

Lutz, Salla

**Doctoral Thesis**

## Position and repositioning in networks: Exemplified by the transformation of the Danish pine furniture manufacturers

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THESIS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

**Position and Repositioning in Networks  
– Exemplified by the Transformation of the Danish  
Pine Furniture Manufacturers**

SALLA LUTZ

Doctoral School of Organisation and Management Studies  
Department of Management, Politics and Philosophy  
Centre for Applied Market Science (CAMS)  
CBS / Copenhagen Business School  
Herning, Denmark 2009

## English Summary

The initiation of this research project is based on the observations among the Danish pine furniture manufacturers. Since the late 1990s the industry has been characterised by the increasing price competition emerging from the other Danish manufacturers and from the producers in the low cost regions. Moreover, the end-users have not favoured pine furniture as much as before.

In this context of increasing price competition and decreasing demand of pine furniture, the Danish manufacturers have started purchasing ready-made furniture from the low cost regions, e.g. China and Eastern Europe in order to complement the own manufacturing activities. This thesis followed longitudinally the manufacturers' transformation from the manufacturing practises to purchasing of ready-made furniture.

### *The theoretical foundation of the thesis*

Theoretically, the thesis has its foundation on the Industrial Network Perspective by the IMP Group (Industrial Marketing and Purchasing) that assumes that companies are interrelated and interconnected to other actors in the network through relationships. In this thesis the conceptual framework is based on the following concepts: Supply network, position, repositioning and drivers of repositioning. The *supply network* is defined as a net delimited from the network for the particular research purposes. Moreover, a supply network looks at connections and dependencies between firms from raw material to final customer.

I identified *three measurements of position*. I identified three measurements. I argued that position is measured upon specific measures, which are subjective and dependent on the context position is studied in. I defined role in supply networks in the following way. Firstly, I identify a firm's function (e.g. supplier, manufacturer, distributor and customer), and those activities that are typical and expected in relation to the specific function. Secondly, there are supporting activities that are carried out by a collection of actors, and these activities support a firm's main role.

Regarding relationships, three relationship elements were identified: Cooperation - Competition/Conflict, Power Dependency and Trust Development. These elements were identified

as important tools when describing the general structure or atmosphere of the relationship. However, the examples above have indicated that the relationship elements as such do not tell the whole truth. Hence, the relationship context in terms of interaction environment provides the platform to reveal useful information concerning the relationship, and help us understand them in a more comprehensive way.

Finally, I identified two different types of capabilities that are concerned with the role and relationships a firm has in a network. Role capabilities entail those product and process capabilities (Ritter, 2006) that are important for a firm to carry out activities related to a specific function. Relationship capabilities include technical, economic and cultural skills as well as knowledge about other actors. In the present study, these capabilities have been studied from the purchasing point of view, i.e. product and supplier knowledge, cost calculations and ability to manage international supplier relationships. Relationship capabilities also entail social skills that are considered the ‘soft’ part of managing relationships.

*Repositioning* in this thesis is understood in terms of following the process of change from a position at a certain point ( $t_0$ ) to a position at another point ( $t_1$ ). In other words, this thesis takes its starting point by studying a firm’s position as pine furniture manufacturer and followed the process of change from this position to a new position as furniture trader. As the concept of repositioning was anchored in the concept of position, the change in position included the changes in the measurements, i.e. role, relationships and capabilities.

A *change driver* is defined as a change at organizational, relationship or network level that leads to reactions in a network. I also distinguished between internal and external change drivers. The classification of these drivers is dependent on whether the change arises from a firm itself, from its network or from the network. The external drivers can explain changes in the general network environment, while the internal drivers are concerned with the changes within the organisational and/or a firm’s relationships. Moreover, change drivers are context-specific, meaning that each research context has its particular change driver types.

In order to refine the dichotomy of internal and external change drivers, I identified that this classification is dependent on a firm’s knowledge about its network. In this context the

predictability of changes gained relevance. Unless changes occur totally unexpected (e.g. natural disasters), changes may be predicted by studying a particular firm's network context and inherent general characteristics. Moreover, I identified that a firm can either be reactive or proactive towards change. On certain occasions, a firm's ability to be proactive towards change increases when it captures a more holistic understanding of its network. Based on these facts I argued that a firm's ability to recognize and react upon change is dependent on its change capability that entails the holistic understanding of the network structure that the firm is part of. However, this capability may be hindered by a firm's path dependence.

### ***Methodology and research method***

In this research project I adopted the critical realist perspective. From that perspective, the reality was 'out there' and that reality can be discovered and understood (Easton, 1995). The critical realist approach entailed that knowledge must be evaluated and tested critically in order to determine to which extent it represents or corresponds to the world (Hunt, 1990). As cases were a starting point for this thesis, a multiple case study research consisting of three cases was selected. Moreover, this research method was selected because it provided a good platform for understanding a new phenomenon. Moreover, the Danish pine furniture industry did not have any former experience in participating in the academic research.

This thesis was built on 82 semi-structured interviews with persons employed in the case companies. Of these interviews 31 can be categorised as the interviews carried out in the inductive phase. Other 41 interviews were carried out in order to obtain more detailed information on the purchasing function. Finally, 10 interviews were made as in-depth interviews related to the purchasing of ready-made furniture in three case companies. The interviews were carried out during the period of January 2005 and July 2007.

### ***Theoretical and managerial contributions***

Theoretically, I have added more insight into the discussion of how a firm's position is seen in relation to others. This thesis has clarified the position measurements by pinpointing that the earlier contributions within this field can be categorised under a limited number of measurements.

Secondly, I have added an alternative way of studying change in networks. In this way the position measurements can be used as operational tool to explore change issues in a network. The third theoretical contribution is concerned with the concept of supply network. This thesis has anchored the supply network as being a useful and appropriately delimiting tool to study global sourcing issues in industrial networks.

For practice measures, this research has the following implications. Firstly, purchasing has increased its importance significantly. Secondly, capabilities are of utmost important when carrying out a role of managing business relationships and undertaking change in networks. The necessary capability set is required to carry out these activities, and it is important for the firms analyse, whether their capabilities fit the present situation. Moreover, it is of ultimate importance that the firms understand the network context they are operating in. In these terms, it is not enough to know who your suppliers, competitors and customers are. It is also crucial to recognize the more general development of the present network and capture the change driving forces.

Thirdly, in this study path dependence was one of the factors that hindered the firms' repositioning and the development of capabilities. In this context capabilities can also be seen as impetus for changing this. An analysis of the capabilities found in a particular firm can be a source of more proactive change. It might even transpire that a firm will discover capabilities that will lead to a change from an existing network to a totally new one. A firm's relationship can be used in a similar way, and the existence of a latent or indirect business relationship can lead to changes in a firm's role and capabilities. Therefore, a more proactive way of using capabilities and relationships as shown above can lead to a change in a firm's network logic.

## Dansk Resumé

Dette forskningsprojekt tager udgangspunkt i observationer omkring de danske producenter af fyrretræsmøbler. Siden slutningen af 90'erne har industrien været præget af priskonkurrence som ses dels indbyrdes mellem de danske producenter, dels fra aktører i lande med lavere omkostningsstrukturer. Derudover er slutbrugernes interesse for fyrretræsmøbler dalet betragteligt. I takt med den heraf følgende lavere efterspørgsel på fyrretræsmøbler er de danske producenter i stigende grad begyndt at købe færdigproducerede møbler fra lavprismarkeder som Kina og Østeuropa for at komplementere deres egen møbelproduktion.

### *Afhandlingens teoretiske ramme*

Det teoretiske fundament er baseret på det industrielle netværksperspektiv, som antager, at virksomhederne er en del af netværket gennem direkte og indirekte relationer til andre aktører i netværket. Denne afhandling er baseret på følgende fire koncepter: Supply network, position, repositioning og drivers of repositioning. *Supply network* er defineret som et net afgrænset fra netværket som skal anvendes til et specifikt forskningsformål. Supply network omhandler også virksomhedernes indbyrdes relationer ved at undersøge materialeflowet fra råmateriale og frem til slutkunden.

*Position* defineres ved hjælp af de tre parametre rolle, relationer og kompetencer.

Rolle er defineret som de aktiviteter, en virksomhed påtager sig i en bestemt funktion. Disse aktiviteter er understøttet af støttefunktioner (f.eks. indkøb og markedsføring) og de medarbejdere, der er tilknyttet disse støttefunktioner. Relationerne består af tre sammensatte hovedelementer: Samarbejde – Konkurrence, Magt – Afhængighed og Tillid – Engagement. Disse elementer anvendes for at beskrive relationernes struktur eller omgivelser.

Kompetencerne er inddelt i to hovedkategorier: Kompetencer relateret til rolle henholdsvis relationer. Rollekompetencerne indebærer produkt- og proceskompetencer, der er nødvendige for at udføre en bestemt funktion. Relationskompetencerne omfatter fire områder: tekniske, økonomiske og kulturelle kvalifikationer, samt viden om andre aktører.

*Repositioning* omfatter forandringsprocessen fra en position på et defineret tidspunkt ( $t_0$ ) til en ny position på et andet defineret tidspunkt ( $t_1$ ). Med andre ord følger denne afhandling forandringen fra at være drevet ud fra virksomhedens produktionsaktiviteter og frem til det tidspunkt, hvor det primære fokus ligger på indkøb af færdige møbler i stedet. På denne måde bliver repositioning forstået som forandring i position, d.v.s. forandring i rolle, relationer og kompetencer. *Drivers of repositioning* defineres som forandring på organisations-, relations- eller netværksniveau som medfører yderligere forandringer i netværket. Drivkræfterne kategoriseres enten som interne eller eksterne, afhængig af om de opstår i virksomhedens omgivelser eller internt i virksomheden eller i dens relationer. Denne kategorisering præciseres yderligere ved at definere, hvorvidt disse drivkræfter kan forudsiges. Medmindre drivkræfterne er totalt uforudsigelige, kan virksomhederne imødegå drivkræfterne gennem at forstå det specifikke netværks kontekst og generelle karaktertræk. I denne sammenhæng kan der identificeres en forandringskompetence. Ved hjælp af denne kan virksomhederne forudse forandring og reagere med rettidig omhu. Denne kompetence er afhængig af virksomhedens viden omkring dets netværk. Den påvirkes også af virksomhedens vanetænkning.

### ***Metode***

Forskningsprojektet blev gennemført som en multiple case study, hvor tre virksomheders forandringsproces blev fulgt i perioden fra januar 2005 og frem til juli 2007. I denne periode blev der foretaget 82 semi-strukturerede interviews.

### ***Videnskabelige resultater***

På det teoretiske plan har denne afhandling tilføjet forøget indsigt i diskussionen om, hvordan virksomhedens position kan ses i forhold til andre aktører ved hjælp af tre parametre: rolle, relationer og kompetencer.

Forskningsresultaterne indikerer, at indkøbsfunktionen i de medvirkende virksomheder har ændret karakter ved at blive virksomhedernes hovedaktivitet i stedet for at være en mere traditionel støttefunktion. På denne måde er virksomhedernes organisationsstruktur ved at ændre sig, ved at funktionsopdelte støttefunktioner i stigende grad bliver mere integrerede.



Kompetencerne viste sig at være nødvendige for at udføre en rolle i et netværk. Kompetencerne var ligeledes vigtige for at håndtere relationer og for at udføre en transformationsproces. Kompetencerne er også nødvendige for at bibeholde en holistisk forståelse af det netværk, virksomheden opererer i. I denne forbindelse er det vigtigt for virksomhederne at analysere, hvorvidt deres nuværende kompetencer stemmer overens med de faktiske aktiviteter og relationer.

