THESIS FOR THE DEGREE OF LICENTIATE OF ENGINEERING

Role Changes in Distribution Networks: A Study of Middlemen

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ABSTRACT

This licentiate thesis deals with re-orientation of the role of firms identified as ‘middlemen in distribution channels’. Evolving conditions in the business context of these firms have challenged their traditional role. On this basis, two aims with the thesis are formulated: (i) to identify adequate roles for middlemen in the current business context, and (ii) to analyse the implications for implementation of these roles.

The study is based on the industrial network approach with particular focus on the three layers of the ARA-model: activities, resources, and actors. In the analytical framework central issues related to distribution are identified in each of the layer, resulting in the formulation of the research issues of the study.

The empirical study is focused on a case study of a middleman involved in distribution of mobile phones and six of its business partners – one manufacturer of mobile phones, two network operators and three retailers. These five business partners were selected because each of them represents a particular role in the role-set of the distributor. The business relationships with the partners are described and analysed with regard to the central elements derived in the analytical framework.

The roles identified in the empirical study provide the basis for the formulation of four generic roles – two related to the activity layer and two related to the resource layer. Finally, the consequences for the actor layer are discussed. The paper concludes that although middlemen are challenged there are ample opportunities for survival through re-orientation of the traditional middleman role.

Keywords: middleman, intermediary, role change, distribution, industrial network, business relationship, telecom industry

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1 Introduction

This thesis deals with firms that traditionally have been identified as 'middlemen in distribution channels', characterized as "intermediary sellers who intervene between the original source of supply and the ultimate consumer" (Alderson, 1965, p. 211). This view of a middleman is in line with the dictionary definition: "any trader through whose hands goods pass between the producer and the consumer" (Hornby, 1974, p. 534). The specific emphasis of the thesis is directed to the changing role and functioning of these firms in current distribution arrangements. Owing to evolving changes of the business context, middlemen and other firms involved in distribution need to adapt to these new conditions and modify their role and behaviour.
This first chapter provides an introduction and overview of the thesis. It starts by presenting the background to the thesis with special emphasis on middlemen and the dynamics of distribution. It then discusses the current challenges faced by middlemen, the motives for the present study, and the aims of this thesis research. Chapter 1 concludes by describing the structure of the thesis.

1.1 Middlemen and the dynamics of distribution

Middlemen have played a major role in the evolution of trade and industry. Business historians have suggested that the entry of the professional trader at the end of the Middle Ages was an important driver of the development of society as a whole (Heilbroner, 1962). Similar thoughts were expressed by Hicks (1969) who concluded that when these professional firms, specialized in trading, entered the scene, they became the engines that drove the evolution of our world. However, middlemen were important long before and their central role in the past was described by Rosenbloom and Larsen-Andras (2008, p. 235): "wholesalers as institutional type have for thousands of years been involved in what we refer to as global marketing". Various types of middlemen have continued to be significant actors, as Alderson (1965, p. 211) claims, saying that these intermediary sellers in fact represent central features of "an advanced marketing economy", including "retailers and wholesalers and many specialized types of merchants, brokers and sales agents".

Despite the strong and continuous importance of middlemen, their positions in the distribution structures have undergone considerable changes over time. Gadde (2014, p. 623) shows that before the Industrial Revolution in the late 1700s, middlemen "ruled the distribution arena at the time". At the beginning of the 1800s, manufacturers established their own sales organizations in order to exploit the opportunities from large-scale production, implying that "the power of intermediaries in general decreased" (ibid. p. 624). However, for several reasons, middlemen were able to reassert and strengthen their positions from the middle of the 1900s when middlemen became "dominant players in many distribution networks" (ibid., p. 625).

The short résumé above, indicates that the situation for middlemen has been both prosperous and problematic. Sometimes their role has been severely questioned, illustrated by the quote that "business analysts have been anticipating their demise" (Lusch et al., 1993, p. 20). Similarly, Alderson (1949, p. 145) concluded that "the survival and continued vigour of the wholesaler is remarkable considering the persistent attempts to supplement him". The firms that survived were those that reoriented their roles when conditions changed and were "able to adapt to modifications in the business context that affected their power and their way of operating" (Gadde, 2014, p. 628). These adaptations enabled middlemen to uphold, maintain and even improve their positions in the evolving distribution arrangements.

1.2 Challenges facing middlemen

At the end of the 1900s, however, the central position of middlemen was again severely challenged. As described in Olsson et al. (2013), technical developments in manufacturing, logistics and systems for information exchange made available new types of distribution arrangements. In particular, information technology (IT) developments improved the conditions for direct producer-consumer contacts. IT also reduced the need for inventories, because of faster and more accurate communication, and enhanced the control of materials flows. Since warehousing was one of the main functions of middlemen, these changes threatened their position in a time that was characterized as "the revolution that is taking place in distribution" (Stern and Weitz, 1997, p. 824). Far-reaching consequences were expected and it was argued that the on-going changes "will modify many of the assumptions on which distribution channel structure is based" (Pitt et al., 1999. p. 19). The consequences were expected to be most dramatic for middlemen, and Pitt and colleagues concluded that "many intermediaries will die out" (ibid., p. 19). Some years later a comprehensive literature review on the role of intermediaries in distribution indicated that these perceptions were still valid, since a main finding was that "there is no room in this revolution for middlemen" (Mudambi and Aggarwal, 2003, p. 317).

However, Pitt et al. (1999, p. 19) claimed also that "new channels and new intermediaries will take their places". The most significant effect in this respect was supposed to be achieved through specialization in the form of 'electronic' intermediaries (e.g. Tamilia et al., 2002) and third-party logistics providers (Murphy and Poist, 2000). There is no doubt that 'traditional' middlemen in some contexts and some situations, were outperformed by such firms. However, in many cases it is the 'traditional' middlemen that have taken the lead in the restructuring of distribution. They have done so by changing their roles in ways that makes it possible to claim that they appear as 'new intermediaries'. Even more important is that these firms work in ways that make it relevant to talk about 'new channels'. For example, in relation to firms involved in distribution, Dawson (2007, p. 317) concludes that in some new types of arrangements, "it is often difficult to distinguish whether they are wholesalers or retailers in the traditional sense". Obviously, these middlemen have reoriented their operations and redefined their roles.

A significant factor in this reorientation is that channel-type relationships have changed considerably over the last decades. For example, Hoyt and Huq (2000) argue that these relationships have evolved from transactional processes based on arm's-length conditions towards close collaboration relying on trust and information sharing. Therefore, interaction between middlemen and their business partners has become increasingly important.

1.3 Motivation for the study

Middlemen in distribution are thus challenged by considerable changes in the business context. Well defined structures, based on clear cut boundaries between different supply chain actors, such as manufacturers, wholesalers, retailers and consumers/users, are disappearing, as illustrated above. Instead, activities that historically belonged to distribution are being carried out by companies that used to be labelled manufacturers. Activities that previously were performed by producers are being handled now by companies that historically were said to be either distributors or wholesalers. Middlemen are experiencing challenges related to changes in information structures and technological developments, which are being accentuated by increasing specialization and internationalization. These challenges encourage middlemen to alter the way they do business. These conditions taken together are the motivation for a study dealing with middlemen and the adjustments of their roles and operations in the dynamic contexts in which they operate.

Thus, the study is motivated from a practice perspective: middlemen need to adapt to the changing features of the current business landscape. We would suggest that in reorienting their roles, firms should benefit from research on these issues. Also, theoretically, there are good reasons for further research on the changing role of middlemen. The ongoing evolution of distribution is making established concepts and models developed for a different type of business reality, obsolete (Gadde and Ford, 2008). Therefore, studies like this one may contribute with their specific building-blocks for a revised theoretical framing of current distribution arrangements. In particular, the need for studies of middlemen has been highlighted by several authors in order to provide a better understanding of complex distribution structures. For example, Dawson and Moir (1985, p. 20) claim that there is little recognition of the importance of intermediaries and their function "despite the[ir] key position in the dynamic economy". Later, an extensive literature review concluded that "what is missing is research that examines organizational decisions from the distributor's point of view" (Frazier, 1999, p. 239).

1.4 Aim of the thesis

The overall objective of the study is to explore the consequences for middlemen, owing to the current challenges. This objective involves two sub-aims. The first is to identify adequate roles for middlemen in the current business context.

Traditional definitions of role take various forms, but are mainly concerned with the middleman's connection to aggregations of actors identified as producers and consumers (Jensen, 2010). Contemporary changes in the business context make it relevant to search for complementary definitions, adopting other points of departure. In this study the shift away from arm's-length relationships towards increasing involvement is taken into account by a greater emphasis on the interaction between a middleman and specific counterparts. Moreover, Wilkinson (2001) claims that the governance among firms should not be considered in isolation from the system of operations, implying that interaction needs to be investigated in its context.

The second aim of the thesis is to analyse the implications for implementation of the complementary roles. This is achieved through examination of specific examples of role reorientation.

1.5 Structure of the thesis

Chapter 2 presents the analytical framework used in this thesis, which includes the concept of distribution functions, and discusses middlemen and their roles in distribution. The study is based on the industrial network approach. The rationale for using this framework is discussed and the three layers of activities, resources and actors are described in more detail. The chapter ends with a formulation of the research issues examined in this thesis. Chapter 3 describes the methodology adopted including the background of the project, the choice of a single-case study, case selection, data collection and research quality. Chapter 4 presents the case study of a middleman involved in the distribution of mobile phones. It describes the focal company and its context and discusses and analyses a selection of relationships between the focal company and some of its counterparts. Chapter 5 extends the analysis on the roles of middlemen, building on the empirical findings from the first analysis. Chapter 6 presents and discusses the main findings. The results from the case study are discussed alongside the findings from other studies in order to derive a set of generic middleman roles.

2 Analytical Framework

The analytical framework presented in this chapter describes the concepts and models required to analyse and understand the research problem addressed in this thesis. The chapter starts by describing the functions in distribution followed by a discussion of middlemen and their role in distribution. The rationale for using the industrial network approach is discussed and the three layers of activities, resources and actors are described in more detail. The chapter ends with an outline of the research issues examined in this thesis.

2.1 Functions in Distribution

The topic of distribution revolves around a central theme, which is the question of how to bridge the gap between production and consumption. In the effort of bridging this gap there are a number of business actors involved. "A marketing or distribution channel is comprised of a set of interdependent institutions and agencies involved with the task of moving anything of value from its point of conception, extraction, or production to points of consumption" (Stern and El-Ansary, 1982). These 'institutions' are often categorized into producers, middlemen, consumers and other actors. Other actors include such firms that are either directly or indirectly influencing these institutions, such as transportation companies.

The members of a distribution arrangement, such as manufacturers, retailers, wholesalers and other actors perform activities or tasks, that is, they do things. This 'doing' is often discussed in the distribution literature in terms of functions. According to Mallen, (1973), "Marketing functions are the various types of job tasks which channel members undertake. These functions can be allocated in different mixes to different channel members". What constitutes a function and what is viewed as a function related to distribution have changed over the years. Shaw (1912) describes several functions performed by middlemen in distribution: sharing of risk, transporting the goods, financing the operations, selling, assembling, assorting, and re-shipping. Clark's (1922) view is similar except he chooses to categorize them into three aggregated functions: exchange functions (buying and selling), physical distribution functions (storing and transportation), and facilitating functions (financing, risk-taking, standardization and market information).

These early views, with some slight modifications, have persisted and affected the perspective on distribution functions in the literature. Stern and El-Ansary (1982) represent a typical way to describe these functions. They envisage eight universal functions or flows in the marketing channel: physical possession, ownership, promotion, negotiation, financing, risking, ordering and payment. Physical possession involves activities such as handling and storing. Ownership refers to holding title to the product which sometimes but not always coincides with physical possession, take for example a transportation operator who has physical possession of products, but does not own them. Promotion is about the marketing of products towards a potential buyer. Negotiation means discussions over volumes, prices and types of products. Financing can involve financing in two directions. Backward financing which occurs as soon as someone holds inventory, the products are not yet sold, but cash has been exchanged for products in the inventory. Forward financing occurs in the case of extending credit. Risking refers to handling uncertainty, for example, holding products in an inventory is risky because those products may not be sold. Ordering is acquiring products, and payment refers to the transfer of money to pay for them (Stern and El-Ansary, 1982).

The focus on distribution functions revolves around the activities that take place after the product is manufactured and, thus, deals with how a finished product arrives in the hands of the

consumer. Stern and Brown (1969) limit their explanation to discussion of the commercial channel which ends before the consumer and starts after the producer: "specifically, the commercial channel of distribution can be conceived as a structure of institutions and agencies accepting form utility and various resources as inputs from the environment. By the performance of the marketing functions, it converts the physical form to a 'complete' product containing time, place, and possession, in addition to form, utility which the channel returns to the environment as output". It is interesting that the authors acknowledge that there is no actual set boundary between the channel and the task environment; it is arbitrarily inserted for convenience. Gadde and Håkansson (1992) also discuss the functions of distribution channels: "The functions of a distribution channel in themselves constitute a complicated activity structure. However, this is only a minor part of the total activity structure. The activities in the distribution channel are preceded by activities in the production process and they are followed by various consuming activities. These activities cannot be viewed in isolation" (Gadde and Håkansson, 1992, p. 173). These features have an effect on how to investigate or explore the structure of distribution systems. There is a need to consider the producing as well as the consuming functions in order to understand why the functions are arranged in the way they are.

The idea of including production activities into the study of distribution has already been proposed. Bucklin (1960) includes production as one of the fundamental functions in distribution based on the fact that many marketing activities are inseparably related to production activities. Bucklin (1960) proposes five fundamental functions involved in the marketing process: transit, inventory, search, persuasion and production. Shaw (1912) also includes production activities in discussing assembly which is incorporated in the function of 'assembling, assorting and reshipping'. For an overview of these functions see Table 1. The table presents the functions arranged to show the match between different authors' views. It shows agreements and disagreements.

Shaw (1912)	**Clarke** (1922)	**Bucklin** (1960)	**Stern and El-Ansary** (1982)
Transporting the goods	Transportation	Transit	Physical possession
	Storing	Inventory	
Selling	Selling	Persuasion	Promotion
Financing the operations	Financing		Financing
Sharing of risk	Risk taking		Risking
Assembling, assorting and reshipping		Production	
	Market information	Search	
	Buying		Ordering
	Standardization		
			Negotiation
			Payment
			Ownership

Table 1 Functions in distribution

A particular feature of these conceptualizations is that the functions and how they are described focus mainly on the forward flow of products, from manufacturer to the consumer. What

happens after the consumer receives the product is less discussed. Gadde and Håkansson (1992) highlight this and include consuming activities which they label maintenance and regular use. Maintenance includes activities such as repair, service and preventive up-keep. Rules and legislation require companies that sell products to also provide after sales activities including respect for warranties, and provide service and repair; thus, these activities are also part of the distribution arrangement. Regular use refers to all usage activities after procurement and introduces requirements for complementary products such as roads and other infrastructure. For example, to 'regularly use' a car requires provision of fuel and roads.

In the process of taking a product from its conception or extraction to its final point of consumption several functions must be performed. These functions can be allocated in a variety of ways; a single actor might incorporate all the functions, by being a full service actor and controlling the entire flow. Different actors might specialize in one or a few functions which will require coordination with other actors to complete the flow. Rosenbloom, (1991) discusses a number of tasks that the distributor performs for the manufacturer and customer. For the manufacturer, the distributor performs market coverage, sales contact, inventory holding, order processing, market information and customer support. For the customer, the distributor performs product availability, customer service, credit and financial assistance, assortment convenience, breaking bulk, and advice and technical support. These tasks can be seen as more detailed than the universal functions described by Stern and El-Ansary (1982), which include several of these tasks. For example breaking bulk and assortment convenience are part of the function of physical possession, that is handling products. An important aspect of Rosenbloom's conceptualization is that he includes the customer perspective. By dividing the tasks into manufacturer oriented and customer oriented he acknowledges the need for the distributor to satisfy customer needs as well as the needs of manufacturers. Other aspects highlighted by Rosenbloom that are not included in Stern and El-Ansary's definition are the tasks of market information and support. Other authors also include the function of market information (Clark, 1922; Gadde and Håkansson, 1992).

Connected to this, Mallen (1973) discusses how functions are distributed amongst channel members through the concept of functional spin-off. Depending on actors' capabilities, functions can be spun off to other actors in order to promote efficiency, through a more optimum scale of undertaking the individual function. However, it should be remembered "that functions are not independent but are interrelated. Therefore, the spin-off of one function could have repercussions, up or down, for the cost of one or more other functions" (Mallen, 1973).

Thus there are a number of functions that needs to be performed in distribution and the middleman somehow must take a place in this division of work through the performance of some distribution functions. We will elaborate on the characteristics of middlemen next.

2.2 Middlemen in Distribution

Several middlemen can be involved in the operations between producer and consumer. For example, a producer can sell to a wholesaler who then sells to a retailer with a physical store where the consumer can access the products. Consequently, many types of actors fall within the category of middleman. What they have in common is that they are situated in between a producing context on the one hand, and a using context on the other. There are several types of middlemen which differ according to whether or not they take title to the good. Wholesalers and distributors take title to the product while actors, such as agents, sell other actors' products. Transportation companies are sometimes seen as facilitating agents or middlemen that do not own the title to the products, but facilitate their transfer. Common to all these middlemen is that they are involved in performing distribution functions. The role of the middleman in these

functions has changed over time. To try to define what middlemen do, we go back to the historical role of the middleman.

The concept of a middleman and the features of such an actor have changed throughout history. According to Alderson (1954, p. 6): “in a primitive culture most of the goods used within a household are produced by the members of the household”. Later it was discovered that ”some of the needs of a household or a tribe can be met more efficiently by exchange than by production” (ibid, p. 6). This is explained by the gains that can be achieved by specialization as declared by Alderson (1954, pp. 6-7): “One family might be more skillful than another in making pots, while the second might be more skillful in making baskets….If both families produce a surplus of the article they can make best and then they engage in exchange, both may get better quality goods at lower costs”. Shaw (1912) argued that middlemen first emerged in the Middle Ages. As handicrafts become more specialised, the producer assumed a retailer role in town markets, selling his products directly to consumers. When the market expanded, specialisation was possible and the “merchant appears as an organizer of the market” (Shaw 1912, p. 725). The producer, the handicraftsman, no longer was involved in actual selling to consumers. As the market continued to expand, other ‘middle’ levels emerged such as wholesalers, distributors and retailers selling to consumers. The aim of involving a middleman was to make the process more efficient by reducing the number of necessary exchanges among buyers and sellers of goods (Alderson, 1954).

Alderson (1954) discusses the discrepancy of assortments and the need to balance heterogeneous demand with heterogeneous supply. The discrepancy is related to the diversity between the contexts of production and use: the assortments that a producer creates may not be suitable for the users of the products. The producer tries to pool products according to a ‘production’ logic related to optimal use of combinations of machinery, that is the logic of economies of scale. The retailer tries to pool products based on ‘use’ logic. For example, in a production facility a kitchen knife may be produced alongside a carpet knife, but in the retail store the kitchen knife will be pooled with other kitchen utensils and the carpet knife will be sold in a home improvements store. According to Alderson (1954) this ‘principle of the discrepancy of assortments’ explains why the marketing channel is often divided into independent actors performing different distribution functions. This is because the logic prevailing in one situation is different and requires other assortments on a different scale from that prevailing in another. The middleman, in turn, appeared because of its ability to make the inevitable transactions between independent actors more efficient by creating time, place and possession utility. For example, time utility can be generated by storing seasonal goods, place utility can be generated by transporting goods, and possession utility is generated by assimilating risk of ownership.

To create utilities such as time, place and possession, middlemen perform the distribution functions discussed above. Initially, middlemen performed large numbers of functions. Most middleman held inventory, took on risk, transported goods, financed operations, sold products and assembled, assorted and reshipped them (Shaw, 1912). According to Chandler (1977) these actors, referred to as ‘grand distributors’, flourished from the 16th century until the industrial revolution in the late 18th century. The grand distributor “bought and sold all types of products and carried out all the basic commercial functions. He was an exporter, wholesaler, importer, retailer, ship-owner, banker and insurer” (ibid., p. 15). Increased specialization by function emerged in the mid-19th century. Shaw (1912) referred to these new specialists as functional middlemen, for example insurance companies, transportation firms, and banks. Interestingly, Shaw (1912, p. 732) argues that “the insurance company is in a real sense a middlemen in distribution”, and similarly that “the transportation companies and the express companies are

in a true sense middlemen in distribution, though they perform but one of the functions formerly shared by the successive middlemen who took over functions by area. The physical conveyance of the goods to the consumer was formerly one of the most important functions performed by a series of middlemen" (ibid, p. 732). Chandler (1977, p. 15) also points out that "Merchants had begun to specialize in one or two lines of goods: cotton, provisions, wheat, dry goods, hardware, or drugs". They concentrated more and more on one of the institutional levels: retailing, wholesaling, importing or exporting.

In recent times, changes related to information structure, technological development, specialization and internationalization have had a huge impact on the nature of middlemen. In relation to information structure, the introduction of the Internet induced a need for change (Pitt et al., 1999). In this new setting, manufacturers wanted an increased proximity to buyers, and customers wanted to be able to access products using the Internet. These conditions encouraged middlemen to modify their way of working (Morris and Morris, 2002). E-commerce coupled with globalization has resulted in consolidation of actors, weaker companies have been squeezed out and the remaining distributors have been pressured to evolve (Mudambi and Aggarwal, 2003). Technological advances have reduced the need for large intermediate inventories and favour increased use of small batch sizes (Herbig and O'Hara, 1994). Consequently, the actors are having to adapt to a more flexible and customer specific environment. The increasing internationalization of actors in the network has also resulted in a changing environment (Hagberg and Andersson, 1997; Andersson, 2002; Swoboda, 2008). Companies have increased levels of outsourcing and become more specialized on certain activities. Outsourcing initiatives have led to changes in the distribution structure and increased the need for coordination as well as greater specialization in functions. For example, actors specialising in warehousing operations (see Faber et al., 2002), logistics and transportation (Carbone and Stone, 2005) and a new type of information broker (Clarke and Flaherty, 2003) have emerged. This increased specialization could be explained to a certain extent by the logic of task specialization proposed by Alderson (1954).

2.3 The Role of Middlemen

Mallen (1973, p. 22) argues that "part of the definition of a middleman depends on the functions he performs". In line with this, the actors involved in distribution have been defined in terms of the 'distribution functions' they perform, for example, distributors, resellers and retailers. McVey (1960, pp. 61-62) highlights the problematic side of such categorization, arguing that "almost any wholesaler will do some business in retail; similarly, it is not uncommon for a broker to find himself holding title to a given lot of goods, thus becoming temporarily a merchant middlemen". Similarly, Rosenbröijer (1998) shows that middlemen are very different to their character due to diverse capabilities in terms of heterogeneous resource mixes. He argues also that the specialization in the actor structure has developed much further in practice than is captured by this kind of categorization. Consequently, these "concepts have delimited our opportunity to observe the real complexity that exists in the modern distribution channels" (Rosenbröijer, 1998). Furthermore, several studies (e.g. Hörndahl, 1994; Tunisini, 1997; Rosenbröijer, 1998; Hulthén, 2002) show that the functions performed by actors traditionally referred to as producers, distributors, resellers, and even consumers, often overlap.

Another issue is the view that middlemen work on behalf of producers as expressed in marketing textbooks. McVey (1960, p. 62) argues that the reader is led to conclude that "(a) middlemen of many types are available to any manufacturer in any market to which he wishes to sell, and within each type there is an ample selection of individual firms; (b) the manufacturer habitually controls the selection and operation of individual firms in his channel; and (c) middlemen respond willingly as *selling agents* for the manufacturer rather than as *purchasing*

agents for a coveted group of customers to whom the middlemen sell." This perspective dominates also in contemporary textbooks, for example, in relation to 'channel design' where it is proposed that producers should design their distribution channels by selecting different types and levels of middlemen (see e.g. Hutt and Speh, 2010; Dwyer and Tanner, 2009; Biemans 2010), or that middlemen "represent very different abilities to execute a manufacturer's marketing and sales program" (Gorchels et al. 2004). These features provide a view of middlemen and what they do from the producer's perspective: the producer decides about and uses the middleman to reach its customers.

In contrast, Gadde and Håkansson (1992) start from the two ends of the distribution chain and identify three categories each of producer activities and consumer activities – respectively 'product realization', 'consumer influence', and 'physical transfer', and 'procurement', 'regular use', and 'maintenance'. All the activities in a distribution channel can be analysed and described in relation to how they influence and are influenced by these categories. An important implication is that demands for the middleman's activities will originate on the producing as well as the using sides. The middleman works as a connector of actors, both manufacturers and customers. The interest of the middleman is providing value for all of these counterparts. This is the perspective applied in this study. Such an approach is supported by Mudambi and Aggarwal (2003) who claim that middlemen must consistently provide added value to both suppliers and customers.

The discussion above shows that middlemen can be involved in a multitude of activities in distribution. To analyse this complex setting the concept of a middleman role is useful. It refers to how a middleman is involved in relations with counterparts in order to provide value. The definition of role used in this study is in line with Jensen, (2010) who declared that a middleman role "is based on a set of activities that fulfill a certain need or provide a specific service to a customer". Snehota (1990) argued that actors should be described in terms of their 'role sets', indicating that actors can be involved in several roles simultaneously. The activities or services performed by the middleman towards counterparts have been elaborated upon by Alderson (1954). Alderson analysed the economic rationale for using middlemen and identified four middleman roles: reduction of business ties, scale advantages, specialization, and risk redistribution.

First, business transactions can be costly and reducing the number of business ties can lead to a more cost effective system. If several companies are involved in direct transactions with each other, the total number of business ties can be reduced if these transactions are handled by a middleman. In a setting with four sellers and four buyers where each buyer demands products from all of the sellers the number of transactions can be reduced from 16 to 8 by the introduction of a middleman. For this assumption to hold, it must be possible to conduct the same business exchange through a middleman or through a direct transaction. Jensen (2010) refers to the risk that a middleman might be biased towards either supplier or customer and may not put the same effort into conducting the business as the counterpart would do for itself. Second, a middleman can achieve scale advantages compared to a single actor based on the ability to aggregate several actors' demands. Rather than each buyer negotiating and ordering from a supplier, a middleman can pool demand and negotiate with suppliers as a single large actor to obtain better terms and conditions.

Another aspect related to scale is that the activities can be performed on a more appropriate scale for the specific activity. For example, an order for one actor may be only a part load for a truck, but by pooling several actors' demands, a middleman can fill the truck and achieve better distribution efficiency. Third, a middleman can provide task and skill specialization by focusing

on a certain type of activity, for example, warehousing, transportation, financing or coordinating orders. By focusing and improving competence in these activities middlemen will show better performance than an actor trying to perform all these activities. Fourth, risk redistribution revolves around three aspects: shifting of risk, pooling or hedging of risk and elimination of risk through control of the operating situation (Alderson, 1954). Shifting risk means transferring the risk to another actor in the distribution system. These conditions relate to the task specialization described above; a middleman that specializes in a task becomes better at performing the task and, thus, better able to manage the risk associated with the task. Pooling or hedging relates to spreading risk over a wide range of products. It is less likely that a large variety of products will be subject to large price fluctuations at the same time, and a middleman, by pooling the demand of several counterparts, can spread the risk over a larger variety of demands. Lastly, the elimination of risk based on controlling operations means that a middleman can reduce the risk in the system by taking over certain operations and taking responsibility for the coordination of activities (Alderson, 1954). This coordination reduces problems and achieves effective operations.

Jensen (2010) discusses the opportunities and constraints related to middlemen and suggests six middleman roles: hub, broker, specialist competence, risk carrier, resource provider and organizer. The hub role refers to the middleman' position as a central node in the distribution system to enable information exchange, physical transport and decisions. The role is connected to Alderson's (1954) reasoning about reduced numbers of business ties. The role also allows for absorbing fluctuations in transport volumes from counterparts with varying demands in the short term. The broker role is connected to Alderson's (1954) principles of scale and is accomplished by the middleman acting as the go-between for different suppliers and customers. Jensen (2010) argues that a broker creates scale through the accumulation of business from several customers and suppliers. The hub and broker roles are closely related. The role of specialist competence is closely related to the economic rationale of task and skill specialization and relies on the fact that a middleman focusing efforts on fewer tasks becomes better at performing them. The fourth role that Jensen (2010) suggests is risk carrier which is also closely tied to redistribution of risk proposed by Alderson (1954). The shifting of risk is connected to the role of specialist competence since an actor who becomes more adept at performing a task is also better able to handle the risk and, thus, shifting of risk to that actor is beneficial for the system. In addition, the pooling of risk is related to the hub role where variation is evened out and tied to the size of the intermediary relative its customers (Jensen, 2010).

The resource provider role is based on a middleman providing specialized resources to other actors. There are two central aspects to this role. One is that a middleman invests heavily in a resource through specialization. Based on this specialization, the middleman is able to make more efficient use of its resources than other actors dealing with larger resource constellations. In turn, this means that the middleman can provide services at lower cost. The other aspect is based on outsourcing and the fact that a middleman can provide the resources another actor lacks. This is connected also to the matching of resources and explains the choice of one middleman over another (Jensen, 2010). The sixth proposed role is that of organizer which is important since it contributes to making the distribution system work by, for example, organizing and monitoring suppliers. This role is connected to the other roles in Jensen's (2010) work in that the foundation of the ability to organize is the knowledge and capabilities acquired in the other roles.

The first four roles are identified mainly on the basis of the literature and are closely related to the work of Alderson (1954); the last two are derived from the empirical case. Jensen's (2010) conclusion is that the roles of middlemen are characterized by great variety in terms of what is

provided or performed towards different counterparts. There is increasing variety in customer demand, which calls for an increasing level of adaptation to the activities performed and the services provided by middlemen. This variety can imply an opportunity to take on new roles, but can also be a challenge in that multiple roles may be difficult to combine.

2.4 A framework for exploring middlemen roles

Exploration of potential opportunities for middlemen calls for a framing of their strategic situation. Today's middlemen operate in a business landscape that differs considerably from the distribution context in which the mainstream literature on distribution channels derived its concepts and models. As already indicated, in the current business environment the boundaries between different business actors are less clear than 50 years ago. For example, it is common that producers outsource production to contract manufacturers and that logistics providers and distributors are taking over assembly activities. The present business environment is more network like consisting of interlinked specialized actors. A network view of distribution seems highly relevant since it has been argued that current arrangements take the form of "networks of value-adding partnerships, like confederations of specialists" (Anderson, Day, and Rangan, 1997, p. 59). Other researchers found that successful innovators in distribution perceived their organizations as "webs of capabilities embedded in an extended enterprise" (Narus and Anderson, 1996, p. 112). These arrangements require increased coordination between an increasing number of actors, which leads to a complex network of business firms that are linked together in various forms of relationships. These relationships are necessary to increase the needed coordination. So, rather than a number of isolated distribution channels with sharp delimits among producers, middlemen and customers, we are seeing a complicated network of business actors. In line with this reasoning, several authors have suggested a network approach to distribution (e.g. Andersson, 2002; Hulthén, 2002; Gadde and Ford, 2008) in order to provide a holistic view of the distribution reality.

