of actual outcomes and potential side effects are hard to find” (Berggren and Bengtsson, 2004:211). Within logistics there are numerous claims concerning the potential benefits of outsourcing arrangements (see for example, Bowersox, 1990; Tate, 1996; Bhatnagar and Viswanathan, 2000; Halldorsson and Skjoett-Larsen, 2004; Marasco, 2008). There is no doubt, however, that the outcome of third-party logistics shows mixed results. Lambert et al (1999) conclude that while the benefits of TPL are well documented, the pitfalls and problems have received less attention. Moreover, it is argued that there is clear evidence that in some cases “logistics outsourcing has become a source of corporate failure and

disappointment” (Boyson et al, 1997:73). Their survey showed that a significant share of the respondents indicated that they had to make critical changes in the logistics arrangements and take previously outsourced functions back in-house. Other studies also indicate severe problems with outcome and so it is reported that 55% of logistics alliances were terminated after three to five years (Gulisano, 1997). Similar results were obtained by the Outsourcing Institute which found that more than half of third-party partnerships had failed (Foster, 1999). Among the problems leading to these consequences can be mentioned “service performance, disruption to inbound flows, inadequate provider expertise, inadequate employee quality, sustained time and effort spent on logistics, loss of customer feedback and inability of 3PL-providers to deal with special product needs and emergency circumstances” (Selviaridis and Spring, 2007:130).

Also these figures seem to correspond to what has been observed for outsourcing in general. For example, a survey organized by the American Management Association showed that three quarters of the respondents stated that outsourcing outcomes had fallen short of expectations, and more than half of the companies had brought at least one outsourced activity back in-house (Bryce and Useem, 1998). Lacity and Wilcox (2001) found that a third of the companies in their study had cancelled outsourcing contracts. Linder (2004) summarizes experiences from two surveys and concludes (i) that 20-25 percent of outsourcing relationships end within two years, (ii) that 50 percent fail within five years, and (iii) that only about 10 per cent of the firms were completely satisfied with their outsourcing arrangements.

When it comes to the reasons for the problems, terminations, and back-sourcing, the most obvious factor seems to be that expectations concerning financial benefits have not been met. For example, Lieb and Randall (1996) concluded that outsourcing companies had difficulties in estimating the true costs of logistics outsourcing. These problems are accentuated by the fact that another study showed that some outsourcing firms were uncertain even about the true costs of their own operations (Bagchi and Virum, 1996). Since cost reductions always is on the top of the list of expectations of outsourcing benefits these conditions represent major drawbacks. Again this set of affairs is in line with findings concerning outsourcing in general and the causes of the unrealized expectations concerning cost reductions. Typically these conditions are explained by the conclusion that the low unit price that may be gained through outsourcing “is only one part of a very complex equation and must be considered against the direct, indirect, and hidden costs” that are associated with such shifts in the division of labour (Smyrlis, 2006:6).

Secondly, the inadequate cost estimations seem to be caused by incomplete analyses of what outsourcing of a logistics activity actually implies. Outsourcing will have other consequences than making a specific activity less expensive to undertake or more efficient in other ways. Moving an activity from one company and one place to another company at another place will also impact on the total pattern of activities of which the outsourced activity is part. When it comes to outsourcing in general the lack of strategic analysis of potential consequences is perceived to be a main reason for failures (see e.g. King, 2005; Venables, 2005). The situation seems to be the same in logistics. For example, Ackerman (1996) concludes in a paper about pitfalls in logistics partnerships that these tend to occur because buyer and seller have not reached a realistic understanding of what the change actually implies.

Thirdly, the main determinant of the outcome of third-party logistics seems to concern the relationship between the outsourcing firm and the logistics service provider. This conclusion is also in accordance with findings related to outsourcing in general, where it is argued that the nature of the relationship between the parties is of crucial importance concerning both ‘standardized’ outsourcing (Smyrlis, 2006) and more ‘advanced’ outsourcing (Lei, 2007). Moreover, the features of business relationships have been used as explanation of both unsuccessful outsourcing (Whitten and Leidner, 2006) and successful (Lewin and Peeters, 2006). In logistics outsourcing the crucial role of relationships have been illustrated by, for example, Razzaque and Sheng (1998), Bagchi and Virum (1996), and Knemeyer and Murphy (2005). Among the issues discussed by the authors are the failure of outsourcing firms to manage providers properly and a lack of understanding of the other party. In turn these conditions are explained by insufficient sharing of business information among the parties with subsequent problems to provide an appropriate context for co-operation. These problems are accentuated by the fact that in many cases the division of responsibilities among the two partners is claimed to be unclear. The crucial role of relationships in logistics outsourcing is well expressed in the following quote: “logistical considerations and expertise might be important factors when choosing a partner, but never as important as the relationship which includes the networks of contacts the local partner will bring into the project” (Denault, 2006:52).

Finally, the underlying reason for these problems with relationships seems to be explained to a large extent by the risks perceived by buyers to lose control over logistics operations (e.g. Bolumole, 2001; Selviaridis and Spring, 2007). These perceptions have resulted in buyer approaches classified as “command and control-patterns” (Bolumole, 2001:104). As will be shown later in the paper these conditions tend to constrain the opportunities of the provider and create tensions in the relationship.

On the basis of these findings the claims by Maloni and Carter (2006) for alternative conceptualizations and frameworks for the analysis of logistics outsourcing and TPL seem highly relevant. Many of the problems revealed in previous studies are explained as results of inadequate understanding of what TPL actually means. Several researchers have provided alternative perspectives on TPL. For example, Haldorsson and Skjoett-Larsen (2004) applied a ‘resource and competence based’ framework on two TPL-cases. Moreover, from the discussion above it should be clear that more attention has to be paid to the relationship between provider and buyer. Knemeyer and Murphy (2004) adopted a relationship marketing approach to the research of a buyer of logistics services and its relationships to the provider. Bask (2001) took the point-of-departure in supply chain management in the exploration of logistics service providers and their clients. These studies – and others not mentioned here – improve our understanding of what takes place in the relationship between buyer and provider. In this way they are of help in solving the issues related to some of the problem areas identified in the section above – what is crucial for the relationship and the issue of control. They also provide some support to the other problems. Improved understanding of the relationship will increase the opportunities to realize what changes actually are required and what consequences these changes may imply, for example, in terms of costs.