I dette forskningsprojekt har virksomhedernes vanetænkning og mangelfuld netværksforståelse forhindret en hensigtsmæssig forandringsproces. Derfor er det vigtigt for virksomhederne at dyrke de kompetencer og relationer, der kan bane vejen for en mere proaktiv forandringsproces og endda føre til, at virksomheden bliver del af et nyt netværk.

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My passion for research began when I was about ten years old. One day, I was writing an essay on coloured scraps, and for that purpose I eagerly copied the article on that topic in our brand new encyclopaedia. My father passed by, and pointed out something that I still remember to this day: “You should never rely on only one reference”. I am very thankful to my father for challenging me already at that early stage of my life. Unfortunately, he passed away back in 1993 and will never read this dissertation. Therefore, I would like to dedicate this book to the memory of my father, Martti Uusikylä.

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Salla Lutz

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## **I Prologue**

## ***1. Introduction: Reshuffling of activities in global networks***

The motivation for this study arises from a study of eight Danish pine furniture manufacturers. Back in 1996 while I was still carrying out my Master's studies in forest products marketing in Finland, I conducted a small research project for a Finnish consultancy firm dealing with the Danish pine furniture industry. At that time, the operational excellence of the Danish pine furniture manufacturers was a target of admiration among many Finnish sawmills who exported pine (*Pinus sylvestris*) sawn wood to the Danish manufacturers. As a matter of fact, many actors in Finland could not understand how a small country like Denmark with almost non-existing own sawn wood resources could reach the largest productivity per capita in the woodworking industry.

I returned to the Danish pine furniture industry as doctoral student in the beginning of 2005, and compared with the glory days in 1996, I now faced a glum scene. After more than 20 years' of success as pine furniture manufacturers, these formerly lucrative companies were struggling for their survival. While these companies were desperately looking for orders to fill up their tremendous production capacity, I observed that many companies had also started focusing on sourcing of ready-made furniture from China as a complementary activity to manufacturing. This observation led me to wonder whether they would succeed in shifting focus from manufacturing activities to purchases of ready-made furniture.

Obviously, firms are faced by many changes in their environment, and compared with earlier decades these changes seem to take place more rapidly than ever before. Alongside the increasing product range and innovation, many managers have come to realize that flexibility and a firm's ability to respond to constantly changing market trends are more critical capabilities than ever before (Håkansson and Persson, 2004).

In terms of the Danish pine furniture industry there are several reasons for these changes: Firstly, the opening-up of the global economy has made it possible for historically isolated countries to enter the world trade arena. These new countries typically have low labour costs (Taplin and Winterton, 2004). Secondly, efficient and effective transportation and communication systems make interaction and exchange over long distances possible and economically viable (John et al., 2001). Thirdly, more and more firms adopt global sourcing practices and thus gain experience in

dealing with international suppliers (Kotabe and Murray, 1990; Handfield, 1994; Levy, 1995; Trent and Monczka, 2003).

### **1.1. Outsourcing versus value chain upgrading**

Opening up the global economy has led, and forced, many companies to reconsider the composition of their own activities by contemplating the ramifications surrounding make-or-buy decisions. Even though make-or-buy decisions have been dealt with in the literature already for more than half a decade (Culliton, 1942), it is only in the past 15-20 years that these decisions have accrued increased attention in terms of a firm's core competences (Prahalad and Hamel, 1990), outsourcing (e.g. Lacity and Hirschheim, 1993; Quinn and Hilmer, 1995; Feenstra and Hanson, 1997) and further specialization in the activities.

This specialization has been dealt with by Balassa (1967) and Sanyal (1983) as vertical specialization, and Krugman (1995) talks about slicing up the value chain. Moreover, disintegration of production is mentioned in Feenstra (1998) while Feenstra and Hanson (1997) refer to production-oriented specialization. Also such terms as fragmentation can be depicted (Jones and Kierzkowski, 1997; Deardorff, 1998; Arndt 2001) as well as intra-product specialization (Arndt, 1998; 2001). Similar to these contributions is the fact that companies aim towards further specialization as a way of narrowing its field down to a few core activities (McIvor, 2005).

However, specialisation in the activities is not always a neatly defined strategic and pro-active decision. On the contrary, sometimes firms may react passively. This fact is identified among value chain researchers (e.g. Gereffi, 1999; Fakude, 2001; Kaplinsky et al., 2002; Kaplinsky et al., 2003) who have observed a reactive pattern of change. This pattern is labeled as value chain upgrading and entails four upgrading processes as follows: (Humphrey and Schmidt, 2002; Humphrey, 2004; Gereffi et al., 2005):

1. ***Process upgrading*** (Changing towards more efficient production facilities and processes);
2. ***Product upgrading*** (Moving to a more sophisticated products lines, e.g. from the apparel commodity chain upgrading from discount chains to department stores);
3. ***Function upgrading*** (abandoning existing functions and acquiring new, superior functions in the chain, such as design or marketing);
4. ***Inter-sectoral upgrading*** (applying the competence acquired in a particular function to move into a new sector. For example, Taiwanese TV manufactures used their knowledge and skills to make monitors and move into the computer business).

These upgrading processes have been identified among manufacturers in the developing countries that traditionally have been suppliers to the large global retail chains like IKEA and Wal-Mart (Gereffi, 1999; Fakude, 2001; Kaplinsky et al., 2002). This powerful relationship set-up between developing countries and dominating retailers might not be surprising, but I was surprised when I realized that the objects of my study were undergoing exactly the same process. A further literature review indicated though that similar patterns could also be depicted among other developed countries. Surprisingly enough, both the Finnish (Tikkanen, 1998) and American (Nwagbara et al., 2001) pine furniture industry had experienced a similar value chain upgrading process. Moreover, the Italian shoe industry (Rabellotti, 2001) was also facing the same phenomenon.

## **1.2. Integration of activities and the emerge of supply networks**

As activities are split up and companies change their focus from product and process aspects to downstream-oriented issues (Araujo and Spring, 2006), and the integration of activities triggers. In this context Supply Chain Management and especially the concept of supply chain integration (Bowersox and Closs, 1996; Lee, 2000) gains relevance. The early notions regarding Supply Chain Management (SCM) can be found in Forrester (1961) who talks about materials flows and the reduction of total inventory. However, the term SCM first appeared in the early 1980s, often in the context of logistics (Oliver and Webber, 1992). At that time SCM was solely concerned with the external logistical integration of customers and suppliers (Bowersox and Closs, 1996). Even though SCM and logistics literatures are closely related, there are some distinctive differences as well. Logistics literature presumes rational co-operation between different actors and in this way strives to find optimal solutions for inventory and transportation (Mills et al., 2004). This also means

enhanced focus on minimising total costs. Moreover, the traditional focus of logistics is often intra-organizational (Larson and Rogers, 1998)

SCM, in contrast, considers the behavioural aspect (e.g. power and dependency, trust and commitment) between buyers and sellers and is concerned with long-term profitability among different actors in the supply chain (Lamey, 1996). Finally, SCM is inherently inter-organizational in its focus (Larson and Rogers, 1998) and this is also seen in Lambert et al. (1998, p. 504) who define SCM as “*the integration of business processes from end user through original suppliers that provide products, services, and information that add value for customers*”. Therefore, the integration of activities in the supply chain context is concerned with material, information and finance flows to customers, suppliers, manufacturers and distributors (Lee, 2000). As these flows cut across different functions within a firm and outside its boundaries, coordination and integration of these flows achieve a crucial role. This orientation has led into development of new types of specialist organizations (Miles and Snow, 1986) and systems integrators (Araujo and Spring, 2006), and new job titles like supply chain integrators (Parker et al., 2002).

In this specific context of supply chain integration, references to a supply network can be depicted. Lee (2000, p. 32) refers to these concepts by stating “*There are complex relationships, such as multiple suppliers serving multiple customers, or a suppliers that may be a customer or even a competitor in different parts of the chain. This complexity is why some people refer to supply chains as “supply networks” or supply webs*”.

In the later years the concept of supply networks has developed in two distinct stream of research (Lamming et al., 2000):

1. Largely descriptive research on industrial network mainly conducted by the researchers in the IMP-Group;
2. More prescriptive research on SCM, based in the fields of strategic management and logistics and mainly propagated by American researchers.

The amount of IMP contributions concerned with supply networks is growing rapidly. Since the seminal work of Harland (1996) three main streams of contributions can be identified (see Table 1) that have developed into four different directions. Firstly, there are contributions that are developing *the concept of supply networks* from various angles:

- Levels of analysis (Harland, 1996);
- Types of supply networks (Lamming et al., 2000; Harland et al., 2001);
- Models for studying supply networks (Harland et al., 2004; Mills et al., 2004);
- Characteristics of supply networks (Håkansson and Persson, 2004).

Secondly, there is a growing interest towards *supply network management issues*, and this can be depicted in terms of networking activities (Johnsen et al., 2000) and roles and competences (Harland and Knight, 2001; Knight and Harland, 2005; Hertz, 2006) related to management issues. Finally, the most recent contributions are dealing to a large extent with the *dynamism in supply networks*. Andersen and Christensen (2005) study the dynamics by following the development of supply activities and the increasing integrative role of purchasing, while Hertz (2006) is concerned with the evolvment and constraint in overlapping of supply chain networks. Finally, Holmen et al. (2007) are concerned with the development of supply networks in terms of firms' initiatives.

<b>Author</b>	<b>Area</b>	<b>Case study / Conceptual</b>	<b>Contribution</b>
Harland (1996)	The concept of supply network	Case: UK and Spanish automotive industry	Levels of analysis in supply networks
Johnsen et al. (2000)	Supply network management	Case: Automotive industry in UK and in the continental Europe	Specific networking activities and network effects
Lamming et al. (2000)	The concept of supply network	Case: 16 European major firms from 5 industry groups	2x2 matrix: Higher/lower product complexity and innovative/functional products
Harland et al. (2001)	The concept of supply network	Case: Same as Lamming et al. (2000)	2x2 matrix: Dynamic/routinized supply network and Low/high degree of focal firm influence
Harland and Knight (2001)	Supply network management	Case: Same as Harland (1996b)	Six network management roles
Harland et al. (2004)	Supply network management	Case: 8 cases of product/service supply networks (ProjectION)	Conceptual model that informs about supply networks within the areas of: <ol style="list-style-type: none"> <li>1. The set of networking activities</li> <li>2. Connection of networking activities</li> <li>3. Possibility to apply the model in the future empirical research</li> </ol>
Håkansson and Persson (2004)	The concept of supply network	Case: 5 case studies within different industries	Serial/sequential, pooled and reciprocal interdependency, better understanding of prioritizing strategic actions and organizational behaviour
Mills et al. (2004)	The concept of supply network	Conceptual	Four perspectives for studying supply networks: <ol style="list-style-type: none"> <li>1. Upstream</li> <li>2. Downstream</li> <li>3. Static network</li> <li>4. Dynamic network</li> </ol>
Andersen and Christensen (2005)	Dynamism in supply networks	Exemplified cases	New, integrating positions of subcontractors
Knight and Harland (2005)	Supply network management	Case: Same as Harland (1996b)	Applying role theory in supply networks, grouping of roles: <ol style="list-style-type: none"> <li>1. Structural (Operation)</li> <li>2. Roles undertaken by groups</li> <li>3. Individual roles</li> </ol>
Hertz (2006)	Supply network management Dynamism in supply networks	Case: Swedish automotive industry	Roles and constraints in different supply networks also change
Holmen et al. (2007)	Dynamism in supply networks	Case: Large main contractor	Supply network initiative (permanent/temporary) as a means to reform the supply base

**Table 1: Research on supply networks from the IMP perspective**

### **1.3. Identification of the research area and defining the research question**

My empirical observations among the Danish pine furniture manufacturers are in line with the general acknowledgement of firms are undergoing changes more rapidly than before. The changing activities and the vast impact of relationships indicated clearly that this phenomenon was not merely an internal reorganization. In contrast, it showed that firms are affected by the other actors' actions and in this manner networks gained relevance. This network view combined with the subject of current interest made me more convinced about selecting this research topic.