For this reason a network perspective is applied. More specifically, the point of departure is the Industrial Network Approach (see e.g. Håkansson and Snehota, 1995; Håkansson et al., 2009). This model relies on three main building blocks - actors, resources and activities - and is commonly referred to as the ARA model. Actors control resources and perform activities. Activities make use of resources for their undertaking. Actors in a network are involved in an activity structure, a resource collection and an organizational structure. They in turn are connected to other actors through their network of business relationships. In reality, the three dimensions are not separate, but are closely related. However, it is helpful from an analytical standpoint to look at them separately because they illustrate various aspects of the complex reality. A literature review of the changes in the distribution context revealed three main changes over time (Olsson et al., 2013). The first was the increasing specialization in the activity structure discussed above, where central middlemen features are modifications of those personified by the Grand Distributor, towards, for example, information and transportation specialists (Gadde, 2004). Second, this specialization required resource-sharing among the firms involved in distribution since companies have narrowed their resource set-ups (e.g. Narus and Anderson, 1996). Third, the above changes have necessitated a shift in the nature of the relationships among actors – from previous adversarial relations towards more collaborative relations (Frazier, 1999). These three main changes are closely related to the three layers of the ARA model. They relate to changes to the activities performed, how resources are used and how actors relate to each other. Therefore, the ARA-model is highly relevant for the present study.

The network imposes restrictions and offers opportunities for the firm's actions (Håkansson et al., 2009). To understand a company and its decisions, it is important to analyse the network

and the company's situation in that network. As a result of network embeddedness no company can act on its own without considering the actions of its counterparts. A central feature is the interaction occurring between companies, "it is not what happens within companies but what happens between them that constitutes the nature of business" (Håkansson et al., 2009). In this view, an actor can be described in terms of its connections to others.

2.5 The activity layer

In this section, the aspects of the activity layer deemed most relevant for this study are discussed. The section begins with a description of the activities in distribution and how they are arranged in terms of activity chains and activity structures. This is followed by an examination of the interdependencies and adjustments among activities and some notes on efficiency.

2.5.1 Activities in distribution

In the bridging of the gap between production of a product and its final consumption a huge number of activities are needed. As shown in the discussion of distribution functions in 2.1 these activities can be variously grouped . Shaw (1912) used a broad categorization identifying three aggregated functions: exchange functions, physical distribution functions and facilitating functions.

According to Shaw (1912) the most significant activities regarding exchange are buying and selling. However, this ultimate phase of business exchange is contingent on prior activities. These activities involve the selling firms' marketing operations and the buying firms' search for suitable suppliers and their products and services. In both cases, various forms of more or less advanced market analyses have to be undertaken based on market research. In these efforts, both buyers and seller can benefit from forecasts of demand from individual customers and from large constellations of customer groups. Once buyer and seller have identified each other as potential counterparts in a particular transaction, business negotiations begin over product specifications and financial conditions. Depending on the nature of the transaction and the previous experiences of the parties, these negotiations can be more or less comprehensive before a deal is decided. In addition to these 'commercial' activities, a number of administrative activities are required, including formulation of inquiries, requests, tenders and quotations, before an order is signed.

Physical distribution functions provide place, time and form utility in distribution (Alderson, 1954). Transportation and logistics activities are central for the bridging of the geographical gap between producer and consumer and thus providing place utility. The time gap between production and consumption is bridged by warehousing and storing. These activities are crucial because demand cycles do not necessarily coincide with efficient manufacturing processes. In the warehouses, materials handling activities related to inbound and outbound logistics are central. Form utility is created by activities identified as 'breaking bulk', where deliveries of large packages from manufacturers are repacked into smaller parcels suitable for end-users. These operations involve multiple 'picking-and-packing' activities in the warehouse.

Finally, facilitating activities include, for example, financing, risk-taking, and insurance, vital for specific business transactions. Other facilitating functions are required after delivery to support the buyer's use situation. Such activities involve repair, after sales services and preventive up-keep.

2.5.2 Activity chains and activity structures

The numerous activities concerned with the exchange, physical distribution and facilitating functions described above, are connected to each other. These connected activities are identified as activity chains (Ford et al. 2011). Figure 1 depicts a simplified activity chain focusing on the activities of a retailer and a distributor (D) in the empirical study of this thesis.

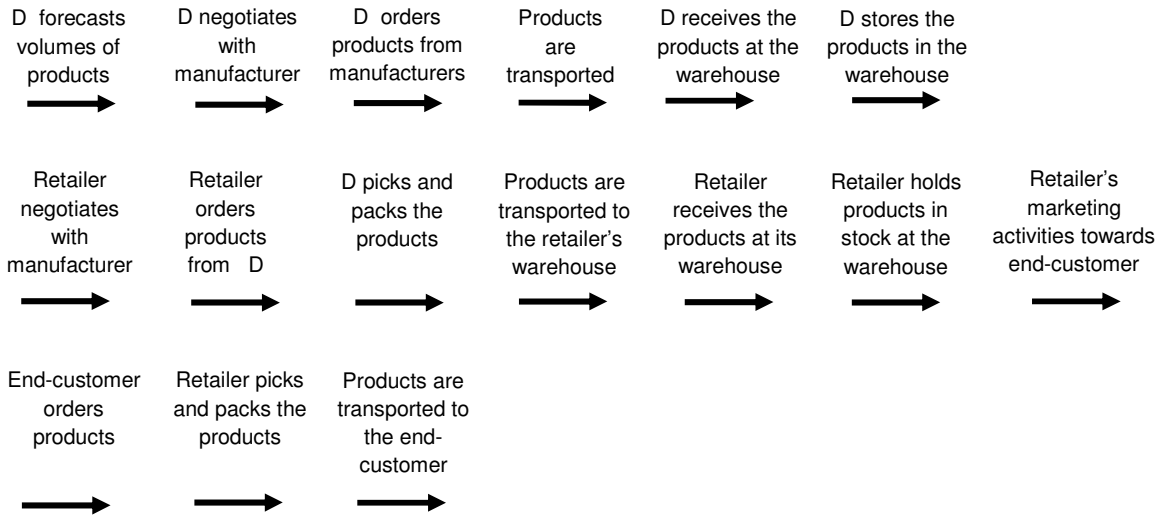

Figure 1 A chain of activities

Some of the activities have to be undertaken in a specific order, while others can be carried out simultaneously. Irrespective of this situation, the complex set of activities needs to be coordinated. Some of the activities are carried out entirely within the boundary of one firm, for example warehousing and materials handling in the warehouse. Other activities, such as negotiation, ordering and transportation, cross firm boundaries. This means that the activities of one firm are connected to activities carried out by other firms.

Furthermore, a specific activity chain is related to other activity chains. For example, distributor D in Figure 1 is involved in activity chains with other retailers and the retailer is involved with other distributors than D. These conditions have a huge impact on the efficiency of individual activity chains. Thus, bridging of the gap between production and consumption involves several firms, and a particular form of division of labour in relation to the huge numbers of activities in an activity chain. In this thesis, the division of labour in terms of the firms involved and the activities carried out in order to bridge the gap between production and consumption, is identified as an activity structure.

The division of labour in an activity structure changes over time through the functional spin-off discussed by Mallen (1967). Such changes, when manufacturers or end-customers are interested in modifying the division of labour in activity structures, provide a middleman with opportunities for reorientation of roles. Since several middlemen can be identified in an activity structure modifications generated by one of these middlemen may open up opportunities for another middleman.

2.5.3 Interdependence among activities

Activities are linked to other activities which result in interdependence. A particular activity is linked to a previous activity since this is where its input originates. Likewise, the previous activity is dependent on the next activity which must deal with its output. Therefore, these

activities are interdependent. Above it was highlighted that activities in distribution take the form of long activity chains which make serial interdependence an important characteristic. Any discussion of supply chains or distribution channels needs to focus on the serial nature of the activities involved.

Serial interdependence emerges when a specific "activity cannot be performed until another one has been completed" (Håkansson et al. 2009, p. 105). This interdependence can exist between activities located in different companies. For example, a typical distribution setup will involve the distribution of manufactured products to the end-customer where activities show a clear serial nature. The products are shipped from the manufacturer to a middleman who stores the products in a warehouse. These products are then packed and delivered to various retailers before being sold to the end-customer. All these activities are serially interdependent, the product needs to be manufactured before it can be shipped and stored, and needs to be packed and delivered to the retailer before it can be sold to the end-customer. Serial interdependence is also present between activities within a single company. Relating to the previous example, products needs to be received and placed in storage before they can be packed and delivered, which again illustrates the serial interdependence between these activities.

Serial interdependence becomes increasingly important to consider in a time when process integration practices, such as just-in-time deliveries or build-to-order manufacturing, are applied (Håkansson et al., 2009). The level of coordination required is increased by these interdependencies. For example, build-to-order strategies mean that an order of a product will require close coordination of activities from the start of manufacturing to final delivery.

Activities characterized by serial interdependence are identified as sequential activities. "Sequential activities are central to the logistics and supply-chain frameworks in the analysis of flow efficiency in activity configurations" (Håkansson et al., 2009). Activities that are sequentially related are not necessarily characterized by strong serial interdependence. However, there are situations where serial interdependencies are strong. For example, in build-to-order arrangements activities are tightly sequential. In such activity chains, "the output of an activity that is tightly sequential has a particular direction in its linkages to other activities" (Håkansson et al. 2009, p. 113). As discussed, strong interdependencies and tightly sequential activities, call for extensive coordination to handle these conditions. Adjustment is a way of handling these interdependencies and to achieve the needed coordination (Håkansson et al. 2009).

2.5.4 Adjustment of activities

When two activities are interdependent there is a need to adjust these activities to each other in order for them to be compatible and function together. Adjustments can take a variety of shapes and forms. One example could be a retailer that is interested in purchasing electronic goods from a large manufacturer. The retailer may be required to adjust its ordering systems to match that of the manufacturer, which leads to adjustments of the ordering activities, and also might need to adjust the volume of products ordered to fit the requirements of large scale manufacturing. Another example is just-in-time deliveries where the activities need to be closely adjusted to each other in order to facilitate the flow of products. There are strong economic reasons for a company to adjust its activities in relation to other activities (Håkansson et al., 2009). In relation to the first example, the reasons are simply to enable purchase from the manufacturer, in the other example, it is a question of improving the efficiency of the supply chain.

In some business relationships, the purchase and corresponding sale of products are preceded by intensive information exchange concerning, for example, requests, quotations, invoices, and delivery notifications. If this information exchange can be automated or simplified through activity adjustments then both actors involved in the relationship can rationalize their processes. The resulting adjustments will link the two actors more closely, and result in opportunities for further adjustments, but will also constrain their ability to use the same activities towards other actors who have made adjustments towards other counterparts. These adjustments are continuous processes over time and lead to increased specialization in the activity pattern (Håkansson et al. 2009). This means that, as activities are adjusted towards each other in order to handle interdependencies, they also become more specialized. These conditions improve the efficiency of the current activity patterns, but also change the nature of the interdependencies. As these interdependencies change they will affect the performance of activities in the future. They may lead to opportunities for linking activities to new activities, but can also lead to constraints and mean that some activities are no longer compatible.

2.5.5 Postponement-speculation

In relation to the discussion about serial interdependence and sequential activities, the concepts of speculation and postponement become important. Speculation "holds that changes in form, and the movement of goods to forward inventories, should be made at the earliest possible time in the marketing flow in order to reduce the costs of the marketing system" (Bucklin, 1965, p. 27). Speculation favours standardization and enables use of large scale production equipment, thereby reducing the cost per unit. Speculation works to reduce the strength of serial interdependence and ultimately reduces the need for coordination. Through inventories of products functioning as buffers between demand and supply, the activities in manufacturing and transportation can be decoupled from the sale of the products, which reduces the need for coordination. For example, buying large quantities once a year and distributing them in small quantities means that the precision of the supply activities is not critical. As the inventories act as buffers, the delivery of products from the supplier does not have a direct impact on the ability to sell and deliver products to the next customer in the chain.

The alternative to speculation is postponement. Postponement was suggested by Alderson (1950) as a way to reduce marketing costs by postponing final completion of the product to the last possible moment. There are risks and uncertainties involved in the differentiation of products. By keeping the product in a standardized form and waiting for orders it is possible to reduce the risk of obsolescence. The risk is reduced by moving the point of differentiation closer to the actual purchase when demand is more predictable (Bucklin, 1965). Ideally, the final changes should be delayed until as close to the time of purchase as possible. Hence, the principle of build-to-order is the ultimate form of postponement, since the entire product is not finalized until the moment of purchase. Just-in-time is an example of backward postponement as identified by Bucklin (1965), it is a way to shift risk to another actor. Bucklin argues that not all actors can shift risk of ownership and in these cases speculation is the alternative.

Depending on which of these two principles is used it will affect how the activity chains are arranged and the level of coordination between companies. A shift from speculation towards postponement results in tightly sequential activities (Håkansson et al., 2009). For example, in just-in-time operations, the delivery of a manufactured product must exactly match that product's use. In this situation a delay of a day, or in some cases even one hour, will have a huge impact on the performance of subsequent activities. In this situation, serial interdependence is tightly sequential, and the need for coordination is huge, to ensure that the products arrive precisely when they are needed.

Speculation and postponement are different means of enhancing distribution efficiency. By postponing differentiation, efficiency can be increased because there is less risk of products becoming obsolete, whereas in speculation efficiency is enhanced by increasing the scale and consequently making better use of the production facilities. This concept of efficiency is elaborated next.

2.5.6 Efficiency in distribution

As discussed above, a way of enhancing efficiency is through standardization which in turn provides economies of scale. Economies of scale are attained through improved resource utilization. Standardized activities can rely on the same resource and, in so doing, the utilization of that resource is improved. Activities that exploit the same resource are identified as similar activities (Håkansson et al., 2009). Increasing the similarity of activities is thus a way to improve efficiency.

Basically, similarity can be achieved when activities make use of the same machines, the same transportation equipment, the same work force and/or the same knowledge. Increasing similarity leads to cost advantages because the cost of investing and using the equipment is spread to a larger set of activities. As similarity is increased, the output becomes more standardized. This means that from activities that are increasingly similar it is problematic to achieve customization. In essence, there is a tradeoff between increased similarity and economies of scale on the one hand, and customization or diversity on the other.

Moreover, increased similarity will constrain the "the level of sequentiality in relation to particular business partners. Too much reliance on standardization in order to reap economies of scale may interfere with efforts to provide customers with tailor-made and synchronized delivery solutions." (Håkansson et al., 2009, p. 118). The notion of sequentiality ties into the concept of diversity and the fact that customers demand variety. This calls for diversity in the processes of a company to satisfy the diverse needs of customers. It is important to consider the balance between similarity and diversity. Ambitions to attain diversity and tight sequentiality will limit the possibilities of also achieving similarity (Håkansson et al., 2009).

2.6 The resource layer

This section deals with resources in distribution and the central features of resources in the industrial network approach. This is followed by a discussion concerning resource combining, the need for adaptations and issues related to economizing on distribution.

2.6.1 Resources in distribution

Ford et al. (2003, p. 134) discuss the resources of middlemen and conclude that "the role of intermediaries in distribution in business markets rests on the resources they provide for connecting different networks of actors". The resources of middlemen are crucial for their ability to perform various roles towards their counterparts. These resources can be separated into physical and organizational resources.

Among physical resources the assortment is central. The assortment is a collection of products that is bought and sold, and essentially acts as the driving force underlying the distribution system and its activities. Physical resources in terms of factories, equipment and machines, are necessary for the manufacture of the products in the assortment. Materials and components are bought and handled by people, transformed into products by machines in a factory, and later sold to a customer. In the process of transportation from a production site to the place where it is used, physical resources in terms of transportation equipment become important. Trucks,

trains, ship or airplanes are necessary for this physical movement. Physical distribution is also dependent on the available infrastructure in terms of roads, railways, ports and airports. There is also a need for resources to store and handle products, such as warehouses and cross-docking terminals. For the sale to end-customers there is a need for physical resources in terms of sales materials and retail stores. To be able to coordinate the flow of products and information, there is most likely also a need to employ some sort of IT-system.

The physical resources have to be organized in some way, and effective handling of logistics resources is an important issue. This organization, in terms of relating physical resources to each other and, thereby, creating interfaces between them, does not evolve on its own; there is always an organizing action that is enabled by organizational resources (Jahre et al., 2006). There are, of course, a multitude of organizational resources pertaining to the context of distribution and some examples can be given as illustration. Purchasing competence and physical handling skills are important organizational resources for the sourcing and subsequent handling of products. In a similar vein, marketing and sales capabilities are required for influencing customers. Moreover, to be able to coordinate the flow of products and information there is a need for people with the skills and knowledge to handle these resources. Furthermore, business relationships are valuable resources because they provide access to the networks of a business partner. For example, producers of goods through relationships with a middleman can gain access to the middleman's network of customers. In turn, these relationships enable a middleman to bring together assortments suitable for its customers. This highlights the importance of relationships. Through relationships in which activities are linked and resources are tied together, actors are able to acquire resources that they are not in ownership control of. In a relationship, the resources necessary for the distribution of a product can be coordinated and handled. Thus, organizational resources in terms of relationships, are the prerequisite for combining resources and making something useful from them.

So, in the bridging of the gap between production and consumption there is a landscape of resources required to perform the various activities needed. The question that arises for the actors involved in distribution arrangements is which of these resources they need to control through ownership and which resources can be accessed through others.

2.6.2 Central features of resources

The main feature of a resource is that its value is dependent on the ways it is combined with other resources. This means that the value of a particular resource differs if it is combined with resource A or with resource B. These conditions are referred to as the heterogeneity of resources (Håkansson et al., 2009). Therefore, the resources of a middleman will be valued differently depending on which actor and, consequently, which resources they are combined with. The value of a middleman's resources is, thus, multifaceted; to some actors, a resource such as a warehouse can be highly significant, whereas to other actors the relationships with suppliers might be the most valued resource. In essence, no resource can be viewed as an isolated asset because its value is derived from how it is combined with other resources.

Altogether, this means that the value of a resource is not given. Its value is determined by the connections to other resources and the services this resource combination may render (Penrose, 1959). A specific resource appears in a huge number of combinations with other resources. Therefore, the features of the resource have to fit in relation to the resources of the various business partners that work in different contexts. This fit is achieved through adaptations between resources. These adaptations modify the features of the resource, thus affecting its value. "Any resource thus evolves in a process where it is developed in relation to other resources. It is produced through the utilization of some resources and it is finally used in

combination with yet other resources. The lifecycle of a resource is thus full of combinations and combining" (Gadde et al., 2010). Based on this resource heterogeneity, the concept of resource combining becomes important.

2.6.3 Resource combining

Resources are continually combined and recombined in distribution networks. These actions are undertaken in order to make the best use of resources in the rationalization and development activities of a firm. Some of these resources are located within the ownership boundary of the firm and make combining an internal affair. However, these internal resources need to be combined with external resources controlled by business partners. Over time, the significant attention to outsourcing has made access to the resources of other firms increasingly important. Through specialization of the internal resource base and reliance on the resources of business partners, firms have been able to improve their performance considerably. When it comes to the effects of outsourcing in distribution, a US study showed that firms that share resources and capabilities in novel ways "can take advantage of profit-making opportunities that they could not exploit on their own" (Narus and Anderson, 1996, p. 112). In this way, external resources have gained in importance and it is even claimed that "in many cases these external resources may be more important to a company than their internal resources" (Gadde et al., 2010, p. 261). This means that a company should never consider its internal resources in isolation, but as part of the larger resource constellation in the network (Håkansson and Snehota, 1995). Thus, a company's performance hinges on the connection between external and internal resources and the ways in which the two are combined.

Another critical issue in resource combining concerns the combining of physical and organizational resources. The combining of physical resources in terms of vehicles, equipment and the logistics infrastructure, is a crucial determinant of distribution performance. Also organizational resources must be combined and recombined. For example, the capabilities and skills of the people and the organizations involved in distribution must be recombined to enable coordination of daily activities, as well as long-term learning in situations when conditions change. However, the most significant type of combining involves the connections and interfaces between physical and organizational resources (Jahre et al., 2006). Effective utilization of the physical resources in distribution arrangements, is dependent entirely on the availability of organizational resources in terms of skills and capabilities in logistics and physical distribution.

2.6.4 Adaptations of resources

In order to combine resources successfully, they have to be adapted to each other. In a relationship between a producer and a buyer of products, the product can be adapted to fit various requirements to reduce costs or increase revenues. These adaptations can be one-sided, implying that one of the parties adapt, to the other, or more or less mutual. Adaptation of physical resources links the processes of the two counterparts, for example production operations and delivery schedules (Jahre et al., 2006). These joint processes connect the facilities of the two actors to fit together better. Also, resources are embedded in a network context where they are continually adapted to other resources in order to improve their joint performance. As discussed above, resources are always used in combinations with other resources and, importantly, one resource may be used in several combinations at the same time. Thus, adapting a resource to perform better in one combination may constrain its ability in another combination.

It is the gradual interaction that makes it possible for companies to learn about their operations, which paves the way for mutual adaptations. These adaptations then allow companies to benefit from performance enhancements. Adaptations are resource intensive and evolve over time, thus changing the content of the relationship (Ford et al., 2003). These adaptations may be technical, logistical or administrative in nature (Jahre et al. 2006). Adapting resources to function better in relation to other resources or managing several different resource combinations are issues that affect efficiency. This efficiency in relation to resources can be discussed with the concept of economizing, which is discussed next.

2.6.5 Economizing on resources

Economizing is closely related to resource combining because "economizing on logistical resources is about careful thought or planning when it comes to the combining and recombining of resources" (Jahre et al., 2006, p. 170). Economizing on resources can be carried out in different ways, and an important determinant of the options available is the type of resource. Jahre et al. (2006) discuss economizing in relation to the four resource entities defined by Håkansson and Waluszewski (2002): products, facilities, business units and business relationships. The following discussion is based on Jahre et al. (2006).

The business unit is a relevant starting point for this discussion because the business unit is in essence the 'economizer'. The business unit settles the business deals and forms the basis for profit and loss accounts. Moreover, the products and the facilities reside within the ownership boundaries of the business unit, which also provides the foundation for the business relationships.

Economizing on facilities can be achieved in two ways. First, economizing on single facilities is based on the principle of economies of scale and focuses on the relationship between cost and output. This type of economizing, therefore, deals with the utilization of the capacity of single facilities, for example, in terms of volumes or fill-up rates to spread the cost over several products, or in relation to machinery set-up times.

The second type of economizing on facilities deals with the coordination of activities that are performed in separate facilities. This type of economizing provides the rationale for the increased attention to supply chain management where the activities carried out in facilities located in a multitude of business actors in different stages of the distribution process need to be coordinated in order to improve flows. By careful coordination of activities the flow of products or information can be improved and, thereby, generate economies of speed. Just-in-time deliveries highlight the importance of economies of speed across company borders. These situations require coordinated activities to improve efficiency through reduced inventory and more efficient handling of products or components.

Economizing on facilities is an important precondition for economizing on products, because the cost of a product is determined largely by the cost of the facilities. If economies of scale are achieved in the production facility or the distribution warehouse, product cost decreases. There is also a reverse relation in that economizing on products strongly affects an actor's ability to economize on facilities. Product characteristics are important determinants of production and handling operations. Increasing standardization enables the use of similar machines or handling equipment and, thus, achieves a higher level of economization on facilities.

In addition to standardization, economizing on products can be achieved in several other ways. On the buying side, consolidation in terms of numbers of product variants that are purchased and the attempts of firms to source complete systems instead of individual components, are

examples of economizing on products. Also, economizing on products can be achieved by changing the product mix by eliminating unprofitable products and introducing new solutions and extending product life cycles.

One of the most important dimensions of economizing is economizing through business relationships. Increasingly, the resources required for the firm's operations are located outside the firm's ownership boundary due to outsourcing and specialization. Thus, economizing on resources is largely dependent on the relationship enabling access to external resources. By connecting in a business relationship the two actors are able to achieve something that neither can achieve in isolation (Håkansson and Snehota, 1995). These joint connections provide fertile ground for economizing. These relationships allow exploitation of the resources of other actors, primarily the other actor in the focal relationship but also actors connected to this business partner.

In order to economize on relationships, the costs of relationship building and maintenance must be balanced against the benefits gained. The benefits from economizing on relationships centre around increasing returns from economizing on facilities, products and other business units. Economizing on relationships requires a certain level of collaboration and integration between the two actors. Jahre et al. (2006) discuss a specific relationship between two actors where parts of the logistics function were transferred to the distributor. This modification enabled that actor, and the dyad, to benefit from the distributor being better positioned to economize on the scale of logistics operations. Thus, through the relationship, opportunities for economizing were identified and then achieved. Thus, a business relationship is an organizational resource and represents potential for further economizing.

2.7 The actor layer

In this section significant aspects of the actor layer are presented. First, the actors in distribution and their central features are discussed. The section continues with issues related to interaction and the need for information exchange, and concludes with some notes on an actor's position in distribution networks.

2.7.1 Actors in distribution

Several actors are involved in the distribution of products. Manufacturers that produce goods, retailers that resell goods, transportation operators that transports goods, logistics and warehouse operators, etc. There is endless variety in how a distribution system can be set up and which types of actors are involved. At its core, is a producing actor and a consuming actor. Between them there may be several middlemen. In some cases there might be a full service intermediary that manages most activities and consequently controls a full host of resources. In other situations, the work may be split among several more specialized actors that are focused on and control more specialized sets of resources, for example, carriers that concentrate on control of transportation means.

A middleman, by definition, is situated in between other actors. More specifically, a middleman actor, as understood in this study, is situated between actors focusing on production and actors focusing on using production output. This actor's objective is to connect these other actors by linking activities and combining resources. The bridging of the gap between the contexts of production and use has been discussed above in terms of the activities carried out and the resources used. However, none of these links or combinations emerge on their own. The actor controls the resources and performs the activities. This leads to consideration of the central features of the actor layer.

2.7.2 Central features in the actor layer

Interaction in business relationships is the most significant feature in the actor layer. As claimed above, the business relationships of an actor are perceived as its most important type of resource. A business relationship is embedded in other relationships, implying that changes in one relationship will impact on other relationships. Hence, the surrounding network imposes changes on the actor at the same time as an actor implementing change will impose change on the surrounding network. No actor can achieve change in isolation; whatever an actor does or tries to accomplish will draw on or affect some other actors directly and many more indirectly. What an actor can achieve is determined by how it relates to other actors (Håkansson et al. 2009).

As discussed above, a series of activities need to be carried out in distribution. Which activities and who should perform them are not givens and are subject to change and modification over time. Some actors might focus on transportation activities which in effect make them carriers. Others might focus on warehousing and transportation which would enable them to take on a role as a third party logistics provider.

The functions in distribution can be arranged amongst the actors in different ways. In chapter 2.1, we referred to the work of Mallen (1973) and his notion of functional spin off. The idea behind functional spin off is transferring activities to those able to conduct them most efficiently. This approach is one of the determinants of the performance of activity structures. The other determinant is coordination among the activities involved in connecting produce and use contexts. Since these demands for coordination stretch across corporate borders they require joint efforts from various actors. It is the interaction and collaboration in business relationships that provide the means for these cooperative efforts.

In this business landscape an actor needs to position itself in relation to the activities to perform and which resources to control. In essence, there are two options available to an actor: to focus on a few functions, or to try to incorporate multiple activities and become a full service intermediary. In either case, there is a need for a middleman actor to relate to other business actors such as manufacturers and suppliers on the one hand, and retailers and other customers on the other. In order to coordinate activities and combine the resources across company borders, there is a need for interaction between the involved parties. This interaction in business relationships is discussed next.

2.7.3 Interaction in Business Relationships

Interaction in business relationships is a prerequisite for resource combining and activity coordination (Håkansson et al., 2009). It is through interaction that resources are combined and activities are coordinated, and interaction is also the foundation for performance improvements. Resource combining and activity coordination are increasingly being performed across company boundaries. Thus, in order to identify opportunities for improvements that span these boundaries there is a need to interact with other actors. Interaction takes place in connected business relationships that evolve over time (Ford et al., 2003). Every actor controls resources and performs activities which connect these actors together in larger groupings. These connections have a social content that is formed through social exchange among the individuals participating in the interaction processes. This means that an actor is continually being formed by the ongoing interaction processes.

Interaction between actors is affected by the contexts of this interaction. Depending on what the two actors are involved in at the time, affects the interaction between them. However, it is also important to consider both past interaction episodes and actors' expectations about future

interaction. How resources have been adapted and how activities have been adjusted in previous interaction episodes will affect the current interaction situation. Some adaptations and adjustments will be enabled by these earlier interactions, while others will be constrained (Håkansson et al., 2009).

The actors' dispositions towards each other are influenced by the interaction atmosphere. The atmosphere in business relationships has changed over the last decades from transactional and arm's-length agreements to collaborative arrangements based on trust and information sharing (Hoyt and Huq, 2000). Gadde (2004) argues that there has been a movement from mainly adversarial towards more cooperative relationships. Trust and commitment are important prerequisites for achieving the benefits of more collaborative relationships and provide a basis for more efficient co-ordination of activities and more effective combining of resources. Although the shift has been towards more collaborative rather than adversarial relationships, conflict remains an issue in business relationships. The level of conflict can be higher in close relationships involving numerous activities and resources, compared to arm's-length relationships that have required fewer adjustments and adaptations (Frazier, 1999).

2.7.4 Information Exchange

Exchange of information is crucial for the coordination of activities and combining of resources. The most frequent medium for information exchange is face-to-face communication which is often informal and takes place as people discuss various day-to-day issues. Face-to-face information exchange is also important for maintaining relationships with external business actors. Discussing issues, possible future plans, joint development opportunities or everyday trivia, works to strengthen the bonds between people working in the relationship and often constitutes the foundation for more formal agreements.

In addition, the exchange of more technical information is also important. This type of exchange often employs IT systems and technologies such as electronic data interchange, email, electronic exchanges, web-based applications (Porterfield, 2008). The type of information exchanged via these means can vary greatly. Important information related to distribution includes production and delivery schedules, product mixes, projected market growth, advance shipping notifications, order fill rates, shipment tracking and vehicle routing. Just-in-time strategies rely on accurate and timely information exchange of sales and production figures on a daily or even hourly basis, in order to avoid dependence on forecasting capabilities (Stank et al., 1996). Firms privy to information about customers' long-term forecast requirements, distribution plans and service requirements are better able to customize their operations and enhance performance (Stank et al., 1996). A typical example would be a customer informing the supplier of an expected surge in demand to allow the supplier to adjust its capacity accordingly.

Moberg et al. (2002) discuss information exchange in supply chains, and separate it into more operational and more strategic information. Operational information includes requisitions and purchasing orders, invoicing, confirmation and credit adjustments. Strategic information deals with performance reviews, inventory inquiries, promotion announcements and various schedules for instance. This type of information serves to improve coordination of inter-firm resources (Porterfield et al., 2010).

The development of IT has improved the conditions for information exchange substantially. Efficient distribution requires updated information regarding forecasts, inventories, lead times and orders, and tracking and tracing. IT improves the performance of flows of information. Moreover, advanced IT provides opportunities for control of physical flows. Accurate and

timely information makes it possible to improve the speed and reliability of the distribution processes (Gadde et al., 2010).

2.7.5 A company's position in the network

This thesis is focused on the roles of middlemen. The role of an actor is determined by its place in the network, that is its position in relation to other actors. In the industrial network approach, the concept of position has been elaborated by several authors. Henders (1992, p. 151) argues that position "is defined as much by the resources and actors that it is related to through activities as those resources within the legal circle drawn around it. It is the position that states that a focal actor is embedded in its context, whatever it might be, or was, or will be". From this perspective, a firm's position in a network is defined by how it is related to its network context. Similarly, Ford et al. (2003) state that "a company's network position consists of its set of relationships and the reputation, rights, limitations on behaviour and obligations which it has acquired through its interactions within those relationships". They also stress the importance of considering what is beyond the formal firm boundary in terms of ownership as well as what is 'within' this boundary. This implies further that a firm can be depicted in terms of its position related to how it connects its own resources and activities to those of other firms, both directly and indirectly. According to Gadde and Ford (2008), analysis of the firm's position in the context of a network of relationships is required in order to understand the restrictions and opportunities facing individual firms.