In this paper we will take one step further. However careful the analysis of a particular relationship will be, this view provides a partial understanding only. A relationship is never isolated. Both buyer and provider are involved in other relationships. Since these relationships are connected, changes in one of these will impact on the other (Hakansson and Snehota, 1995). Owing to these conditions the industrial network approach would provide an appropriate framework since a network by definition consists of connected relationships (Cook and Emerson, 1978). In the same way the supply chain perspective represents a severe limitation of business reality. Since any firm is involved in several chains a change in one of these will impact on others, thus making the efficiency in a particular supply chain dependent on how it is related to other chains. Therefore, a network view of supply chains has been proposed by advocates of quite different schools of thought (e.g. Christopher, 1998; Gadde and Hakansson, 2001). The industrial network approach provides a holistic perspective on logistics outsourcing. In fact, this approach is recommended in two recent reviews of the state-of-the art of TPL research. According to one of these the industrial network approach “would presumably offer insights about the dynamics of outsourcing and service design decisions” (Selviaridis and Spring, 2007:138). In the other review the approach is suggested as a means for providing a “robust structure that enables a comprehensive understanding of TPL-relationships” (Marasco, 2008:16). The basic features of this framework emphasising the interplay among connected business relationships are therefore well suited for our purpose. Previous studies have not considered the customer-provider relationship in its network context. The analysis of the business reality in the three layers of actors, activities, and resources should contribute to enhanced understanding of the potential impact of third-party logistics.

3. An industrial network perspective on outsourcing

The point of departure for our analysis is to explore what outsourcing would mean from a network perspective. Outsourcing of logistics is part of a general movement towards outsourcing which has been an issue on the top of the management agenda during the last twenty-five years. We begin our exploration by identifying some prerequisites and consequences related to outsourcing in general.

By focusing on a limited part of the activity pattern in which a firm is involved, outsourcing companies have been able to improve their performance substantially. Outsourcing increases specialization and this specialization leads to benefits in the undertaking of remaining in-house activities (e.g. Quinn and Hilmer, 1994; Ellram and Billington, 2001; Kakabadse and Kakabadse, 2005). In addition, most cases of outsourcing are based on transfer of activities to suppliers and contract manufacturers serving a multitude of customers. Since these firms are working on larger scale than the outsourcing firm, also these activities have become more cost efficient. Moreover, gaining access to the technological resources of suppliers has been an important driving force for outsourcing (Quinn, 2000; Gadde and Hakansson, 2001).

The most visible effect of outsourcing is a shift in the division of labour in the business landscape. An activity is shifted from one company to another in order to find the most efficient location for its undertaking. However, outsourcing will have other consequences than making a specific activity more efficient. Moving an activity from one company and one place to another company at another place will also impact on the total pattern of activities of which the outsourced activity is part. No activity exists in isolation – it is always connected to others and in some way coordinated with these. Some of the connected activities are undertaken before the activity subject to outsourcing, some simultaneously and others after. Outsourcing of an activity changes the connections and interdependencies to other activities. These issues require an analysis of the impact of outsourcing on the links to other activities and the subsequent effects on the activity pattern of the network as a whole.

Outsourcing also means that activities previously coordinated within one firm will now be allocated to different firms and coordinative actions will now have to span the boundaries of these firms. Integration within a firm is thus replaced by integrative efforts across the boundaries of several firms. These changes in the actor layer put the emphasis on the crucial role of business relationships. Inter-organizational coordination of activities will require relationship involvement between the companies, implying the creation of bonds between the actors in the network. Like activity links, actor bonds are connected, in turn leading to effects also for other actors than those involved in the specific TPL-arrangement. Considering the potential consequences for the actor layer in the network is therefore an important issue in the analysis of the impact of outsourcing.

Finally, outsourcing also affects the resource layer of the network. To a large extent outsourcing is about improving the resource utilization in the network. The main advantage of outsourcing has been expressed as “full utilization of external suppliers’ investments, innovation and specialized capabilities that would be prohibitively expensive to acquire or even impossible to duplicate internally” (Quinn and Hilmer, 1994:43). The buyer of logistics services specializes not only in the activity layer but also when it comes to resources. By focusing a specific part of the activity pattern the outsourcing firm will be able to concentrate also when it comes to resources – both in terms of physical resources and knowledge. The opportunity to focus on what is labelled ‘core competence’ has been a main driving force for outsourcing. But there are some drawbacks also in this respect. A single resource element, for example, a specific machine, a particular component, or the knowledge of an employee, is connected to other resources. Moving an activity from an in-house machine to one of a supplier will impact on these connections. Furthermore, outsourcing changes the ownership control of a resource. What was previously internal combining of resources will now be resource combining between organizations.

These changes of the business landscape imply that activities increasingly are coordinated across the boundaries of firms, and that resources are combined over the borders of companies, and this, in turn, has called for closer relationships between actors. In this way what is going on in the business landscape has become more ‘network-like’. These changes are pointed out from various angles. For example, in distribution and marketing it is claimed that distribution innovators in the US can best be characterised as “webs of capabilities embedded in an extended enterprise” (Narus and Anderson, 1996:112). Other authors describe the new distribution arrangements as “networks of value-adding partnerships like confederations of specialists” (Anderson et al, 1997). Similarly, it is advocated that “companies have moved away from hierarchical, integrated supply chains in favour of fragmented networks of strategic partnerships with external entities” (Bitran et al, 2007:30). Concerning technological development Freeman (1991) expresses the conditions regarding emerging features of innovation processes that “there has indeed been a major upsurge of formal and semi-formal ‘networks’” (p. 499). Finally, when it comes to purchasing it is increasingly argued that these activities need to be considered in a supply network context, typically illustrated by the following quote: “purchasing activities are embedded in supplier networks that extend national borders” (Houman-Andersen and Rind-Christensen (2005:1261). In the conceptualization developed by Hakansson and Snehota (1995) this means that the activity links, resource ties, and actor bonds between companies have been strengthened which in turn will have implications for the prerequisites and consequences concerning logistics outsourcing.

4. A network analysis of logistics outsourcing

The next step in the analysis is to illustrate what impact logistics outsourcing may have on established network configurations. We explore these conditions for the three layers of the network: activities, resources, and actors. For each of these layers we begin by describing the main characteristics of the network

configurations that have evolved over the last decades and continue by investigating how outsourcing of logistics activities may impact on these features.

4.1. Implications for the pattern of activities

The main characteristic of activity patterns in current networks is the substantial integration of business processes. Synchronization within and between manufacturing and logistics processes has become a top priority (see e.g. Pfohl and Buse, 2000; Christopher and Towill, 2001; Garcia-Dastugue and Lambert, 2003; Juttner et al, 2006). The most obvious impact of this process integration is the just-in-time deliveries in the western automotive industry that were introduced in the beginning of the 1980s later followed by similar implementations in other industries, and the design of systems for efficient-consumer-response (ECR), see for example White and Pearson (2001), Bhatt (2001), Kaynak (2002), Kannan and Tan (2005), Christensen et al. (2005), and Kaneko and Nojiri (2008). The most significant feature of these activity patterns is the inherent interdependencies among activities. Previous arrangements typically relied on inventories functioning as buffers that decoupled sequentially related activities from each other. Once these buffers are eliminated interdependencies must be coordinated in other ways. A particular problem in this respect is that, owing to enhanced specialization, these interdependencies increasingly cross the boundaries of firms.