Judging from the increasing amount of contributions to supply networks among industrial network researchers, the topic is relevant to study further. In order to strengthen this relevant concept in the IMP research, it is important that we develop the concept into a more durable direction, i.e. build up a generic framework with the aid of extensive case study material and by strengthening the conceptualization of the term supply network. Moreover, as the contributions within the dynamic nature of the supply networks are just emerging, this research will contribute to that direction. This research project started at the time, when the objects of the study just had adopted the new trading activity. Thus, it was a unique possibility to study the development and observe changes as they occurred. Moreover, it also enabled a look at the forces behind this change process. Therefore, based on the above, the research question of this thesis is as follows:

*How does a firm's position evolve in supply networks?*

In order to answer this question, two sub-questions are defined:

1. How is a supply network defined? (Chapter 2)
2. How is a firm's position defined in supply networks? (Chapter 3)
3. What is meant by a firm's repositioning? (Chapter 4)
4. What drives this repositioning process? (Chapter 5)



#### **1.4. The structure of the study**

The structure of the thesis is as follows. After the introduction to the study, the second part entails the theoretical framework underpinning the research questions defined in the chapter 1. There are five chapters (Chapters 2-6) covering the theoretical foundation. Chapter 2 defines the concept of a supply network. Chapter 3 introduces the concept of position and consists of three parts. The first part discusses the dimensions of position and the second part builds up the determinants of a firm's position in the supply network. Subsequently, a framework for determining a firm's position in the supply network is presented which is based on the dimensions and the determinants of position.

Chapter 4 develops the concept of repositioning. The chapter consists of two main parts of which the first makes a distinction between positioning and repositioning. After that, repositioning in supply networks is studied in terms of the determinants of position that have been defined in chapter 3. Chapter 4 introduces the drivers of repositioning. Finally, chapter 6 combines the theoretical concepts presented in the chapters 2-5 and builds up the underlying reference frame for this thesis.

The third part of the thesis introduces the research method and the case studies. Chapter 7 includes a discussion of the method that has been used throughout the research process. It discusses critical realism and an abductive approach to conducting case study research. This is followed by a description of the three research phases that the project has gone through during the period from 2005 to 2007. Moreover, the chapter discusses the challenges that arise when research is conducted *with* the companies, and not only *in* the companies.

Chapter 9 contains three case studies and analyses of the empirical material based on the frame of reference, presented in the chapter 6.

The fourth part (Chapter 10) of this thesis entails conclusions, implications and recommendations for further research. The structure of the thesis is illustrated in Figure 1.

I Part: Prologue

1. Introduction

II Part: Conceptual framework of the thesis

2. Concept of a supply network

3. Position in a supply network

4. Repositioning in a supply network

5. Drivers of repositioning

6. Framework of the thesis

III Part: Research method and the case studies

7. Methodology

8. Research design

9. Cases

IV Part: Conclusions

10. Conclusions

Figure 1: The structure of this thesis

## **II Conceptual framework of the thesis**

## ***2. Concept of a supply network***

In this chapter I will define the concept of supply network used in this thesis. Therefore, I will start by discussing the network research in general terms. Subsequently, the structural and actor issues to the networks are discussed. Following, I will relate supply network studies to the above, and finally, I will define the concept of supply networks used in this thesis.

### **2.1. Definition of a supply network**

There are several definitions of a supply network. Hertz (2006, p. 209) talks about supply chain networks and means “*a very specific type of network, which looks at the connections and dependencies between firms from raw material to final customer*”. The term supply network is mentioned e.g. in Harland (1996), Johnsen et al. (2000) Harland and Knight (2001), and Knight and Harland (2005). Harland (1996) defines the supply network in terms of sets of supply chain that describe the flow of goods and services from original sources to end customers. Hertz’ (2006) and Harland’s (1996) definitions are closely related, but I will adopt Hertz’ (2006) definition of supply networks, because it is more closely related to the network terminology than Harland’s definition (1996).

### **2.2. Network research and a supply network**

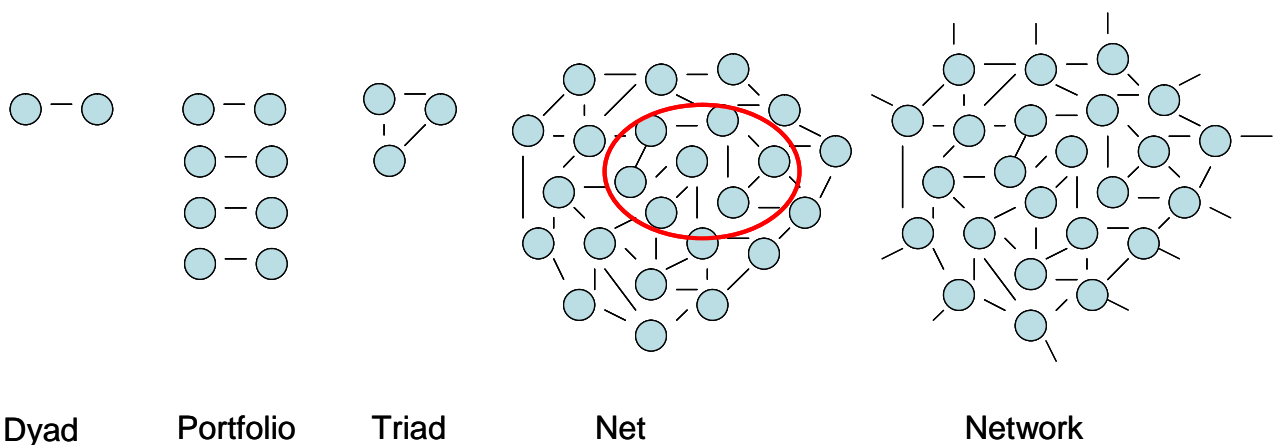
Network is an aggregate of actors that are interrelated and interconnected through relationships. In order to understand a network, we have to study and understand relationships (Easton, 1992). Easton (1995, p. 416) rightly points out that “*one can never research the industrial network*” and therefore carrying out industrial network studies are calls for sampling. This means that in research terms, every industrial network study is a compromise regarding representivity (Easton 1995). Moreover, the network level is not meaningful when carrying out research due to its complexity (Wilke and Ritter, 2006), and in a similar vein Jüttner and Schlange (1996, p. 484) point out that “*On the one hand, empirically verifiable determination of relevant network components is impossible. For analytical purposes, however, it must be done if any insights in the network structure are to be gained at all*”.

This leads us to a notion of level of analysis which is unavoidable when trying to understand networks. Wilke and Ritter (2006, p. 51) point this out by stating “*the different levels of analysis must be treated as quasi-isolated but as complementary connected in our efforts to understand the overall picture*”.

When discussing the level of analysis in industrial studies, this leads us to the question of sampling unit size. In this context, Ritter and Gemünden (2003) distinguish between structural and actor elements as presented below.

### 2.1.1. Structural elements

Wilke and Ritter (2006) identify four different levels of structural elements: dyad, portfolio, net (including triad) and network (See Figure 2), where the dyad, i.e. relationship between two actors, is the fundamental element in inter-organizational research. The next level consists of portfolios (Möller and Halinen, 1999) comprising similar relationships and focuses on several relationships rather than their interconnectedness.



**Figure 2: Structural elements in level of analysis (Wilke and Ritter, 2006)**

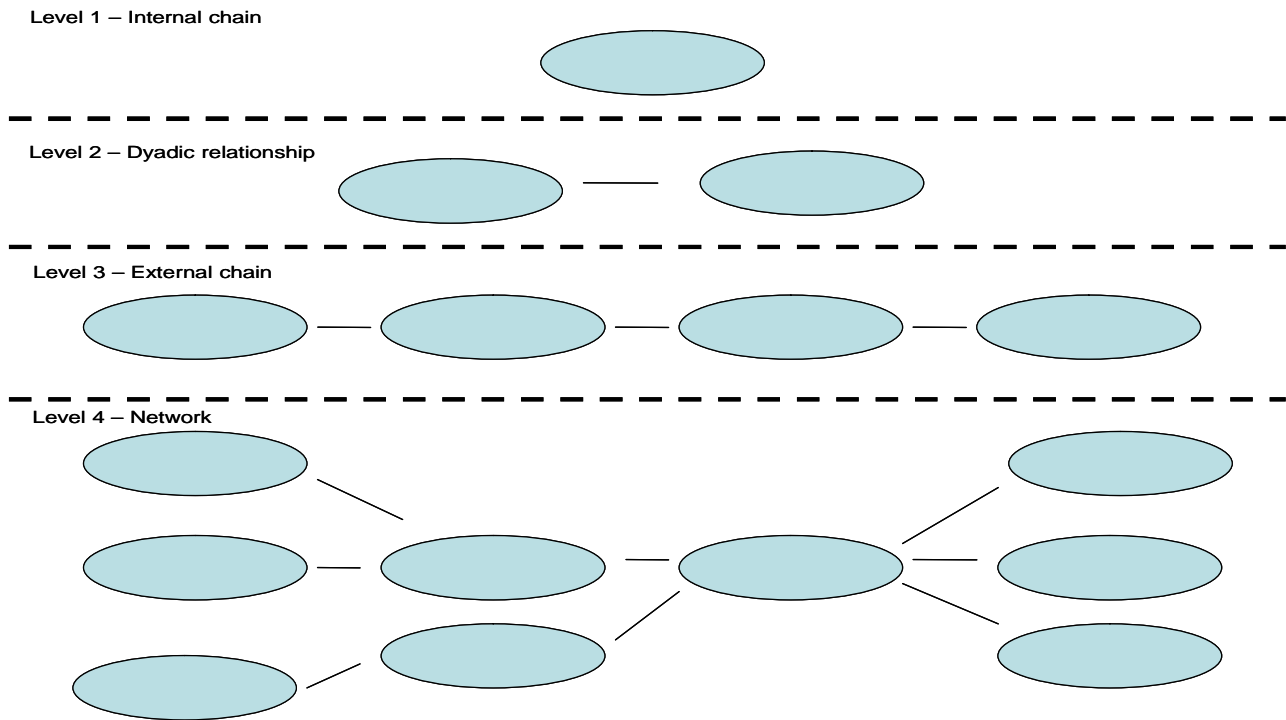
However, as relationships potentially influence each other (Blankenburg Holm et al., 1999; Ritter, 2000), further relationships beyond dyad need to be considered. In its narrowest extent the analysis

is carried out in a triad, which is the smallest entity displaying all interconnections (Havila, 1996), but there is a tendency to extend this level to comprise a firm's net (Johanson and Mattsson, 1988).

In this context, the concept supply network presents 'the verifiable determination of relevant network components' (Jüttner and Schlange, 1996). As the concept of SCM evolved, the term "network" came into use (Lee, 2000). Supply networks can be defined as sets of supply chains, describing the flow of goods and services from original sources to end customers (Harland, 1996). Instead of looking at material flows from producers to end-users as linear sequence, the supply network comprises the complex nature of networks entailing the interconnectedness of relationships and direct and indirect effects from them (Harland et al., 2001). Some of the early studies of supply networks can be traced back in the automobile industry that compared the Japanese Keiretsu with Western manufacturing networks (Womack et al., 1991; Nishiguchi, 1994).