Hence, position describes how a focal actor is embedded in its network of other connections. Position is crucial because it defines what type of roles that an actor can perform. The role of a middleman is based on a set of activities that fulfils a certain need or provides a specific service to a customer or a supplier. This means that an actor occupies a position in the network and takes on the roles that come with that position (Levinson, 1959). Depending on its position in the resource and activity layers, certain options are open to the actor while others are not. Through its position a middleman can access and combine certain resources but not others. Some activities can be coordinated, some cannot. In essence, position provides the conditions for the interactions with counterparts (Gadde et al., 2010). This interaction in turn becomes the foundation for providing value to other business actors. For an actor in a business network it is important to find a way to relate to others, to find a position from which it can provide value to other business actors. Every actor needs to identify a specific role in the network and in this study the interest lies at the role of middlemen.

2.8 Research Issues

The analysis of the current situation of middlemen revealed that the industrial network approach provides a relevant framing for identifying strategic opportunities. In the analysis of the actor layer it was made clear that the main task of the middleman is assuming a position where it is possible to provide value to its business partners. This value is generated through interaction in the business relationships with counterparts.

The first research task is therefore to examine the features of the actor layer. The main research issue is to analyze what is ongoing in the business relationships with potential partners, in terms of products and services exchanged, and to what extent these offerings are of value to customers and suppliers. As shown above, exchange of information between business partners is crucial for efficient and effective business processes.

A deeper understanding of potential middlemen roles requires investigation of activities and resources, since the position in these layers determines the roles that are attainable. The second research task relates to the activity layer, where several research issues were identified:

- The division of work in the activity structure with a particular focus on activity chains
- The interdependencies in the activity chains and the adjustments among activities
- The similarities of activities and the subsequent consequences for economies of scale

The research tasks in the resource layer includes the following central research issues:

- The combining of physical and organizational resources
- The adaptations among resources to improve their joint performance
- The means of economizing on resources

3 Methodology

This chapter describes the methodology used for this study. The chapter begins by describing the project that this study was part of, the choice of a single-case study approach, and case selection. The chapter continues with a presentation of the phases in the data collection process and a discussion of research quality.

3.1 The HUR project

When I started the PhD process I participated in a new research project funded by Handelns Utvecklingsråd known as the HUR project. The overall objective of the project was to investigate the central features of current distribution arrangements. Based on the conditions of blurred boundaries between actors, there was an interest in analyzing the impact of these conditions on distribution systems. The specific aim of the HUR project was to analyse distribution dynamics with a particular emphasis on the role of middlemen.

The project focused on three separate industries in order to provide a better and more holistic picture of current middlemen and their role in these different contexts. The cases were chosen deliberately for the variation they provided; and the industries are telecoms, personal computer, and construction. The project also involved two senior researchers from the Industrial Marketing Division in Chalmers University of Technology; my study focused on the telecom industry.

3.2 A case study approach

Current distribution arrangements are characterized by complex configurations, requiring a holistic perspective on the research problem. These conditions have particular methodological consequences and favour a case-study approach that "investigates a contemporary phenomenon in its real-life context" (Yin, 1984, p. 25). This approach is recommended for studies of complex systems and events with broad conceptual frameworks (Normann, 1980). Qualitative case studies are frequently used in B2B-research and network studies (Dubois and Araujo, 2004), because they enable analysis of problems in settings with unclear boundaries (Halinen and Törnroos, 2005; Yin, 1984). Network studies present challenges for researchers because of the lack of natural boundaries. In other words, there are no predetermined boundaries with regard to what should be included or when the study should end. However, they also provide opportunities, since the strengths of a case study approach are flexibility and evolution of the case in interaction with the empirical world and the theoretical notions and assumptions of the researcher (Dubois and Araujo, 2007). In addition, "because of the richness of the picture produced by case research, the approach is suitable to handle the complexity of network links among actors and can be used to trace the development of network changes over time" (Easton, 1995, p. 480).

The research objectives of this study seemed to favour a single-case approach for two reasons. First, other studies report that one and the same 'middleman' may fulfil several roles in relation to its business partners. For example, a study of a Norwegian logistics service provider shows that this company applied quite diverse roles in relation to the various domestic car importers (Jensen, 2010). Second, reliance on a focal firm guarantees that variety in the role-set is not explained by diversity in the context of firms. This is the reason for a single-case methodology for this project. In case study and qualitative research, case selection is the most important methodological decision (Dubois and Araujo, 2007).

3.3 Case selection

First, the industry chosen was the telecom industry. The telecom industry and mobile phone distribution were considered suitable based on their being recently emerged sectors. Adjustments to new conditions are easier to undertake than in contexts where long-term historical patterns and industry traditions make change more difficult. The mobile phone industry has shown structures similar to that of traditional distribution with clear-cut boundaries between the actors although this is changing; the consequences of these changes were considered an interesting subject for investigation. Furthermore, the relative youth of the industry increased the possibility of talking to the people involved in the industry from its beginnings. These conditions provide opportunities for a relevant description of the development of the whole industry.

Within this industry setting, a middleman was identified. One of the researchers participating in the HUR project had been in contact with a company involved in the distribution of mobile phones and accessories, which we will call Mobile Inc. Mobile Inc. had contributed to the teaching activities of the Division of Industrial Marketing. Representatives of Mobile Inc. had described the company and how it conducted business, and the project researchers had a good initial understanding of the company's operations and the variety of the ways they worked with different counterparts. The middleman identified as the focal actor, was approached and agreed to participate in the study. The case study centres on the Swedish operations of a global mobile phone distributor called Mobile Inc., and its efforts to identify new business opportunities.

3.4 Systematic combining

The study is firmly rooted in the industrial network approach (Håkansson et al., 2009), with its three layers: activities, resources and actors. This basic framing directed the research process and the data collection from the outset. Within the case study framing, I rely on an approach that follows an abductive logic, implying iteration between theory and empirical reality. The starting point was theoretical and further development was based on studying the empirical reality. As empirical facts were gathered, it was necessary to revisit the literature in order to revise the framework. I started from a general interest in what middlemen do in distribution, and this approach developed and was narrowed down as the study progressed and new information emerged from the interviews. I was interested also in how several roles were handled concurrently, which sparked the need for further data collection. The final focus of the thesis research was not decided at the outset, but rather evolved and developed in the course of the research process.

The research process can be described as systematic combining: a non-linear, path dependent process, highlighting the interplay between the theoretical and empirical worlds. Systematic combining is characterized as "a process where theoretical framework, empirical fieldwork and case analysis evolve simultaneously" (Dubois and Gadde, 2002, p. 554). Accordingly, the findings derived from the empirical world require refinement to the framework, which then requires additional data, and so on: "This stems from the fact that theory cannot be understood without empirical observation and vice versa" (Dubois and Gadde, 2002, p. 555). Also, as Ragin (1992) suggests, having too strong preconceptions and not being open to change during the research process will likely hamper conceptual development. These conditions make the aim of the research, its boundaries, context and horizon, outcomes of the research process rather than things that can be decided in advance (Dubois and Araujo, 2007). Similarly, the other objects to study were not decided from the start, but were outcomes of the ongoing research process as the study progressed. The selection of Mobile Inc.'s business partners is described below in the data collection section.

3.5 Data collection

The data collection for this thesis was performed between 2009-2011, as such the information regarding the empirical case reflects this time period. Initial contact with the focal company was made a few weeks into my PhD studies. The CEO of Mobile Inc. was approached and apprised of the general topic of the study, and asked to participate in the study by providing access to members of the top management group for interviews. The initial contact aimed at learning more about the focal company, how it worked, and how it handled some of its most important counterparts, to get a better understanding of the company and its context and identify areas that might be interesting for further study in the research. Contact persons were identified by the CEO, who also provided more in-depth descriptions of various areas and relationships that might be of interest. The individuals identified included head of product management, sales manager 3PL, sales manager retail, and the former CEO. They were all contacted and interviews were scheduled. The initial round of interviews provided a broad picture of the company and its context. Main counterparts, such as mobile phone manufacturers, operators and retailers with which Mobile Inc. were directly involved, were identified, and also other actors that had an influence on the overall setting, but with which interaction was limited. The focus of the interviews was on Mobile Inc. and its relationships with these counterparts, and changes over time.

At this stage in the study the focus was on Mobile Inc.'s business with operators. The sales manager 3PL supplied contact information for individuals employed by these operators who would be able to provide information. These people were approached and interviews were scheduled. The interviews with top management in the focal company and with representatives of the operators formed the initial case description.

Second round of interviews

The initial round of interviews gave a broad overview and an understanding of several types of distribution setups and ways of working. During this initial round, an important issue for Mobile Inc. arose concerning how to handle such a varied setup internally. The emerging picture was of a middleman involved in multiple setups with a large variety of counterparts. It seemed interesting to investigate how these setups were managed internally. This led to a second round of interviews in order to get a more detailed picture of individual relationships and what goes on internally at Mobile Inc.

A second meeting was arranged with the sales manager 3PL to identify internal contact people in Mobile Inc. They included the key account managers for relationships with the main operators, personnel involved in Mobile Inc.'s day-to-day activities, and Mobile Inc.'s warehouse manager. These people were subsequently contacted and interviewed. In addition to interviewing the warehouse manager I visited the warehouse and observed the processes. This round of interviews revealed relationships with the operator side, and warehouse operations.

Third round of interviews

The data collection strategy adopted in the second round of interviews was repeated for the retail side. The head of retail sales was contacted and interviewed a second time and counterparts were identified for further examination. The discussion focused on which retailers would best demonstrate the diversity of ways of working applied by Mobile Inc. towards their counterparts. The ambition was to reduce the number of potential interviews with retailers that worked in similar ways. The interview identified three retailers and the key account managers

in Mobile Inc. responsible for these relationships. The three key account managers were interviewed to obtain a detailed picture of these relationships.

These interviews yielded contact information for two of the retailers who were subsequently interviewed. The third retailer's perspective was gained during the interview with the key account manager for that relationship since a former employee of the retailer participated in this interview. Other interviews with employees of Mobile Inc. also provided information on the relationship with a manufacturer.

A total of 23 interviews were performed during the study, and a summary of the types of firms and the representatives interviewed is provided in Table 2. The length of the interviews varied from 90 to 120 minutes. The warehouse observation was additional to the interview time.

Company	**Position of respondent**	**Number of interviews**
MobileInc	CEOs	2
	Sales Department	5
	Key Account Managers	5
	Project Management	1
	Logistics	2
	Purchasing	2
Operator ConnectMe	Purchasing and SCM	1
Operator CallU	Purchasing	1
	Supply Chain Development	1
Retailer RetailTel	Purchasing	1
Retailer TeleX	Sales	1
Retailer WebMob	CEO	1
Total Number of interviews		23

Table 2 Interviewed companies, respondents and number of interviews

The main data for this study are from a primary data source (Arbnor and Bjerke, 1994) interviews with company representatives. The warehouse observation in Mobile Inc. provided improved understanding of how products are handled and the types of equipment and other resources used in the various setups with different counterparts. Secondary data were obtained from company presentations, organization charts, magazine articles and company web sites.

The interviews were semi-structured (Bryman and Bell, 2007), based on an interview guide and questions related to specific topics. Interviewees were free to respond in whatever way they felt appropriate. The order of the questions varied according to how the conversation was proceeding. Sometimes interviewees introduced topics not included in the interview guide, some of which were followed up. Thus, there was a plan and a structure to guide the interviews and ensure that the relevant topics were covered, but there was flexibility for both interviewer and interviewee to introduce other subjects and questions.

Several interviews produced diagrams to depict connections with other actors or structures within the companies. Hand written notes were taken at all the interviews, and transcribed immediately afterwards. These transcriptions from hand notes represent 'raw' data; the transcriptions and original notes were stored, to allow consultation of the raw data to cross-check details as the study progressed. In some cases, interviewees were contacted to resolve certain points. Two researchers were involved in the first round of interviews with top management at Mobile Inc.; after the interviews their notes were compared and discussed.

3.6 Research quality

Assessing the quality of case studies requires criteria that fit this type of qualitative research. Lincoln and Guba (1985) discuss the concept of trustworthiness as an important measure of study quality. The degree of trustworthiness is determined according to four criteria: credibility, transferability, dependability and conformability with credibility argued to be the most critical factor in the trustworthiness of a study. These dimensions to determine the quality of case studies have been used by other researchers within the industrial network theory tradition (e.g. Hulthén, 2002; Skarp, 2006; Jensen, 2009). The four trustworthiness criteria are discussed below.

3.6.1 Credibility

As already stated, the criterion of credibility is deemed the most important for the trustworthiness of research. According to Lincoln and Guba (1985), credibility combines seven sub-criteria that enable the reader to evaluate the credibility of the study. These seven sub-criteria are prolonged engagement, persistent observation, triangulation, peer debriefing, negative case analysis, referential adequacy and member checks. I address all these criteria except negative case analysis which refers to the formulation of hypotheses. Since the nature of this study is not to develop and test hypotheses this criterion is not applicable.

The first three criteria deal with the probability that credible findings will emerge during the process. Prolonged engagement addresses the need to invest sufficient time in the empirical setting to ensure that the context is thoroughly understood. I did not spend a long time at the focal company, but the data collection extended over two years involving interviews at the focal company and its counterparts and several interview rounds. This allowed the information gathered in the first interview round to be compared with information obtained in subsequent interview rounds, enabling a gradual deeper and more refined understanding of the context. Moreover, data analysis was successive in line with the data collection, which meant that the study focus evolved as the study progressed. This influenced subsequent interview rounds in terms of who to contact, which issues were interesting to pursue, and what type of information was required. The time component of data collection enabled continual refinement of the research focus which would have been impossible had all the data been collected during one specific period of time. Extended exposure to the context, subjects the researcher to multiple influences that impact on the phenomena and support prolonged engagement.

Persistent observation is related to the depth of the study. The intent is to identify what is most relevant to the problem and to focus on those issues in detail, while sorting out less interesting aspects. An important pitfall mentioned by Lincoln and Guba (1985) is deciding the research focus too soon. I have tried to outline the research process for this thesis and the course of the project as data were collected. All the interview information was saved in its raw form of the transcripts. As the study progressed I was able to refer back to these transcripts and redirect the case by including or excluding information as the relevancy changed. Thus, the study process involved sorting of information and the focusing on the most interesting aspects. This resulted in some relationships and information being left out. In this final version of the project only information considered relevant for the reader's understanding is included.

Triangulation is a frequent technique to cross-check the findings from one source of data with those from other sources in order to increase the credibility of the information presented (Yin, 1984). Multiple sources for information were used in this study to cross-check findings. Interviews with the focal actor and counterparts served to provide a picture tempered by the viewpoints on both sides of the relationships. Data collection was ongoing over a long period

of time, and involved follow-up interviews. Subsequent interviews dealt with similar issues in order to obtain a more accurate understanding of the focal company and its relationships. When similar information is gathered at different times, this reinforces confidence in its accuracy. Triangulation among multiple sources of information is aimed also at revealing aspects unknown to the researcher to help to direct the study towards more interesting and rewarding research issues. This reasoning is crucial for the research approach of systematic combining (Dubois and Gadde, 2002). The different interviews, company presentations, organization charts, magazine articles and company web sites, all served as pieces in the puzzle related to the case and in the context of a middleman's role towards the firm's counterparts.

Peer debriefing is the fourth sub-criterion that provides an external check on the study. Throughout the research process I was involved in several settings that provided this external check. I presented developing findings at several international conferences including the Nordic Workshop on Inter-organizational Research, the IMP conference and the Nordic Wholesale and Retail Conference. The study was discussed repeatedly in internal seminars in the Division of Industrial Marketing at Chalmers. In all these settings the study so far was discussed, and received suggestions and comments regarding future steps. Thus, there has been debriefing and review by several people on several different occasions.

Referential adequacy refers to maintaining collected data 'raw' to allow other researchers to draw their own conclusions. To some extent, all the data in a thesis such as this have been subject to some sort of interpretation in that some information has been included, and some not in the interests of parsimony. There is a need to select among the data gathered in order to provide a clear case description devoid of confusing pieces of information (Dubois and Gadde, 2002). Also, case study data are included to highlight aspects of interest for the research phenomena and, as such, all written cases are subject to the author's subjectivity. I purposely limit use of theoretical concepts in the empirical case description and have tried to provide a true portrayal of the source material which will allow other researchers to make their own interpretations.

The last credibility criterion is member checks, which refers to the opportunity for informants to check data. No attempt was made to arrive at an 'objective truth', but at times during the research process data were discussed with informants. During successive interviews, information gained from a previous interview was reintroduced and, thus, checked. Checks were sometimes performed by the same informant in different interviews; sometimes information checks involved other informants. In some cases, clarification was obtained via e-mail. In the interviews where two researchers participated, information was cross-checked.

3.6.2 Transferability, Dependability and Confirmability

Transferability refers to transferring the findings from one study to other contexts, and Lincoln and Guba (1985) discuss the importance of providing 'thick' description in order to enable the reader to decide whether or not transfer is possible. I believe I have provided a 'thick description'. The present study is of a middleman distributing mobile phones, but I argue that the framework could be extended to the study of middlemen in other settings. The framework is not specific to a particular industry, but is aimed at exploring the middleman role regardless of context. I believe also that the findings of this study would be transferrable to other actors and other contexts. Middlemen in other contexts than the mobile phone industry should be able to work according to the four generic roles outlined in this thesis. However, in the case of implementation there are differences. The empirical setting for the present research was selected because it represented an evolving distribution set-up devoid of the features typical of

long established traditions and historical patterns. In mature contexts, these conditions are likely to make it more difficult for middlemen to adapt to changing environmental conditions.

Dependability relates to examining the process of inquiry (Lincoln and Guba, 1985). I have tried to meet this criterion by describing as detailed a research process as possible. I have described the data collection process, how interviewees were selected and how data were gathered, which it is hoped will provide the reader with sufficient understanding of the nature of the process.

The final criterion is *confirmability,* which deals with evaluation of the research product, the finished study, and the extent to which the findings, the concepts used and the data are consistent. I hope I have provided a coherent study and adequate matching between theory and empirical reality. An important aspect of this coherence is the relationship between analysis of the case and the framework developed. It is crucial that application of these concepts to the empirical material makes the conclusions relevant.

Finally, I hope that by outlining the research process and discussing these criteria as suggested by Lincoln and Guba (1985) the reader is confident about the trustworthiness of this study, which, in combination with the description of the research methodology should allow the assessment of the study quality.

4 Case study: A Middleman in Mobile Phone Distribution

This chapter presents the data. It provides a description of the focal company followed by a short review of the industry to provide an understanding of the study context. It discusses and analyses some of the relationships and variety of roles between the focal company and some of its counterparts.

4.1 Mobile Inc., the Focal Company

The middleman Mobile Inc. is the focal actor in this study. Mobile Inc. is a distributor in global telecom, focusing on mobile phones and related products such as mobile broadband and SIM cards. Mobile Inc. operates in more than 35 countries and has customers in over 75 countries, totalling more than 25,000 worldwide and including major manufacturers and operators. The focus here is on the Swedish part of Mobile Inc.'s business; the description Mobile Inc. refers in this thesis to the Swedish division of the global company.

The company started in the mid 1990s as a classic 'box-mover' and has grown since. In 2010, when this study was performed, the company handled and distributed over 1 million units and had a turnover of more than SEK 3 billion. Mobile Inc. is one among three major distributors in the Swedish telecom market; the other two we call Distributor1 and Distributor2.

Mobile Inc. is organized into four business areas. The first focuses on consumer channels and handles relationships with retailers. The second focuses on operators and provides logistical services to these actors. The third is targeted towards purchasing and relationships with manufacturers. The fourth is responsible for electronic prepaid refill cards. Mobile Inc. has contacts and arrangements with the major manufacturers of mobile phones. It is important for the company – and any distributor in the business - to be able to provide all the major brands of mobile phones to its customers. Mobile Inc. also has agreements with several retail chains as well as with operators. It sees itself as the 'spider' in the web connecting manufacturers, operators, retailers and end-customers.

Mobile Inc. distributes mobile phones and accessories, and offers value added services. The assortment of mobile phones covers the major brands and the accessories to their mobile phones. The most popular of these are headphones and screen protectors. Examples of value adding services are kitting services, for example, bundling a mobile phone with SIM cards and information brochures. Mobile Inc. also provides product customization, which includes preloading a mobile phone with an 'image', that is a predetermined set of programs and settings, mostly for business customers. It also offers vendor managed inventory solutions and SWAP services. A SWAP service is an extended offer towards certain companies. If a phone is damaged, the user will receive a replacement product within 24 hours and will send the broken product to Mobile Inc. to deal with it. Related to this, Mobile Inc. offers trade-in and recycling services and device reworks.

In order to handle all these services, Mobile Inc. operates a large warehouse located centrally in Sweden. The warehouse is roughly 20,000 square metres in area, and the company handles around 10,000 orders per day in addition to 1,500 returns. Returns may be faulty products in need of repair or scrapping, but may be due to customers changing their minds. During 2011, the company received and packed more than 5 million order lines and roughly 85 % of the deliveries were sent directly to the end-customer. Mobile Inc. does not support a fleet of transportation vehicles, but relies on external actors. This is a brief introduction to the company and will be expanded in the description of the relationships with various counterparts.

4.2 The mobile phone industry

This brief description of the mobile phone industry provides context to Mobile Inc.'s operations. Mobile phone use includes three components. First, there is the hand set - the mobile phone – which is the physical product that is manufactured and delivered to the end user. Second, the subscription that entitles the mobile phone user to access the network in order to communicate with other users. Third, a SIM-card which ties the phone and its functions to a specific user and that user's subscription to enable charging for traffic to the relevant user. These three components steer the activities and the actors performing them.

Several different actors are involved in the mobile phone industry. Figure 2 shows their relationships and highlights the area of analysis in this study. The study focuses on the middleman, the distributor of mobile phones, and how that actor relates to counterparts in the form of operators, retailers and manufacturers. The actors of most direct relevance to this thesis are discussed below.

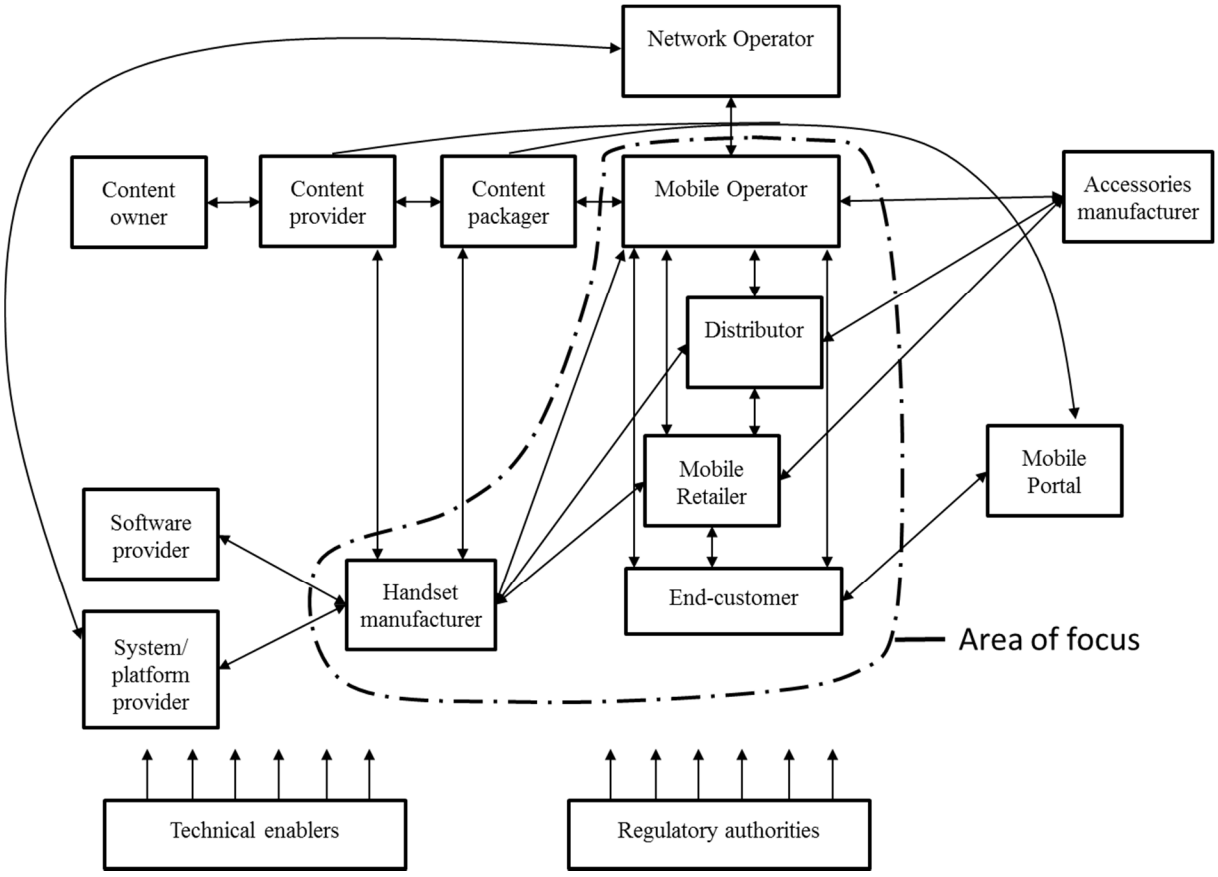

Figure 2 Mobile communications network, inspired by Nyström (2008)

The end-customer is the final destination for products and subscriptions. This research does not directly analyse end-customers, although they influence the various relationships described. In this setting, end-customers can be both consumers and business customers, where employees' mobile phone use and subscriptions are part of their work. The type of end-customer affects how products are sold and by whom.

Network operators control their own backbone networks. This used to be a core competence for operators, but deregulation has resulted in ownership of a network no longer being a requirement to act as an operator. This leads to a second classification of operators: MVNO (Mobile Virtual Network Operator) which lease capacity from other network operators. In this study the term mobile operator or operator is used to refer to operators that offer mobile telephony and services regardless of whether or not they own the infrastructure. The operators' subscriptions provide access to the network of communications masts and fixed-lines in order to enable communication. The operators control ability to make mobile phone calls and send text messages, thus, they are significant actors in the network through provision of network access. However, increasingly they are supplying the hardware. For an end-customer to acquire and use a mobile phone only interaction with an operator is required. Most operators offer subsidized mobile phones in combination with a subscription that ties the end-customer to that operator for a certain period of time – usually between 12 and 24 months. Because the price of the phone is subsidized, this method is often the cheapest for end-customers wanting to purchase a new phone, resulting in a coupling of the mobile phone hardware to the subscription to the particular operator's network.

The operators act as the interface with end-customers for the duration of a subscription. They provide general support and advice on various customer issues. They are attractive counterparts for the phone manufacturers because they promote the manufacturers' products. Manufacturers can also be fairly certain that products they sell to operators will end up in the hands of end-customers because of the operators' ability to combine subsidies and subscription deals. These conditions are beneficial because they provide product exposure on the market. Although the manufacturer receives the same price, there is added value from the product being chosen by end-customers which increases the likelihood of future sales.

Mobile retailers offer various types of mobile phones and are frequently connected to the major operators. They are able to offer different combinations of mobile phones and subscriptions. Some mobile operators have their own retail chains. An operator's own stores only offer that particular operator's subscriptions while retailers are able to offer a range of options. Some retailers focus on supplying business customers with mobile phone solutions, others are more active in the consumer market. Their types of product portfolios also differ; some specialize in mobile phones and accessories, others sell mobile phones within a much larger portfolio of consumer electronics.

Product manufacturers are significant actors in the industry. The end-customer is primarily interested in the phone and discussions over subscriptions and operators mainly occur after a phone has been chosen. Production of mobile phones is costly which is why there are only a few major manufacturers which rely on large scale production to keep down costs. Manufacturers are only interested in selling to actors who can attain sufficient volumes. There is a discrepancy between the production of mobile phones which involves large volume, and individual sales of the phones to end-customers which usually involve one item. Most retailers are not big enough to purchase directly from the manufacturers; instead they purchase phones and accessories from distributors that can aggregate the demand of several actors to achieve the required volumes. Other important actors are the manufacturers of accessories. End-customers are interested not only in purchasing a particular mobile phone but also various accessories such as headphones, screen protectors and phone covers which help to individualize their phones.

Nyström's (2008) classification also includes actors such as content providers, content owners and content packagers, mobile portals, system and platform providers, software companies, technical enablers and regulators. However, these actors are beyond the scope of this study.

4.3 The network around Mobile Inc.

With the discussion regarding the industry and the type of actors in mind, this section provides an overview of the firms in the network around Mobile Inc. that has been studied. The network features a variety of organizational setups related to information exchange, physical flows and transfer of ownership, see Figure 3.

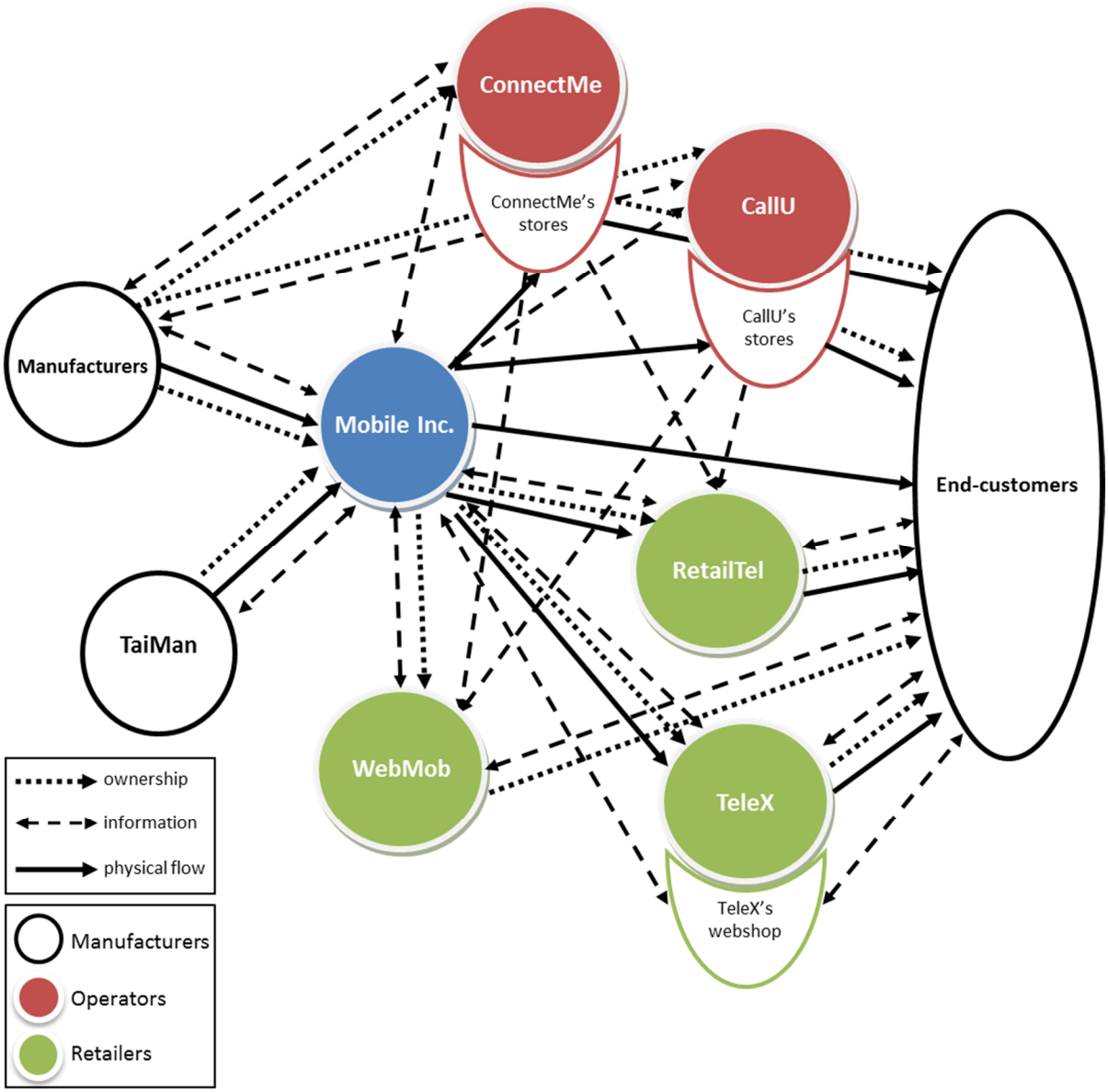

Figure 3 The network around the focal actor Mobile Inc.