Other reconfigurations of activity patterns have contributed to increasing requirements for coordination. Firstly, 'customization' in relation to the particular needs of specific business partners has become an issue on the top of the management agenda (e.g. Lampel and Mintzberg, 1996). In these efforts the principle of postponement has been instrumental since it "enables firms to provide product variety and quick responses" (Kotha, 1996:42). Increasing attention to and consequences of, the principle of postponement are described and evaluated in, for example, Pagh and Cooper (1998), van Hoek (2001), and Su et al (2005). The implication of these new opportunities are that 'mass' customization is now applied in various industries and firms, such as IT (Feitzinger and Lee, 1997), home appliance products (Henke, 2000), textiles (Abecassis et al, 2000), farm equipment (Berman, 2002), and electronics (Partanen and Haapasalo, 2004). The ultimate form of postponement and customization is build-to-order implying that the individual customer's order initiates the supplier's operations (see e.g. Holweg and Pil, 2001; Gunasekaran and Ngai, 2005). In this way it becomes possible to reduce and even eliminate inventories of finished products. On the other hand considerable efforts are required when it comes to the integration among the activities in order to fulfil customer demands in reasonable time (Hulthén and Gadde, 2007). The main conclusion concerning the features of current activity patterns is thus the strong sequential interdependencies accompanying business process integration and activity synchronization across the boundaries of a manufacturing company and its customers and suppliers (see for example, Dubois et al, 2004; Hakansson and Persson, 2004).

The potential effects of logistics outsourcing and the entrance of a third-party logistics service provider in these activity patterns will not be without its problems. A TPL-arrangement leads to disintegration of connected business processes that have been built up over time. It will require the establishment of linkages to the activities of a new business partner and also new links between this logistics service provider and the activities of customers and suppliers of the outsourcing company. Moreover, these links need to be coordinated with prevailing links along the whole supply chain. For example, a case study showed that outsourcing of logistics activities to service providers caused severe disturbances in the inbound logistics flow of a car manufacturer relying on responsive customer driven strategies (Svensson, 2001). It is not surprising therefore that the experiences regarding the consequences for the network's activity patterns sometimes tend to be negative since a TPL-arrangement both has to break existing activity interdependencies and establish new interdependencies. Especially when it comes to outsourcing to low-cost countries substantial problems have occurred. For example, in one representative study it is concluded that the buyer many times has not "thought through the logistics of delivery assurance of supply, flexibility of supply and quality" Forrest (2005:1). Other studies indicate that the outcome often is that costs are rising and service levels are dropping in comparison with expectations (see, for example, Barthelémy, 2001; Hirschheim and Lacity, 2000).

In the coordination of interdependent activities information sharing plays an important role. Coordination across the boundaries of firms therefore requires substantial information exchange between the companies involved. Problems related to this issue have been reported in several studies. Lieb and Randall (1992) claimed that many TPL-failures have occurred because of problems in the integration of the computer and information systems of buyer and provider. Razzaque and Sheng (1998) found that the absence of advanced information technology linking manufacturer, carrier, warehouse, and customer operations, to be a severe

problem in securing efficient TPL-operations. This issue still seems to be a major problem when it comes to the integration of the information of the various parties involved (e.g. Choy et al, 2007). Piplani et al (2006) argue that for logistics service providers “it would become imperative that they integrate [their information systems] with the IT-systems of their partners and customers in order to increase the effectiveness of the systems and to get the real value out of them” (p. 40). Another study concludes that most efforts have been devoted to the potential of information technology to reduce costs, while other, more value generating, opportunities have been less considered (Marasco, 2008).

4.2. Implications for the constellation of resources

The introductory discussion about the resource layer in the network showed that one of the important driving forces for outsourcing in general was to combine internal resources with those available externally. The main underlying reason is the increasing problems for the single firm to be at the cutting edge of all the technologies on which it relies. For example, Masi (2006:14) points out the necessity of a cross-company approach in a time when the “mix of skills needed to produce even a simple household appliance exceeds what any company can assemble or, more importantly, manage”. Therefore, to an increasing extent, the resource base available to a company is located outside its ownership boundaries. A crucial issue for a company is therefore to share resources with other firms and thereby “be able to combine resources in new ways, gain additional resources, and dispose of superfluous resources” (Wilson and Daniel, 2007:10). In order to make the best use of its total resource base a company therefore needs to combine external and internal resources in the short term and secure long-term joint development with business partners.

The performance of a specific constellation of resources – whether they are external or internal – is contingent on the way resources are adapted to each other. Through mutual adjustments the combined benefits of two resource elements will be enhanced. Systematic combining of resources over time is therefore a way to improve the performance of resource constellations. These efforts will impact considerably on the development of the individual resource elements since these become increasingly integrated. This interplay has been conceptualized by Hakansson and Waluszewski (2002) as the successive evolvement of interfaces between on the one hand physical resources (exemplified by production facilities and products) and on the other organizational resources (exemplified by business relationships and organizational units and the various capabilities residing in these). This framework has been applied also on issues related to logistics resources (Jahre et al, 2006) where it is concluded that the combining of logistics resources may be more or less conscious, more or less active, and more or less successful. Irrespective of which alternative is actually to hand, resources become increasingly related over time. The more systematic the combining of two resource elements – the better they will function in relation to each other. On the other hand, the better they function in relation to each other – the more difficult it will be to use these resources effectively in combination with other logistics resources owing to the prevailing mutual adaptations. Therefore, any resource adaptation must be considered an investment since any adjustment will constrain the utilization of the particular resources. Finally, these conditions imply that the value of a single logistics resource “is always dependent on a set of other resources, and in particular, on the interfaces with these” (ibid. p. 213).

Outsourcing to a third-party logistics provider may have huge implications for the resource constellation of which the logistics activities rely. Outsourcing of an activity means that the constellation of resources will be affected. The current constellation involves combinations of resource elements like manufacturing facilities, logistics infrastructure in terms of railways, ports, information technologies and warehouses, logistics equipment in terms of vehicles and handling equipment, and organizational resources in terms of people’s logistics capabilities for planning as well as other competences. This constellation will be affected in several ways through outsourcing. Some of these resource elements will no longer be part of the resource constellation implying that investments in these resources will lose their value. The resources of the TPL provider have to be combined with those remaining from the current constellation and this combining always is resource demanding. Interfaces have to be developed with these new resources and the interfaces among the remaining resource elements will also be affected through the connections to the new resource elements.