Supply networks are nested within wider networks and consist of interconnected entities whose primary purpose is the procurement, use and transformation of resources to provide goods and services. In this way supply networks can be comprised of several interconnected supply chains and encompass both upstream and downstream relationships.

In the structural classification a supply network is aligned with the net level. As the starting point for defining supply networks traditionally has been in SCM literature, the structural levels differ from those of Wilke and Ritter (2006). Harland (1996) distinguishes between the four structural levels, which she labels as levels of research in supply chain management (See Figure 3).



**Figure 3: Levels of research in supply chain management (Harland, 1996)**

These research levels are generally acknowledged by other supply network researchers, but Mills et al. (2004) interpret these levels more as an indication of how the focus of SCM has evolved over the years and state: *“The framework mirrors the development of academic work in this area over time from level 1 in the 1960s to level 4 in the early 1990s”* (Mills et al., 2004; p. 1015). Furthermore, Håkansson and Persson (2004) focus implicitly on the structural aspects as well as depicting the role of interdependencies of both supply chains and supply networks. They pinpoint that *“while the SCM concept has helped to create management attention around inter-organizational issues and challenges, little emphasis has been put on other types of interdependencies than serial interdependencies other than serial interdependencies in the supply chain”* (Håkansson and Persson, 2004; p. 24).

In my view, their findings of serial, pooled and reciprocal interdependencies indicate the following fact. Despite the influence of SCM literature on emerge of supply networks, the linear or sequential way of structuring supply networks is not sufficient. If we think about Harland’s (1996) level 4, one way of understanding chain of suppliers could be the relationship portfolio presented in Möller and

Halinen (1999), where the focus is on supplier categorization rather than on interdependencies. Alternatively, if we adopt the interaction view more explicitly, interdependency in relationships between different actors gains relevance, as also pointed out in Håkansson and Persson (2004).

### ***Micro, meso and macro levels***

Apart from the structure in a level of analysis, a further distinction can be made between micro and macro levels. Mattsson (1985) refers to micro and macro levels as micro and macro positions. Micro positions refer to links between individual units, and macro positions to an individual organization's links to aggregated levels in the network. In a similar way, Johanson and Mattsson (1992) distinguish between limited and extended positions and define the limited position by which actors the focal actor has exchange relationships with. The extended definition also involves the actors' role in the production system. Moreover, Mattsson (1997) introduces a meso level after, acknowledging that the gap between micro and macro level is too large. The difference between macro and meso level is to be understood in terms of a scope of a focal firm's relationships, where macro level includes specific relationships in a network, while meso level entails all of a focal firm's relationships. Wilke and Ritter (2006) combine the view of levels by addressing that *"For each study, there is a given level of analysis and this becomes the micro level for the research. The immediate higher level is then seen as the meso level, as the impacts from this level are normally strong and observable. All other higher levels form the macro level, often also described as the environment"* (Wilke and Ritter, 2006; p. 44).

Following Wilke and Ritter's (2006) categorization of levels and referring to the earlier discussion on analysis level, I argue that the levels used in network studies are micro and meso levels. The micro level is, as pointed out by Wilke and Ritter (2006), the given level of analysis, and the meso level refers to the immediate higher level defined for the research purposes. As macro level entails a more complex network, it does not make sense to include other than the generalised environment during research.

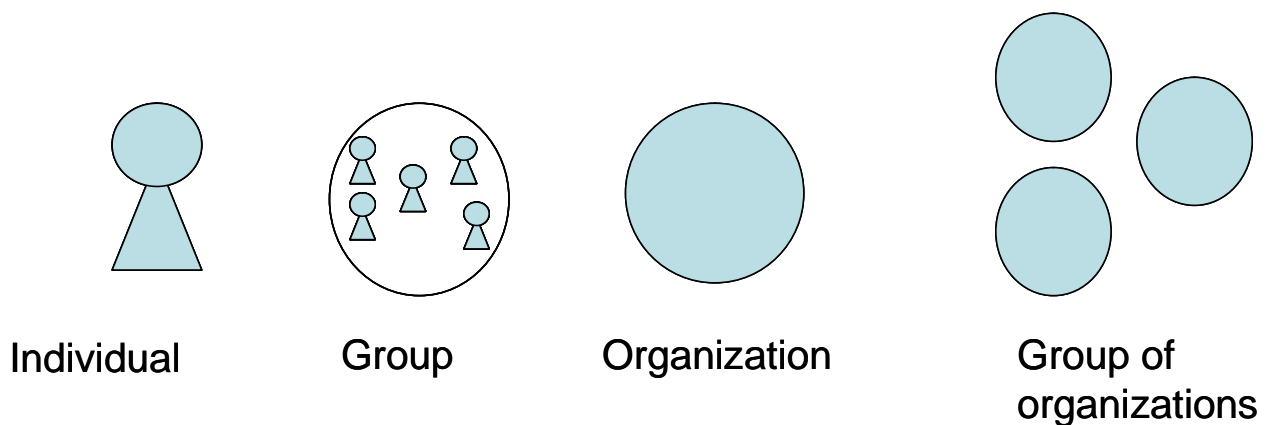
Based on these arguments I suggest that we consider the net, i.e. supply network, as the highest level of analysis when studying the structural analysis level in supply networks. The extent to which multiple or single supply networks are studied depends on the network context and on the research



purposes. This means that even if we are studying multiple supply networks, we are looking at a specific net determined for particular research purposes. Moreover, we can study supply networks in dyads and triads as well, but we should not altogether forget the interdependency and interconnectedness of various supply network actors. Hence, a supply network becomes structurally more closely related to the construction of industrial networks.

### 2.1.2. Actor elements

The human dimension can be divided into four levels of network actors (Burt, 1980; Håkansson and Johanson, 1992), namely the individual, a group/team of individuals, the organization, and the cluster of organizations (See Figure 4). On an individual level, the role and impact of individuals are analyzed, while in a group/team of individuals the team is responsible for a given relationship. On the organizational level there is a wider pool of actors than in a group working on behalf of their organization, and finally, on a group of organizations level, firms e.g. within the same industries or regional groupings link up against other clusters (Ritter and Gemünden, 2003).



**Figure 4: Actor level analysis (Wilke and Ritter, 2006)**

If we study the actor level in relation to the structural levels in supply networks as defined by Harland (1996), we can say that the internal supply chain integrates business functions involved in the flow of materials, and information from inbound to outbound ends of the business. The second level illustrates the relationship management with immediate suppliers. On the third level, the

external chain entails the management of chain of suppliers (e.g. 1<sup>st</sup> tier, 2<sup>nd</sup> tier) and customers. The fourth level is the network level defined as the management of interconnected businesses. This management is concerned with management of activities and resources in relation to other actors and their activities and resources (Håkansson and Snehota, 1995).

## **2.2. Concluding remarks on Chapter 2**

To begin with I agreed on that one never can study the industrial network (Easton, 1995). Therefore, an industrial network study always presents a sample of a network. In this context network studies are concerned with the level of analysis that entails structural and actor elements (Ritter and Gemünden, 2003). The structural elements include dyad, portfolio, triad, net and network levels, while the actor elements entail individual, group, organisation and group of organisations. In this thesis, the supply network is defined as a net designed for the various particular research purposes. Moreover, a supply network looks at connections and dependencies between firms from raw material to final customer.

Moreover, when defining the structural and actor levels in the supply network studied in this thesis, it is useful to return to the research question (Wilke and Ritter, 2006). The overall research question sounds: *How does a firm's position evolve in supply networks?* This question reveals both the structural and the actor level. Obviously, as the supply network is chosen, the research will be carried out on a net level. When looking at the actor level, the research question indicates that the research is carried out on an organisation level.

### ***3. Position in a supply network***

The aim of this chapter is to develop a definition of a firm's position inside the supply network. The chapter is structured as follows: First, the dimensions of position are explored. Secondly, the determinants of a firm's position are defined based on a literature review in the industrial network approach. Finally, the frame of reference for the studying position in this thesis will be presented.

Position is a broadly used term, and the common use of the word may lead into a great latitude of confusion (Henders, 1992). The seminal works of Johanson and Mattsson (1985; 1992) and Mattsson (1985; 1987) provide the platform for studying the concept of position in supply networks. The focal point in these contributions is that a firm's position in the network is characterized by its relationships to other actors (Johanson and Mattsson, 1985). Later contributions have developed the position discussion in the industrial network perspective conceptually (Henders, 1992; Håkansson and Snehota, 1995; Turnbull et al. 1996; Ford et al. 2003) by highlighting how an actor 'fits' into a network (Henders, 1992) and emphasizing the importance of understanding the relationships that an actor is involved in (Turnbull et al. 1996; Ford et al. 2003).

Moreover, some empirical studies (Henders, 1992; Anderson et al., 1998; Aastrup, 2003) have enriched the position discussion by linking the theoretical discussion to practical case studies. Henders (1992) studied marketing organizations' position in the UK newsprint/newspaper network, and Anderson et al. (1998) analysed two different cases: import agencies' position in the Finnish cheese network and two focal companies' (advertising company and an international consumer products' company) positions in the immediate network. In a more recent study, Aastrup (2003) studied inter-modal transport companies' positions in the network.

All three studies provide snapshots of focal companies' position in the network, and although Henders (1992) confesses that the network she studied was constantly changing, the snapshots contribute to understanding the actor's position inside a network. This means that a process can be studied with snapshots at certain points over time. Thus, the focus in this chapter is on the structural aspects of a position rather than on the process itself.

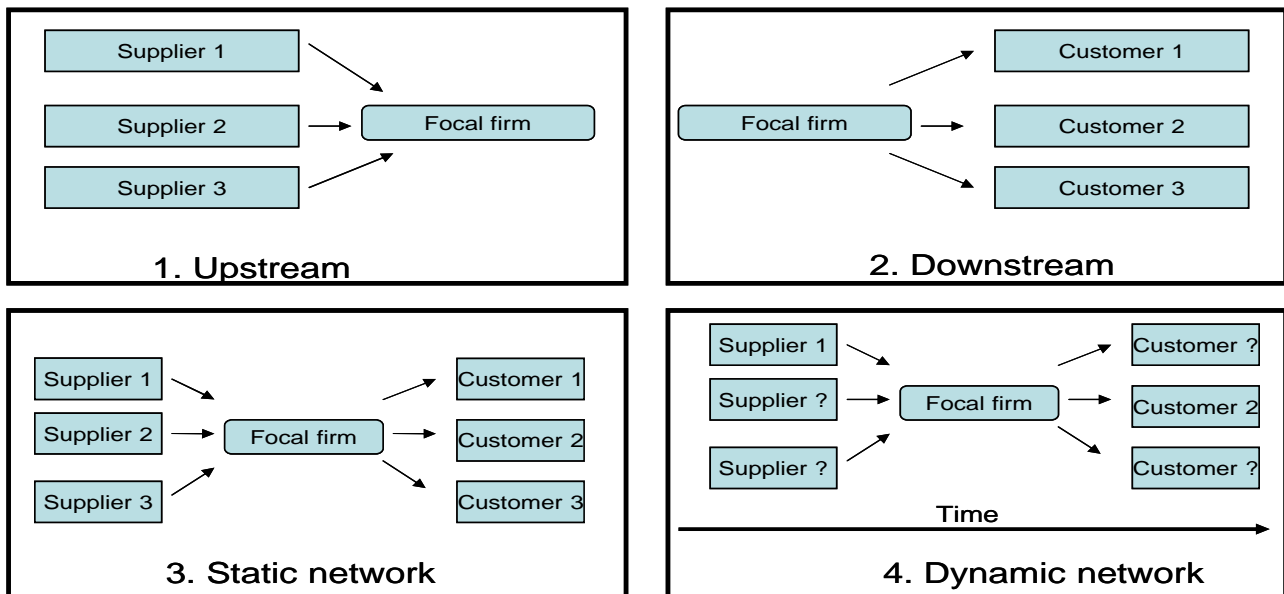
Ultimately, the term position in business networks is used to describe how individual actors are related to each other in a network structure (Johanson and Mattsson, 1992), and in this thesis, I

adopt the network view and consider a firm's position seen in relation to other actors in a network. Moreover, I view position as a static structure that contributes to the understanding of an actor in the network at a given point of time.