End-customers can purchase mobile phones and accessories from retailers' or operators' stores. 'Subscriptions' are delivered and handled by the operators, but end-customers can sign up to them at operators' and retailers' stores. Consequently, the operators are connected to the retailers. The three retailers and the two operators were mentioned by names in Chapter 3. The manufacturer Taiman was not interviewed, but information on the firm was obtained from interviews with several employees of Mobile Inc. Figure 3 shows that Mobile Inc. is involved in most physical flows in the network. However, transport is outsourced to external logistics service providers.

Mobile Inc. was established as a traditional distributor and fulfils the role of assortment provider. It buys products in large volume from the manufacturers, stores them in its warehouse and then ships them to retailers. This continues to be an important business for Mobile Inc., although over time other arrangements have emerged due to changing conditions in the context of the mobile phone industry. These arrangements were developed in the relationships with firms depicted in Figure 3 and differ from the assortment provider role in various ways. The features of what is ongoing in these relationships enabled the identification of four complementary roles. Table 3 presents the relationships and roles described in succeeding sections of this chapter.

Section	Relationship with	Role
4.4	RetailTel, retailer	Assortment provider
4.5	ConnectMe, operator	Logistics service provider
4.6	TeleX, retailer	Purchasing coordinator
4.7	WebMob, retailer	End-customer interface
4.8	TaiMan, manufacturer	Marketing organizer

Table 3 Overview of relationships and roles

Each empirical section begins with a discussion of the important features of the firm involved in the relationship, followed by a description of significant aspects of the relationship with Mobile Inc. Then the business arrangements with the respective counterpart are scrutinized relative to the research issues derived in Chapter 2:

- the activity structure;
- interdependencies and adjustments;
- similarity and scale;
- resource combining;
- adaptation and economizing.

Each section concludes with some general comments on the role of Mobile Inc. in the specific relationship. The relationship with CallU is described in Section 4.9 and illustrates all five roles.

4.4 RetailTel and the role as assortment provider

RetailTel is a Swedish retailer of home electronics which focuses on Internet sales. It has some physical shops which are called ‘warehouse shops’, which allow customers to search a web page to choose a product, and then find it in the warehouse and purchase it.

RetailTel is divided into five business areas corresponding to the types of products sold: Computers, AudioVideo, ‘White goods’, Photography, and Telecom. Total revenue of the Telecom business area is between SEK400-500 million per year, making it RetailTel’s third largest business area, after Computers and AudioVideo. RetailTel purchases directly from manufacturers in all areas except Telecom where it buys from distributors. It prefers not to take the risk of holding large stocks of mobile phones because of the short product life cycle. New models are launched frequently, which makes the risk of obsolescence greater for this business area. RetailTel’s Telecom products are mostly sold online, while other products are more often sold ‘over the counter’ in their warehouse shops.

RetailTel has contacts with several manufacturers of mobile phones, with which it has regular (quarterly) discussions about business deals. Price reduction are usually negotiated quarterly making it necessary to re-negotiate business terms. The negotiations also concern discussions

of upcoming campaigns, which mobile phones to focus on, bonus deals, prices and other financial conditions. On the basis of the number of mobile phones RetailTel predicts it will be able to sell, the manufacturer and RetailTel agree on a level of 'marketing money' that the manufacturer will provide, and the price that RetailTel will pay to the distributor for the products. There are two ways that RetailTel can secure the agreed price level. One option is that the manufacturer informs the distributor that this will be the price for RetailTel and the manufacturer pays the distributor if there is a discrepancy between the distributor's purchasing price and the sale price for RetailTel. Another option is that RetailTel purchases from a distributor and the manufacturer compensates RetailTel.

RetailTel saw value in using distributors for the telecom area because of their better ability to handle risk because they can forward unsold products to other actors. Because of the high risks involved in mobile phones it was important for RetailTel to have the option of returning unsold products.

RetailTel is involved with three distributors. It also uses Distributor1 and Distributor2 in addition to using Mobile Inc. In most situations RetailTel relies on Distributor1 since this firm's prices tend to be lower. However, for volume purchases and campaigns, Distributor2 and Mobile Inc. are more attractive. Distributor1 is a relatively small actor and is not able to handle the large volumes that the other two distributors can manage during the launch of a sales campaign.

4.4.1 The relationship with Mobile Inc.

The relationship between Mobile Inc. and RetailTel takes the form of a traditional distribution set up where Mobile Inc. sources products from manufacturers, stores them in the warehouse and then sells them to RetailTel which then offers them to end-customers. RetailTel maintains contacts with operators in order to supply subscriptions to customers. Figure 4 illustrates this relationship and the other actors involved.

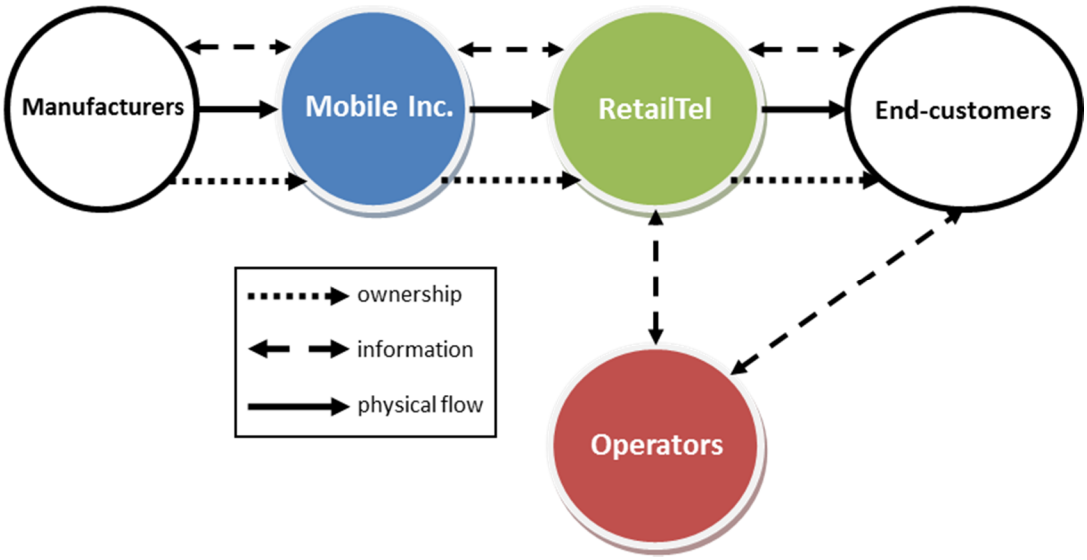

Figure 4 The relationship between RetailTel and Mobile Inc. in its network context

Orders are placed through EDI, Email and fax. Mobile Inc. types orders manually. All deliveries from Mobile Inc. are sent to RetailTel's central warehouse. RetailTel is responsible for their delivery to its warehouse shops. It is crucial for RetailTel that products arrive on time at the

various warehouse shops and controls its own transportation because it considers it too risky to leave this responsibility to another actor. Sometimes it needs to redistribute products among warehouse shops; being in control of transportation allows better control over these operations. It uses a logistics service provider for transportation. This firm's systems work in accordance with RetailTel's needs. Based on its warehouse management system, RetailTel feels in control of products and deliveries at a level of detail that would be impossible with the involvement of an external actor. It is crucial for RetailTel always to have mobile phones available since 90% of its customers know which products they want to buy and if they are not in stock, they will go to another retailer's website and order them there.

Both parties are involved in negotiations with manufacturers regarding price levels and campaigns. They also negotiate with each other regarding contract terms and special deals. In these discussions forecasts of coming demand are central. Based on these forecasts, RetailTel reserves a certain volume for later delivery. According to Mobile Inc., RetailTel's forecasts are mostly accurate and they generally buy what they have reserved. This accuracy can be vital in certain situations:

"For new products it is very important that there is a commitment to buy the products that they reserve because new products are uncertain. If we're talking about well-known and established products, a commitment isn't necessary because if that customer doesn't buy it we can sell it to another channel instead" (Key Account Manager, Mobile Inc.).

RetailTel is responsible for handling return logistics. End-customers with problems contact customer service. There are three possible outcomes. The end-customer can send the faulty product directly to a repair centre. The product can be sent to RetailTel's own technical service to determine whether or not it can be repaired, and whether to scrap or send it on to a repair centre. A second option is that the end-customer takes the product into one of the warehouse shops for staff to evaluate the next step. If the product is replaced under warranty, which means RetailTel should be compensated by the manufacturer, the reimbursement is sent to RetailTel via the distributor.

4.4.2 The activity structure

Figure 5 depicts the activity structure in the relationship between Mobile Inc. and RetailTel. It shows the central activities and the actors involved. The number on each activity indicates the order of their performance – from forecasting (1) conducted by Mobile Inc., to transport to end-customer (12).

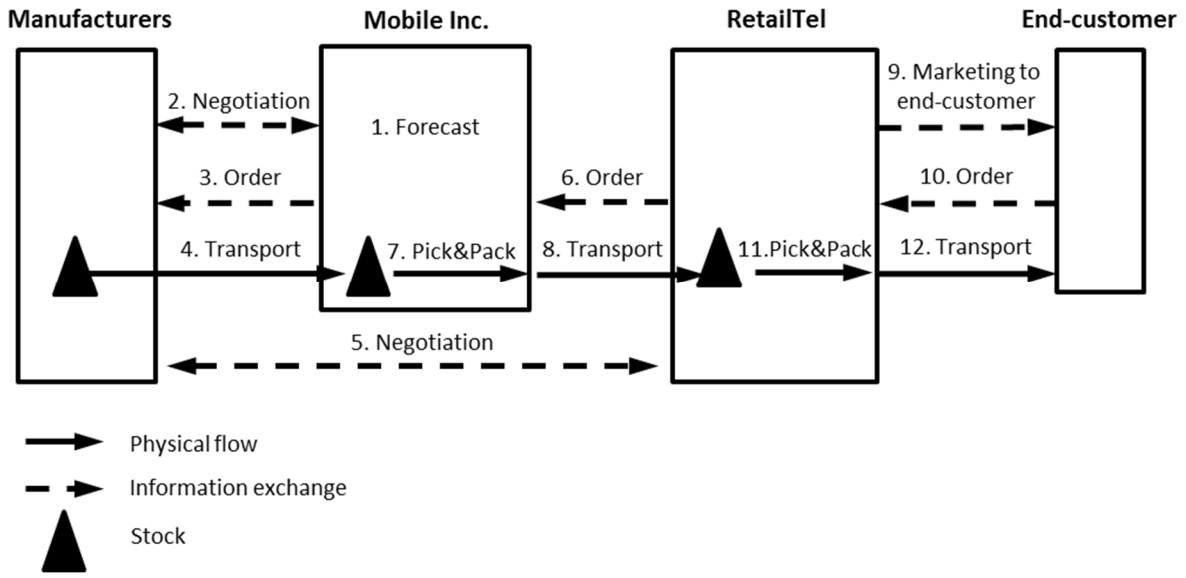

Figure 5 The activity structure and division of work in the relationship between RetailTel and Mobile Inc.

Mobile Inc. forecasts (1), negotiates (2) and orders (3) products from the manufacturers. These products are then transported (4) and subsequently received and stored in Mobile Inc.'s warehouse. RetailTel negotiates (5) with manufacturers concerning price levels and other financial conditions. Actual orders (6) are sent to Mobile Inc. who picks and packs (7) the products before they are transported (8) to RetailTel's warehouse shops. For outbound transportation RetailTel relies on independent logistics service providers. RetailTel receives the products and stores them before they are sold to the end-customers. RetailTel markets (9) its products continuously via its website for customers. When an end-customer orders (10) products online, RetailTel needs to perform pick and pack activities (11) before the products can be transported (12) to the end-customer.

Several activities are conducted by both Mobile Inc. and RetailTel. The main difference is that the volumes and scope handled by Mobile Inc. is larger. RetailTel holds inventories in relation to its customer base; Mobile Inc.'s customer base includes several retailers and operators. Marketing and sales is RetailTel's responsibility to its end-customers primarily through its web site.

4.4.3 Interdependencies and adjustments

There are few strong interdependencies in the serially related activities undertaken in the relationship between RetailTel and Mobile Inc. The two companies are decoupled from each other through large inventories that buffer Mobile Inc.'s purchasing from their sales to RetailTel. Mobile Inc. forecasts estimated sales to retailers such as RetailTel, based on discussions between the companies. Since these discussions are not related to specific contracts for volumes, they serve to inform, but not dictate Mobile Inc.'s purchasing. Accordingly, Mobile Inc.'s purchases from manufacturers are based on speculation of coming sales.

Mobile Inc. sources products from several manufacturers, which results in multiple inflows of products to the warehouse. These inflows must be coordinated with each other and with warehousing activities. The inventory in the warehouse consists of standardized products, which can be used interchangeably for multiple customers. The activities in the chain are sequential since they need to be performed in a specified order. Since the destination of the products purchased by Mobile Inc. is not determined, they are not tightly sequential.

Mobile Inc.'s sales of products to retailers follows a similar pattern to product ordering, implying that there are multiple outbound flows of products to retailers and operators. Outbound transportation activities need to be coordinated with pick and packing activities in the warehouse.

Orders from RetailTel are sent through standard means and handled manually by Mobile Inc. Only few adjustments are made between the ordering activity and the picking and packing activity. This means that also in this part of the activity chain, interdependencies are low. RetailTel is not bound to buy from Mobile Inc. and wants to keep alternatives open, from which business partner to purchase.

RetailTel's purchases from Mobile Inc. are based on speculation, which has implications for the level of coordination required. Owing to the decoupling in the activity chain through buffering inventories, reliance on speculation and the standardized assortment, the need for coordination is relatively low.

4.4.4 Similarity and scale

In this activity chain there are few adjustments made between the activities that Mobile Inc. are carrying out in relation to RetailTel and the activities undertaken in relation to other customers. RetailTel thus exploits the standardized set-up of Mobile Inc. with the result that the similarities in the operations of Mobile Inc. with regard to RetailTel are substantial. Such similarities occur in purchasing, inbound transportation, warehousing, materials handling, ordering handling processes and picking and packing activities. The distribution arrangement involving the two parties benefits from considerable economies of scale.

RetailTel's operations also feature standardization and similarity. The purchasing arrangements for mobile phones are the same as for other products. RetailTel has ambitions to deal with the other two distributors in the same way, in order to enhance similarity. As discussed above, Mobile Inc. is better suited than Distributor1 to exploiting potential economies of scale related to campaigns. Because of the limited adjustments in relation to distributors, RetailTel retains freedom to switch between them, depending on actual business conditions.

The relationship between Mobile Inc. and RetailTel achieves large economies of scale. On the other hand, the standardized set-up and arm's-length conditions do not allow for benefits associated with adjusted and customized operations.

4.4.5 Resource Combining

The most significant resources in the relationship between Mobile Inc. and RetailTel are illustrated in Table 4.

Physical Resources	Organizational Resources
Mobile Inc.'s assortment	Mobile Inc.'s purchasing capability
Mobile Inc.'s warehouse	Mobile Inc.'s physical handling capability
RetailTel's warehouse/stores	RetailTel's marketing and sales capability
	Mobile Inc.'s business relationships

Table 4 Significant resources in the relationship between RetailTel and Mobile Inc.

The product assortment that Mobile Inc. makes available to RetailTel is an important resource in this relationship. RetailTel demands a certain product range that is different from the assortment offered by each manufacturer. A manufacturer offers an assortment based on what it produces, and on a scale that suits its production logic. Mobile Inc. can bridge the gap between

this production logic and the user logic of RetailTel by creating a product assortment that is suited to RetailTel.

In creating this assortment, Mobile Inc.'s warehouse is a significant resource. Mobile phones are fast moving products and retailers and operators are reluctant to stock large quantities, while the consumer expects products to be immediately available. These contradictory demands require products to be stored elsewhere, which provides business opportunities for a distributor such as Mobile Inc. The warehouse and the equipment for materials handling and logistics capabilities related to warehousing and transportation are a crucial means for Mobile Inc.'s value creation. Similarly, the warehouses/stores of RetailTel are important resources for satisfying customer needs for availability.

Mobile Inc.'s purchasing capability is important in several respects. It has to be able to source the right products in the right quantities to create appropriate assortments for its customers. Product knowledge, forecasting skills and negotiation abilities are important for this capability. The bargaining position in these negotiations is affected by the scale of the operations which is significant for the prices Mobile Inc. can offer RetailTel. The physical handling capabilities of Mobile Inc. are essential, concerning both warehousing operations and inbound/outbound logistics in order to exploit potential economies of scale. RetailTel's marketing and sales capabilities are important for their own operations and also for the contribution they make to the scale of Mobile Inc.'s operations.

Mobile Inc.'s business relationships are important resources because they make Mobile Inc. an attractive counterpart. The primary reason for RetailTel's choosing to work with Mobile Inc. is the latter's ability to handle the risk of obsolescence associated with fast moving products such as mobile phones. RetailTel prefers to work with distributors because it can transfer the risks to these firms. Mobile Inc. and other distributors are able to handle the risk because of their established structures of relationships with a diversity of retailers and other outlets. The relationship between Mobile Inc. and RetailTel is characterized by a low involvement approach since activity and resource interdependencies are limited.

4.4.6 Adaptations and economizing

In the relationship between Mobile Inc. and RetailTel there are few adaptations as illustrated above. In terms of economizing, Mobile Inc.'s warehousing facility is significant. The operations related to this facility provide efficient connections between the large scale produce context of manufacturers and the features of use contexts of retailers, operators and consumers. However, exploitation of the economic potential of this facility is strongly dependent on the organizational resources of Mobile Inc., such as purchasing competence and physical handling capabilities.

The relationship with Mobile Inc. is crucial for RetailTel's economizing. RetailTel's product range needs to cover quantities that its warehouse shops can manage in inventories, but also to provide sufficient variety to display all relevant products to the consumer. Here Mobile Inc.'s capabilities come into play in the combining of these two contexts which are referred to as the resource's context of use and context of production (Håkansson et al., 2009). Were RetailTel to purchase mobile phones from manufacturers as they do for other products, they would be forced to keep a large stock of different brands. This would involve considerable risk for RetailTel. Instead they economize on the relationship with Mobile Inc. by exploiting their capabilities in providing assortments. In Mobile Inc.'s warehouse, a large shipment from one manufacturer is broken up into smaller lots and combined with other types of products from other manufacturers to create assortments of goods that suit RetailTel's current demand. This

allows RetailTel to rely on small volumes of products in assortments that fit their customers' needs. RetailTel exploits Mobile Inc.'s established set of relationships with manufacturers for sourcing products, and the set of relationships with other customers. In this way Mobile Inc. is able to secure large-volume business and achieve scale in its operations. These conditions allow it to handle the risks associated with holding title to products. The main resource for Mobile Inc. in this respect is the business relationships with other potential customers. Unsold products can be redistributed to other channels. So, Mobile Inc.'s established network of relationships allows it to reduce the risks for its customers. Moreover, Mobile Inc.'s relationships with suppliers, operators and retailers are important incentives for other actors choosing to work with them.

4.4.7 Mobile Inc.'s role and the challenges toward this traditional role

The role of Mobile Inc. in relation to RetailTel is the traditional one of middleman, as an *assortment provider*. The relationship with RetailTel illustrates the way that most of Mobile Inc.'s business has been conducted since its establishment. Mobile Inc. originally was mainly a 'box-moving' type set up, connecting manufacturers with retailers and operators. Warehousing and risk-taking are significant activities in these operations. Mobile Inc. was involved in 'breaking-bulk' in order to provide RetailTel with appropriate qualities and quantities of mobile phones on the basis of the large scale and variety of offerings available from manufacturers. This role as an *assortment provider* is still a significant part of Mobile Inc.'s total business.

The *assortment provider* role is an extensive undertaking, comprising many activities and utilizing a huge set of resources. These services provide Mobile Inc.'s customers with several benefits, although they are also quite costly. As described above, RetailTel primarily relies on Distributor1 and uses Mobile Inc. only for large volumes. This is because Distributor1 represent a lower cost, and Mobile Inc.'s arrangement is perceived as more complex and more costly, as expressed by a representative of RetailTel:

"[Mobile Inc.] have added on additional functions and layers to distribution. They have product managers, sales representatives and they put together marketing campaigns, things that are not core activities for distributors. We are already negotiating with the manufacturers and deciding which products to focus on. We don't need our distributor doing this as well".

RetailTel perceives that it is paying for services and activities it does not need. It would like a dedicated middleman as a partner, to create assortments, and to buy and deliver products at the price RetailTel has agreed with manufacturers. Other activities, such as negotiating, designing marketing campaigns and deciding what products to focus on are performed by RetailTel themselves. It seems that some of Mobile Inc,'s customers, would prefer a more specialized middleman.

Another challenge to the traditional role of Mobile Inc. and other middlemen emerged when mobile communication expanded and operators grew and became more influential. This change made it more interesting for manufacturers to sell directly to operators, rather than to middlemen like Mobile Inc. By selling to operators, manufacturers were able to increase the exposure of their offerings to end-customers. In addition, the substantial profit-margins in the early days of the mobile phone industry were successively reduced as the market penetration increased. The CEO of Mobile Inc. concluded that the company: *"could not compete with this"*.

The changes in the business environment caused a shake-out of firms. The surviving actors, including Mobile Inc., expanded to achieve large-scale sales to compensate for shrinking

margins. Mobile Inc.'s CEO claimed that *"it is important to reach a critical mass in order to be of interest to manufacturers"*.

Mobile Inc. concluded that the traditional 'box-moving' arrangement no longer represented sufficient business. Instead it needed to identify other value-generating functions to complement assortment-providing. As a result, Mobile Inc. decided to approach operators in order to detect new business opportunities.

4.5 ConnectMe and the role as logistics service provider

ConnectMe is a large global operator owned by a large global group. ConnectMe is organized into regional divisions. Its Danish, and Swedish divisions are the subject of this study. As the names imply, ConnectMe Denmark and ConnectMe Sweden are part of the regional Scandinavian ConnectMe division, which is part of the global company. In 2010, ConnectMe Denmark operated some 40 own stores, 25 of which were shops in shops, and also sold through two independent retail chains. Shops in shops are stores physically located within another retail store. These shops in shops are not allowed to sell accessories because this would compete with the retailer's assortment of accessories. Shops in shops were chosen as a less expensive alternative for ConnectMe Denmark than working directly with retailers. Retailers handle many brands and products, with the result that they do not promote a particular operator's products. Therefore, the benefits of relying on retailers shift over time:

"Using retailers is good when you are starting up and you can use their market knowledge, logistics resources and distribution structure to reach many customers. It is good for getting wide coverage in the country. However, it becomes less attractive once you start up your own distribution." (Supply chain manager, ConnectMe Denmark)

The scale that ConnectMe has achieved in its total business motivated it to purchase products directly from the manufacturers. Its global group connections are useful in negotiations with manufacturers. When ConnectMe Denmark makes a sales forecast, it is sent to the Scandinavian group which aggregates all the forecasts from the Scandinavian markets and submits this to the global group which aggregates all national forecasts into a total group forecast. This is the forecast demand presented to manufacturers. This activity allows the ConnectMe Group to achieve scale advantages in purchasing operations which would be impossible for ConnectMe Denmark operating alone.

In some cases customers demand products that are not available in ConnectMe's assortment. If there is sufficient demand, ConnectMe sources these products from a local distributor. Otherwise it buys directly from manufacturers. However, ConnectMe Denmark does not have the resources to handle the physical movement of goods, which leads to the next section discussing ConnectMe's relationship with Mobile Inc..

4.5.1 The relationship with Mobile Inc.

In November 2006, ConnectMe Denmark signed a new contract with Mobile Inc. Denmark, which assigned to the latter responsibility for physical distribution to customers, while ConnectMe Denmark invoiced customers. This arrangement continued until the beginning of 2009 when ConnectMe Denmark requested lower prices, which Mobile Inc. Denmark was unable or unwilling to meet. As a result, ConnectMe Denmark sent out a request for quotations (RFQ) to identify another actor that could satisfy its demands.

At the time, Mobile Inc. Sweden was focused on traditional middleman tasks, that is sourcing, holding title to and physically distributing products. However, they had previously considered

a logistics handling solution as a result of an RFQ issued by ConnectMe Sweden which was seeking a new partner for physical handling. At the time, ConnectMe Sweden was involved with another company that was handling its logistics and ultimately decided to continue to work with them. ConnectMe Denmark's RFQ was initially addressed to this same logistics company. When Mobile Inc. saw the request, it decided to submit a proposal based on the work done previously on providing such a service. Its tender was accepted by ConnectMe Denmark and in November 2009 a new partnership was signed with Mobile Inc. Sweden. The arrangement involves Mobile Inc. Sweden being responsible for the physical handling of the whole assortment of ConnectMe Denmark. The operator handles the administration of the orders from customers and sends Mobile Inc. order lines for what to pack. Figure 6 provides an overview of the relationship between Mobile Inc. and ConnectMe Denmark in its network context.

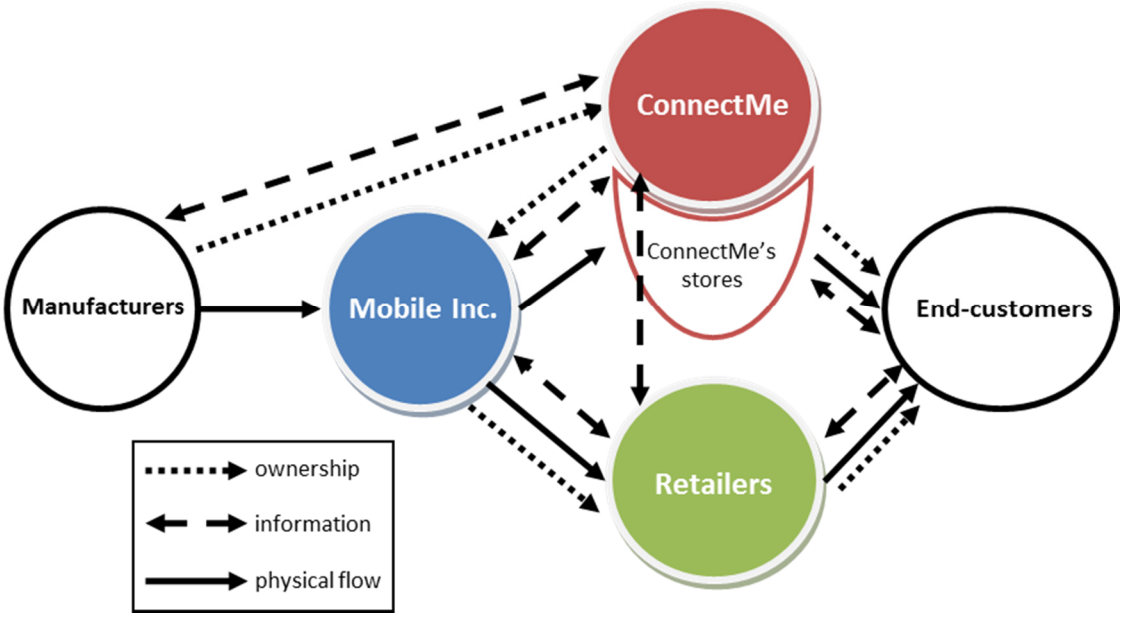

Figure 6 The relationship between ConnectMe and Mobile Inc. in its network context

ConnectMe Denmark purchases all its mobile phones directly from manufacturers, represented by the dotted arrow indicating ownership changes. Physical flow of products is towards Mobile Inc., which means that all products are delivered from the manufacturers to Mobile Inc.'s warehouse. These products are stored and later delivered directly to ConnectMe Denmark's stores for purchase by end-customers. The two-way arrow between Mobile Inc. and ConnectMe Denmark represents mutual information exchange, for example order placement, product information and return flow registration, to facilitate product transfer and storage. End customers can also purchase their mobile phones and subscriptions to ConnectMe, from a retailer. In this case, the retailer is in contact with ConnectMe in order to access the subscriptions. These retailers, in their turn, source products from Mobile Inc. Products that are specific to ConnectMe Denmark are purchased by Mobile Inc. and then sold to retailers.

In this relationship, Mobile Inc. handles products owned by ConnectMe Denmark. However, actual operations – storage of products, packing and shipping – are similar to the box-moving set up described above. The warehouse has separate sections for products owned by ConnectMe Denmark and all the other operators to avoid confusion or mixing of products. The order pack stations are also separated and have designated operators. If necessary, these designations can be changed with relative ease.

Since 2010, Mobile Inc. has been responsible also for handling ConnectMe Sweden's products. Incorporating ConnectMe Sweden into the system more or less involved mimicking the setup that had been established for ConnectMe Denmark. In the remainder of this section, ConnectMe will refer to both ConnectMe Denmark and ConnectMe Sweden unless there is a need to identify them.

In situations when Mobile Inc. purchases products from ConnectMe in order to sell to retailers, the products must be moved from ConnectMe's section in the warehouse to the section containing Mobile Inc.'s own products. This involves minor logistics handling within the warehouse, a change of ownership and a money transfer. However, whether the products are packed based on an order line sent from ConnectMe, or as a purchase order from a retailer, the packing procedure is the same. The warehouse staff simply go to either ConnectMe's section or Mobile Inc.'s section to pick the products and then the packing and shipping activities are the same.

Mobile Inc. and ConnectMe are in daily contact regarding operational issues, and there are separate monthly meetings between Mobile Inc. and ConnectMe Sweden and ConnectMe Denmark. During these meetings, the invoices for Mobile Inc.'s logistics services are discussed in relation to specifications, costs and activities. Other issues discussed include the service level agreements and the quality of the logistics services provided. The parties also discuss forecasts, for instance, whether there are upcoming campaigns or events that might affect the volumes of products to be handled. These discussions are very important since ConnectMe holds periodic 'power weeks' when it reduces the prices of certain products. This has a dramatic effect on the volumes that Mobile Inc. is required to handle and necessitates allocation of additional resources. If Mobile Inc. is prepared, it can take on temporary staff for those periods.

Quarterly business reviews are conducted where representatives of ConnectMe Sweden, ConnectMe Denmark and Mobile Inc. meet to discuss and exchange opinions about what might be likely to happen in the next 12 months, and whether major improvement projects are required.