A particular problem with this reconfiguration of the resource constellation is that the more systematic the combining in the previous constellation – and the better its performance – the more difficulties will be encountered when the remaining resource elements are to be combined with the new elements. On the other hand, it is such modifications that may lead to the most fundamental changes of the performance of the whole network when technical development makes new resource constellations available. For example, technical

developments in manufacturing, logistics, and information exchange provided the opportunities for restructuring of activity patterns and paved the way for both just-in-time deliveries and build-to-order production.

4.3. Implications for the web of actors

The central characteristics of the actor layer have been brought up indirectly in the sections above. Activity configuring and resource combining crossing the boundaries of firms have put the emphasis on the relationships between the actors in the network. Previous recommendations to avoid too close relationships in order to promote market conditions and stay away from dependency on individual counterparts have been challenged. These changes are illustrated in purchasing by, for example, Wynstra (1998), and Gadde and Hakansson (2001) who argue that avoiding dependency on a supplier also implies the avoidance of the benefits that require high-involvement relationships. In distribution these changes are described by Weitz and Jaap (1995:35) as a shift in “marketplace transactions from discrete to relational exchanges”, while others claim that examples abound of how different retailers, distributors and manufacturers are developing closer relationships to improve performance (Frazier and Antia, 1995). For both purchasing and distribution the exploitation of potential benefits from close relationships implied huge resource investments in relation to individual business partners and the efforts to encourage connections also between these partners in order to form network configurations enhancing efficiency and effectiveness.

Outsourcing to logistics service providers impacts considerably on the features of the actor layer of the network. Outsourcing requires the building of relationships with new business partners. Moreover these logistics service providers have to be connected to the other actors in the network which in turn will impact on the bonds between these actors. As our review of previous research illustrated this seems to be an area where companies underestimate the efforts that are necessary. For example, King (2004) argues, in an analysis of outsourcing in general, that many companies have been surprised with negative results owing to shortcomings in this respect. To be successful in these efforts it is required that companies are aware of the fact that “close attention must be paid to everything about the client-vendor relationship: from the criteria for selecting a vendor, to the details of the outsourcing contract, to the frequent monitoring of progress, to the level of control exerted over the vendor, to the level of trust that is developed in the client-vendor relationships” (King, 2004:2). Crucial issues in the actor layer include the huge relationship investments in order to establish communication patterns, personal relations, quality control systems etc.

One issue of particular concern for the actor layer is the impact of outsourcing on the buyer's control ambitions. When activities are undertaken in-house, the resources utilized are within the ownership boundary of the company. Outsourcing changes these conditions since the resources used are now owned and controlled by the service provider and accessed by the buyer. Losing control in this respect is sometimes perceived problematic for the buyer and this dilemma can then be tackled through contracts specifying in detail the provider's obligations. But these specifications tend to constrain the operations of the provider and make it difficult to use resources and capabilities in the most appropriate way. For example, Hawkins (2006) concludes that failures come when outsourcing organizations look to control through contracts alone and not by building effective relationships. Similarly, King (2004:2) claims that many unsuccessful arrangements occur since firms thought they could outsource “through a contract and then do little to monitor and manage the client-vendor relationship”. The argument of Tompkins et al (2006:52) is that “outsourcing requires giving up control of a business function and trusting others to handle that function for you”.

Following this exploration of the potential impact of logistics outsourcing on the three network layers, the attention is shifted to the view of logistics outsourcing from the perspectives of the provider (Section 5) and the buyer (Section 6).

5. The roles of a logistics service provider

5.1. An illustrative empirical example

The shift towards an extended scope of outsourcing arrangements implies a “shift from traditional and functional third-party logistics to comprehensive supply chain relationships” (Bolumole, 2003:93). These changes have significant implications for both the role of TPL-firms which has been broadened accordingly and what is appropriate involvement in the relationship with the buyer. Below we illustrate these issues by

exemplifying the role of a logistics service provider (LSP) in relation to three buyers of logistics services. These examples from an ongoing study show the variety in the engagement of LSP in the customers' operations. They also illustrate the dynamics of the scope of the outsourcing arrangements owing to the buyers' need for reorganisation in the activity patterns and resource constellations. The examples illustrate the diversity in involvement from LSP's perspective and hint to the fact that LSP must be able to offer customers everything from the undertaking of single activities to the design and realization of total solutions.

Customer A is a firm in the retailing industry that has outsourced production to low-cost countries and strives to improve the efficiency in its supply chain. The background to the decision to outsource logistics was the problems related to the prevailing structure based on a 'push' philosophy. In this set-up the retailer firm's orders to the main supplier were based on historical sales figures at each of the stores of the company. The supplier produced and packed the goods for each store and then delivered to a distribution centre, run by LSP. At the distribution centre goods were sorted by destination and sent to the respective stores. However, the forecasts based on historical sales showed to be quite unreliable and so the allocation of goods to the retail stores did not correspond to the actual demand. This over- and undersupply caused severe financial problems to the retailer.

To change this situation LSP and the retail firm together designed a new routine for the logistics operations. In the new working arrangement 75% of the predicted volume at each store was earmarked while 25% of the goods sent from the supplier did not have the identity of a specific store. Then, daily orders from the stores, based on real demand, direct the remaining 25% of goods. The distribution centre hence keeps these goods in stock until an order from a store arrives and then packs and ships the goods. In the new arrangement LSP has a more coordinative role owing to the handling of supplementary orders from the stores. Moreover, the daily deliveries to the stores from the distribution centre also increased the number of transportation activities. Other operations, such as stock-keeping, order handling, marking of goods, and contacts with the retail stores, are now part of the outsourcing arrangement thus expanding the role of LSP. Previously LSP was involved only in a traditional sorting function. In the new arrangement LSP on the one hand extended the scope of its operations and also was involved in the design of the solution.

Customer B is a manufacturer with production located in Sweden. From previously relying on local suppliers B started to source components from China. In this case, LSP was involved in the design of the outsourcing arrangement and made responsible for the total logistics solution. Company B's production design requires delivery from suppliers 2-4 days after call-offs. Therefore vendors with manufacturing in China must supply components from a location nearby B. This was arranged by establishing a warehouse, run by LSP, close to the production site. Manufacturer B specifies the requirements to suppliers concerning for example delivery times. B and LSP then jointly work out different solutions that are offered to the suppliers so they can fulfil the delivery requirements. Even though these offerings to the suppliers are developed jointly by LSP and B, it is LSP that is offering the solutions. It is also LSP who communicates with the suppliers during the delivery process, for example, by handling the call-offs to suppliers. LSP also takes care of the daily delivery of components to the production site and secures that components are properly unwrapped, and sorted in accordance with B's internal production logic. Furthermore, LSP processes the invoices on behalf of suppliers but the payment is handled directly between the suppliers and B.