### **3.1. Characteristics of position**

The previous chapter provided some initial issues related to the concept of position. Firstly, Johanson and Mattsson (1985) claim that a firm's position in the network is characterised by its relationships to other actors. This underpinning is acknowledged in the industrial network perspective and shows that positions cannot be studied without having something to relate to. This idea is also supported by the general definition of position that considers position as a relative term, i.e. it is always seen *in relation to something else* ([www.m-w.com/dictionary/position](http://www.m-w.com/dictionary/position)). A firm's relationships can include suppliers, customers and other relevant actors in the networks.

In the supply network context (Mills et al., 2004), relationships with suppliers and customers can be identified in four different perspectives (See Figure 5). The first and second perspectives are upstream and downstream, where the focal firm is dealing respectively with suppliers and customers. In the third perspective, which combines the first and second perspectives, Mills et al. (2004) suggest that this perspective provides a static and comparative view of a focal firm's position in the network. Finally, Mills et al. (2004) introduce the fourth perspective, the dynamic network, and divide it further into two sub perspectives, one dealing with the evolution of existing supply chains and another concerned with the creation of new supply chains. In this thesis, supplier relationships have been chosen.



**Figure 5: Four perspectives in defining a firm's position in a supply network context. Modified from Mills et al. (2004)**

The question of which relationships are included depends on the *context* in which the network study is carried out. In the previous chapter (Chapter 2), I have already given some definitions that are helpful in this discussion of context. I defined that a supply network is structurally a net. A supply network approach was chosen from the research relevance point of view, as the companies under scrutiny are transforming from own production to trading. A supply network also indicates that supply-related activities are carried out in that network. However, other types of networks in different research contexts can be identified, e.g. innovation networks (Ritter and Gemünden, 2003), distribution networks (Dubois et al., 2000), and development networks (Pedersen and Holmen, 2001; Wynstra and van der Valk, 2004). Activities like the above-mentioned are often connected to certain industries, e.g. Ritter and Gemünden (2003) studied fields within mechanical and electrical engineering, measurement technology and control engineering. Dubois et al. (2000) were concerned with the personal computer–industry, Pedersen and Holmen (2001) analysed the construction industry, while Wynstra and van der Valk (2004) researched the food and packaging industry.

Moreover, apart from the activity and industry contexts, network studies are in most cases related to a specific country, such as Germany (Ritter and Gemünden, 2003), Sweden (Wynstra and van der Welk, 2004), Denmark (Pedersen and Holmen 2001), and Netherlands (Wynstra and van der Welk,

2004). These context-related issues are also identified in Lutz and Hedaa (2006) who argue that boundaries (contexts) can be defined as socially constructed or phenomenological. They further refer to boundaries that can be object-specific i.e. the focus is on a certain topic, like e.g. innovation and building a house. Lastly, a time-specific boundary refers to the snapshot or a specified period of a net or a network defined at certain point and the development of the boundary over time (Lutz and Hedaa, 2006).

In this thesis, the context is the pine furniture supply network. Activities under scrutiny are two-fold. Firstly, a focus on the pine furniture manufacturing activities, and following, on the trading activities. The industry is furniture manufacturing and the activities take place in Denmark. And as I will describe later, part of these activities are being transferred to China.

In the previous sections I have identified that position is seen relative to something else in a specific context. These decisions are made by the researcher carrying out his or her study, or by a manager making a decision. This leads to the third relevant characteristics of position, namely the fact that a study of a firm's position is dependent on *who is judging*. This notion entails an important fact about position, namely it is a composition of sub-positions. In these terms, we can talk about a firm's position set (Biddle and Thomas, 1966). This position / sub-position distinction can be illustrated by taking my own person as example. I am one person, but within that person I have different positions: doctoral student, wife, mother, daughter, friend etc. This complement of positions is my position set, as also illustrated in role theory by Biddle and Thomas (1966), and this position set enhances the overall understanding of my person.

A firm's position to be studied is dependent on the interests and abilities of the judge. And in this vein different judges disclose different positions. For example, a bank sees a firm's position in a different way, so does a competitor to a firm. In this context, a further important notion regarding position triggers: the ways to capture a firm's position in relation to others. In marketing literature, a firm's position in the market is measured e.g. in terms of market share, industry concentration and barriers (Shepherd 1972), and this way of measuring is to a high extent based on competition. Though, as my interests as a network researcher are anchored in the industrial network perspective, the measurements used in this study are developed on the basis of the industrial network paradigm. These measurements will be studied in the next section.

### 3.2. Measurements of position

Before analysing the position literature among the IMP-researchers, it is appropriate to start by presenting the ARA-model (See Figure 6) that describes and analyses a given network-like structure (Håkansson, 1987). The model is based on activities, resources and actors. The definition of these elements is circular; “those who perform activities and/or control resources within a certain field are defined as actors” (Håkansson, 1987; p. 14).

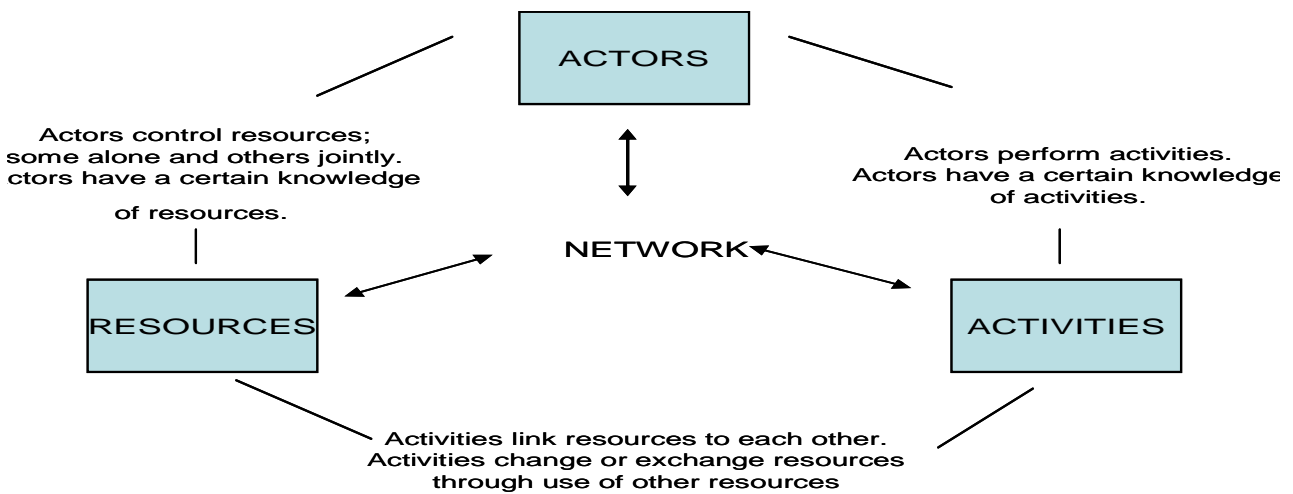


Figure 6: The network model (Håkansson, 1987; p. 17)

Actors are those that act in industrial networks, and may be a company or an individual. Actors may also be clusters of companies or groups of individuals as shown in the actor dimension of a supply network structure. However, “companies or individuals as actors in business networks are bounded in their perceptions, knowledge and capabilities and therefore different from each other” (Håkansson and Snehota, 1995, p. 192). An actor has ascribed motives and intentions and is therefore able to behave purposefully, hence implying that actors are goal-oriented. In these terms, actors’ general ends are to increase control of resources and thereby increase autonomy (Holmen, 2001). In turn, the increase in control may lead to not achieving other ends. This point is also expressed in the third network paradox (Ford et al., 2003; p. 31): “Companies try to manage their relationships and control the network that surrounds to achieve their own aims. This ambition is

*one of the key forces in developing networks. But the paradox is that the more a company achieves this ambition of control, the less effective and innovative will be the network”.*

In the Industrial Network Approach, resources are viewed in the perspective of the assumption of resource heterogeneity. This is built on Penrose's (1959) argument that the value of resources is dependent on the services they can provide, and that every resource consists of a bundle of potential services. Viewing resources as heterogeneous is in contrast to considering resources as homogeneous. Homogenous resources imply a fixed value of a certain resource.

Resources may consist of physical, financial and human assets (Håkansson, 1987) and the value of a resource is not a given. Instead, the heterogeneity assumption implies that the value of a resource depends on how the resource is used or related to other resources. In general, what makes an element a resource is dependent on the fact that it has a known or potential use value to someone (Håkansson and Snehota, 1995). Moreover, the resource value depends on how the resource is combined with other resources.

Knowledge and experience are important in order to use and develop resources (Håkansson and Snehota, 1995). In that sense, knowledge plays a significant role in determining which resources to use and how to combine them. Moreover, increased knowledge about resources and their combination potential can be regarded as learning (Håkansson and Snehota, 1995).

Finally, activities can be divided into transformation and transfer activities (Håkansson and Snehota, 1995). Transformation activities such as production and administration are viewed as 'internal', because in general, they do not directly involve others outside the company. Purchasing, financing and sales are considered as transfer activities and regarded partly as 'external' involving others outside the company. Activities are performed within firms but may be adapted to how other firms perform their activities. Hence, activities are interrelated across firm boundaries (Dubois, 1994).

But, how is a firm's position in a network connected to the elements of ARA? Håkansson and Snehota (1995) argue that *“the overall position of a company is a composite of position with respect to the relevant resource constellation, activity pattern and structure of actor bonds”*



(Håkansson and Snehota, 1995; p. 48). How to measure or operationalise this position? There are several contributions in the IMP-literature concerned with these measures (See Johanson and Mattsson, 1985; 1992; Mattsson, 1985; Turnbull et al. 1996; Aastrup, 2003 Ford et al. 2003). The measurements are presented in Table 2.

<b>Authors</b>	<b>Measurements of position</b>
Johanson and Mattsson (1985)	<ul style="list-style-type: none"> <li>• Role</li> <li>• Importance</li> <li>• Relationship</li> <li>• Identity</li> </ul>
Mattsson (1985)	<ul style="list-style-type: none"> <li>• Functions</li> <li>• The identity of the organizational unit that the firms is linked to</li> <li>• Relative importance of the firm</li> </ul>
Johanson and Mattsson (1992)	<ul style="list-style-type: none"> <li>• Exchange relationships</li> <li>• A firm's role in the network</li> <li>• Possibility to control resources</li> </ul>
Henders (1992)	<ul style="list-style-type: none"> <li>• Role</li> <li>• Importance</li> <li>• Relationships</li> </ul>
Turnbull et al. (1996)	<ul style="list-style-type: none"> <li>• Relationships - Rights and obligations</li> </ul>
Anderson et al. (1998)	<ul style="list-style-type: none"> <li>• Taken-on activities</li> <li>• Made-up activities</li> </ul>
Aastrup (2003)	<ul style="list-style-type: none"> <li>• Network logics</li> <li>• Resource bases</li> </ul>
Ford et al. (2003)	<ul style="list-style-type: none"> <li>• Relationships</li> <li>• Reputation</li> <li>• Rights</li> <li>• Limitations on behaviour</li> <li>• Obligations</li> </ul>

**Table 2: Measurements of position in the IMP literature**

According to Henders (1992) the operationalization of position, i.e. the way a firm's position is defined in a network, is unique to each study, and in that sense the determinants will be defined based on a specific study. However, a closer look at determinants of position in the different

contributions reveals that certain measurements seem to appear in most contributions, albeit under different names.