The first step in ConnectMe's ordering process is that the product manager decides about order quantity. This order quantity is placed in the hands of ConnectMe's purchasers. On the basis of seasonal variation, purchasers partition the orders for delivery over the year depending on when the products will be needed, and then send the orders to the manufacturers. At this point, the processes of ConnectMe Denmark and ConnectMe Sweden differ. In the case of ConnectMe Sweden, these orders are sent also to Mobile Inc. and its purchase coordinator. They contain information on incoming goods to Mobile Inc.'s warehouse, and the purchase coordinator's job is to take this information and create purchase orders in Mobile Inc.'s administrative system. If the products are completely new, the purchase coordinator needs to create a new item in the system. Existence of the purchase order in the system is required to enable the warehouse to receive the incoming shipment. When the products are delivered and registered by the warehouse personnel, there must be a corresponding purchase order in the system which gives information on their owner and where they should be stored in the warehouse.

In the case of ConnectMe Denmark, the process starts with products being delivered to Mobile Inc.'s warehouse. The warehouse personnel then notify the purchase coordinator that goods belonging to ConnectMe Denmark have arrived. Mobile Inc. send the information supplied by the warehouse personnel to ConnectMe Denmark in order to verify that the shipment is correct in terms of products and quantities. When this is confirmed, Mobile Inc. creates the purchase order in the system and the warehouse personnel receive and place the goods in the warehouse.

For return logistics, Danish customers send their products to a POB (pick up box) in Denmark, from where they are transported to Mobile Inc.'s warehouse in Sweden. ConnectMe requires that all products that are returned and sent to Mobile Inc. are checked and evaluated as whether they can be resold, or must be disposed of. If a product is returned unopened, the product is placed in the warehouse and resold. If it has been opened and used, but is not damaged it can be used as a display product in one of ConnectMe's stores.

Mobile Inc. has a section of the warehouse devoted to returned products which allows Mobile Inc. to screen, clean and restore them. A separate station is used for all products related to ConnectMe. This station has computers that connect to ConnectMe's information system. ConnectMe requires Mobile Inc. to access ConnectMe's information system to register returns as they are handled. This requires designated personnel trained to use ConnectMe's system, which reduces mobility of personnel between stations devoted to different operators.

4.5.2 The activity structure

Figure 7 illustrates the activity structure in this relationship and the division of work among the participating actors.

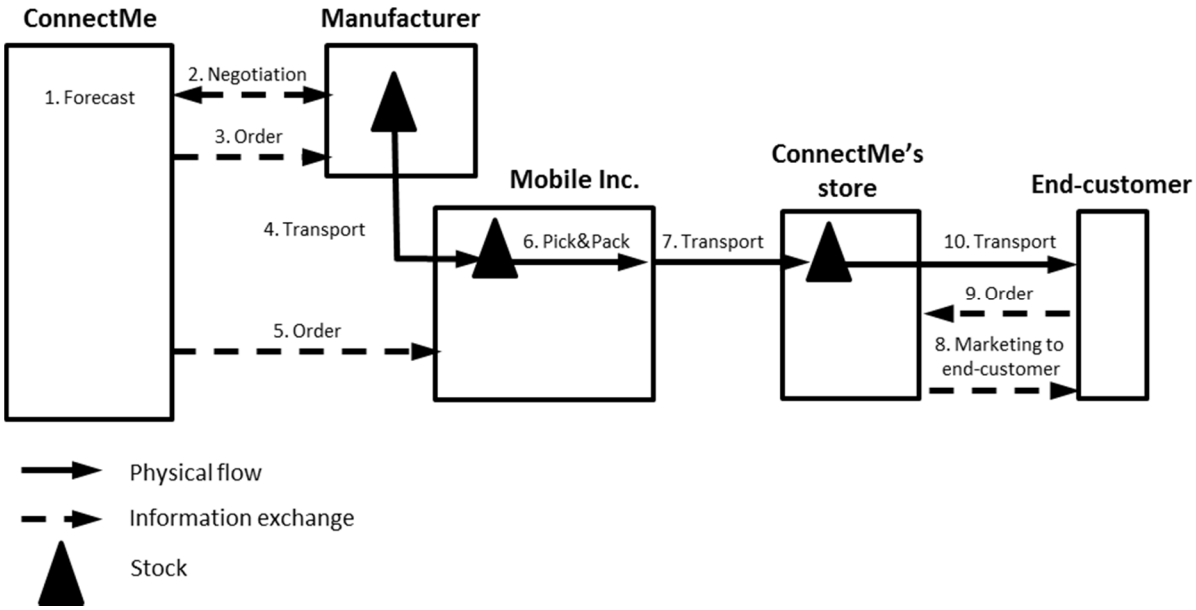

Figure 7 The activity structure and division of work in the relationship between ConnectMe and Mobile Inc.

In this relationship, ConnectMe forecasts (1), negotiates (2) and orders (3) products from the manufacturers. These products are then transported (4), by an external transportation provider, to the warehouse of Mobile Inc. where the products are placed in inventory. Then, on the basis of sales and forecasts from the individual stores, ConnectMe sends order lines (5) of what to pack and ship to which destination to Mobile Inc. Mobile Inc. picks and packs (6) the products which are then transported (7) by an external logistics provider to ConnectMe's retail stores. The products are received by the stores and placed in inventory before being marketed (8) and sold to customers (9-10).

The activities involved in physical handling of products are heavily influenced by and interdependent with the activities related to ordering and sales. In this relationship, Mobile Inc. specializes in a limited set of activities, and ConnectMe is responsible for ordering activities and contact with manufacturers. Consequently, there is a need for close coordination between the two actors. Mobile Inc. is responsible for the delivery of the products but they don't perform

the transportation activities. These operations are undertaken by external transportation companies, which illustrates another aspect of specialization in this activity chain that also requires coordination across corporate borders.

Activity structures of this type require joint coordination among the actors involved. The cooperative atmosphere in the relationship between ConnectMe and Mobile Inc. is illustrated by the following quote from Mobile Inc.'s key account manager:

"ConnectMe perceives Mobile Inc not as a supplier, but a partner, and for us the simple truth is that if ConnectMe do well, we do well".

4.5.3 Interdependencies and adjustments

In the activity structure involving Mobile Inc. and ConnectMe the ordering of products is undertaken by ConnectMe while products are delivered to Mobile Inc.'s warehouse. Ordering is based on forecasts of future demand, and products are stored in the warehouse, awaiting demand. These conditions imply that this process is based on speculation.

The activities involved in the purchasing of products from manufacturers and delivery to the stores are serially related. Inbound operations at Mobile Inc.'s warehouse are interdependent with ConnectMe's ordering activities since inbound receiving is designated specifically to products to which ConnectMe holds title. These activities are not only sequential, but also tightly sequential because the ordering activity requires a specific inbound receiving activity which acknowledges ownership of ConnectMe and handles the products accordingly. Inbound receiving requires adjustment to the ordering activity because the warehouse must be aware of incoming orders for capacity and administrative reasons. Ordering activity is adjusted because inbound receiving must be coordinated with physical handling within the warehouse. These conditions require extensive coordination because, at the point of ordering, the customer for the products is already determined. The subsequent activities performed by Mobile Inc. are all focused on handling and delivery of products to their specific customers. The information on orders is sent to Mobile Inc. and a corresponding purchase order is created and delivered to those responsible for inbound receiving. This information determines specific warehousing activities and where products are stored in ConnectMe's designated section of the warehouse. The subsequent sales order for the products requires specific pick and pack activities in the designated section.

The retailers' ordering of products is based on speculation. Depending on the forecasts provided by retail stores, ConnectMe orders products to be delivered from Mobile Inc. The retail stores owned by ConnectMe can order products from Mobile Inc. in a continuous way. Such orders are based on marketing and sales activities planned and executed by the stores. Increased sales result in increased need to resupply the store's stock of products. The ordering performed by ConnectMe in these cases concerns small volumes of products in various assortments to meet the needs of the particular retail store. The products are picked and packed by Mobile Inc. before delivery by the external transportation company. The products are received by the retail store and placed in inventory, awaiting sale to customers. This set up is characterized by serially related activities that are decoupled or buffered by inventories. Ordering is based on speculation, and the inventories function as buffers against fluctuating demand. These arrangements result in a low level of interdependencies among activities and consequently reduces need for adjustments. This standardized way of working is adequate because the decoupling reduces the need for advanced integration in order to achieve short lead times between placement and fulfilment of orders.

Concerning returns handling, these activities at ConnectMe and the inbound receiving of returns at Mobile Inc. are tightly sequential. When a return is identified as a 'ConnectMe product' it is sent to the section that handles returns for ConnectMe. There are specific adjustments made in the processes of Mobile Inc. to accommodate ConnectMe's requirement that all returns should be registered in ConnectMe's own information system. This is a deviation from the standardized way of handling return activities, and calls for adjustments specifically towards ConnectMe and adaptations to resources, which is discussed below.

An important feature of this relationship is the connections between the activities undertaken at the boundaries of the two organizations. In this set up purchases and sales of products are carried out by ConnectMe, while inbound receiving, warehousing and outbound shipping are carried out by Mobile Inc. These activities need to be coordinated as discussed above. The coordination of physical handling activities and purchasing and sales activities is contingent on effective exchange of information between the two actors. To prepare the warehouse and its staff for incoming deliveries, information concerning these deliveries is required. To pack and ship an order for a specific location to meet a desired delivery time, the order information must be accurate and received on time. Correspondingly, for the operator to be able to convey delivery details to its customer, this information needs to be transferred by Mobile Inc. Information about products in stock and lead times are important for the operator to inform potential customers.

4.5.4 Similarity and scale

The ordering activities of ConnectMe, and the inbound receiving activities of Mobile Inc., are tightly sequential. Tightly sequential activities usually constrain similarity, because activities have to be adjusted to handle the specific demands. Instead of standardized activities there is a need for adjustments of activities that therefore tends to be unique and specialized. However, there are still some opportunities to exploit similarities because the warehousing operations related to ConnectMe are quite similar to the activities related to other operators in similar set ups. They are also fairly similar to the activities carried out within Mobile Inc.'s ownership. Products are received and identified and later transported to the warehouse and stored, but destinations (both final and in the warehouse) are different. In the computer system, ownership and identity are distinct, but physical handling is the same. Thus, similarity can be achieved even though the activities are tightly sequential.

ConnectMe has outsourced the physical handling of products to Mobile Inc. which is able to work on a larger scale. The volumes that ConnectMe can generate in negotiations with manufacturers are based on a global setup. However, the physical flow of goods in Scandinavia - the business related to the Danish and Swedish markets - is a tiny part of this volume. The volumes in this flow are quite small in the aggregate flow of products that Mobile Inc. handles. The addition of ConnectMe's products increases the scale of Mobile Inc.'s operations. ConnectMe's outsourcing of the physical handling of products has further increased the similarity in Mobile Inc.'s activities allowing both actors to benefit from the greater economies of scale. The situation is slightly different for handling of returned products and specific adjustments have been made to accommodate to the requirement that Mobile Inc. must work in ConnectMe's information system. These specific activities have led to reduced similarity in this activity.

As already mentioned, ownership of products is separated from their physical flows allowing Mobile Inc. to specialize in activities related to physical handling, improving efficiency and performance. ConnectMe specializes in negotiation, purchasing and sales. This allows improvement in its operations without investment in resources for handling physical flows. However, it requires close coordination among the actors, since ordering is performed by

ConnectMe and inbound receiving and subsequent handling of the products are undertaken by Mobile Inc..

4.5.5 Resource combining

This relationship involves several interesting physical and organizational resources – see Table 5.

Physical Resources	Organizational Resources
ConnectMe's assortment	Mobile Inc.'s physical handling capability
Mobile Inc.'s warehouse	Mobile Inc.'s IT competence
Mobile Inc.'s IT-system	ConnectMe's IT competence
ConnectMe's IT-system	ConnectMe's purchasing capability
	ConnectMe's marketing and sales capability
	Business relationship

Table 5 Significant resources in the relationship between ConnectMe and Mobile Inc.

The assortment of products is a significant physical resource for several reasons. First, the products, their handling and their transfer to the final user are the basis of this relationship. Second, ownership of the assortment is particular to this relationship and impacts on other resources. Because these products are owned by ConnectMe throughout the process, adaptations to IT resources and the warehouse are required. These conditions determine the importance of the organizational resources. In particular, ConnectMe's purchasing capabilities and business relationship are significant because of the separation of ownership of the assortments from actual physical flow.

Physical resources, such as the warehouse and the warehouse equipment, are important assets in this relationship. The warehouse is a prerequisite for the physical handling of products. The shelf space, flatbed trucks, facility and loading docks are necessary for receiving, storing and shipping of ConnectMe's products. The IT systems and digital couplings are important physical resources for the coordination of the purchasing activities performed by ConnectMe, and the inbound receiving and warehousing activities of Mobile Inc.

Organizational resources are significant also for the control and coordination of physical resources. Mobile Inc.'s knowledge related to the physical handling of products is important since it provides the foundation for activity specialization in both Mobile Inc. and ConnectMe. The IT competencies of Mobile Inc. and ConnectMe are exploited to establish the information couplings required. Since purchasing and marketing activities are the responsibility of ConnectMe rather than Mobile Inc., the former's capabilities for performing these activities are significant resources in this setup. In addition, the business relationship between ConnectMe and Mobile Inc. is a crucial organizational resource for both actors. This relationship enables coordinated ordering and handling of products, and the necessary adaptations to IT-resources.

4.5.6 Adaptations and economizing

The combining of internal and external resources is central in this relationship. The division of work means that each actor is reliant on the resources of the other. Mobile Inc. relies on ConnectMe's purchasing capabilities for utilizing warehouse capacity; ConnectMe relies on the physical handling capabilities of Mobile Inc. to ensure that the products it purchases end up in its retail stores. These conditions affect the coordination of activities and the resource adaptations required.

Owing to the similarity in the structure of activities for physical handling of incoming products destined for ConnectMe, Mobile Inc. can use the same physical handling resources in the warehouse used for traditional 'box-moving'. Also, ordering of products, performed by ConnectMe, is based on speculation logic in which inventories function as buffers between the supply of products and the sale of products to the end consumer. Without these buffers, the retailers' sales activities would require advanced IT integration with Mobile Inc. in order for products to be delivered to end-customers within a reasonable time. In the current arrangement, the speculative nature of ConnectMe's ordering alleviates this issue and reduces the need for resource adaptations in relation to these operations. On the other hand, the above analysis indicates low levels of similarity in handling product returns. In this case, Mobile Inc.'s resources have been adapted to the requirements of ConnectMe. Mobile Inc. has a returns handling station devoted only to ConnectMe's product returns, and equipped with computers that can access ConnectMe's information system to allow these returns to be logged. Personnel have been trained in ConnectMe's requirements, implying that this organizational resource has been adapted specifically towards ConnectMe.

The IT-resources of the two actors require mutual adaptation. The level of adaptation differs between ConnectMe Sweden and ConnectMe Denmark. In the Mobile Inc.-ConnectMe Sweden arrangement, IT-resources were adapted to each other allowing orders placed by ConnectMe to be sent directly to Mobile Inc. to ensure that when products arrive at the warehouse, Mobile Inc. is prepared for inbound operations. In the ConnectMe Denmark case, products arrive with no advance notice and then Mobile Inc. reacts. The coordination in the case of ConnectMe Sweden is more efficient than that in the case of ConnectMe Denmark. The adaptations in the former case are mostly on the side of Mobile Inc. to make the IT systems function together. The IT resources are adapted to each operator, resulting in multiple resource interfaces between Mobile Inc.'s IT-system and those of its operators. The resource adaptations affect the potential to exploit the same resource in relation to other firms, but they also enable more efficient exchange processes in the focal relationship.

There are two types of economizing in this relationship. Mobile Inc. economizes on its own resources at the same time as it is enabling ConnectMe to do the same. Mobile Inc. economizes on its facilities since it is able to increase the scale of its operations by using the same structure and resources for handling a new setting. They are also economizing on their know-how in physical handling. ConnectMe is exploiting the resources of Mobile Inc. by relying on the business relationship between the two, which allows it to transfer products from the point of purchase to the final consumer by exploiting the capabilities and facilities of Mobile Inc. By exploiting the resources of another actor, ConnectMe is able to economize on its resources. It is able to focus attention and financial means on sales and marketing rather than physical handling resources. It is able to increase economies of scale in these operations by exploiting the resources of Mobile Inc.

A form of economizing on facilities that is prominent in this relationship is the economies of scale attained in the warehouse. Inclusion of all ConnectMe's products, increases the volume of products in the warehouse. Greater fill rates in the warehouse, improves utilization of the capacity. The capabilities and resources of Mobile Inc. that are used in the handling of ConnectMe's products remain the same, since existing resources can be used to handle the added volume of products. Thus, the warehouse is better exploited through the handling of ConnectMe's products. Also, since the products are owned by ConnectMe, Mobile Inc. achieves this without incurring any greater risk of ownership.

The resources for ordering and inbound receiving are located at different actors. The IT couplings between Mobile Inc. and ConnectMe enable the flow of information and, consequently, the combining of internal and external resources in which the business relationship is central. Without this relationship, ConnectMe would have to invest resources and handle the physical flows of goods, Mobile Inc. would need to find other ways to achieve the same volume of goods to handle in the warehouse. The relationship allows both actors to achieve scale that would be impossible if they worked in isolation.

4.5.7 Mobile Inc. and the logistics service provider role

The setup involving Mobile Inc. and ConnectMe illustrates some of the advantages that can be attained through specialization. The division of work allows both actors to focus on a limited set of activities and achieve increasing scale in their operations and better exploitation of their resources. Like RetailTel, ConnectMe wanted another setup than the traditional *assortment provider* role. ConnectMe's global orientation allows it to achieve greater scale in purchasing activities than would be possible for Mobile Inc. This means that ConnectMe prefers to keep sourcing and negotiation with suppliers in house.

However, when it comes to physical handling, the operations of ConnectMe are local, which means that they work on smaller scale than Mobile Inc. which is involved in business transactions with several operators and retailers. Rather than investing in resources for physical handling, ConnectMe prefers to rely on access to Mobile Inc.'s resources which include vehicles and warehouses, as well organizational resources such as logistic capabilities and business relationships with transportation firms. Through the relationship with ConnectMe, Mobile Inc. improves its utilization of these resources which enhances similarities and economies of scale. Thus, Mobile Inc. serves the role of a *logistics service provider* in relation to ConnectMe.

4.6 TeleX and the role as purchasing coordinator

TeleX is a Swedish retailer of telecommunication and IT products. It focuses mainly on the business segment and sells communications hardware and solutions to business customers. The company is a franchise organization, including several "independent" retail stores, which display the TeleX logo. A number of independent retailers combined to form the organization TeleX in the mid-1990s. Later, TeleX AB acquired many of the independent retail stores, resulting in a mix of centrally controlled and several independent TeleX stores. Although these stores are not directly controlled by TeleX it tries to persuade them to adhere to a central plan. There are some 50 TeleX stores throughout Sweden.

4.6.1 The Relationship with Mobile Inc.

There is a historical connection between TeleX and Mobile Inc. based on an arrangement forged in 2000. Previously, TeleX was a loosely coupled organization; it approached Mobile Inc. in the search to improve its performance. It already had a relationship with Mobile Inc., but it involved low level of procurement and limited involvement. TeleX regularly purchased about 20% of its product volumes from Mobile Inc., the remainder being sourced fairly randomly from several actors. TeleX wanted a new setup with Mobile Inc. because it saw potential in coordinating its purchases. Mobile Inc. saw an opportunity of increasing volume by handling the majority of TeleX's purchases. To achieve this objective Mobile Inc. and TeleX jointly developed an IT-solution in the form of a new web service. This web service enables direct communication between TeleX and Mobile Inc.'s warehouse. A web-shop was established which allows TeleX to place orders. This arrangement has substantially improved the coordination of TeleX's purchases. The purchasing of its various stores is aggregated and

sourced from Mobile Inc. The web service was important for these coordination efforts in the new partnering agreement.

Through this arrangement, Mobile Inc. is TeleX's first choice for the purchase of mobile phones. However, it is not possible to source everything from Mobile Inc. or any other single actor. For example, a popular product might be sold out, or a less popular product not stocked, and in these cases TeleX uses other sources. Alternatively, Mobile Inc. might have decided to exclude a certain product from its assortment. For example, TeleX sells teleconferencing hardware, products that Mobile Inc. does not supply; TeleX buys this assortment from another distributor. However, between 80% and 85% of TeleX's purchases are sourced from Mobile Inc.

Representatives of Mobile Inc. describe the relationship with TeleX as a long-term partnership in which it has developed services and offerings jointly, for example, the services TeleX 24h and Smart service, provided for TeleX by Mobile Inc.

The mix of ownership in TeleX's business setup means that Mobile Inc. is involved in two tasks. The first relates to arranging deals with TeleX on a central level; the second relates to trying to sell those arrangements to all the individual stores. The deals made with TeleX on the central level apply to all the stores under TeleX AB's ownership, while the independent stores are free to exploit them or not. Therefore, the arrangements need to be 'marketed' to these retailers by Mobile Inc. and TeleX. Thus, on the one hand, Mobile Inc. works with TeleX on a central level to discuss and agree various campaigns, business terms and so forth. On the other hand, it works with independent retail stores to pass on information and also 'sell' these terms.

In relation to the contacts with independent retail stores it was important that Mobile Inc. and TeleX work together. Mobile Inc. has dedicated account managers and sales people who work with these independent stores - relaying information and discussing deals, in order to build a relationship. These account managers understand the various stores' needs which are related back to Mobile Inc. These account managers are important channels of information agreed centrally. The need for these arrangements was described by one of Mobile Inc.'s key account managers as follows:

"It is difficult to make an arrangement that fits all. The relationship to the independent stores is important to get them to head in the same direction as Mobile Inc. and TeleX centrally"

To add to this complexity, manufacturers' representatives also interact with both the retail stores and the central organization in TeleX, demonstrating products, offering discounts, and so on. For Mobile Inc. it is important to be synchronized with the manufacturers to assure that information on campaigns and products is consistent.

TeleX and Mobile Inc. are connected via an IT-coupling. TeleX places its orders in Mobile Inc.'s web shop. For large quantities, orders might be via e-mail. In addition to regular in-store sales, the retail stores can connect to Mobile Inc. which offers services to these stores on payment of a subscription to its web shop. The name and colour of the IT interface is adapted to reflect the identity of the specific retail store. Thus, the web shop provides end customers with direct access to Mobile Inc.'s warehouse, although it appears to be the retail store's warehouse. The web shop enables TeleX to display information from Mobile Inc.'s warehouse to its customers. When customers log on, they see information on products and stock levels in Mobile Inc.'s system.

TeleX also sells products targeted at the business market, which need to be included in its web shop offerings. The independent retailers are able to display only those parts of Mobile Inc.'s assortment that are relevant for them. Not all the products in Mobile Inc.'s warehouse will be relevant to the retailer and are not displayed in its web shop. When an order is placed it must be confirmed by TeleX before being transferred to Mobile Inc., which then packs and ships. For large customers, Mobile Inc. can deliver directly to the customer's premises, otherwise the products are delivered to the retail store from which they were ordered. In the case of telemarketing from TeleX, Mobile Inc. delivers the product directly to the customer.

Products not part of Mobile Inc.'s assortment are normally sourced directly from other distributors. However, there are some situations where Mobile Inc. is involved in the deal although they usually do not handle the products. One example is Apple computers. Mobile Inc. purchases these computers from a distributor with whom TeleX has a connection. The products are delivered to Mobile Inc.'s warehouse where they are stored. Mobile Inc. owns these products, but they are destined for TeleX and its customers. When retailers order these computers, the setup appears the same as in the case of a mobile phone purchase. However, because the products are bought specifically for TeleX, Mobile Inc. has the option to invoice TeleX at any time if it seems they are not being sold. Figure 7 illustrates the relationship between the two central actors and the context around them.

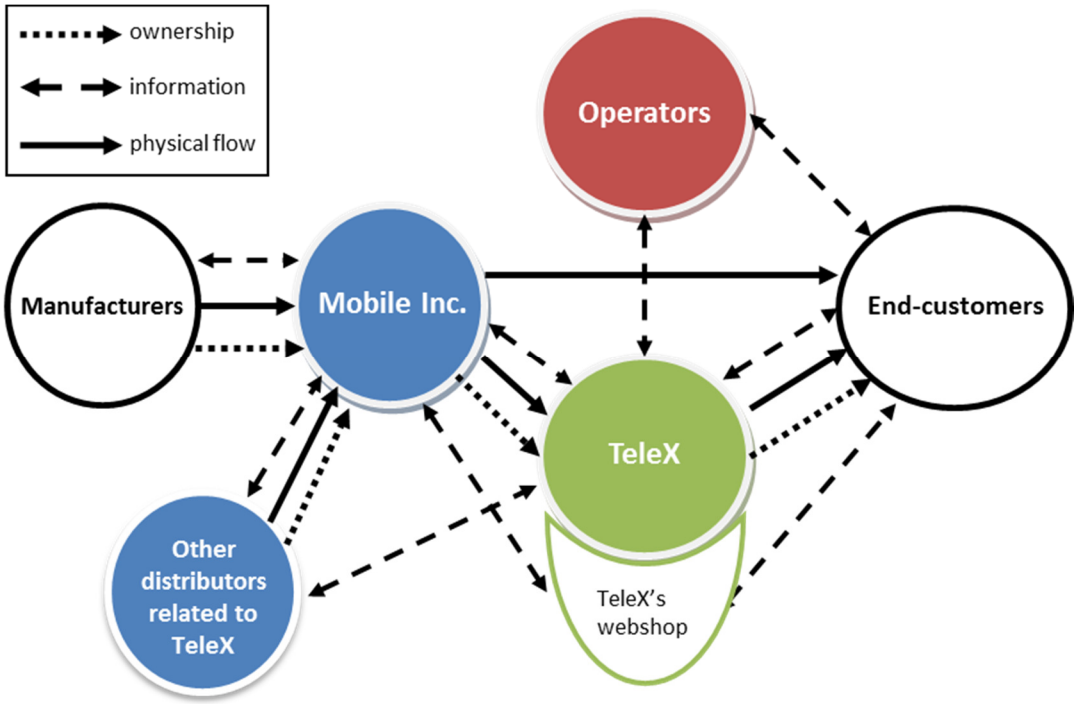

Figure 7 The relationship between TeleX and Mobile Inc. in its network context

Mobile Inc. is connected to the manufacturers and the other distributors that are related to TeleX. The physical flow of products passes through Mobile Inc.'s warehouse and then shipped to TeleX's stores or, in some cases, direct to the end-customer. There is continuous information exchange between TeleX and Mobile Inc. related to the web shop and order placement, and discussions regarding deals. Information exchange between the manufacturers and distributors and Mobile Inc. is also focused on orders. Information exchange between TeleX and operators is primarily information regarding subscriptions which needs to be passed to customers buying mobile phones. These end-customers, in turn, can purchase products from the retail stores or

online through the web shop, which is why the information exchange depicted in Figure 7 are between end-customers and TeleX and TeleX's web shop.

Each night Mobile Inc. sends an electronic document to TeleX providing information on products relevant to TeleX, such as article numbers, etc. It includes the mobile phones and accessories in Mobile Inc.'s assortment that TeleX has chosen to sell, and products purchased specifically for TeleX. TeleX uses this information to register purchase orders in its own systems, and to compute statistics.

In relation to future demand for mobile phones, TeleX provides forecasts of demand which are discussed with Mobile Inc., but there are no commitments. Actual forecasting and purchasing is the responsibility of Mobile Inc. which also takes the risk.

4.6.2 The activity structure

Figure 8 illustrates the activities and the division of work in the relationship between TeleX and Mobile Inc. It shows that Mobile Inc. is in charge of activities early on in the work flow, and TeleX takes over towards the end of the chain.

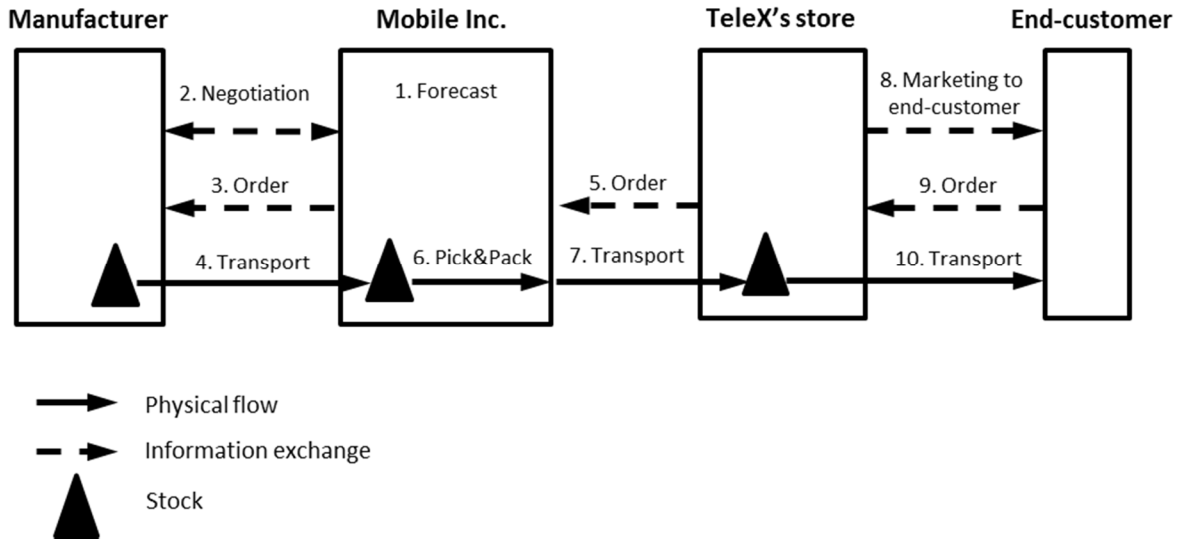

Figure 8 The activity structure and division of work in the relationship between TeleX and Mobile Inc.

In this arrangement, Mobile Inc. forecasts (1), negotiates (2) and orders (3) products from manufacturers. These products are transported (4) by an external transportation provider and later received by Mobile Inc. at their warehouse, where they are physically handled and stored. When TeleX places an order (5), products are picked and packed (6) by Mobile Inc. and then transported (7) by an external transportation provider to the TeleX store that ordered the goods. The products are then received and placed in the store inventory before being marketed (8) and sold to customers (9-10).

The division of work resembles the setup for the *assortment provider* role where Mobile Inc. is in contact with the manufacturers and negotiates and places orders. The exception is that, TeleX as much as possible, through the aid of the web service, concentrates its purchases with Mobile Inc. and uses it as a single source supplier in order to improve purchasing operations performance.

4.6.3 Interdependencies and adjustments

Mobile Inc.'s purchases are based on speculation. It forecasts demand after discussions with TeleX about its needs. However, decisions over volumes, and ownership risk, are entirely the responsibilities of Mobile Inc. Forecasts of TeleX's volumes are aggregated with those of Mobile Inc.'s other customers.

In order to satisfy TeleX's demands, Mobile Inc. sources some products that are specific to TeleX. These products (such as TVs) are sourced from a distributor connected to TeleX. Mobile Inc. owns these products and TeleX is their sole customer. This results in some tightly sequential activities, for example, between the ordering activities of Mobile Inc. and the inbound receiving activities at the warehouse.

Mobile Inc. orders these products on behalf of TeleX and stores them in its warehouse for future TeleX sales. These orders are sent to the distributor affiliated with TeleX which picks and packs them; they are transported to Mobile Inc. by an external transportation provider. They are received by Mobile Inc. and stored in a special section of the warehouse.