In this case LSP is part of an activity configuration that has been jointly developed with the outsourcing firm. LSP is involved in coordination of deliveries by adapting these to B's production logic. LSP intermediates between the suppliers and the manufacturer and links the activity configurations of the suppliers with those of B. The component storage functions as the 'linking point' between the configurations.

Customer C is a producer of household appliances. This example illustrates a situation that is quite common today: a producing company closes down its plants in Europe and moves production to a low-cost country. Before the change LSP had been involved in land transportation of components from suppliers to the plant and in outbound logistics from the plant to the customers. The new distribution arrangement was designed by C's own distribution unit which also takes full responsibility for the coordination of the activities. Hence, in this case LSP was not involved in the design of the arrangement. Moreover they are not responsible for coordination. The activities in which LSP is involved are totally specified by C.

In this case the role of LSP in the new structure is quite 'narrow', they are involved in activity configuration designed and coordinated by others. For LSP this change made them increasingly engaged in air and sea

transportation. The resources and capabilities developed for these operations can be used also in relation to other customers.

5.2 Strategic consequences for a service provider

In this paper we will not rely more on the LSP-example. It is used only to illustrate three characteristics that seem to be representative of general tendencies in TPL. The first is the variety among the types of outsourcing in which LSP is involved, ranging from the undertaking of single activities to total solutions where many competencies and resources are needed. The second is the extended scope of the logistics arrangements as exemplified by customers A and B. Similar conditions are reported in Carbone and Stone (2005) and Marasco (2008). De Boer et al (2006) claim that traditional 'piecemeal outsourcing' of isolated activities is nowadays supplemented with outsourcing of distinct sets of subsystems of overall logistics arrangements and even outsourcing of "bundles of such subsystems to a single TPL-provider" (ibid. p. 447). The third tendency is the modifications of the outsourcing arrangement when a buyer reorganizes its activity configuration, which was observed in all three sub-cases.

These three characteristics can be traced back to efforts of the outsourcing firm to differentiate its outsourcing arrangements. In turn these strategies have required TPL-firms to differentiate their service offerings. The survey by Berglund et al (1999) identified a segmented approach applied by service providers, distinguishing on the one hand between a single 'logistics service' and a 'logistics solution' and on the other between 'basic logistics' and 'value-added logistics'. Persson and Virum (2001) suggested a 2x2 matrix for providers' strategic approaches with the level of complexity of the services and the extent of asset specificity as the two dimensions. Similarly, Hertz and Alfredsson (2003) distinguished between high and low attention to two strategic dimensions: 'general problem-solving ability' and 'degree of customer adaptation'. Bask (2001) applied a similar distinction in a 3x3 matrix building on the dimensions 'complexity of service' and 'customer relationship involvement'. On this basis three types of TPL-services are identified: 'routine', 'standard' and 'customized'.

These changes in buyer demands and the subsequent strategic adaptations of logistics service providers imply great opportunities. By offering services with different features it will be possible to serve customers with huge variety in demands. On the other hand this variety is a problem for the service provider, because the various arrangements have to rely on different sets of capabilities and resources. For example, in the terms above, value-added logistics, customized TPL-services, and advanced general problem-solving ability are resource demanding strategies. They require considerable investments not only in physical facilities and equipment but also in 'logistics competence' – i.e. in designing, organising, and maintaining high-quality logistics arrangements. Moreover, since these arrangements are resource demanding they will expand the cost side of the provider substantially. These increasing costs will impact on the price level of the offerings of the service provider. In turn, these conditions will make it difficult to be perceived a cost efficient alternative for those customers favouring basic logistics, routine and standardized logistics, and those that are fully satisfied with a limited problem-solving ability.

Increasing variety is thus a problem for logistics service providers. First, this variety calls for a broad spectrum of capabilities to handle the differentiated requirements of customers. Service providers are thus confronted with strategic decisions concerning 'what' to do as illustrated in the examples above. Second, these problems are accentuated by the fact that many times customers also tend to direct the providers undertaking of these operations through detailed contracts and specifications. This means that there will also be a broad spectrum concerning 'how' to do, i.e. the service provider has to apply different approaches in relation to the various customers. These adjustments tend to restrict the opportunities for service providers to improve on the scale of their operations. Moreover it constrains the TPL- firm's opportunities to provide its experience in the services to the customer, which is nicely expressed by the managing director of a logistics service provider (Sankaran et al, 2002:692): "In all our negotiations [with the buyer] we expressed concern over the vehicle configuration they wished us to use, We spent a lot of time telling them how we thought they should do... They wanted to do it their way so we made clear we didn't think it would work....and it became a case of 'we told you so'".

It is obvious that arrangements with these features do not allow the service provider to exploit its resources adequately. Therefore such contracts and working conditions will harm not only the provider, but also the buyer since the conditions offered to the provider will make the logistics solution less appropriate than what it

could have been. From the service provider's perspective it is clear that more intense interaction with the buyer could improve the situation for both parties.

6. The approach of the outsourcing firm

Previous research indicates that when it comes to the situation of the outsourcing firm particular emphasis has been put on two problems: partner selection and contract design (Marasco, 2008). These issues focus on the one hand on the decision phase of outsourcing and on the other on the implementation of the selected option. On the basis of our analysis it can be concluded that partner selection and contracting are not always the most important determinants of successful outsourcing arrangements.

Starting with the decision phase and partner selection it was illustrated above that there must be great problems in anticipating the potential performance of a particular supplier. According to the network analysis the main task of a service provider is to integrate its activities with those in the pattern of activities in which the outsourcing firm is involved. In doing so it is required that the resources of the provider are combined with those in the current resource constellation around the buyer. And finally, succeeding in these two respects will call for relationship involvement with the firms in the web of actors where the outsourcer resides. Therefore, evaluation of potential suppliers on their internal capabilities (as recommended by e.g. Bienstock, 2002; Meade and Sarkis, 2002; Jharkharia and Shankar, 2007) is an insufficient approach in our view. The main focus should be on the opportunities of alternative suppliers (i) to fit into the current network around the buyer and (ii) in what ways their connections to other firms would be beneficial to the buyer. Therefore, the analysis needs a network orientation. The crucial issue in this analysis is to investigate in which ways the activity subject to outsourcing is connected to other activities in the pattern and what impact these connections may have on the constellation of resources and the web of actors. Considering these issues is thus more important than the internal capabilities of the various providers when a buyer evaluates potential vendors.