We can analyse the measurements of position in relation to the elements in the ARA-model. In order to be an actor in the network, the actor is assumed to undertake some activities. In this context, three terms can be identified as being attached to the actors and activities in the network. Firstly, role is mentioned in Johanson and Mattsson (1985; 1992), and Henders (1992) also adopts Johanson and Mattsson's (1985) role measurement. Johanson and Mattsson (1985) refer to role as a firm's position as e.g. furniture manufacturer or as an importer of ready-made furniture, while Henders (1992) highlights the importance a firm's role by stating that "*a role becomes an aspect of the actor's contribution to the functioning of the network logic and more importantly its contribution to change in the network*" (p. 90). Secondly, Johanson and Mattsson (1992) refer to an actor's role in a production system, which they also label as extended definition of position. By this role they mean the function the actor has in the production system. Also Mattsson (1985) talks about functions as measurement of a position and means a firm's position e.g. as wholesaler or as manufacturer. Moreover, Johanson and Mattsson (1985) and Mattsson (1985) mention identity that is closely related to role. Mattsson (1985, p. 270) defines the identity by illustrating that "*the firm is a supplier to customer A, B, ..., N, who are located in the market area. It gets supplies from suppliers 1, 2, ..., n, etc*".

All three terms (role, function and identity) used in the contributions refer to the view that actors carry out certain activities that are related to role, function or identity. This can be exemplified by looking at a furniture manufacturer's role as a furniture producer. This role entails certain manufacturing activities that definitely do not have anything to do with e.g. shoe manufacturing activities. This also means that when you are a furniture manufacturer, you are *expected* to carry out certain activities. Anderson et al. (1998, p. 172) point this out by stating that "*the position exists as a results of activities performed between actors, while also shaping the modes of action that are expected in connection with the position*". They label these expected activities as taken-on-activities referring to the current activity structure of a given actor.

This notion leads to another angle of expectations that is dealt with in the sociological view and Berger (1963, p. 95) defines role as "*a typified response to a typified expectation*". "A role...

*provides the pattern according to which the individual is to act in the particular situation*". This behavioural view of expectations related to role can also be found in Turnbull et al. (1996) and Ford et al. (2003). Turnbull et al. (1996) refer to rights and obligations linked with a firm's relationships with other actors. Ford et al. (2003) mention also rights and obligations related to relationships adding limitations on behaviour.

By looking at role from an activity and behavioural point of view, we can provide a link to the earlier discussion of domain of position. In that context I adopted the twofold view of level of analysis, one referring to structure and the other to actor dimension. Following this categorization, role as position measurement can be placed under this set. By this I mean that the activity aspect of role is related to the structure dimension, while the behavioural aspect refers to the actor dimension. This view is also supported by Anderson et al. (1998, p. 172), who mention that "*the role dimension represents the subjective and creative character of the actor; an actor has a position, but acts in a role*".

Based on the literature review, I claim that most contributions are concerned with role, either in an activity or behavioural context and therefore I will also select role as one of the position measurements. Furthermore, this choice is strengthened by an argument made in Anderson et al. (1998). They point out implicitly how positions and roles are intertwined by studying their interconnectedness in networks and refer to Bates (1956, p. 317) who states that "*position and roles – can be said to be closely linked also because there is no role:... without a paired reciprocal role which is a part of a different position*".

Based on the earlier notion of that a firm's position in the network is seen in relation to others, it is natural that relationships will be chosen as measurement, as there is no relation between actors without a relationship. Relationships as measurements are mentioned in Johanson and Mattsson (1985; 1992), Henders (1992) Turnbull et al. (1996) and Ford et al. (2003). Johanson and Mattsson (1985) refer to the strength of relationships with the other firms, i.e. the strength of the bonds of different kinds that describe the relationships, while Johanson and Mattsson (1992) particularly talk about exchange relationships as well as refer to the strength of relationships. Turnbull et al. (1996) highlight a firm's relationships and related ethics as measurements of a firm's position in a network. They state that "*Network position consists of the company's relationships and the rights and*

*obligations which go with them.* (Turnbull et al., 1996; p.48). Along these lines Ford et al. (2003) underline the importance of inter-firm relationships in order to understand the position of the two companies within the network of relationships in which they operate.

In the above-mentioned statement, a firm's position is seen as a composite of *relevant* resources, activities and actors. In this context, it is important to pose the question of what is relevant? Networks as such are not goal-oriented, but the individual actors within it have goals (Håkansson and Snehota, 1995). Being goal-oriented refers furthermore to effectiveness and "*individual organisation's effectiveness will be dependent on its ability to deal with the totality of the network*" (Jüttner and Schlange, 1996; p. 483). Several notions referring to resources can be captured as measurements of a firm's position in the network (Mattsson, 1985; 1992; Henders, 1992; Aastrup, 2003). Mattsson (1985) talks about the relative importance of a firm, by which he means a dominant or a marginal firm. Mattsson (1985) refers to such measures as a firm size or a market share. Henders (1992) mentions also importance, but interprets it in terms of ability to initiate change or, alternatively, capability of preserve or destroy stability in the network. She also refers to what proportion of a specific activity is carried out by the actor and is in that way close to Mattsson's (1985) notions of dominant and marginal firms. This view can be enlarged to comprise resources, meaning that what percentage of the required resources is held by the actor (Henders, 1992).

Johanson and Mattsson (1992) bring up the actor's resources characterizing the relative importance of them, i.e. how much of the total quantity of substitutable resource are controlled by the actor. They link these resources as a quantitative dimension of an actor's role in the production system and claim that "*a network position gives an actor some power over resources controlled by other actors*" (Johanson and Mattsson, 1992; p. 212). Finally, Aastrup (2003) refers directly to resource bases and means both the resources controlled in the network as well as those applied in production systems.

My interpretation of these orientations towards resources is linked to capabilities. In these terms, instead of talking about resources, resource bases or a relative importance of a firm, I find it more appropriate to refer to capabilities, as firms can apply and access certain resources, if they have the relevant capabilities. This link between resources and capabilities is also expressed in Håkansson and Snehota (1995, p. 138): "*Resource ties that arise in a relationship reflect the knowledge and*

*skills in the use and production of resources; they reflect the technology in use in the companies involved*". Resources are a combination of technical, personal, financial and other resources and *"capabilities and the capacity of a business enterprise reflect the nature and amount of resources it can access and mobilize"* (Håkansson and Snehota, 1995; p. 142). Following this interlinked view of resources and capabilities, I argue that capabilities as measurement of a firm's position in the network is the underlying logic for the previous contributions related to resources.

In Table 3 below, the generic measurements of position based on a literature review are categorised under three main headlines, namely role, relationships and capabilities.

<b>Role</b>	<b>Relationships</b>	<b>Capabilities</b>
<ul style="list-style-type: none"> <li>• Johanson and Mattson (1985): Role and identity</li> <li>• Mattsson (1985): Functions and identity</li> <li>• Johanson and Mattsson (1992): A firm's role in the network</li> <li>• Turnbull et al., (1996): Rights and obligations</li> <li>• Anderson et al. (1998): Taken-on and made-up activities</li> <li>• Ford et al. (2003): Rights, limitations on behaviour, obligations</li> </ul>	<ul style="list-style-type: none"> <li>• Johanson and Mattson (1985): Relationship</li> <li>• Mattsson (1985): The identity of the organizational unit that the firms is linked to</li> <li>• Johanson and Mattson (1992): Exchange relationships</li> <li>• Henders (1992): Relationships</li> <li>• Turnbull et al. 1996: Relationships</li> <li>• Ford et al. (2003): Relationships</li> </ul>	<ul style="list-style-type: none"> <li>• Mattsson (1985): Relative importance of the firm</li> <li>• Johanson and Mattson (1992): Possibility to control resources</li> <li>• Henders (1992): Importance in terms of ability to initiate change or prevail stability</li> <li>• Aastrup (2003): Resource bases</li> </ul>

**Table 3: Generic measurements of position in this thesis**

Role refers both to the actor and activity dimensions in ARA-model, because actors undertake a certain role. When an actor has a certain role, it is expected to carry out certain activities. Relationships link actors in the network in terms of actor bonds, activity links and resources ties that encompass the substance of any business relationship. Finally, capabilities are related to all dimensions of ARA, as certain capabilities are needed to undertake a certain role (Miles and Snow, 1992), but they are also needed to handle relationships (Ritter, 1999; Johnsen and Ford, 2006).

In the preceding sections, I have studied the characteristics of position. The following conclusions can be drawn:

1. Position is a relative term and it is always seen in relation to something else.
2. Position is subjective, i.e. it depends on a judge's interests and abilities.
3. Position is measured upon context-specific and subjective measurements.
4. In this thesis, the following measurements will be applied: role, relationships and capabilities.

In the following sections, the three identified measurements will be discussed further in turns.

### 3.2.1. Role

Role theory provides an eminent starting point for any discussion regarding position. The notion of position is among the most commonly used concepts in role theory (Biddle and Thomas, 1966). In the seminal work of Linton (1936), role is defined in relationship to position. Role theory defines role as the expected behaviour of an actor in relation to other actors, being “*the set of prescriptions defining what the behaviour of a position member should be*” (Biddle and Thomas, 1966; p. 29).

Whenever talking about role in the context of role theory, the terms role set and individual position set gain relevance (Biddle and Thomas, 1966). The role set refers to the amount of specialization characteristics of each individual and in some situations specializations will be dispersed among a number of persons. Thus, in other situations, a large number of specializations will accrue to one or two individuals. In turn, an individual position set has been employed to refer to the particular situations in which a person holds simultaneous memberships. Every individual has his/her own set of positions, e.g. I have a position as doctoral student, mother, wife and daughter. It is typical for these positions that they are performed simultaneously, and in these terms I also have various roles.

Even though role theory is concerned with individuals, the term can also be applied in the organizational perspective. Earlier, I have argued that a firm’s position is a collection of different sub-positions. This means that each firm has a position set, and each position has a particular role set. For example, a firm may have a role as supplier, manufacturer and customer, and each of these roles entail a certain number of activities and behaviours. Put differently, a firm’s position is defined as role set (collection of roles), and each role has a role expectation in terms of activities and behaviour.