The tightly sequential nature of these activities implies that Mobile Inc.'s ordering of these products is dependent on a specific inbound receiving activity when the products arrive at the warehouse. These products are sourced exclusively for TeleX and may have different features to the normal assortments, for example, some are much bulkier than mobile phones and accessories. This requires a dedicated section in the warehouse and adjustments related to their handling in the warehouse.

These conditions require extensive coordination. Since the products are intended only for TeleX, the information in the IT-system needs to reflect this. The system also needs to be adjusted to handle these diverging products in order to incorporate them into the order flow between TeleX and Mobile Inc. The products are owned by Mobile Inc., but since – according to the agreement -TeleX can be invoiced at any time, they effectively become TeleX's responsibility. This means that information exchange is needed concerning the volume of products in stock, and the sales rates. From Mobile Inc.'s perspective, these products are unique since they are sold only to TeleX. These circumstances call for adjustments among activities, but also coordination with other product flows. This requires the partners to work closely together, indicated by a current key account manager at Mobile Inc.:

"When I worked for Nokia I was convinced that the two companies were connected through joint ownership".

TeleX's sales to its end-customers can be conducted in three ways, which influence the purchasing activities in Mobile Inc. In the first, ordering is based on speculation, on the basis of plans and forecasts about customers' buying behaviour. In this case, a retail store or the central TeleX organization, orders products to be stored in the warehouse for future sales. The order is placed through the web service and may include products from Mobile Inc.'s standard assortment as well as products that Mobile Inc. sources specifically for TeleX. The IT-couplings between the firms are crucial for the required information exchange. Mobile Inc. picks and packs these products which are then transported by an external provider to the appropriate TeleX stores. The products are placed in inventory, awaiting future sales to end-customers.

Activity adjustments and close couplings between Mobile Inc. and TeleX occur between the ordering activity and the pick and pack activities. The ordering activity of TeleX needs to be adjusted to function in relation to the web service, and pick and pack activity at Mobile Inc. needs to be adjusted to handle the incoming TeleX orders via this web service. The information

systems of TeleX and Mobile Inc. are closely tied together to enable exchange of information concerning warehouse, products and orders. The ordering and pick and pack activities are interdependent and through the mutual adjustments to the web service these activities can be coordinated.

TeleX's second ordering procedure is based on postponement. This procedure is applied in relation to large business customers. In this case TeleX sells the products before having ordered them from Mobile Inc. Purchasing from Mobile Inc. is thus conducted on the basis of a customer order. The orders are placed after an agreement with a large customer. The coordination required is achieved through mutual adjustments where the ordering of TeleX is adjusted to the web service. In this setup the order also needs to specify the destination of the delivery since the products are transported directly to the customer. Pick and pack also needs to be adjusted to these conditions. This postponement approach requires a more efficient ordering process and shorter lead-times between order placement and delivery, which calls for increased coordination.

The third ordering procedure is when a customer logs on and orders. In this situation the customer places the order in the TeleX store web shop. The orders are confirmed by TeleX and then sent directly to Mobile Inc. Mobile Inc. picks and packs the products before shipping to the retail store from whose web shop the purchase was made. Transportation is provided by an external transportation company. The products are received by the store and placed in inventory for collection by the customer. This procedure is also based on postponement. The customer orders on the basis of information about the products available in Mobile Inc.'s warehouse and to which Mobile Inc. currently holds title. Once the order is placed and confirmed by TeleX, TeleX makes the purchase and takes on title to ownership. In this procedure several adjustments to activities occur. Customers order on line instead of discussing with a sales representative who then places the order. It also affects the marketing and sales activities of TeleX. Instead of making direct sales, the focus is on maintaining the relationship with the customer to secure long-term business.

This setup thus leads to adjustments to ordering activities which ultimately provide end-customers with access to the information in Mobile Inc.'s systems. However, the actual handling of the product order by Mobile Inc. is the same as for orders that TeleX places. The products are sent to the store where the customer collects and pays for them. Adjustments and integration are required for the ordering phase but the succeeding process is the same as if TeleX orders.

4.6.4 Similarity and Scale

The aggregation of the orders from the various retail stores leads to increased similarity in purchasing. TeleX's problems before the cooperation efforts with Mobile Inc., were related to its loosely organized purchasing, where local retailers relied on a multitude of suppliers. The relationship with Mobile Inc. led to aggregation of TeleX's orders and increased similarity in its ordering activities. Rather than placing individual orders from various retailers with several suppliers, they now use the same system in relation to a single counterpart. This similarity is further increased for TeleX since Mobile Inc. incorporates the TeleX-specific products into its warehouse. Mobile Inc. functions as a one stop-shop for TeleX allowing it to order most of its product needs from one actor. TeleX needs only to deal with Mobile Inc., while Mobile Inc. deals with the various manufacturers and distributors supplying goods for TeleX.

For Mobile Inc., the increased volumes provided by TeleX enhanced the similarities in its purchasing and physical handling activities. However, the addition of TeleX-specific

assortments has decreased these similarities. The activities involved in handling products specifically sourced for TeleX are tightly sequential and require particular coordination activities. These products often differ in size and shape from its more regular products, which reduces similarity in handling of products, for example, handling a TV set is different from handling a small mobile phone. However, the activities undertaken in relation to these 'extra' products are prerequisites for the increasing scale provided by satisfying TeleX's product demand. The loss in some similarities is borne to capture other benefits. By adapting to TeleX's demands, Mobile Inc. is able to provide substantial increases in ordering similarities for TeleX. These benefits are important for both parties and are the main basis for their relationship.

The web shop has proved an effective way of providing customization without reducing similarity in Mobile Inc.'s operations. TeleX's customers have access to the web shop to place orders. Since the products are sent to TeleX stores for collection by customers, Mobile Inc.'s product handling has not changed. TeleX is able to achieve greater customization for customers without incurring loss of similarity in Mobile Inc.'s operations.

Mobile Inc. sources products from several manufacturers based on the aggregate demand of its customers. This means that the scale of their purchases outweigh TeleX's. The addition of TeleX's purchases to Mobile Inc.'s purchasing volume has increased the scale of the latter's operations and it is this large scale of Mobile Inc.'s activities that contributes to performance improvements in TeleX. These potential improvements were behind TeleX's single sourcing strategy. By pooling their orders from TeleX, retailers are able to get a better deal. Thus, Mobile Inc. is providing TeleX with substantial economies of scale in its purchasing activities.

4.6.5 Resource combining

TeleX's need for coordinated purchasing was fulfilled by the new web service. This service achieved the goal of aggregating purchases from a variety of independent and centrally governed stores. By developing a web service that made it easy to buy products from Mobile Inc., TeleX was able to motivate independent stores to concentrate their sourcing on a single actor, which, in turn, affected the principles for resource combining. The most interesting resources in this relationship are summarized in Table 6.

Physical Resources	Organizational Resources
Mobile Inc.'s assortment	Mobile Inc.'s purchasing capability
Mobile Inc.'s warehouse	Mobile Inc.'s physical handling capability
Mobile Inc.'s IT-system	Mobile Inc.'s IT competence
Mobile Inc.'s web service	TeleX's marketing and sales capability
TeleX's IT-system	Business relationships
TeleX's stores	

Table 6 Significant resources in the relationship between TeleX and Mobile Inc.

Mobile Inc.'s assortment is an important resource in this relationship, because it functions as a one-stop shop for TeleX. Mobile Inc.'s product range needs to match the demands of TeleX and its customers. An interesting feature of the assortment in this relationship is the products that Mobile Inc. sources specifically for TeleX. These products differ in terms of sourcing and handling from the mobile phones and accessories that Mobile Inc. supplies in other relationships. In relation to TeleX, these additional products are crucial resources since this extension of the assortment enables Mobile Inc. to provide value to TeleX by aggregating its purchases. The product assortment carried by Mobile Inc. is thus adapted to meet the needs of TeleX.

Another value provided by Mobile Inc. to TeleX stems from the former's large-scale operations, which also benefit TeleX. These benefits derive from several resources. The warehouse is an important large scale physical resource. Furthermore, the web service accounts for much of the increased scale in purchasing. Mobile Inc.'s capability in physical handling matters greatly in this relationship especially in relation to the inclusion of TeleX-specific products in the product range.

Mobile Inc.'s business relationships with manufacturers and other retailers are essential organizational resources for performance improvements. The business relationship between Mobile Inc. and TeleX is an important organizational resource because it represents the foundation of adjustments, adaptations, and the development of the web service. A former CEO of Mobile Inc. described the features of the relationship as follows:

"This type of cooperation can be seen as the first step towards more long-term relationships in this industry."

Mobile Inc.'s purchasing capability is a useful organizational resource in negotiations with manufacturers over prices. TeleX is heavily dependent on the purchasing capability of Mobile Inc. since most of its purchases are focused on this actor. Therefore, Mobile Inc.'s purchasing performance directly affects the business of TeleX. On the other hand, the marketing and sales capability of TeleX, determines its product needs and, consequently, affects the business performance of Mobile Inc. TeleX's stores are a significant resource because these sales outlets provide access to end-customers.

The web service plays a crucial role in this relationship since it was developed to solve TeleX's initial problem by enabling aggregation of TeleX's orders. This aggregation was made possible through combining and adapting the IT-systems of Mobile Inc. and TeleX to the web service. The development of the web service relied mainly on the knowledge of IT residing in Mobile Inc.

4.6.6 Adaptations and Economizing

In this relationship there is a clear separation of responsibilities between Mobile Inc. and TeleX. Mobile Inc. sources, stores and sells products to TeleX, which then stocks them and sells them to its customers. Through this separation the combining of internal and external resources is a focal issue around the web service. The bulk of resource adaptations occur at the interface between the web service and the two actors. Physical handling is concentrated on one of them, and sales to end-customers in the other. The interfaces between the actors are standardized, requiring only limited adaptations.

Since the majority of orders in this relationship are based on speculation, there are buffer inventories at Mobile Inc.'s warehouse and at TeleX's stores. These buffers reduce the need for short lead-times and consequently advanced IT integration is not required. However, when TeleX supplies some large customers, products are shipped directly to the customer's premises. In these situations, ordering is based on postponement, and the lead times between ordering and order fulfilment are important. However, these cases are infrequent and the most common ordering logic is based on speculation.

There are significant adaptations in this relationship concerning the handling and managing of orders. Development of the web service and the web shop signified a new resource that needed to be combined with already existing resources. It required adaptations to the IT systems of both actors. Orders were placed and received in new ways which had to be reflected in the respective administrative systems.

TeleX has adapted its resources in order to be granted admission to the web shop and thereby gain access to the information about the assortment available in Mobile Inc.'s warehouse. Since end-customers are able to log in and place orders, stores do not have to be involved in product sales.

In this resource set up, TeleX is able to economize through the business relationship by exploiting the resources of Mobile Inc. It can access the web service to place an order. By aggregating orders, it gains by increasing the scale of Mobile Inc.'s purchasing activities. Mobile Inc. can provide economies of scale in TeleX's purchases that the company would not be able to achieve on its own. The web service enables aggregation of purchase orders from the stores of all retailers, and this aggregated demand makes TeleX a more attractive customer for Mobile Inc., and in relation to manufacturers when campaigns are planned.

Mobile Inc. is economizing on the web service, through the coordination of activities undertaken at the various facilities. For example, ordering from the retail stores is coordinated with Mobile Inc. via the web service. TeleX is also economizing on the web service by coordination of the purchasing activities of the local stores. Mobile Inc. is economizing on its warehouse through the increasing scale of operations derived from TeleX's business. They are also economizing on their IT competence, which enabled the development of the web service required to coordinate purchases from retailer's stores. Mobile Inc. is also economizing on the relationship with TeleX by extending the product range to include TeleX-specific products, allowing TeleX to concentrate most of its purchases in a single supplier. By complementing its product portfolio, Mobile Inc. is able to economize on its assortment through a service that satisfies TeleX's demand. The broadening of the assortment through the addition of the specific product range related to TeleX, contradicts prevailing recommendations for consolidation and a focus on a reduced assortment. However, in this case Mobile Inc. supports TeleX's efforts to economize by consolidating its purchases and number of suppliers. Through partnering and reliance on Mobile Inc., TeleX is able to recoup resources that otherwise would be spent on maintaining several relationships.

4.6.7 Mobile Inc. and the purchasing coordinator role

The relationship between Mobile Inc. and TeleX signifies another type of deviation from the *assortment provider* role. In this case, Mobile Inc. extends its role in comparison with assortment providing. Mobile Inc. acts as a *purchasing coordinator* in relation to the various TeleX stores. This service is valuable for TeleX because it operates a widespread and loose organization including a mix of independent and centrally owned stores. In such fragmented structures, there are huge benefits to be gained from coordinated purchase. Lack of coordination brings losses of similarity and economies of scale.

A prerequisite for this role was the development of the web shop which enabled aggregation of TeleX's orders and substantially increased the similarities in TeleX's purchasing activities. These conditions improve the position of TeleX in negotiations with Mobile Inc. and manufacturers. Similar to the relationship with ConnectMe, this relationship requires interaction and mutual adjustments to secure efficient and effective processes.

Through this relationship Mobile Inc. increased the scale of its handling operations, but expanded its product assortment - a sign of reduced similarities. However, this modification is advantageous for TeleX which is able to use Mobile Inc. as a one-stop shop and provides Mobile Inc. with the opportunity to act as *purchasing coordinator*.

4.7 WebMob and the role as end-customer interface

WebMob is an Internet-based retailer with no physical stores. In 2011, WebMob had a turnover of about SEK100 million and employed 12 people. WebMob is the largest of the so called e-tailers of mobile phones in Sweden. WebMob was established in 2003 with a concept - unique at the time - of relying on a distributor as its warehousing partner. This allowed it to display an assortment that other actors were unable to achieve since it would have required stocking all the products in the assortment. WebMob was able to display the product range of its distributor to its end customers while not assuming any risks of ownership or tying up capital. WebMob only purchased from its distributor when it received a customer order and, thus, was fully reliant on postponement. On the basis of this set up, its initial objective was to be the cheapest on the market, but the strategy has shifted owing to changing market conditions described by a key account manager at Mobile Inc.:

"In order to be the cheapest you need to import products from other parts of Europe and that is not something that WebMob wants to do."

Also, when manufacturers plan their campaigns, targeted retailers can reduce their prices more than what WebMob and other actors are able to do. So the present strategy is a focus on being a knowledge-based actor with a low cost profile. In addition, WebMob has appointed a customer support division, where customers can phone, e-mail or chat about questions they might have concerning the products or subscriptions available. The CEO of WebMob claims that the support division was significant in its being awarded 'e-tailer of the year' for five consecutive years.

Another initial differential in comparison with competitors, aside from being the cheapest, was WebMob's ability to handle subscriptions on line. At the time, no other companies were able to sell mobile phones combined with subscriptions online. It is complicated due to the huge numbers of product combinations, which in WebMob's case amounts to around 600,000. At the time WebMob introduced novelty in the market by selling mobile phones with subscriptions online, at lower prices.

4.7.1 The Relationship with Mobile Inc.

When WebMob was established, the e-tail concept was developed together with Distributor1, which was its warehousing partner until June 2009 when it switched partners to Mobile Inc. WebMob was interested in starting business in other countries and since Mobile Inc. was a global actor whereas Distributor1 was focused on the Swedish market, it was appropriate to change to Mobile Inc. Since then, the cooperation between the two companies has flourished, and the distributor's significance for WebMob's development is acknowledged, as described by the CEO of WebMob:

"We could not have reached that turnover with so few employees if we had stores or similar. We are dependent on the distributor because they are our inventory"

Since the assortment in this inventory is visualized to end-customers, it is perceived to be the interface between them and WebMob.

However, during 2011, WebMob realized that a single distributor was inadequate regardless of its good performance. WebMob perceived the context of e-tailer to be very specific, and something that its distributor did not recognize. When a product is sold out in a physical store, it is possible to engage with the customer and on the basis of his or her needs, suggest other appropriate products. This may enable a store to sell an alternative product to the customer. In

the case of a particular mobile phone being in stock, but a particular accessory being out of stock, the retailer is able to suggest similar accessories that would satisfy the customer.

For an e-tailer the situation is different. If a product or an accessory is out of stock, there are other e-tailers that are just a click away and potential customers are likely to go to another supplier. Therefore, it is essential to ensure that stock are always replenished; availability is extremely important for an e-tailer, as WebMob's CEO describes:

"The product availability is a more important aspect than maybe distributors realize. For example during the business recession there were products displayed on WebMob's webpage that Mobile Inc. did not have in stock, and therefore the purchase button was greyed out, which resulted in lost customers."

WebMob realized it needed alternative distributors and could not rely only on Mobile Inc. WebMob's objective was to ensure that all the products it displayed were always available, to ensure that it did not lose customers.

Thus, WebMob went from relying exclusively on Mobile Inc. for warehousing, to introducing two other distributors: Distributor1 and Distributor2. At the time of writing, they were working with three distributors that can deliver directly to the end customer. The distributors' systems, including volumes, price levels and rebates are accessible to WebMob when they place their orders. However, Mobile Inc. is the first choice and the majority of purchases are from Mobile Inc. The relationship with Mobile Inc. is the most advanced and, consequently, WebMob can work efficiently in some processes with Mobile Inc. that are impossible with other distributors. One example is last minute changes to orders, when article numbers are removed and/or added. This works well in relations with Mobile Inc., but with other distributors requires additional shipments, which results in higher freight costs. WebMob has not managed to integrate as much with other distributors:

"When we were to incorporate Distributor2 into our setup, we had to train and educate them in procedures because Distributor2 had never worked in that way before". (CEO WebMob)

For example, Distributor2 was not able to send a product in WebMob's name to the end customer, and have customer payments go to WebMob. The money transfers go to Distributor2, while WebMob has bought the products and sold them. Distributor2 also is unable to send notifications to the end-customer by SMS text message which is something that customers expect and value:

"As long as everything is more or less similar when it comes to prices and lead times etc. then the orders will be sent to Mobile Inc. But if prices are significantly different, then another distributor could very well be chosen instead." (CEO WebMob)

There are routines in place and systems that were developed jointly with Distributor1 and refined during the relationship with Mobile Inc. All these systems also need to be adjusted to distributors. Ultimately, WebMob believes that when all of its systems are in place, the majority of its purchases will be from Mobile Inc. WebMob finds its performance satisfactory, but the proportion of its total purchases is likely to be some 60% to 80%, with the remainder purchased from other distributors.

The relationship with WebMob requires substantial exchange of information. Mobile Inc. posts on the web, information about its products, stocks, order history, and progress in the product flow of specific orders, which is updated every 15 minutes. WebMob can download this

information and provide it to its customers to update them about order progress and expected delivery time.

Mobile Inc. achieved this high level of IT-automation with WebMob because WebMob is a relatively small actor with fairly sophisticated IT systems, which enabled these adjustments. Retailers with older ERP systems, do not have the same advanced IT capabilities for coupling, and bigger actors with larger assortments of products would need to adapt to many suppliers. The automatic IT integration was developed through collaboration between Mobile Inc. and WebMob. WebMob expressed several needs that would improve its performance, and Mobile Inc. in some cases proposed modifications to make these demands fit with already existing solutions at Mobile Inc.

WebMob manually approves every order received. Previously it was enough to simply approve the order and then send it to Mobile Inc. However, use of three different distributors requires them to specify the source. As far as possible it tries to avoid splitting orders among distributors. In order to delimit the number of packages that the end customer receives and to reduce freight it tries to buy a complete order from one actor, even if it means slightly higher price. In some cases, splitting is unavoidable, for example, when a particular accessory and a particular mobile phone are available only at different distributors. Mobile Inc. is the only company authorized to a particular manufacturer's products in Sweden, which means WebMob is forced to buy from it. Other distinctions apply to other distributors.

When an order is placed by an end customer, WebMob checks product availability and price in the stocks of the distributors, and selects which distributor to buy from. The total volume of products in stock is shown to customers, but the exact volumes of the various distributors are not displayed.

In relation to the Apple IPhone, the procedure is different. Apple allows only operators to deal in IPhones, which excludes Mobile Inc. In this case, WebMob buys IPhones from operators. WebMob informs Mobile Inc. that it intends to buy a number of IPhones and Mobile Inc. provides WebMob with a purchase number from its ERP system, which is required as reference for delivery and warehousing. WebMob e-mails the operator that they want to buy said number of IPhones and that the operator must label the shipment with the purchase number received from Mobile Inc. The shipment is then sent to Mobile Inc. and placed in the warehouse. These IPhones can then be displayed to WebMob's customers.

Concerning the connections with the operators, much of the information is handled manually. Information about various types of subscriptions displayed on WebMob's web page are entered manually. Also, when a customer places an order for a product or a certain subscription the information is handled manually. WebMob then logs on to the operator's system and fills in the customer information for the subscription. This method is cumbersome and entails entry of the same information by the customer and then by WebMob which enters it into the operator's system.

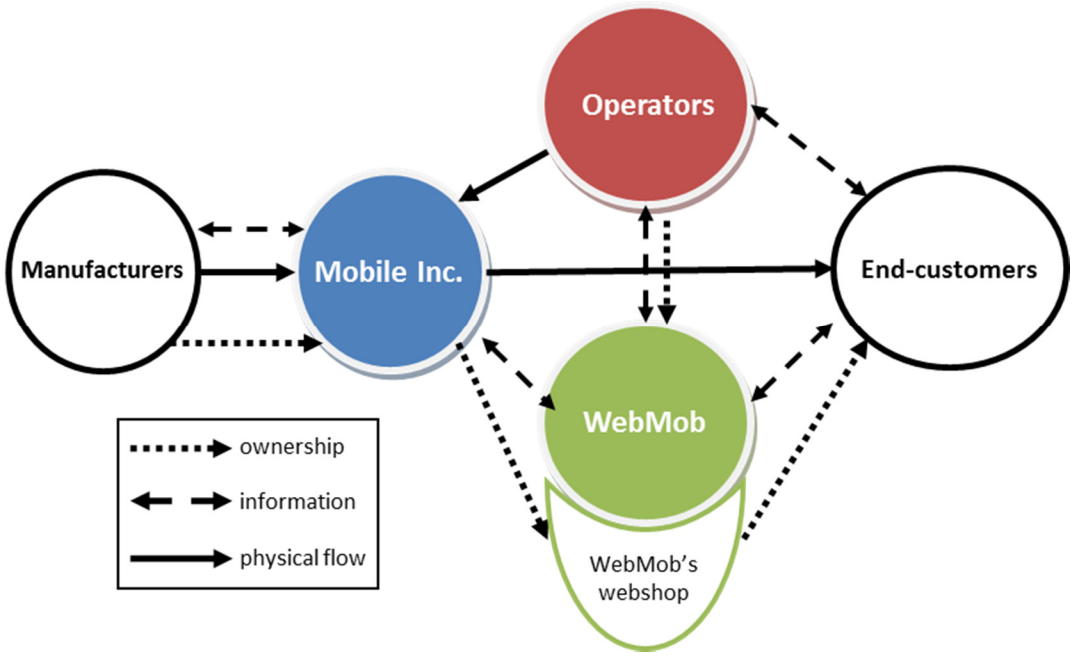

Figure 9 The relationship between WebMob and Mobile Inc. in its network context

Figure 9 illustrates the relationship between Mobile Inc. and WebMob and its context. Mobile Inc. is in contact with manufacturers and sources products. These products are delivered to Mobile Inc. and placed in its warehouse. There is frequent information exchange regarding products in stock and volumes available via the web service between WebMob and Mobile Inc.. End-customers login to WebMob's web shop and thereby find product information concerning Mobile Inc.'s assortment. When the customer places an order, WebMob purchases the products from Mobile Inc., and ownership is transferred from Mobile Inc. to WebMob and then to the end-customer. However, the physical flow for products is between Mobile Inc. and the end-customer; WebMob exchanges information with the operators regarding subscriptions. For certain products, Mobile Inc. is unable to purchase directly and in these cases WebMob purchases the products directly from the operator, but the physical flow is towards Mobile Inc.

Mobile Inc. and WebMob have regular meetings where they discuss what WebMob estimates that they will be able to sell. WebMob is not committed to the volumes reserved, but similarly cannot demand that a specific product be stocked. If Mobile Inc. experiences poor sales of a product and decides to stop buying it, WebMob cannot offer the product to its customers. Since there is no commitment in relation to sales, there is not much discussion of exact volumes. Meetings are devoted mostly to joint planning and forecasting on the aggregate volumes that can be expected. These discussions are important to enable Mobile Inc. to staff its warehouse adequately in order to meet WebMob's demands including during sales campaigns. WebMob informs Mobile Inc. about planned campaigns to ensure that the latter has the appropriate products and volumes available.

The CEO of WebMob is in daily contact with the Key Account Manager at Mobile Inc. regarding any problems related to shipments and other aspects. The CEO also has frequent discussions with Mobile Inc.'s purchasers, which are crucial for WebMob's performance. WebMob considers these purchasers as an extension of its business and keeps in close contact to coordinate operations:

"It is very rare that [WebMob] makes demands about assortments; what products that Mobile Inc. should go for or keep in stock. It wouldn't be right for me to do that since Mobile Inc. is

taking all the risk. But I do make demands about stock keeping. It is vital that the products listed also are in stock" (CEO WebMob)

Return logistics is an important issue for WebMob. It had realized that to handle after-sales would require to take on a part time employee and decided to use Mobile Inc. for these operations since the distributor had an established structure for returns. WebMob, as the seller, is responsible for the after sales market, including returns of damaged and other products. The law allows customers to return products within 14 days of purchase over the Internet, even if the package has been opened and the product has been used. Mobile Inc. cannot sell an opened package to another customer and in this case sends the returned product to WebMob. These products are often used as employee phones or competition prizes.

Customer experiencing problems with a mobile phone contact WebMob's customer support. They check the IMEI number, which is the unique identifier on a mobile phone. This information allows WebMob to trace which distributor supplied the product. WebMob then informs the customer about where to return the item. If Mobile Inc. is involved it is informed by WebMob that the product is on its way from the customer. Mobile Inc. sends the mobile phone to a repair centre for checking to determine whether the problem is due to misuse, whether the product can be repaired or whether it should be scrapped and the customer sent a new phone.

4.7.2 The activity structure

Figure 10 illustrates the activities and the division of work in the relationship between Mobile Inc. and WebMob.

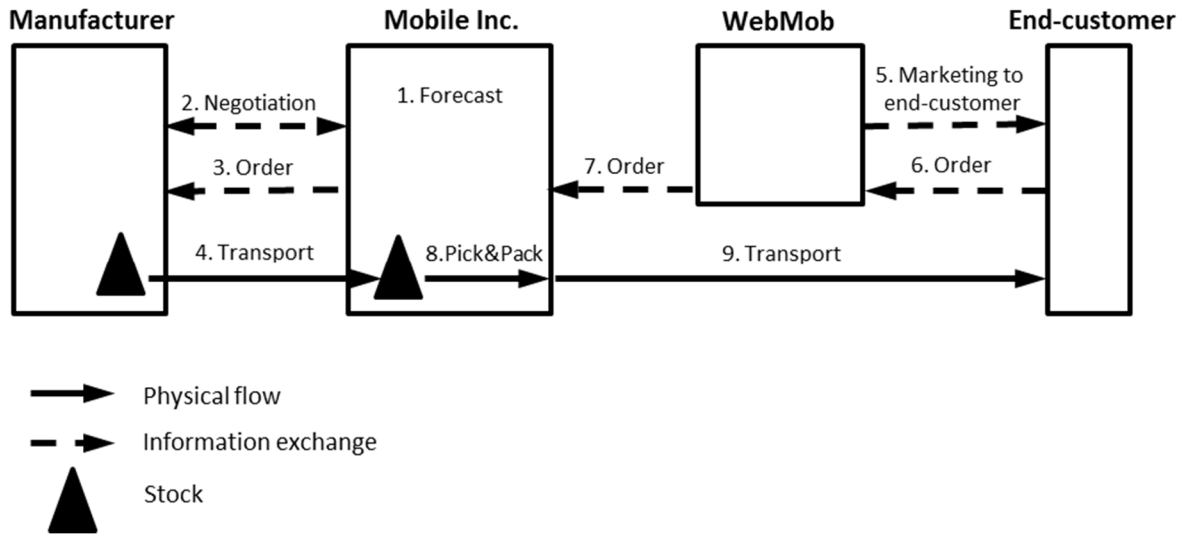

Figure 10 The activity structure and division of work in the relationship between WebMob and Mobile Inc.

Mobile Inc. is responsible for forecasting (1), negotiating (2) and ordering products (3) from manufacturers. These products are then transported (4) to Mobile Inc.'s warehouse where they are placed in inventory. WebMob markets products to the end-customers (5) through its web page. When a customer orders (6) a product, this order is confirmed by WebMob and forwarded to Mobile Inc. (7). WebMob orders products from Mobile Inc. only after receipt of an order from a customer; it relies on postponement. The products ordered by WebMob are picked and packed (8) by Mobile Inc. and shipped (9) directly to the end-customer by an external transportation company.

This arrangement provides WebMob with several benefits since it relies totally on Mobile Inc. for displaying the product range to customers. However, this means that WebMob's offer range is limited to Mobile Inc.'s assortment. WebMob cannot determine its own assortment, but is dependent on the decisions made by Mobile Inc. In addition, its lack of warehousing leads to less attention from the manufacturers. Since WebMob cannot accommodate large batches of products it is not of interest to manufacturers launching product campaigns.

4.7.3 Interdependencies and adjustments

Purchasing from manufacturers is undertaken by Mobile Inc. and relies on speculation logic. Mobile Inc. sources products, based on forecasts that are discussed and influenced by WebMob's predicted sales. The responsibility ultimately rests on Mobile Inc. who takes title to goods and thus takes the risk. On the other hand, WebMob's orders are based on postponement logic, since it places an order only after the customer buys a product.

A significant feature of this relationship is the strong interdependencies between some of the activities of WebMob and Mobile Inc. The ordering activities of WebMob impact considerably on the picking and packing of goods in the warehouse of Mobile Inc. Physical handling of products is performed by Mobile Inc. since WebMob does not have the necessary resources. Therefore, WebMob is highly dependent on the physical handling activities of Mobile Inc. WebMob views Mobile Inc. as its inventory which means that the former's sales activities rely on the physical handling activities that Mobile Inc. performs. Similarly, Mobile Inc.'s picking and packing activity is dependent on WebMob's sales and subsequent ordering activities.

For the managing of these interdependencies there are mutual adjustments undertaken between the ordering activities of WebMob and the picking and packing activity of Mobile Inc. The companies are closely linked through the web service and the IT couplings. The orders from WebMob's customers are followed by order activity in WebMob, which confirms and approves orders before they are forwarded to Mobile Inc. Coordination of these interdependencies requires extensive exchange of information through the IT-couplings in the activity chain.

Thus, there are strong mutual dependencies in this relationship, and the web service and other links between the two actors have been adjusted to each other. The adjustments are related most to the web service, which administers the ordering system. The orders placed by WebMob are handled by the web service and transferred to the warehouse personnel responsible for picking and packing. These activities, in turn, are adjusted to the ordering activity in WebMob. Rather than the normal handling of huge orders from retail stores, the picking and packing activities in these situations must fit with the needs of individual consumer orders. This may involve a single item, with a unique delivery address. The necessary adjustments mainly concerns the IT system and the web service, while picking and packing follow the normal procedure with the exception that volumes are lower and the frequency of carrying out the activities is higher.

The web service was developed and modified to work in line with this specific counterpart's needs. The adjustments allow ordering activity in WebMob to be coordinated effectively with the pick and pack activity in Mobile Inc. As described above, the internal IT competence of WebMob was significant for the business setup, as described by Mobile Inc.'s key account manager:

"The IT-integration between WebMob and Mobile Inc. is the most advanced that we have. Due to the high integration many processes are automated."