Obviously, a proper analysis of these issues would be an immense task that never can be fully conducted. Therefore, we agree with de Boer et al (2006) in their conclusion that we have to "accept and work from the premise that any outsourcing study must be incomplete and selective" (p. 451). More important than selecting the "right" partner therefore will be to find a best way to work with the service provider that is chosen. In this discussion we would like to bring up another recommendation from de Boer et al (2006) where they claim that "neither the system boundary of the activity under consideration nor the capabilities of potential service providers must be taken for granted". Their main argument is that the underlying reason for considering outsourcing is that some particular logistics activities have drawn the attention to a decision-maker – either through dissatisfaction with previous arrangements or through new options made available. However, it is not obvious that what drew the attention to outsourcing considerations should match what is later outsourced. It might well be that careful analysis will identify that another option would be more appropriate. These alternatives can be generated "by varying the system boundaries of the activity ("zooming" in and out on the activity as it were) and varying the capabilities of the provider" (ibid. p. 451). This is the perfect illustration of our argument above that it is the fit between the network configuration and the provider that is the critical issue in the outsourcing decision. The analysis of how this fit is to be achieved will require a holistic perspective as suggested in this paper and may discover that the scope of what is outsourced may be extended or more limited than the characteristics of what actually drew the attention to outsourcing.

When it comes to the implementation of the logistics arrangement the conclusion by Marasco (2008) is that particular emphasis has been placed on contracting issues. We discussed above that too detailed instructions may hinder a service provider to make the best use of its resources. Therefore a more collaborative approach most likely would improve conditions in this respect. Interaction with the selected supplier would also increase the opportunities to attain the fit between the vendor and the network configuration of the outsourcer. Again, Sankaran et al (2002) provides an illustrative example of behaviour that hinders the provider from doing a good job, as conditions were expressed by the TPL-firm: "We were not allowed to tour the existing facility. We couldn't speak to upper management or warehouse managers.... The client did not want to offer information that might influence our proposal or hurt contract negotiations". (p. 692)

Obviously, with these conditions it would be difficult to identify the most appropriate fit in relation to the network configuration of the outsourcing firm. Successful attempts in this direction will require the active involvement in the relationship with the provider. The above discussions concerning the role of the service provider and the approach of the outsourcing firm thus lead to the same conclusion – both parties would be

better off by closer interaction regarding the content of the outsourcing arrangement. In the section below we discuss in which ways interaction would be beneficial for the performance of logistics outsourcing.

7. Buyer-provider interaction –implications for practice

This paper is by no means the first to suggest that the relationship between buyer and provider is important for the performance of the logistics arrangement. However, as quoted in the Introduction “very few studies have attempted to look at both buyers and providers simultaneously” (Maloni and Carter, 2006:30). Most studies approach the relationship from either a relationship marketing perspective or a supply chain view. We find it necessary that a truly interactive approach is applied to the relationship between a buyer and its service provider. This perspective will require the outsourcing arrangement to be perceived a continuous process rather than a one-stand decision. According to Marasco (2008) this is quite an unusual setting and among the few studies taking this direction can be mentioned Lever (1995), Marshall et al (2005), Halldorsson and Skjoett-Larsen (2006). An interactive approach will provide benefits in several phases of the outsourcing process: in the decision concerning what to outsource, in the regular provision of the service, and in the assessment of its performance.

7.1. *Interaction concerning the decision to outsource*

Interaction with potential suppliers is a means of reducing the problems in the phase when the decision to outsource is taken. We concluded previously that insufficient analysis of what outsourcing actually implies is a major reason for the performance problems. We suggested a network analysis for improved understanding of its prerequisites and consequences. We later adopted the approach suggested by de Boer et al (2006) concerning the generation of outsourcing options by adapting alternative boundaries of the activity that is subject to outsourcing in relation to the capability of the supplier. Arriving at reliable conclusions in this respect will require close interaction with the supplier in order to find out the nature of its resources and abilities.

Another problem in the initiation phase concerns the difficulties related to cost estimations. The magnitude of these problems is closely related to the level of interaction between the two. For example, a manager in a TPL firm expressed substantial concerns over the situation when the potential buyer had provided them with very little information about its cost situation. On the other hand they had required the provider “to divulge our fixed and variable costs for our warehousing and the fixed and variable costs for our distribution, and then they want us to commit ourselves to what percentage of reductions in costs will take place” (Sankaran, 2002:392). It goes without saying that the opportunities for successful arrangements will be quite limited when such conditions are at hand. Maltz and Ellram (1997) analyzed logistics outsourcing from a total cost orientated perspective and concluded that this approach is quite different in TPL-arrangements in comparison with traditional make-or-buy decisions. Adequate capturing of cost conditions will require also inclusion of the costs of handling the relationships between shipper/third-party and third-party/end-user. On this basis they extend a 10-step model for total cost of ownership developed for purchasing to a total cost of relationship model for logistics outsourcing. Utilizing this approach for cost estimation will require an interactive orientation of the parties involved and - if this is achieved - far better decisions can be expected.

A crucial issue in this phase of the outsourcing process is to determine the scope of the logistics service. This decision will depend on the outcome of the analysis of the fit of the supplier capabilities into the buyer's network configuration and the costs associated with the various alternatives. Sanders and Locke (2005) criticize existing outsourcing frameworks and models for lack of differentiation and conclude that deciding on the extent of outsourcing is a most strategic issue. The authors provide a framework distinguishing between four types of arrangements, ranging from ‘out-tasking’ (i.e. transfer of one or a few activities) to ‘full outsourcing’, where an entire function or process is outsourced. Factors impacting on the scope of the outsourcing decision are considered to be the strategic importance of the task/function, the required degree of customization and the nature of the relationship with the provider. Bolumole (2001) observed a relationship between the scope of outsourcing and the buyer's motive. Organizations that outsourced for operational and cost based reasons tended to apply a more limited scope of their arrangements than those striving more for value enhancement.

7.2. *Interaction concerning the regular provision of services*

The responsibility of the provider will be greater the greater the scope of what is outsourced. The buyer must realize what a transfer of responsibility actually implies for the relationship with the vendor since extension of the scope of outsourcing increases both risks and potential benefits. These conditions are at hand for logistics as well as for outsourcing in general. For example in the IT industry Beulen et al (2005) observed a shift from single application outsourcing towards undertakings in 'infrastructure management'. Similar conditions were identified by Linder (2004) who made a distinction between 'conventional outsourcing' of single activities and 'transformational outsourcing' covering larger processes. Increases in the scope of the outsourcing arrangements will put greater emphasis on business relationships and require that clients and vendors are prepared to get into strategic long-term relationships (Gupta, 2007). Bolumole (2001) found that in long term relationships the scope of outsourcing over time was extended from basic services to more value-adding responsibilities.