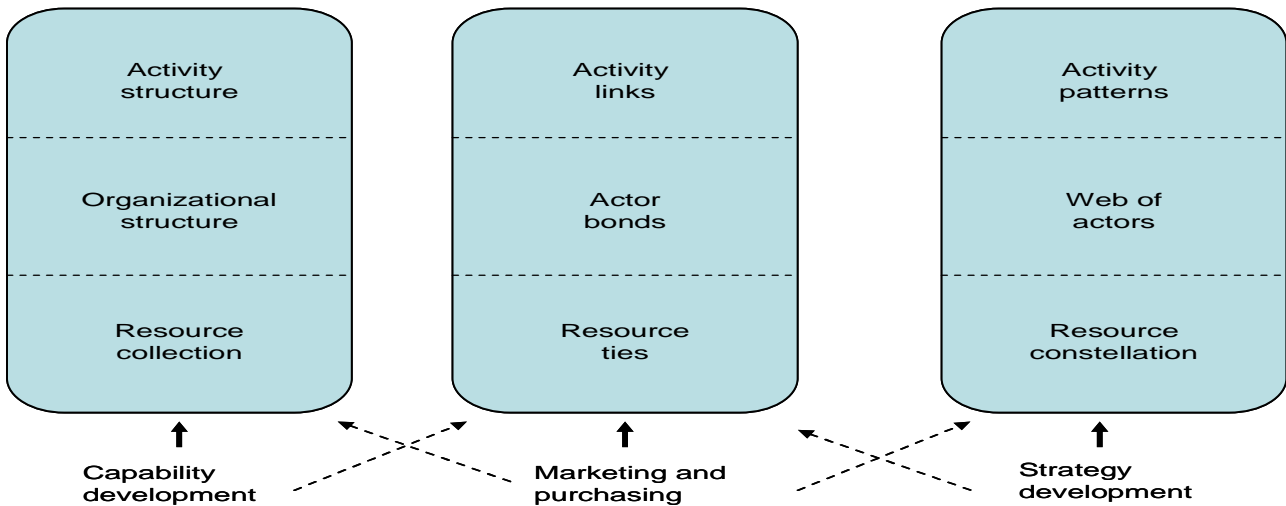
Harland and Knight (2001) and Knight and Harland (2005) have studied the role concept in the supply network context. Knight and Harland (2005) use the role concept to help cluster the network management activities and goals in order to understand how a firm can ‘manage’ the networks in which it operates. In that way they agree with Hales (1986), Stewart (1989) and Fondas and Stewart (1994) by stating that “*role theory is usefully applied to categorising the activities and goals of network management, for the same reasons that role theory can usefully be applied to the study of the question ‘what do managers do’*” (Knight and Harland, 2005; p. 290).

Knight and Harland (2005) make a distinction between several views of role. The structural view of the role refers to the routines, or current operations in the network (e.g. supplier, designer and producer). Another way of viewing roles is to identify the roles undertaken by a collection of actors to perform a particular task (e.g. a purchasing team). The third option Knight and Harland (2005) identify is the collection of roles undertaken by an individual in performing its 'meta-role' (e.g. purchasing manager, or managing director). The two last mentioned options, i.e. collection of actors performing a task and further dividing it into individuals, is related to the structural role theory. It focuses on the individual in the organization and is based on three main elements (Calder, 1977):

1. The composition of people who make up the organization, or some subsystem of it.
2. Positions that people occupy in the organization.
3. The tasks that constitute the operational units of any workflow through the organization.

Following these distinctions, I define role in supply networks in the following way. Firstly, I identify a firm's *function* (e.g. supplier, manufacturer, distributor and customer), and *those activities that are typical and expected* in relation to the specific function. Secondly, there are *supporting activities* that are *carried out by a collection of actors*, and these activities support a firm's main role. For example, a firm's purchasing function undertakes certain activities that will underpin a firm's role as manufacturer. This means that a purchasing function is an interface in complementing a firm's purchasing strategy (Dubois and Wynstra, 2005). In Håkansson and Snehota (1995), this purchasing function's interface is indicated through a scheme of analysis. The main purpose of the purchasing function is to handle supplier relationships, i.e. develop the function of relationships (links, bonds and ties) as a dyad (Håkansson and Snehota, 1995). But, it also affects a firm's capability (organizational level) and strategy (network level) development, as also shown in Figure 7.





**Figure 7: Purchasing function in business networks (Håkansson and Snehota, 1995; p. 47)**

This division of role provides a foundation for understanding a firm's internal activity and organisational structure in relation to the network around the firm. It helps us answer such questions as:

- Which manufacturing activities does a firm carry out?
- What kind of purchasing activities are carried out to support a firm's role?
- Who is involved in the purchasing activities?

In the context of a purchasing function and the activities related to it, the buying phases (Robinson et al., 1967; Webster and Wind, 1972) can be used for categorising the activities. These buying activities are shown in Table 4.

Author	Purchasing activities
<b>Robinson et al. (1967)</b>	<ol style="list-style-type: none"> <li>1. Recognize the problem</li> <li>2. Determine requirements</li> <li>3. Set specifications</li> <li>4. Search for potential sources</li> <li>5. Acquire and analyze proposals</li> <li>6. Evaluate proposals and select suppliers</li> <li>7. Select an order routine</li> <li>8. Performance feedback and evaluation</li> </ol>
<b>Webster and Wind (1972)</b>	<ol style="list-style-type: none"> <li>1. Identification of need</li> <li>2. Establishment of requirements</li> <li>3. Identification of alternatives</li> <li>4. Evaluation of alternatives</li> <li>5. Selection of suppliers</li> </ol>

**Table 4: Buying activities (Robison et al., 1967; Webster and Wind, 1972)**

However, firms do not have a role in isolation, but e.g. carry out certain manufacturing activities to sell the output to the customers. For these outputs, specific inputs provided by suppliers are needed. Furthermore, a firm's manufacturing activities are affected by other manufacturing firms' actions. For example, if another actor is able to produce the same product at a lower cost, then the manufacturer is compelled to make adjustments to its manufacturing processes. Therefore, it is not only important to understand the roles as such, but also the quality of the relationships when the firms are interconnected.

### 3.2.2. Relationships

A firm has a collection of different roles toward other actors. This means that a firm also has a collection of relationships towards these actors. Let us illustrate this by using my own roles as PhD-student and mother as examples. As PhD-student I have e.g. a relationship with my supervisor and with employees in the case companies. This example shows that the same role is characterised by a set of different relationships to different actors. They also indicate that my relationships with my children are not directly connected to my role as PhD-student, but influence each other due to the fact that they are combined in one actor.

In a supply network, the focal firm has a portfolio of relationships. It has relationships to its suppliers, customers and distributors. Moreover, the focal firm is directly or indirectly influenced by activities performed by other actors in the network. This issue is also illustrated in Håkansson (1982, p. 28-29) who exemplifies that *“manufacturer A may sell electric components to manufacturer B, who then incorporates these components into actuators that are sold to manufacturer C, who adds them to valves. These valves, with many other products, may form the stock of distributor D and so on. The marketing strategy of A may thus be influenced by and directed at several markets at different stages in the channel. Clearly his relationship with buying company B will be affected by both A's and B's relationship with C and other subsequent organizations”*. We can therefore note that these relationships may have neutral, positive or negative effects on each other in the focal firm's network (Ritter, 2000).

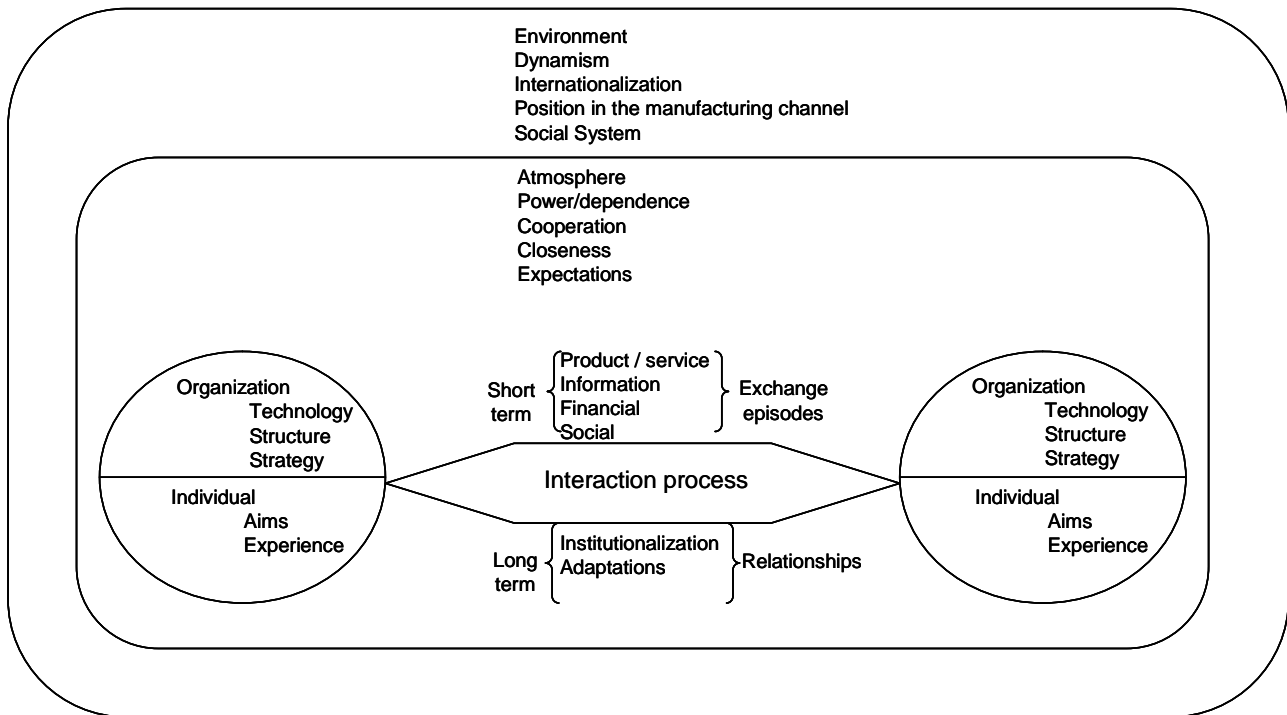
If we look at the focal firm's relationships in a supply network, we notice that these relationships may vary greatly (Ford, 1980). On one hand, a firm may have supplier relationships that have existed for many years. On the other hand, a firm may have initiated new supplier relationships. These new relationships may have been initiated because the focal firm has started a new activity, e.g. a new product line. Alternatively, even though the focal firm enjoyed a good working relationship with a long-term supplier, changes in the market structure may compel the focal firm to search for alternatives and the existing supplier relationship may become more at arm's length in nature. Even though this development may sound somewhat unsuitable for the contemporary business practices, the global pressure on unit prices invites this type of behaviour. This can be clearly identified among global retailers that have replaced their long-term supplier relationships by

new low-cost suppliers (Gereffi, 1999; Fakude, 2001; Kaplinsky et al., 2002; Kaplinsky et al., 2003).

In general, it is characteristic for industrial buyer-seller relationships that they are often close, complex and long-lasting (Ford, 1980; Håkansson, 1982). Moreover, relationships evolve over time, and parties are likely to make adaptations. This development has been captured in relationship life cycle models (Ford, 1980; Dwyer et al., 1987), where the relationships are characterised by different phases (pre-relation phase, development phase, maturity phase and decline phase). However, the statement that developing business relationships requires time has been challenged in the past years. The study by Parker and Anderson (2002, p. 76) revealed that when Hewlett Packard (HP) was obliged to renew its supplier base, the new relations had to be made to function at short notice and stated: *“Disaggregated firms like HP, however, do not have the luxury to spend 20 years developing good supplier relationships. In our study of HP’s notebook division, the organization had to make the successful transition from a vertical to a collaborative development model in less than 1 year”*.

Also, Ritter and Walter (2003, p. 493) show that relationship duration is not significant for customers involved in the innovation process and argue *“it is not the time waited that impacts on the involvement, it is the things that are done. Some firms work together for ages whilst not discovering collaborative NPD opportunities. Others are able to achieve this valuable integration of customer knowledge and resources earlier due to managerial efforts.”*

The examples above show that it is important to understand the network context in which the particular relationship takes place. This is a starting point for analysing any relationships in a network. This network context can also be depicted in the Interaction Model (Håkansson, 1982; p. 28) that states *“the interaction between a buying and selling firm cannot be analysed in isolation, but must be considered in a wider context”*. In this context, the interaction environment is captured, and it consists of such elements as market structure, dynamism, internationalisation, position in the manufacturing channel and the social system. The interaction model is illustrated in Figure 8.