This arrangement enables WebMob to specialize in a narrow set of activities, because they utilize Mobile Inc.'s capabilities in purchasing and physical handling. With increased

specialization follows a need for increased coordination, and in this relationship the web service and the IT-couplings between the two actors enable this coordination. For Mobile Inc., IT-integration has served to automate processes that are performed manually for other counterparts with less sophisticated IT-systems that cannot cope with the required level of integration. The physical activities performed by Mobile Inc. are not very different from those performed for other actors; for example, purchasing and some warehouse activities are the same.

The activity coordination achieved by integrating the IT-systems has made it possible to automate many processes, which has enabled WebMob to offer customers short delivery times without running a warehouse. The transfer of information from Mobile Inc.'s warehouse to WebMob, concerning stock levels, prices, etc., is another example of the coordinative efforts. This information is vital for end-customers' decisions about what and when to buy. Therefore this information is updated automatically every 15 minutes.

4.7.4 Similarity and Scale

This relationship signifies specialization by WebMob and a more encompassing activity structure for Mobile Inc. WebMob can increase the similarity in its activity structure by specializing in a narrow set of activities related to marketing and sales. In addition, the tight couplings between the two actors enable WebMob to exploit the similarities in Mobile Inc.'s warehousing activities. The business transactions in the relationship with WebMob feature several adjustments and rely on an advanced IT-integration that is unique to Mobile Inc. These conditions lead to low levels of similarities in some activities related to WebMob, compared to those undertaken for other counterparts. However, once orders are placed and received, Mobile Inc. is able to capture similarities in physical handling in the warehouse. The adjustments made relate mainly to digital order information handling and the web service, while the physical handling in the warehouse is similar to handling of orders from other retailers. Although volumes are smaller and the frequency is higher, the procedure is the same.

These similarities provide WebMob with economies of scale and, consequently, lower costs than store-based retailers. The benefits derived from the relationship with Mobile Inc. stem from similarities in large-scale physical handling and also access to a wide range of products in a huge assortment. Mobile Inc.'s large customer base and their various demands makes an inventory available to WebMob that would not be possible in a local retail store. Firms need to consider carefully what assortments to carry, since it is costly to carry stock for long periods and even more costly if the items do not sell. This means that retailers will usually only buy products that they are confident of selling. This restriction does not apply to Mobile Inc. since it can offer its products to a large range of customers. Mobile Inc. is thus in a better position to manage the risks connected to title-holding. It is this ability of Mobile Inc. that WebMob is able to access by using it as their warehouse. This arrangement offers WebMob an edge over store-based retailers that have to invest and manage their own inventories.

In addition, WebMob accesses the scale of Mobile Inc.'s activities in the returns handling processes. Thus, WebMob handles these activities without having invested in staff and equipment. It had to choose between employing additional staff and investing in equipment for returns handling, or relying on its distributor. It was decided that it would be more efficient to use Mobile Inc.'s established arrangement than to organize these operations internally. Mobile Inc. handles returns of products for many actors and benefits from similarities. It has the equipment, personnel and procedures in place and, therefore, it is more efficient to expand the volumes in the existing structure, than to invest in building a new set up. Moreover, the economies of scale in Mobile Inc.'s returns handling are further enhanced by WebMob's approach.

4.7.5 Resource Combining

The most significant resources in the arrangements in this relationship are illustrated in Table 7.

Physical Resources	Organizational Resources
Mobile Inc.'s assortment	Mobile Inc.'s purchasing capability
Mobile Inc.'s warehouse	Mobile Inc.'s physical handling ability
Mobile Inc.'s IT-system	Mobile Inc.'s IT competence
Mobile Inc.'s web service	WebMob's IT competence
WebMob's IT-system	WebMob's marketing and sales capabilities
	Business relationships

Table 7 Significant resources in the relationship between WebMob and Mobile Inc.

The resources in focus in this relationship are primarily related to Mobile Inc.'s warehouse and IT-related resources. Their arrangement enables the warehouse of Mobile Inc. to appear as WebMob's interface with end-customers. Mobile Inc.'s assortment is therefore a vital resource in this relationship. By utilizing this resource, WebMob can treat the warehouse as if it were its own, which has huge implications for the product range that customers associate with WebMob. The assortment is a key selling point for WebMob, since it can offer its customers a large variety of mobile phones at prices below those offered by many other actors carrying smaller assortments. A large inventory can imply substantial capital and warehousing and equipment costs, as well as risks of obsolescence. Thus, Mobile Inc.'s assortment provides WebMob with considerable benefits in relation to its customers. The access to this resource is provided through the close relationship with Mobile Inc.

The IT resources are significant for the functioning of this set up, because they secure the exchange of information that is required for efficient and effective processes. Moreover, they provide visibility of the stock and create a link between customer order and the activities related to packing and shipping. The foundations of these IT-couplings are the IT-competences of WebMob and Mobile Inc. In addition, the web service that Mobile Inc. developed in the relationship with TeleX is a crucial mechanism for the functioning of this arrangement. The web service was initially developed in order to provide an external actor with access to the warehouse information of Mobile Inc.

The business relationship between the two parties is also a crucial resource for both. Mobile Inc. has another customer in its base and WebMob has access to the resources of Mobile Inc. This relationship allows WebMob to specialize and rely on the resources of Mobile Inc. Owing to this specialization WebMob can focus on sales and marketing. In this way the marketing and sales capability of WebMob has become a critical organizational resource.

Mobile Inc.'s purchasing capability is a vital resource for WebMob in this relationship. As declared by WebMob, Mobile Inc.'s purchasers are in effect, its purchasers. This means that the purchasing performance of Mobile Inc. directly affects WebMob's business. Along the same line, Mobile Inc.'s physical handling capability is crucial since the handling of products has a direct impact on the customers' perception of doing business with WebMob. Any problems with delivery will affect the customers' view of WebMob and likely influence future interactions.

4.7.6 Adaptations and Economizing

Through this relationship, huge volumes of products supplied by manufacturers need to be adapted to the conditions in the use context of individual end-customers. Rather than supplying

assortments for a retail store, Mobile Inc. delivers single shipments including one or a few products to numerous end-customers. These features provide particular requirements on the resources for handling and shipping products. Instead of relying on the ability of generating scale in handling operations by packing large shipments, Mobile Inc.'s resources must be adapted to small volumes and frequent operations in relation to individual customer orders.

A crucial issue in this relationship is the combining of internal and external resources. The premise of this relationship is the specialization of WebMob which chose not to keep inventories. This approach makes resource combining across corporate borders paramount. WebMob's internal resources related to marketing and sales are combined with external resources in terms of Mobile Inc.'s warehousing and physical handling capabilities.

The direct links to end-customers which demand short lead times from ordering to delivery, and the fact that ordering is based on postponement, adds extra requirements to resources and capabilities for order handling. This setup requires sophisticated information sharing. These features emphasize the importance of the IT-systems and their ability to process information quickly and accurately. Development of the couplings between the two firms was enabled by WebMob being a small actor with up to date IT-systems and IT skills. During development of the IT system, WebMob used only one distributor. The single supplier conditions made it possible to develop the relationship and connect the resources within that relationship, without having to worry about connections to other actors and the effect on them.

The IT resources have been adapted across the WebMob-Mobile Inc. relationship. Their IT couplings function better than those in the relationships between WebMob and other distributors. Late changes to orders can be handled by Mobile Inc., but not the other distributors. Also, sending shipments in WebMob's name and transferring payments directly to WebMob are tasks unique to Mobile Inc., and the result of several years of working together. Thus, the adaptations made to the IT resources have improved the arrangements between WebMob and Mobile Inc.

Through the adaptations to IT systems, and the associated coordination discussed above, both actors are able to economize on their facilities. They achieve economies of speed through the coordination of activities undertaken at the various facilities. These benefits are important for efficient combining of internal and external resources in settings where customers require short lead times.

A prominent form of economizing is WebMob's specialization in a narrow set of activities and total reliance on distributors' resources for purchasing, physical handling in warehouses and returns handling. Through the relationship with Mobile Inc., WebMob is able to economize on Mobile Inc.'s warehouse and consequently achieve economies of scale and scope that most actors with physical stores and inventories cannot. The relationship with Mobile Inc. also enables WebMob to economize on its business unit. WebMob can focus on its website and its marketing and customer care capabilities and gain economies of scale in these operations. For returns handling, parts of Mobile Inc.'s resource setup are shared among several counterparts. This means that, by relying on Mobile Inc. these resources can be exploited further. If WebMob had invested in returns handling, the same level of economizing would not have been attained.

Mobile Inc. is economizing on the web service. This resource was originally developed in relation to TeleX, but meets WebMob's requirements. The web service was developed to provide other actors with direct access to Mobile Inc.'s warehouse. For WebMob to specialize in managing sales rather than inventory, this solution was important.

4.7.7 Mobile Inc. and the end-customer interface role

WebMob is the most specialized of Mobile Inc.'s business partners. WebMob is focused on marketing and sales to end-customers. Consequently, this relationship requires the broadest engagement of Mobile Inc. Besides providing resources for WebMob regarding purchasing, storage and physical handling, Mobile Inc. also functions as the *end-customer interface* in relation to WebMob's customers. The web shop developed in the relationship with TeleX was the key resource in this set-up. In the relationship with WebMob it was further improved and adapted which allows WebMob to work with Mobile Inc. in ways not possible with other distributors.

Mobile Inc. is responsible for a major part of this activity chain, and functions as WebMob's retail store and warehouse. When end-customers log in and order, they are interfacing directly with Mobile Inc. For this set-up to work sophisticated IT-couplings and extensive information exchange are required. In its role as *end-customer interface*, Mobile Inc. is taking over activities normally carried out by retailers.

4.8 TaiMan and the marketing organizer role

TaiMan is a Taiwanese manufacturer of mobile phones. The company was founded in 1997 as a contract manufacturer for other suppliers of mobile phones through an OEM-branding system. Currently, TaiMan manufactures and sells mobile phones under its own brand and is one of the major producers of smartphones.

In 2002, TaiMan launched a sub-brand, referred to here as the PDPhone. At the time, the PDPhone brand focused on innovative smartphones, implying a combined mobile phone and PDA (personal data assistant). A rather unique feature of this product compared to the alternatives offered by other manufacturers, was that PDPhone was based on a Windows platform. The targeted audience consisted of business customers, for whom the familiar Windows platform and interfaces to Outlook and similar clients were attractive features.

On the basis of this product, TaiMan began to expand internationally. TaiMan was relatively unknown in Scandinavia, but was keen to expand to this area. However, it did not have a great deal of knowledge about the context. It approached Mobile Inc. and the two firms decided to enter a partnership in order to achieve this expansion.

4.8.1 The Relationship with Mobile Inc.

In this relationship, Mobile Inc. was given responsibility for configuring the product and packaging it. It was also in charge of marketing the product to end-customers and retailers. Mobile Inc. was also responsible for the design and printing of advertising materials. It also took on returns handling and after sales services such as customer support and maintenance. In this relationship, Mobile Inc. thus extended their engagement in comparison with the conventional box-moving setup. The special features of this relationship were described by a former CEO of Mobile Inc. as follows:

"In this relationship Mobile Inc. worked more like an agent for TaiMan by marketing and warehousing the products".

The cooperation was so close that a Swedish industry magazine referred to Mobile Inc. as a retailer of the PDPhone (Telekomidag.se).

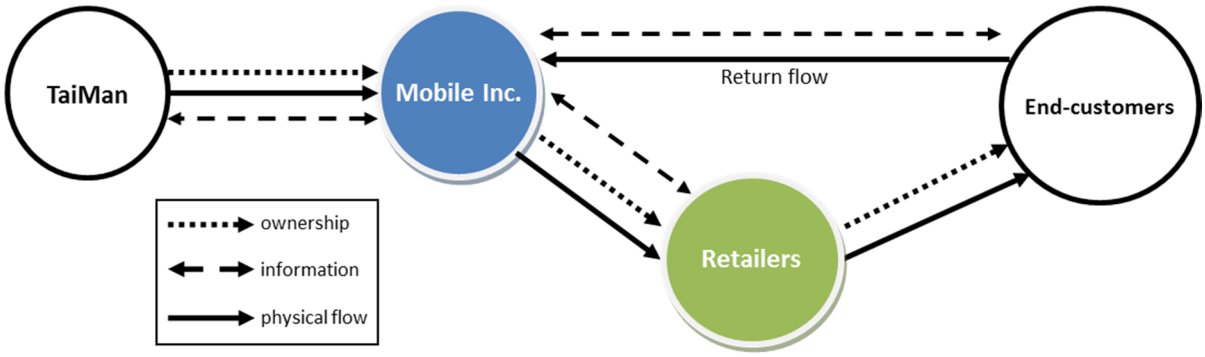

Figure 11 The relationship between TaiMan and Mobile Inc. in its network context

Figure 11 illustrates the relationship between Mobile Inc. and TaiMan and part of the surrounding network. Mobile Inc. purchases products from TaiMan, hence the arrow indicating transfer of title. Substantial exchange of information is required, concerning, for example, ordering and market communication. The products are then sold to retailers from which end-customers buy them. Product returns are sent to Mobile Inc., which is responsible for customer support and means that end-customers are also in contact with Mobile Inc.

Mobile Inc.'s initial interest in this relationship was spurred by TaiMan's products. At the time, TaiMan was a new and relatively small actor in Scandinavia, which affected pricing conditions and margins. Its target group was business customers, and the products were mainly sold through retail stores (similar to TeleX's operations focused on business customers). The specific market conditions related to the PDPhone assortment were explained by a former CEO of Mobile Inc.:

"When Nokia launches a new product, price-levels are balanced directly, almost as on a spot-market. A newcomer like PDPhone (TaiMan) allows for more flexible pricing, which is favourable to our profitability."

As an actor with exclusive rights of selling PDPhone products, Mobile Inc. was able to increase its margins and improve profitability. Non-exclusive rights would have meant margins being adjusted to those of other actors selling these products. The partnership with TaiMan increased Mobile Inc.'s responsibilities and costs, but provided opportunities for increasing revenues and profits.

Over time, the relationship has changed considerably. From the outset, TaiMan was open about its future plans to establish its own business in the Swedish market. By 2008, TaiMan had become a well-known and strong brand. The former PDPhone identity had been abandoned and smartphones were being sold under the TaiMan brand. The company had evolved to become the major smartphone brand in Sweden. The responsibilities of Mobile Inc. were successively reduced as TaiMan expanded its activities in Sweden by opening sales offices. In the new setting, Mobile Inc.'s relationship with TaiMan came to resemble the distribution arrangements with other manufacturers. TaiMan's products are now sold through a variety of channels, and the pricing conditions reflect those of other products and suppliers. The relationship with Mobile Inc. evolved from substantial engagement to a reduced and more distant undertaking. However, in addition to warehousing and physical handling, Mobile Inc. still performs some marketing activities for TaiMan.

4.8.2 The activity structure

The most interesting aspects of this relationship concern the period before TaiMan established its sales offices in Sweden – that is when Mobile Inc. was responsible for all activities after manufacture. The activity structure at the time is illustrated in Figure 12.

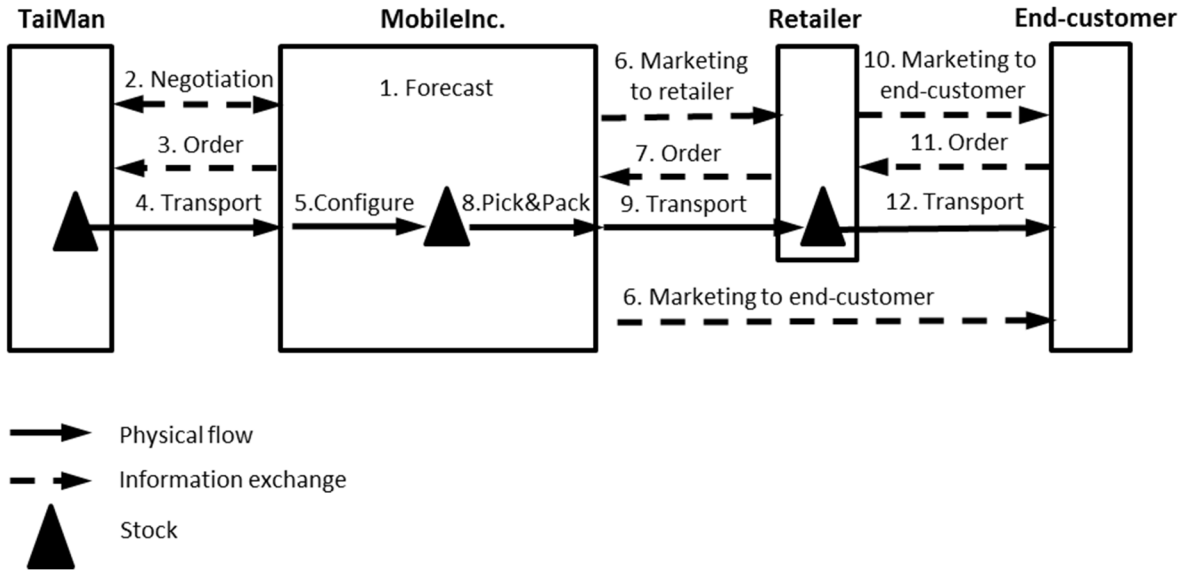

Figure 12 The activity structure and division of work in the relationship between TaiMan and Mobile Inc.

Mobile Inc. forecasted (1) the volumes of PDPhone that would be needed. It negotiated (2) with TaiMan and placed orders (3). Then products were transported (4) to Sweden, received in Mobile Inc.'s warehouse, configured (5) by Mobile Inc. and stored there. In conjunction, Mobile Inc. was involved in marketing (6) to end-customers through advertisements and other campaigns. Retailers ordered (7) products from Mobile Inc. which were packed (8) and then transported (9) by a logistics service provider. The retailer received the products and stored them before selling to end-customers (10-12).

Ordering and sales processes followed the same procedure as in other relationships with manufacturers and retailers. The main difference concerned the level of involvement, the configuration activities undertaken by Mobile Inc., and the marketing and promotion activities towards end-customers. The discussion that follows focuses on these features.

4.8.3 Interdependencies and adjustments

The ordering of products performed by Mobile Inc. in this relationship was based on speculation. Mobile Inc. ordered products on the basis of forecasts and stored them in its warehouse awaiting sales to retailers. This implies low levels of interdependencies. Due to the speculative nature, the products could be purchased in bulk and then stored in the warehouse without any direct consideration of sales. Orders from a retailer were not directly dependent on ordering by Mobile Inc. from TaiMan.

However, the ordering of products was tightly sequential with inbound receiving at the warehouse. These activities were both performed by Mobile Inc. and the products delivered from TaiMan were configured by Mobile Inc. before being placed in inventory. This meant that the ordering activity required a specific inbound receiving activity that directed the products to configuration. This called for adjustments of these activities because there was a need to divert the flow to the configuring station before the products were placed in the warehouse awaiting orders.

However, the product itself showed similar physical characteristics to Mobile Inc.'s more established assortment. The PDPhone was novel in being a smartphone, but physically was similar to other mobile phones which required no adjustments for physical handling apart from configuring.

There are interdependencies between Mobile Inc. and TaiMan's negotiation and discussion activities, and the subsequent marketing activities towards retailers and end-customers. TaiMan had to convey sufficient product information to Mobil Inc. for the latter to promote the product appropriately. In addition, adjustments were required to Mobile Inc.'s organization because this new relationship also called for an added contact with the end-customers. As a result of the responsibilities, Mobile Inc. was the primary contact for the end-customers when it came to customer support and after-market issues such as a repair. This new end-customer relationship called for adjustments of the activities performed by Mobile Inc.

4.8.4 Similarity and scale

Marketing of the products towards retailers represents TaiMan making use of the similarity that Mobile Inc. is able to achieve in its activity structure. Marketing to retailers is an activity that Mobile Inc. performed prior to its arrangement with TaiMan; it had frequent contact with retailer counterparts to discuss new products, for instance. Mobile Inc. performed the same service in relation to TaiMan's PDPhone, which increased the scale of this activity. Thus, in partnering with Mobile Inc., TaiMan was able to make use of the former's established structures and build on its existing activities, while Mobile Inc. was able to increase similarity and TaiMan was able to benefit from the resulting more efficient product introduction. However, marketing to end-customers was a new activity for Mobile Inc. with the result that similarities were low.

As discussed, few adjustments were required for Mobile Inc. to physically handle PDPhone products. Their similar physical characteristics increased similarity in product handling. For Mobile Inc. there were advantages in incorporating a new product in the form of high margins within an already existing set up and increased economies of scale. However, the added task of configuring the products before they could be sold decreased the similarity.

Hence, this relationship involved increases as well as decreases in similarity. For Mobile Inc. there was similarity in physical handling and marketing the products to retailers. However, marketing to end customers and provision of after sales services required adjustments to its activity structure. These additional responsibilities required the products to be configured before being placed in inventory, which was an additional warehouse activity. Mobile Inc. was able to sell a new product with higher margins and potential higher profit, but in return had to assume responsibilities that did not benefit from similarities because they were new activities. By suffering a decrease in similarity, gains in terms of increased income was the ultimate goal.

TaiMan, by outsourcing marketing and the customer contact to Mobile Inc., was able to focus on specializing in producing products, increasing similarities in their own activity structure all the while making use of the similarity that Mobile Inc. was able to achieve in theirs. By outsourcing the marketing to Mobile Inc. who already had relationships and established structures for marketing other products the similarity of Mobile Inc. could both be increased but also benefitted from by TaiMan.

4.8.5 Resource combining

The most significant resources in this relationship are described in Table 8.

Physical Resources	Organizational Resources
Mobile Inc.'s assortment	Mobile Inc.'s purchasing capability
Mobile Inc.'s warehouse	Mobile Inc.'s physical handling capability
TaiMan's mobile phone	Mobile Inc.'s marketing and sales capability
	Business relationships

Table 8 Significant resources in the relationship between TaiMan and Mobile Inc.

TaiMan's mobile phone (PDPhone) was important because it provided the basis for the initiation of the relationship. The product was novel when it was launched and, therefore, provided Mobile Inc. with an opportunity to increase its revenues and profits. These features attracted Mobile Inc. to partnering with TaiMan and made it willing to adjust its working procedures. TaiMan perceived Mobile Inc.'s assortment as a key resource which made Mobile Inc. an attractive business partner for retailers and operators and attractive for this foreign manufacturer as a way to enter the market. It was recognized that if its products were included in this already established assortment it would receive exposure to an already existing customer base.

Thus, Mobile Inc.'s established business network was the foundation for this relationship. It had significant relationships with retailers and operators as well as manufacturers. Mobile Inc. was perceived as capable of marketing and promoting new products through its established sales channels. TaiMan was interested in this structure without access to which it would have had to invest and rely on internal resources.

Mobile Inc.'s warehouse was another critical resource. Besides being used for stock-keeping, it was the basis for physical handling in relation to inbound receiving and outbound logistics activities. In this relationship also the configuring of the PDPhone products was undertaken in the warehouse. The purchasing capability of Mobile Inc. is also important on the one hand in order to be able to source TaiMan's products, but also since the capability of sourcing products from several sources is the foundation for being attractive to retailer and operator counterparts and thereby being attractive as a partner for TaiMan's launch of the PDPhone.

The marketing and sales capabilities of Mobile Inc. are always important resources. These resources are normally utilized in relation to retailers and operators. The relationship with TaiMan involved an extension of these marketing activities since the PDPhone products required promotion to end-customers. Mobile Inc. had to develop an ability that had not been called for in other relationships.

4.8.6 Adaptations and Economizing

The combining of new resources with old ones, is a prominent feature of this relationship. The PDPhone products represented something new to the market. It was a PDA phone with a Windows operating system, essentially an early smartphone. This new resource was combined with old resources in various ways. First, it was combined with other mobile phones in the assortments of Mobile Inc. and retailers. Second, it was combined with other physical and organizational resources (e.g. facilities in the form of warehouses and retail outlets, and business relationships) in order to become embedded in established distribution structures.

This combining required few adaptations since the new product had similar physical characteristics to the existing products. Therefore, the same handling and transportation equipment could be used. An exception in this respect concerned the final configuring of the products. Since this activity was new to Mobile Inc., it had to make some minor adaptations to its warehouse resources.

The combining with the old structures implied a need for active marketing in relation to end-customers, which was a new activity for Mobile Inc. The capabilities needed for these activities required some adaptations to its promotional resources. The new responsibility for customer support called for adaptations to its internal resources.

The partnering with Mobile Inc. enabled TaiMan to economize on the business relationships established by Mobile Inc. with other actors. Through the relationship with Mobile Inc., TaiMan could access an existing distribution structure. Mobile Inc. was able to economize on its business relationships because it was possible to market and distribute a new product with higher margins. Mobile Inc. was able to exploit its relationships to provide value for TaiMan's product launch while generating higher profits for itself. Mobile Inc. was able to economize on the PDPhone product because it was new and the margins were higher. By including this product in its assortment, Mobile Inc. increased its revenues. Since Mobile Inc. was the exclusive supplier of the new products, its assortment was differentiated compared to competing actors.

4.8.7 Mobile Inc. and the marketing organizer role

In this relationship Mobile Inc. widened its scope of activities. In addition to the traditional role as *assortment provider* it became involved in the final configuration of the PDPhone phone, which was undertaken in its warehouse. It also took responsibility for the whole bundle of marketing activities. TaiMan outsourced everything except product design and manufacturing to Mobile Inc., indicating a role as *marketing organizer* for the PDPhone assortment.

Mobile Inc. was able to provide TaiMan with valuable resources that allowed speedier launch of the PDPhone in the Scandinavian setting. These resources consisted of an established distribution structure of physical resources and relationships. These relationships were crucial to Mobile Inc.'s ability to market the products. In essence through the resources that Mobile Inc. has they were able to take on and function as a *marketing organizer* of the new PDPhone products.

Mobile Inc. was able to take on an extended responsibility as a *marketing organizer* for the new products partly because it was able to make use of similarities in structures already in place. However, to accommodate all of TaiMan's needs required adjustments that also limited similarity. These adjustments and decreased similarity were partly offset by the higher margins and potential higher revenue related to this new and unique product.

4.9 CallU and the multifunctional role

CallU is a Swedish based company that operates in 11 countries and had a turnover of SEK40 billion in 2011. The company offers products and services within fixed and mobile telephony, broadband and cable-TV. It considers itself a telecom operator and, in this study, the focus is on its Swedish division.

Initially, CallU sold its products through various retail stores. In 2009, it decided to open some own stores and was aiming for a nationwide chain within a couple of years. In 2012, it had around 40 stores in the middle and southern parts of Sweden. CallU claims that its success was built on external retailers. Thus, it planned to continue to market through these external retailers, but to increase sales through their own stores and internet sales. Its rationale for investing in a network of company owned stores was to promote continuity in its business activities. In its relations with external retailers, the business was heavily focused on price and which supplier could provide the retailers with the most attractive deal at a specific point in time. CallU saw

this situation as making it difficult to maintain continuity in the relationships with retailers, whereas in company owned stores this continuity could be guaranteed.

4.9.1 The Relationship with Mobile Inc.

CallU originally relied on several distributors for different types of products and services. However, in 2008, CallU began a search for a single distributor that could meet their demands, given their ultimate aim to manage a retail chain of 40-65 stores. Major distributors were approached and prices, competencies, trustworthiness, etc. compared. CallU's aim was to select one distributor in which to focus all of its business, and, thereby, acquire scale advantages and purchasing and physical handling competencies. In 2009, the decision was made to partner with Mobile Inc. Sweden, which was appointed sole distributor of all of its products except for digital TVs, which were not part of Mobile Inc.'s current assortment, and were sourced by CallU elsewhere.

CallU expected several benefits from this partnership. It wanted Mobile Inc. to be more than just a wholesaler from which it bought products. CallU visualized a collaborative distribution setup. This involves discussion between CallU and Mobile Inc. over new product launches and decisions about which products to focus on in future sales campaigns. CallU has found Mobile Inc. to be well positioned and knowledgeable about its products based on the latter's connections with manufacturers. For CallU, Mobile Inc.'s relationships with operators and retailers are beneficial, because the large-scale operations entailed provide CallU with advantages. CallU also appreciated the potential reduction of risk of ownership enabled by the extended partnership with Mobile Inc. For example, if CallU cannot sell a product, it can be returned to Mobile Inc. which then tries to find another outlet for it. Mobile Inc. and other distributors are better positioned than retailers and operators to handle such situations, because of their connections with alternative outlets.

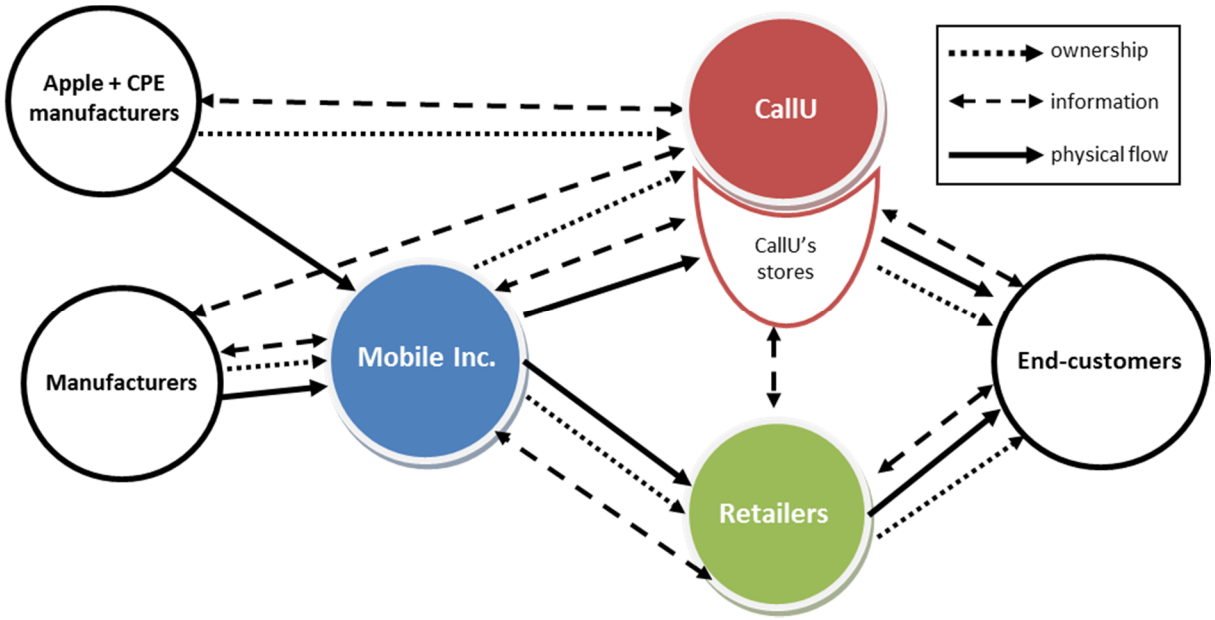

Figure 13 The relationship between CallU and Mobile Inc. in its network context

The setup involving Mobile Inc. and CallU is illustrated in Figure 13. CallU buys its products from Mobile Inc., and Mobile Inc. in turn purchases from manufacturers. CallU is also in contact with manufacturers. As already stated, only certain operators are allowed to buy Apple

IPhones. Hence, CallU purchases these products directly from the manufacturer, but still relies on Mobile Inc. for their physical handling. Similarly, in the case of CPE (Customer premise equipment), CallU purchases these products, but they are delivered to Mobile Inc. for storing and delivery to CallU in response to orders. In addition, CallU is in direct contact with manufacturers over marketing campaigns.