Long-term interactive relationships are necessary for the handling of service operations characterized by increasing complexity since these require close cooperation and continuous knowledge sharing (Lei, 2007). The author especially points out the importance of technology transfer and providing suppliers with access to knowledge and skills in order to enhance performance. Successful effects of these efforts concerning outsourcing in general are exemplified by a study of Suzuki's program for development of their Indian supplier network. Through systematic transfer of skills Suzuki managed to significantly change the nature, content and extent of local suppliers' capabilities (Okada, 2004). Similar effects were observed concerning the need for knowledge exchange between the global IT department of a multinational bank and its suppliers (Chua and Pan, 2008). Ignoring the need for exchange of knowledge and transfer of skills may cause severe problems and it has been shown that many companies have been "stumbling because they underestimated the knowledge transfer issues" (Overby, 2007:2). Buyers thus have to engage in the operations of their suppliers in order to secure the performance of outsourcing arrangements whether the services involves logistics or other activities. Therefore, 'teaching' suppliers is an important issue in interactive relationships (Sachin and Mabert, 2004; Gadde and Hakansson, 2007). These teaching activities include both what is required by the individual supplier/provider and what is needed from the network around.

It is important, however, that teaching does not become overly ambitious. One reason is that the potential gains from teaching have to be balanced in relation to its costs. What is even more important is that too much direction from the client might hinder the provider to make the best use of its resource set-up as we previously argued in the discussion of the control ambitions of the buyer. In this respect we agree with the argument of Quinn (1999) that the provider has been chosen for its competence and typically has more knowledge depth than the buying firm. On this basis Quinn concludes that the main mission for the buyer should be to shift the outlook to *what* result is desired rather than trying to determine *how* this result is to be achieved. If the buyer specifies how to do the job in too much detail it will not only ruin the opportunities for economies of scale but also "it will kill innovation and vitiate the supplier's real advantage" (Quinn, 1999:19). These problems will not be at hand in truly interactive relationships where buyer and supplier together develop the specification of what is exchanged. This approach would make it possible for the two parties to consider "their joint set of resources, evaluate different solutions and the various trade-offs among them" (Araujo et al, 1999:504).

7.3. Interaction concerning the assessment of the solution and the relationship

As shown previously in the paper all outcomes of logistics outsourcing are not successful, witnessed by the examples of back-sourcing, home-sourcing, and insourcing. We have argued that the industrial network perspective, and particularly the interactive approach launched in this paper, would improve conditions when it comes to the problems related to insufficient analysis and unrealistic expectations identified in previous studies. Moreover, a network analysis and an interactive approach would reduce problems related to both the implementation of the logistics solution and the functioning of regular service operations.

There is one more thing to consider, however: What constitutes an adequate logistics service and an appropriate relationship will change over time. The demands of the buyer may be modified and so will the capabilities and resources of the provider. Changes in technology may make new logistics opportunities available. Changes in the activity pattern initiated by other actors may impact on either the buyer or the provider or both. Therefore, the logistics services and the customer-provider relationship should be continuously evaluated. In most cases these performance measurements put the emphasis on the logistics services and the impact of the provider (see for example Wilding and Juriado, 2004). As should be clear from

the discussion above it is as important that these metrics also take the role of the buyer and the features of the business relationship into consideration.

The outcome of this evaluation may sometimes be that one of the two parties (or both) will be dissatisfied with the current arrangement. The buyer may consider the logistics solution as either too costly or not functioning as expected. The provider may feel that the costs of serving this buyer do not pay off in terms of monetary revenues or other benefits. If the assessments are made unilaterally buyer or provider normally are inclined to switch to another business partner. This means that the investments on both sides of the dyad in the logistics solution and in the business relationship will be worthless. However, if the assessment is interactive it might be possible to rescue the business deal and the investments in the relationship. This can be done by modifying the logistics solution, for example, by changing its scope so it fits both parties in terms of the benefits and the costs it represents for the two sides.

It might also be the case that the involvement in the relationship needs to be adjusted to new conditions. Our literature review clearly illustrated the significant impact on outsourcing outcome due to the nature of business relationships. A huge bulk of publications deal with processes for building relationships with providers of outsourcing services (e.g. Tompkins et al, 2006) and for example Kedia and Lahira (2007) conclude that in value enhancement arrangements the cumulative experience sharing and learning are vital and that these joint actions require strategic partnerships. It has also been shown that there is a clear trend towards the development of longer term partnerships (Jaafar and Rafiq, 2005). We agree that the performance level of an outsourcing arrangement can always be improved through increasing relationship involvement in terms of process integration and resource combining. Unfortunately, these benefits of increasing involvement are accompanied by increasing sacrifices since relationship involvement is resource demanding. Therefore, the benefits owing to activity linking, resource combining and interaction between people sometimes are more than offset by raising costs. This means that in some situations the outcome of interactive relationship assessment may well be a decision to reduce the involvement in the relationship. For both the provider and the buyer it is important that their portfolios of relationships are characterised by variety: in some cases a high-involvement relationship makes sense, while in other situations low-involvement may be preferable for some reason. For example, Kedia and Lahira (2007:13) conclude that “all forms of cooperative behaviour between clients and providers [should not be] the same in terms of value proposition and degree of involvement”.

A crucial issue in any assessment, whether it concerns the logistics solution or the relationship, is the timing of the evaluation. We have argued that a relationship must be seen as an investment. Therefore, it shares the conditions of other investments that costs appear more or less instantaneously while revenues develop over time. Revenues appear because of potential benefits related to process integration and resource combining discovered through interaction. Previous network studies clearly shows that reaping these benefits takes time. Therefore, recent decisions to back-source and internalize logistics activities may not have been fully appropriate. If these solutions and relationships had been given more time and more resources it might be possible that they over time could have turned into successful arrangements.

8. Implications for the overall business landscape

We argued in the Introduction that the attention to logistics outsourcing is part of a general development towards outsourcing in the business landscape. In this final section we discuss some implications of this transformation. The evolvement of third-party logistics service providers is but one illustration of the increasing specialization in the business landscape. Other examples are identified as ‘contract manufacturing providers’, ‘final assemblers’, ‘electronic intermediaries’, ‘design houses’, ‘information brokers’, ‘warehousing specialists’, ‘electronic hubs’, ‘cybermediaries’, ‘B2B-portals’ etc. A specialized company evolves because it is capable of conducting the function in which it is specialized in a more efficient way than a firm that combines this activity with many other functions. Once the process of specialization has started it gets momentum since one type of specialization breeds other types, which was defined by Alderson (1954) as ‘the proliferation of opportunities’. The most obvious illustration is probably in the distribution operations of companies which have undergone considerable changes during recent decades. Traditionally most distribution operations were organised and conducted either by the manufacturer of the particular item or delegated to an industrial distributor. These intermediaries most often were multifunctional and involved in more or less all activities necessary to connect the ‘technology of use’ with the ‘technology of production’ (concepts from Alderson, 1954). For example, in the middle of the 1990s the typical industrial distributor was portrayed as a full-service intermediary that “contacts customers and makes the product available by providing necessary

supporting services such as delivery, credit, technical advice, repair service, assembly and promotion” (Herbig and O’Hara, 1994:199).