End-customers can purchase a mobile phone with a subscription from CallU, either via one of its stores or from an independent retailer. The retailer needs to be in contact with a distributor, which could be Mobile Inc., and CallU. The contact with a distributor is necessary to get access to the assortment of mobile phones, and the contact with CallU is required for the subscription. CallU manages its own web shop, which is linked to Mobile Inc.'s ERP-system allowing orders placed to be transferred directly to Mobile Inc.

CallU and Mobile Inc. have set up a 'product council' to discuss new products that are perceived as interesting and to decide which products to focus on. They develop a joint plan for the next three to six months. CallU uses this planning to try to reduce the risk of products becoming obsolete. CallU shares its sales forecasts with Mobile Inc. who passes on these forecasts to the manufacturers. The sales predicted by CallU do not constitute a formal agreement with Mobile Inc. although there is a 'gentlemen's agreement' that CallU will buy the forecast numbers of products.

Mobile Inc. provides CallU with regular statistics. CallU requires comprehensive information on the previous week's business activities. For example, it wants data on stock, what has been sold, and any backlog of unfilled orders.

Mobile Inc. is responsible for supplying SIM-cards and sales material related to CallU's products. Sales materials include price lists and welcome letters. The materials are designed in CallU's webshop, where Mobile Inc. can log on and order what it needs. The material is delivered to Mobile Inc.'s warehouse where it is bundled with the products and accessories ordered by CallU.

4.9.2 Mobile Inc. and the multifunctional role

CallU use Mobile Inc.'s distribution services for most of its products. In this respect Mobile Inc. fulfil the traditional role as *assortment provider*. For Apple and CPE products CallU takes title to the products, but outsources the remaining activities to Mobile Inc., indicating the *logistics service provider* role. The *end-customer interface* role is visible in this relationship because CallU's web shop is linked directly to Mobile Inc.'s warehouse which displays its assortment. Responsibility for CallU's purchases from manufacturers features the role as *purchasing coordinator* for CallU's retail chain. Finally, Mobile Inc.'s involvement with sales materials is related to the *marketing organizer* role.

Thus, Mobile Inc. fulfils a variety of roles, not only in relation to different business partners. It is also involved in several undertakings in relation to one and the same business partner. However, its *assortment provider* role differs from that related to RetailTel and the multifunctional role in relation to CallU discussed above. RetailTel was keen to avoid over-dependence on Mobile Inc. and wanted to be open to alternatives. CallU, on the other hand, looked for increased involvement, which reduces the opportunities to 'play the market', but enables solutions impossible in arm's-length relationships.

Since all the situations in the CallU example were described and analysed in relation to their implications for the features of the activity and resource layer they are not examined further.

5 The roles of middlemen

In this chapter the empirical material presented in the previous chapter will be further analysed. This chapter is divided into two sections. The first deals more closely with the empirical roles and the relations among them. The second is a more general discussion identifying a set of generic roles in the activity and resource layers of the ARA framework. To begin, the roles that were identified earlier are briefly reiterated followed by a discussion of the roles and how they relate to each other.

5.1 The empirical roles

The discussion in the previous chapter showed that Mobile Inc. takes on several roles towards its counterparts. The first role is *assortment provider.* This role focuses on the creation of assortments that are made available to customers, that is resellers and retailers. In order to make accurate forecasts and to plan operations, the relationships with counterparts are crucial for information exchange. Information from producers about planned product releases and phasing out of existing products is vital as are sales data from resellers and retailers. Based on the information provided by these counterparts, Mobile Inc. can organize and exploit its resources for warehousing and materials handling in an efficient way. This is important for Mobile Inc.'s achievement of economies of scale in its internal operations. The assortment provider role is similar to the traditional middleman role, which is being challenged.

The second role is that of *logistics service provider.* This role involves Mobile Inc. in warehousing and transportation, but not purchasing from manufacturers. Activities related to manufacturers are undertaken by an operator which purchases in sufficiently large quantities to deal with manufacturers directly. ConnectMe chooses to focus on these operations and outsource physical handling to Mobile Inc.

The third role identified is *purchasing coordinator*. In this role Mobile Inc. supports another actor in coordinating its purchases. This role is part of the relationship with TeleX where a new organization was developed in interaction with Mobile Inc. In order to resolve TeleX's loosely coordinated organization problem, Mobile Inc. drew on its existing knowledge and IT resources to develop a web shop for this customer.

Development of the web shop acted as an enabler for the fourth role of *end-customer interface*. This role applies to the relationship with the e-tailer, WebMob. In this case Mobile Inc. takes responsibility for the same activities as in the *assortment provider* role, but also provides inventory services for WebMob. Through the web shop, Mobile Inc.'s assortment is displayed as the product range of WebMob. This allows the e-tailer to display a larger assortment at lower cost than would be possible for a store based retailer. Mobile Inc.'s warehouse, in turn, serves as the end-customer interface for WebMob. Mobile Inc. takes care of the entire physical operation, and WebMob can focus on communication to consumers and improving its web site.

Mobile Inc.'s established customer network of retailers and operators enables a fifth role in relation to a new actor in the network, TaiMan. It acts as *marketing organizer* through its connections with manufacturers, retailers, operators and in some cases end consumers. Its position in the network provides unique opportunities to acquire knowledge of both upstream and downstream processes. TaiMan lacked this knowledge and saw an opportunity to tap into Mobile Inc.'s resources through collaboration with this actor. This allowed TaiMan to connect to the Swedish network more quickly and effectively than if it had performed these activities itself.

Finally, the previous chapter also highlighted the multifunctional role of Mobile Inc. This was illustrated by the relationship with CallU in which Mobile Inc. performs a variety of roles for one counterpart. In addition to all the roles described, Mobile Inc. is also involved in product development, illustrated below.

The case of pre-paid refill cards

In the late 1990s, prepaid refill cards for mobile phones emerged. These cards allowed customers to 'preload' their subscription with set amounts of money that was then used for calling. Each card had a printed code which represented a certain amount of money. The customer 'scratched' the card in order to reveal the code which was then entered into his or her mobile phone and the prepaid subscription would be refilled with that amount.

In order to reach consumers effectively with these pre-paid refill cards, Mobile Inc. started working with new counterparts. Its existing relationship structures with various retailers were not appropriate for this new product which had distinctive characteristics. A pre-paid refill card is a product that the consumer needs to buy regularly and sometimes outside of normal store opening hours. Customers can 'run out' of subscription at any time of the day or night, requiring a top up as soon as possible. This made convenience stores with their long opening hours and presence in many locations, attractive counterparts for the sale of these products. They were also seen as a way of strengthening Mobile Inc.'s position as the former CEO explained:

"*The power of the distributor lies in their sales channels. If you then have 2000 convenience stores then that is of course a strength"*.

However, there was a problem related to handling these prepaid cards. There was significant risk of theft during storing and transporting of these small cards, which were sometimes equivalent to large amounts of money. One small card, the size of a normal credit card, might represent monetary value of SEK100-500. This rendered their transportation similar to transporting cash, and required rigorous security protocols for their storage. It required a sealed off section in the warehouse, literally a cage, with limited access. Their storage in convenience stores also involved risks of theft and robbery.

In addition, Mobile Inc. felt that physical distribution of a code that basically was a digital product was unnecessary and expensive. It required the convenience stores to keep track of the number of products in stock, identify upcoming need, and contact Mobile Inc. to source the cards. All of these activities, normally associated with physical products, were essentially unnecessary since the code was an electronic product.

Altogether these factors urged Mobile Inc. to seek a solution. It identified an opportunity it was unable to develop on its own and set up a collaboration with another company. Mobile Inc. provided the specifications for what the system should achieve, and its partner developed the system. This solution allowed Mobile Inc. to dispense with physical cards and to distribute a code that could be printed digitally at the time of purchase at the convenience store. Storage and transport of prepaid cards was no longer necessary. The digital code printing was accomplished by machines that Mobile Inc. supplied to the convenience stores and which were linked to Mobile Inc. As the system was developed these machines were replaced by a modification to the stores' cash registers, which eliminated the need to produce, store and transport the machines. This represented a move from physical distribution to electronic distribution. Electronic distribution also removed the need for the customer to physically visit a store to refill his or her subscription. Electronic distribution and the link to Mobile Inc. meant codes could be sold online at any time of the day.

This was the foundation for the sixth and final role studied, that of *product developer*. This role of Mobile Inc. was a quite different responsibility. Mobile Inc. had recognized a problem with the prepaid cards and also identified an opportunity for development. It also provided a connection with convenience stores. However, Mobile Inc. did not have the necessary resources to develop the new electronic distribution system without collaborating with another actor. However, it recognized a problem and sought to develop its capabilities by acquiring new resources. In order to improve its capability of effectively distributing this new product, pre-paid cards, it needed to assume the completely new role of *product developer*. Thus, Mobile Inc. acting as middleman, fulfils six different roles in relation to its counterparts, see Table 9.

Assortment Provider
Logistics Service Provider
Purchasing Coordinator
End-customer Interface
Marketing Organizer
Product Developer

Table 9 The six identified roles performed by the middleman Mobile Inc.

5.2 Connections among roles

The case illustrates a middleman that develops new roles in response to opportunities. We identified six roles assumed by the middleman towards its counterparts, customers as well as suppliers. In the case analysed, the distributor started out with one role, *assortment provider,* and other roles developed later. Furthermore, some roles disappear as a result of what purpose Mobile Inc. can fulfill to counterparts, for example *marketing organizer* and *product developer*, which highlights that firms' role-sets are dynamic. It would seem to be as important to take care of opportunities for the development of new roles as removing roles that are no longer required. The analysis shows that one actor can interact with another firm in more than one role simultaneously. The case also illustrates how already established roles provide opportunities for the development of new roles. This points to connections among roles and that various roles breed each other. This is discussed next in more detail.

First, the relationship with counterparts is a central aspect of Mobile Inc.'s business and its ability to assume various roles. These relationships are key ingredients in each role and are also a source of similarity in the undertaking of various roles. The relationships with operators and retailers enable Mobile Inc. to exploit potential similarities in their activity structures. An example is the products from ConnectMe which are handled in a similar way to those of other operators, for example CallU. Indeed, the products that Mobile Inc. sources for sales to retailers exploit the same activity structures within the warehouse. Hence, the role of *assortment provider* and the role of *logistics service provider* involve the same activities for their execution. Mobile Inc. is able to increase the similarity in its activity structures and gain from economies of scale.

The two roles are complementary also in that one feeds the other. The ability to handle physical products in the warehouse is important for assembling and shipping assortments to a multitude of retailers. When the need for and opportunity to take on the role of *logistics service provider* arose in the form of handling ConnectMe's goods, Mobile Inc. already had the capabilities and necessary resources for these activities related to physical products. Essentially, through its efforts to become a better *assortment provider* its capabilities in physical handling of products developed to the extent that, in conjunction with its established relationship, they enabled Mobile Inc. to remain an attractive counterpart for ConnectMe once this firm decided to

purchase directly from manufacturers. By increasing the volume of the products handled in the warehouse, the activities related to the role of *logistics service provider* benefited from the 'similar' activities related to the role of *assortment provider*. Handling an expanding set of products increased the potential for economies of scale. The added benefit was that handling large volumes of other actors' goods increased the volumes in the warehouse without increasing the risk. Likewise, the volume of products handled in the *assortment provider* role is also benefitting the scale of product handling for the *logistics service provider* role, meaning that a more competitive price can be offered to the operators. By adjusting to the changing needs and demands of counterparts and, importantly, in this adjustment making use of and exploiting existing internal resources, the process of taking on a 'new' role was advantages for already established roles, and vice versa.

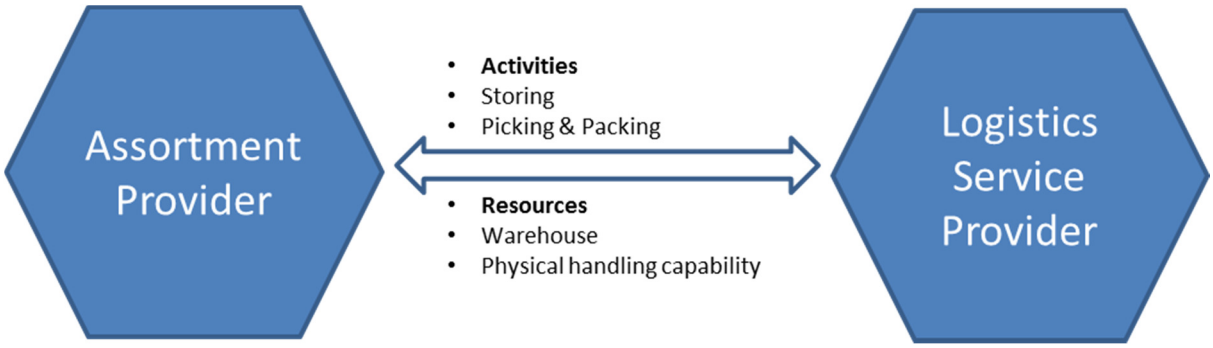

Figure 14 The roles of assortment provider and logistics service provider and the activities and resources used in both.

Figure 14 shows the two roles of *assortment provider* and *logistics service provider* and how they are connected. The two roles utilize the same warehouse and physical handling capabilities of Mobile Inc. They also are connected through similar activities in the form of storing and picking and packing.

In addition, the *assortment provider* role served as a foundation for the *purchasing coordinator* role. To be able to handle large volumes of goods and distribute them effectively in new assortments in Mobile Inc.'s role of *assortment provider*, requires extensive IT-systems. Information exchange related to customer purchases, warehouse stocks, lead times and so forth, needs to be coordinated and kept updated to enable efficient management of incoming products, their warehousing and delivery to customers. Through its experience in the role as *assortment provider* and in moving boxes, IT systems and technological know-how were developed to the point that Mobile Inc. was able to design a new IT solution that would benefit TeleX. Thus, through its role of *assortment provider*, Mobile Inc. had acquired and developed resources that enabled it to take on the role as *purchasing coordinator* when this opportunity arose.

Figure 15 The roles of assortment provider and purchasing coordinator and the activities and resources used.

Figure 15 illustrates the two roles *assortment provider* and *purchasing coordinator* and the activities and resources that are used in both roles. The IT competence of Mobile Inc. enabled the development of the web service which was an integral part of its ability to coordinate the purchases of TeleX. The roles are connected through use of the same resources and similar activities. In the role as purchasing coordinator, Mobile Inc. performs several activities that are integral to the *assortment provider* role. Forecasting, negotiation with manufacturers, ordering of products, storing and picking and packing products are all important activities since the creating of assortments is a crucial aspect of the coordination of purchases for TeleX.

The capability to create assortments, purchase products and physically distribute them is an important enabler for the role as *end-customer interface* and exemplifies how a resource explored in one relationship was later exploited in another. TeleX's need for aggregated purchases led to the development of the web service. Thus, the web service resource was developed in the *purchasing coordinator* role. Later, in connection with WebMob that same resource was used in a similar fashion to enable Mobile Inc. to take on the role as *end-customer interface*. The web service enabled the high level of automation required to achieve the capacity for information sharing and product delivery needed for the *end-customer interface* role.

Figure 16 The roles of purchasing coordinator and end-customer interface and the activities and resources used.

Figure 16 illustrates how the role of *purchasing coordinator* is connected to *end-customer interface* through exploitation of the same resources and utilization of similar activities. Again, the activities and resources needed for creating assortments were important parts of Mobile Inc.'s ability to take on the role as *end-customer interface*. In addition, the roles of *purchasing coordinator* and *end-customer interface* both rely on the web service. The web service developed in one role served as an enabler and led to the opportunity to take on another role.

The role of *marketing organizer* was also connected to Mobile Inc.'s previous operations. TaiMan wanted to utilize the resources and established network of another actor to enable its expansion. Mobile Inc. was an attractive counterpart based on its previous and current work as *assortment provider*. This role had allowed Mobile Inc. to establish a network of relationships with customers, operators, producers and transportation companies. This network enabled Mobile Inc. to supply various actors with products and information. TaiMan needed to make its products available to customers and, therefore, needed to transfer information about new products to customers and end-users. Mobile Inc.'s established network met its requirements. Thus, in the role as *assortment provider,* Mobile Inc. developed relationships that enabled it to assume the role as *marketing organizer*.

Figure 17 The roles of assortment provider and marketing organizer and the activities and resources used in both.

Figure 17 illustrates the connection between the roles of *assortment provider* and *marketing organizer*. The role of *assortment provider* enabled the new role through the established network, but both roles share resources and capabilities related to handling and marketing products.

When it comes to the role of *product developer,* this role signifies a move away from Mobile Inc.'s established network of relationships and in-house capabilities. There are no clear connections between this role and the other roles that were identified in this study. The distribution of prepaid refill cards required the involvement of other types of counterparts in the form of convenience stores. The development of the electronic distribution solution demanded capability to design a system according to specifications set by Mobile Inc. As long as the prepaid refill cards were distributed physically they exploited the same facilities and physical handling resources as the 'normal' assortment of Mobile Inc. However, when the electronic distribution system was introduced these conditions changed.

5.3 Central findings of the study

The study shows that Mobile Inc. is involved in several roles. The various roles evolved from the original role of assortment provider. The resources developed in relation to the assortment provider role were crucial for the efficiency of the activities related to the other roles. Also, it should be noted that the traditional role as assortment provider is still the most significant one.

Three important issues are highlighted. First, by exploiting resources in novel ways, new roles can be identified and developed. This role-generation is a matter of how existing resources are used internally, how resources are connected among actors, and how resources are developed both internally and in interaction with others. The study illustrates also that resources that are developed and used in the relationship with one counterpart can be used and further refined in other relationships. Thus, resource development is crucial for new roles to emerge. A main challenge for Mobile Inc. is hence to continually try to exploit their resources in new ways, as well as to develop resources that can be used in new roles.

Second, the development of roles through the exploitation of resources requires interaction with counterparts. Initiatives related to new roles can originate from customers and suppliers, as well as from within the focal company but in all cases interaction is necessary. The study shows that new roles may be developed in response to a specific need of a counterpart; TeleX, TaiMan and ConnectMe are prime examples. While some roles, for example the *purchase coordinator* role and the *marketing organizer* role, have only been used towards one counterpart, others such as *assortment provider* and *logistics provider* relate to several counterparts. Consequently, although a particular role is developed in relation to one counterpart, this role may be 'duplicated' towards other counterparts. Even if a role and the necessary resources are developed within the frame of one relationship it is important for the middleman to be able to use these resources in relationships with others.

Third, in some situations Mobile Inc. takes on a new role in order to solve a problem related to its own operations, as in the case of the *product developer* role where Mobile Inc. tried to create a new business that called for an extension to its network and the inclusion of new counterparts.

The study shows how a firm changes its role-set as new opportunities emerge. However, it was equally important for Mobile Inc. to handle its current role-set as to be open to opportunities related to changes to its role-set. These conditions required coordination of the activities related to the various roles and ensuring that resources appropriate to the specific roles and relationships were deployed. Various capabilities might be needed for each individual role, and its specific 'business logic' needs to be understood. For the focal firm, close interaction with counterparts is necessary to manage each relationship. Through this interaction, the firm becomes knowledgeable concerning the role represented by this relationship, which, in turn, can generate opportunities for relationship development and new roles. Understanding how different roles are connected and feed each other is crucial for efficient handling of the role-set.

6 Conclusions and implications

The main finding of the study is that numerous business opportunities are available for middlemen in the current distribution context. The study shows that Mobile Inc. is involved in six distinct roles in relation to its various business partners. Although the company combines these roles within the same organization, each of the six could be the basis for a specialized firm, for example, logistics service provider, purchase coordinator, assortment provider. A particular feature of the study is that the middleman roles are derived from observations in individual business relationships. Previous conceptualizations of roles (e.g. Alderson, 1954; Jensen, 2010), define the role of a middleman on the basis of some general features in relation to groups of anonymous potential business partners.

In this final thesis chapter, observation of Mobile Inc.'s businesses is used to formulate generic value-generating roles for middlemen. In this discussion, the findings from the case study are combined with findings from other studies. The two first sections discuss generic roles in the activity and resource layers in the network. The third sections analyses the consequences for the actor layer. The final section is devoted to discussion of the contributions of the study and suggestions for further research.

6.1 Generic roles in the activity layer

In relation to the operator, ConnectMe, Mobile Inc. focuses on physical distribution activities without taking title to goods. This role as logistics service provider is an example of rationalization in the activity layer in order to enhance economies of scale through specialization on a specific set of activities. This finding accords with other research. One example, is a study of wholesaling in three industries in the UK and Ireland where it was concluded that the main dynamics in distribution resulted from the search for efficiency through improvements in the performance of activities (Quinn and Murray, 2005). Such rationalization in the activity layer results from exploitation of technical development, as witnessed by the two 'revolutions' in the infrastructures for communication and transportation mentioned in Chapter 2. One strategic opportunity for a middleman is therefore to focus on some activities, divest and outsource others and, by means of *activity specialization*, re-orientate its role. Such specialization may regard information handling (e.g. Aldin and Stahre, 2003) or logistics and physical distribution (Selviaridis and Spring, 2007).

Increasing specialization provides opportunities for a second role in the activity layer. The retailer TeleX bases its business on a net of independent stores. Allowing each store to act in response to its specific situation provided certain advantages in terms of local flexibility. However, this independence and flexibility for individual retailers did not allow TeleX to exploit economies of scale. The role of Mobile Inc. as purchasing coordinator combined the demands of the various stores and generated value for the entire TeleX organization. This integration in the activity layer exemplifies a generic role based on *activity coordination*, which is increasingly important for two reasons. Firstly, specialization on information on the one hand and logistics on the other, calls for integration between the two, because specialization anywhere in an industrial system requires integration somewhere else. Specialized activities have to be re-assimilated "into a cognitive form wherein they have economic meaning" (Piore, 1992, p. 442). For example, for a buyer it is the functionality of a PC that is vital – not the efficiency of manufacturing the PC's components. This coordinative role is exemplified also by large-scale logistics service providers that connect the operations of huge groups of transportation firms through sophisticated IT solutions (Marasco, 2008). Secondly, enhanced attention to just-in-time deliveries and build-to-order production makes activities increasingly

interdependent, which also requires integration. An example here is a UK study that shows that some wholesalers have become "coordinators of the total supply chain" (Dawson, 2007, p. 318).

The two roles in the activity layer involve several diverse business opportunities depending on the nature of the activity interdependencies. For example, activity specialization may be problematic when activities feature strong sequential interdependencies (Thompson, 1967). In these situations the coordinative role is highlighted. Also, the mechanisms for activity coordination take various forms depending on the occurrence of other types of interdependencies.

Dell Computers is a significant example of role re-orientation in the activity layer. The business mission of Dell contrasts with the basic logic of PC distribution. This logic relies on a 'push' system and results in substantial inventories of assembled PCs on several middleman levels. Dell exploited opportunities offered by technological development (e.g. the Internet) and established arrangements for customized make-to-order assembly through direct contact with consumers. This shift towards postponement also eliminated speculative inventories of finished PCs that often were subject to severe obsolescence (Hulthén and Mattsson, 2010).

6.2 Generic roles in the resource layer

Mobile Inc. functions as a marketing organizer in relation to the producer TaiMan. This arrangement is an example of a generic role we label *resource provisioning*. Providing resources for others is increasingly significant in today's business landscape which is characterized by increasing attention to outsourcing and a focus on core competences. In these structures, the single firm is dependent on access to the resources of other organizations. Another illustration of this generic role is Mobile Inc.'s relationship with WebMob. This internet-based retailer relies on the warehouse facilities and other resources of Mobile Inc. through the role as end-customer interface. The relationship with ConnectMe is also an example of resource provisioning. The physical distribution activities of this firm were transferred to Mobile Inc. because Mobile Inc.'s resource capacity improved the performance of these operations. Thus, there is a clear connection between activity specialization and resource provisioning. As already mentioned, a firm focusing on a limited set of activities is better positioned to invest in sophisticated resources within this specialization, than firms involved in a multitude of activities, each requiring its particular resource set-up.

In some situations the need for resource access expands to include huge combinations of physical and organizational resources. The relationship with CallU touches upon this generic role that we identify as *problem-solving*. The two companies are involved in several collaborative efforts that exploit the resources of Mobile Inc. A study of Japanese wholesalers and their relationships with retailers reports similar findings of wholesalers engaged in the design of "sales programs, market strategies, computerized inventory management systems, etc." (Kimanyi, 2005, p. 39). Mobile Inc.'s role as the product developer of refill cards is not a major one; however, it is representative of a general evolution in which middlemen are increasingly involved in design and development operations (Dawson, 2007). A most striking example of problem-solving concerns the Li and Fung Group, which evolved from a textile trade broker into a coordinator of whole networks of private label apparel firms in Europe and North America (Bitran et al., 2007). Li and Fung integrates the processes in the supply chain from raw materials sourcing to allocation of production to factories, and is in control of manufacturing operations, shipping consolidation, customs clearance, and also local forwarding logistics. These features indicate a broad problem-solving role, evolving in the direction of the Grand Distributor.

For both resource provisioning and problem solving, resource combining is crucial. The resource layer features continuous combining and recombining of resources (Håkansson and Waluszewski, 2002). In these processes the interplay among physical and organizational resources is central. The interplay between the physical resources mainly concerns technical features, while social and administrative issues are crucial in relation to the organizational resources. The interplay between physical and organizational resources is particularly significant since economic considerations are involved (Håkansson et al., 2009).

The furniture retailer IKEA represents a significant re-orientation in the resource layer. IKEA decided to insource design previously undertaken by manufacturers and independent design houses. This internal resource enabled IKEA to create efficient manufacturing and transportation solutions and also to form the IKEA assortment. IKEA was established at a time when consumers had acquired their own resources for transportation through the expansion of private cars. IKEA exploited these conditions by establishing their stores in cheap out-of-town locations and involving consumers in home transportation and final assembly (Håkansson et al., 2009).

6.3 Consequences for the actor layer

The modified role-set of Mobile Inc. has evolved in relation to several types of actors; one producer, two operators, and three retailers. Traditionally, middlemen were considered prolonged arms of the manufacturer, illustrated by the claim that intermediaries are "business firms that help the [manufacturing] company find customers or close sales with them" (Kotler, 1988, p. 137). This function in some way corresponds to the assortment provider role of Mobile Inc. However, there has been a clear shift in the orientation of middlemen in general, from "facilitating the sale of what is produced, to one of identifying customer needs and then sourcing solutions" (Dawson, 2007, p. 315). As shown by the case study, this approach is much in line with the new roles of Mobile Inc.

The literature on distribution channels normally defines the position of a middleman through its connections to other actors, with a particular emphasis on the opportunities to reduce the number of transactions between producers and consumers. This study provides some complementary findings in this respect. The analysis with the industrial network model clarifies the significant impact of the middleman's position in the activity and resource layers. This finding supports the claim in Wilkinson (2001) that the operations of firms need to be considered in the analysis of role modifications. Concerning the activity layer, one option is to take a 'narrow position' by specializing in a limited set of activities. Another value-generating approach would be to occupy a 'broad position' and function as coordinator of a bundle of specialized activities. Similarly, the roles defined as resource provisioning and problem-solving imply their particular positioning in the resource layer. The actual positioning in the resource and activity layers is one significant determinant of the conditions for joint value-generation. The other critical factor concerns the patterns of interaction with individual business partners.

Potential benefits of increasing interaction in business relationships were analysed in a study of outsourcing to logistics service providers (Gadde and Hulthén, 2009). The study shows that improved interaction made it possible to identify the relevant scope of the provider's undertaking, which varied from single activities to total solutions. Moreover, sustained interaction over time improved the conditions for learning about business partners' activities and resources, which enhanced performance in both daily operations and long-term development. In general, the evolving middleman role builds on intense interactions with business partners, which, in turn, requires a shift from arm's-length relationships towards close cooperation (Ford et al., 2011; Weitz and Jap, 1995). The significance of interaction is clearly

expressed by the argument that actually a "market offering concerns the nature of the producer-user interaction, rather than any essential feature of a particular product or service" (Mason and Spring, 2011, p. 1034).

6.4 Final remarks and further research

The main contribution of this study is the analysis and formulation of middleman roles on the basis of individual business relationships. Previous research outlines the roles of middlemen in relation to clusters of anonymous organizations. Identification of the roles in the activity and resource layers in the network complements the mainstream literature which tends to define roles in relation to a middleman's position in the actor layer. Expanding the perspective to include the other two layers provides a broader spectrum for analysis of role options.

The basic point of departure for role re-orientation in changing business contexts is that any middleman must, in some way, generate value for its business partners. As shown in this study there are numerous value-generating opportunities available for a middleman. The findings indicate that there is more room for middlemen in today's distribution landscape compared to the previous situation. The argument underlying this statement is the huge variety in the operational involvement of current middlemen as well as the diversity of the capabilities they represent. The variety of middleman roles is explained by the disparate demands of business partners, the features of the value-generating capability of individual middlemen, and the conditions in the specific business context.

This variety is beneficial for a middleman since it provides a multitude of opportunities. However, these conditions can, at the same time, be problematic. In some cases the operations related to several roles support one another because they rely on the same resource set-up. In other situations, contradictions may emerge since the fulfilment of one role in relation to a specific business partner may constrain opportunities for other roles. Network analysis could uncover the tensions in and enable management of these controversies.

Re-orientation of roles is a major concern for middlemen since they have always been forced to adapt to new conditions. This chimes with Alderson's (1949) conclusion about the persistent attempts to supplant wholesalers. Half a century later other researchers were arguing that wholesale continues to be a highly significant function, despite the fact that "business analysts have been anticipating the wholesalers' demise for several decades" (Lusch et al., 1993, p. 20). The middlemen that survived did so because they were able to accommodate to new conditions and modify their value generating operations. Over time, these adjustments have changed the features of the organizations involved in distribution. Today, traditional labels, such as producer and middlemen, are less appropriate since historically sharp demarcation lines between production and distribution have blurred. Moreover, from an industrial network perspective, there are no specific middlemen, since every firm is situated in-between other firms. On the other hand, every firm is involved in connecting activities, resources and actors, across corporate boundaries. Therefore, all firms would benefit from considering themselves as involved in intermediation in the three layers of the networks to which they belong (Gadde and Ford, 2008; Hörndahl, 1994).

The conditions for this intermediation are in constant flux, and the basic roles of firms must be adjusted accordingly. These adjustments are problematic, since roles and business models are difficult to change "due to forces of inertia and resistance" (Zott and Amit, 2010, p. 217). Despite these difficulties, it is crucial for established firms to rethink their roles to avoid losing the initiative to new actors that exploit potential opportunities. As shown above, neither IBM

nor Hewlett Packard transformed the network for PC production and distribution, and it was the newcomer IKEA that reshaped the features of the furniture network.

This study was conducted in a recently established distribution context. Therefore, further research on middleman roles in other distribution arrangements is needed. It is most likely that a re-orientation of roles is more problematic in business contexts where the distribution logic features long established patterns. In particular, the implementation of alternative role-sets may deserve further attention in these institutionalized structures. In this study the middleman is the focal actor. Further research could research the roles of middlemen from the perspective of their business partners.

Finally, in the efforts of middlemen to rethink their strategic situation, the analytical tools and suggestions for re-orientation presented in this paper could be useful. Firms following these principles for role modifications should achieve ample opportunities to successfully adjust their operations in response to the considerable changes ongoing in the distribution landscape: “from scale to scope, from speculation to postponement, from push to pull” (Maruyama, 2004, p. 36).

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