This type of ‘all-inclusive’ actor has thus been challenged by the ‘functional specialists’ identified above that focus on some specific activities in the flows of information or the flows of materials. The ‘traditional’ industrial distributor is challenged since it is difficult to be as efficient in the undertaking of the activities as a specialized company can be. The problems associated with the multi-functional corporation become accentuated when new conditions are made available, for example, through technical development. Developments in information technology and logistics provide opportunities for conducting activities in new ways. The realization of these opportunities will require investments in sophisticated facilities and equipments in order to improve the performance of the activities. The first problem for the multi-functional firm is that investing in a broad range of new technology is costly. The second problem relates to the principle of non-proportional change (Boulding, 1962). This principle implies that it is unlikely that the various distribution facilities are designed to reach their optimum values at the same scale of operations. This means, for example, that a multi-functional company with full capacity utilization in its warehousing operations may have overcapacity in its equipment for internal logistics activities and insufficient capacity for transportation. For companies specializing in one of these operations it will be possible to run each facility and equipment at its optimum level with all the cost effects this will provide.

So far we have dealt with single activities and functions and showed how outsourcing can be beneficial for their undertaking. It will always be possible to make an individual activity more efficient by increasing the extent of specialisation. But the industrial distributor discussed above was involved not only in the undertaking of each of the single activities. The ‘full-service’ distributor also integrated these activities so they together constituted a meaningful bundle of activities. And this is the second aspect of importance for the efficiency and effectiveness of any activity pattern. The total performance of an activity pattern is thus dependent on the combination of efficiency in single activities and the integration of these activities. In recent years the latter aspect seems to have been somewhat neglected in comparison with the benefits of the first. There is a clear tendency in today’s business landscape that the main focus is on “slicing the activities of firms more finely [which results] in finding optimum locations for each closely defined activity” (Buckley and Ghauri, 2004:81). In the end, however, the outcomes of these single activities have to be integrated in order to jointly create something useful: a PC, a refrigerator, an information system, a bundle of logistics services etc. Therefore, increasing specialization at one point in an industrial system must be balanced by greater integration at some other point (Piore, 1992; Bitran et al, 2007). The relationship between these two dimensions is simple: the greater the specialization – the greater the need for integration. An obvious consequence is that “both the pattern of specialization and the relationship between specialists have decisive influence on the performance of an economic system” (Loasby, 1999:90). The gains from specialization are thus accompanied by ever escalating demands for integrative efforts that increasingly have to cross the boundaries of firms.

It should come as no surprise, therefore, that firms with a specialty in integration have evolved to handle the required coordination of activities undertaken by specialized firms. In general terms these intermediating actors have been described as ‘system builders’ and ‘system integrators’. In the same way some logistics service providers function as ‘logistics integrators’. For example, UPS Worldwide has been identified as an ‘intermediate logistics layer’ with the role of “coordinating logistics service operations and providing the client with a single point of contact” (van Hoek and Chong, 2001:464). Moreover, it has been observed that TPL-firms can act as logistics coordinators for clients “as the synchronization of dispersed supply resources become a critical requirement” (Bolumole, 2003:97). Finally, the role of ‘fourth-party’ logistics providers as logistics integrators is acknowledged in many writings. One of these is Munkopadhy and Setaputra (2006) where the role of these firms is analysed with a particular focus on reverse logistics.

These examples illustrate the need for integration of activities that have become increasingly dispersed through logistics outsourcing. These integrative actions represent substantial costs for those involved. At some point and in some cases, the escalating costs for coordination may outweigh the benefits provided through outsourcing and specialization. These conditions may then pave the way for insourcing and coordination within firms which illuminates the ever ongoing dynamics in the business landscape.

9. Concluding summary

Previous research suggested the industrial network approach as an adequate conceptualisation for a complementary perspective on logistics outsourcing and third-party logistics. The analysis of outsourcing from a network view clearly illustrates that outsourcing of logistics is not only about moving an activity from one firm to another. Owing to network interdependencies other activities and the links between these will be affected. Moreover, logistics outsourcing will impact on prevalent resource constellations and actor webs. In fact, a complementary perspective on third-party logistics that has been suggested would be to consider it as insourcing of supplier resources (Gadde et al, 2003). In this paper we have concluded that by using the industrial network framework the understanding of what logistics outsourcing actually implies would be improved. This increasing understanding should hopefully reduce the problems related to outsourcing failures identified in the literature review. A network perspective would contribute to more appropriate analysis of the potential consequences of outsourcing and a more adequate estimation of the costs and benefits associated with outsourcing.

Previous studies have focused on either the outsourcing firm or the provider of the service. In these studies it is often claimed that the relationship between the two have decisive impact on the outcome of the outsourcing arrangement. Despite these arguments surprisingly few studies have investigated the features and consequences of buyer-provider relationships and the interaction between the parties. Our exploration showed that an interactive approach between buyer and provider is beneficial for both parties. The extended scope of outsourcing and the subsequent various roles to fulfil by logistics service providers make these operations increasingly resource demanding. Through closer interaction it will be possible for provider and buyer to jointly develop a solution that is appropriate to the customer in terms of both benefits and costs. In some situations the buyer will be better off by sticking to a standardized solution where resources are shared with others, than requiring a customized solution.

Our analysis showed that an interactive approach between buyer and provider would lead to benefits in several respects. Firstly, in the decision phase, interaction would favour a more complete understanding of the potential consequences of logistics outsourcing. Furthermore, interaction would be of help in determining the scope of the outsourcing arrangement through a joint analysis of the requirements of the buyer, the capabilities of the provider, and the costs and benefits associated with different types of arrangements. Secondly, in the regular provision of the services, interaction is required in order to secure the quality of the services. Particularly when the scope of outsourcing is extended, buyer and provider have to be in close contact for the arrangement to function in the way it has been planned. In these respects interaction involving joint learning and teaching have shown to be more appropriate mechanisms than the control ambitions of the buyer. Thirdly, the conditions for outsourcing arrangements and relationships change over time. Therefore, the features of these must be assessed and modified in accordance with what new situations may imply. Without evaluation of the relationship features problems may appear either with too much involvement or too little.

Finally, we related logistics outsourcing to other ongoing dynamics in the business landscape. Outsourcing leads to specialization which provides certain advantages with respect to activity patterns and resource constellations. For a single activity specialization will always lead to increasing performance. However, the outcomes of these specialized activities need to be integrated in order to form a totality in terms of, for example, a car, a logistics service, an information system etc. The more specialized an activity pattern becomes – the more efforts are needed for integration. There is thus a point at which the benefits of outsourcing and specialization are more than outweighed by the increasing need for integration. The crucial issue for any outsourcing company is to identify the location of this point.

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