**Figure 8: Interaction model (Håkansson, 1982; p. 32)**

Every relationship has an atmosphere where interaction between two parties takes place. This means that these actors become connected to each other in an atmosphere that “*can be described in terms of the power–dependence relationship which exists between the companies, the state of conflict or co-operation and overall closeness or distance of the relationship as well as by the companies' mutual expectations*” (Håkansson, 1982; p 21). Therefore, a relationship is described by its atmosphere and by the strength the relationship is connected to the other actors.

***Cooperation – competition/conflict***

All buyer-supplier relationships are characterised by co-operation and conflict that co-exist simultaneously (Wilkinson and Young, 1994). These two elements occur because parties have shared and contradictory interests. In cooperative interactions, both parties can gain from the interaction, while in competitive interactions, the relevant goals of both parties cannot be satisfied simultaneously (Deutsch, 1949; Stern, 1971). Therefore, business relationships are always characterized both by cooperation and competition, because the actors have both shared and contradictory interests (Nisbet, 1972; Gadde and Håkansson, 2001). For example, parties may be

very cooperative regarding quality and delivery times of a given product, but compete for the most favourable payment terms.

Wilkinson and Young (1994) identified four types of inter-firm relationships that are characterised in terms of cooperation and competition. In a similar vein, Gadde and Håkansson (2001) distinguished between cooperation and conflict. The different relationship types are shown in Table 5.

<b>Relationship characteristics</b>	<b>Explanation</b>	<b>Relationship type</b>
Low cooperation and low competition/conflict	Limited or no interdependence between the trading parties	A non-crucial relationship Marginal relationship
Low cooperation and high competition/conflict	Both parties are very self-interested.	Arm's length relationships Hostile relationship
High cooperation and high competition/conflict	Opportunism (their own and their partner's) is not perceived to be inappropriate or conflict-inducing. May be sound business practice.	Good working relationship/ Creative relationship
High cooperation and low competition/conflict	Relationships are committed, usually long-term and effective	Ideal relationship/ Nice relationship

**Table 5: Relationship types (Wilkinson and Young, 1994; Gadde and Håkansson, 2001)**

A relationship characterized by low co-operation and competition is considered as marginal or non-crucial. It might not be especially important to any of the parties. In the case of low cooperation and high competition, relationships are described as hostile or arm's length. Such relationships are not likely to survive, unless it for some reason is important to at least one of the parties. The relationships of most significance often entail a high degree of cooperation in some dimension (Gadde and Håkansson, 2001). If a relationship is characterized by both high cooperation and competition, we may consider it as a good working or creative relationship. This is the case if opportunism is not perceived to be inappropriate (Wilkinson and Young, 1994). Finally, in a relationship characterised by high cooperation and low competition, parties are often mutually committed, but a relationship in such an environment may also become too nice where the parties have too few demands levelled at each other.

For the purposes of this thesis, both the relationship characteristics and type will be adopted to describe the level of cooperation and competition/conflict in the particular relationship.

### ***Power and dependency***

In business relationships, one company often is more powerful than the other, and the other conversely becomes more dependent upon the first company. In these terms, power stems implicitly from other actor's dependency (Emerson 1962; Cook and Emerson 1978). In industrial networks, power can be identified at different levels, and Zolkiewski (2001) identifies a 'power pyramid' that comprises personal, organizational and indirect power. Personal power involves control over resources (people, finance, expertise and knowledge) and the ability to influence other people. Organizational power involves control over resources, ability to influence other actors, willingness to form alliances and willingness to adapt. Indirect power involves ability to influence the network and the ability to invoke political action and/or media action (Zolkiewski, 2001, p. 21-22).

When looking at the focal firm's supplier relationship, it is clear that the focal firm selects the particular supplier, because the supplier can provide a product or service that the focal firm can or will not produce internally. The focal firm's relationships with its suppliers can lead to an increased dependency (Gadde and Håkansson, 2001), and development of these relationships depends on how this power and dependency is handled. The focal firm can search for alternative suppliers to become less dependent on the suppliers, but both parties can also handle power and dependence in a more constructive way (Gadde and Håkansson, 2001). Moreover, power will depend on the parties' ability to reward or compel each other through exchange. Finally, power is also influenced by the relative expertise and access to information. In these terms, the power of organization A over B is directly related to the dependence of B on A (Håkansson, 1982).

### ***Trust and commitment***

When two parties initiate a relationship, it is characterized by uncertainty in the beginning. On many occasions, the parties first test one another through minor business exchanges, and the further connection between these two parties develops through interaction. It is known that social exchange relations evolve in a slow process (Gadde and Håkanson, 2001) in order to reduce uncertainty trust and commitment gain relevance. Trust can be defined as an actor's confidence in another actor's reliability and integrity between the two parties (Moorman et al., 1993; Morgan and Hunt, 1994).

Commitment between two business actors can be defined as an enduring desire to maintain a relationship (Moorman et al., 1992; Morgan and Hunt, 1994).

Developing trust is important, because without trust there is no commitment (Håkansson and Snehota, 1995). Building trust and commitment are resource consuming, but both elements can be dissolved fairly quickly (Gadde and Håkansson, 2001). This means that even a relatively small change in a relationship can become reason for disbanding trust and thereafter commitment. For example, if the focal firm starts threatening its long-term supplier with dealing with an alternative supplier, the original supplier may not trust the focal firm in the same way as before.

This decrease in trust may lead to a decreased commitment from the supplier's side. In this context, the duration of the business relationship may play a significant role. A firm that fails building up trust in the early phase of the relationship is likely to face challenges in gaining commitment and may even lose the chance of establishing a business relationship with the counterpart. If actors in a long-term relationship are met by an episode that decreases the level of trust between the parties, it does not necessarily mean that the commitment evaporates entirely. In addition, changes in the business environment do have an effect. For example, if house building activities decrease and lead possibly to an increasing number of bankruptcies among house building firms, customers may become more sceptical towards construction companies in general.

This chapter has discussed relationship quality as an additional measurement of position in a supply network. Three relationship elements were identified: Cooperation Competition/Conflict, Power Dependency and Trust Development. These elements are important tools when describing the general atmosphere of the relationship. In the relationship context, interaction environment is also added in order to understand the context in which the relationship takes place.

For the purposes of this thesis the relationship measurement is defined as shown in Table 6.



<b>Relationship element</b>	<b>Description</b>
<ul style="list-style-type: none"> <li>• Cooperation and Competition/Conflict</li> </ul>	<ul style="list-style-type: none"> <li>- A non-crucial / Marginal relationship</li> <li>- Arm's length / Hostile relationship</li> <li>- Good working / Creative relationship</li> <li>- Ideal /Nice relationship</li> </ul>
<ul style="list-style-type: none"> <li>• Power and Dependency</li> </ul>	<ul style="list-style-type: none"> <li>- The extent to which the firm is dependent on the supplier</li> <li>- The extent to which the supplier is dependent on the firm</li> </ul>
<ul style="list-style-type: none"> <li>• Trust and commitment</li> </ul>	<ul style="list-style-type: none"> <li>- The level of trust in the relationship</li> <li>- The level of commitment in the relationship</li> </ul>

**Table 6: Relationship measurement in this thesis**

Furthermore, relationships do not exist unless there are actors that have reason to interconnect. Regarding the ARA-model, activities and actors have been widely discussed in the previous sections, and I have excluded the resource dimension intentionally until now. In section 3.2 I identified capabilities as the third dimension for measuring position in networks. I based my choice on the theoretical underpinning dealing with the resource dimension in more general terms as measurement of position. However, capabilities in terms of managing resources compile just one dimension. As resources are important in carrying out activities and an access to other resources can be obtained through relationships, the capability concept in this thesis is based on *an actor's ability to cope with the network*, as also pointed out by Jüttner and Schlange (1996).

### 3.2.3. Capabilities

Capabilities have appealed to many scholars in the management literature. This area has been of special interest to the researchers within the resource-based view. Penrose's (1959) seminal work on the firm's distinctive competencies has been an important source of inspiration to later contributions within this field. Several important areas of capabilities have been dealt with, as for example:

- Core competence (Prahalad and Hamel, 1990)
- Product-development capabilities (Leonard-Barton, 1992)
- Distinctive organizational capabilities (Day, 1994)
- Dynamic capabilities (Teece et al., 1997; Eisenhardt and Martin, 2000; Winter, 2003)

#### *Definition of capabilities*

These contributions have dealt with capabilities on an organizational level. In these terms, the capabilities of a firm can be defined in various ways. Winter (2003, p. 991) defines that “*an organizational capability is a high-level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization's management a set of decision options for producing significant outputs of a particular type*”. Day (1994), in turn, identifies three areas that comprise a firm's distinctive capabilities, namely business assets, capabilities of the business and core competencies of the corporation. I adopt Winter's definition of capabilities as a starting point for discussing capabilities in a supply network.

#### *Capabilities in the IMP literature*

In the IMP literature, capabilities have been discussed in many contributions. When reviewing literature related to capabilities, a few notions arise. Firstly, all the contributions are coherent with the interaction and development view meaning that while the development of capabilities is dependent on the interaction (Ford et al. 1986; Håkansson and Snehota, 1995; Rosenbröijer, 1998), it also calls for certain capabilities (Ritter, 1999; 2006; Axelsson et al. 2005; Johnsen and Ford, 2006).

Ford et al. (1986) consider capabilities as being mainly related to resources and interaction in relationships over time. They further stress the importance of interaction with other actors as combinations of resources activated through interaction and integrated in a firm and in relationships as well as across a firm's wider network. Håkansson and Snehota (1995) discuss capability development in relation to a firm's activity structure, the organisational structure, and the resource collection. They also argue whether or not it matters little if a firm actually has a capability, as long as counterparts do not acknowledge the firm has said capability. This means that a counterpart has to be of the opinion that a firm has a competence, and the counterpart has to be interested in using it.

Rosenbröijer (1998) focuses explicitly on capability development in business networks and argues that the development of a firm's capabilities is closely entwined with the firm's relationships. Hence, the development of capabilities depends on resource-related interaction, combination and confrontation processes in single relationships as well as across relationships. Finally, Johnsen and Ford (2006) study smaller suppliers' interaction capability developments in relationships with larger customers and identify four types of interaction capabilities (human, technological, cultural, managerial systems) that small suppliers should adopt and develop.

Secondly, the IMP literature on capabilities is concerned with capabilities in distinct areas. Ritter's (1999) network competence includes both a relationship area and a wider network, while Johnsen and Ford (2006) explicitly focus on interaction between two counterparts. Axelsson et al. (2005) are concerned with specific capability development within sourcing and operate both on the relationship and network level. The contributions are presented in Table 7.

<b>Author</b>	<b>Capability area</b>
Ford et al. (1986)	Interaction perspective of capabilities
Håkansson and Snehota (1995)	Capabilities in relation to resource heterogeneity
Rosenbröijer (1998)	Capability development
Ritter (1999)	Network competence
Axelsson et al. (2005)	Sourcing capabilities
Ritter (2006)	Firm capabilities (Product, process, market)
Johnsen and Ford (2006)	Interaction capability (Human, technological, cultural, managerial systems)

**Table 7: Capabilities in the IMP literature**

The above-mentioned contributions reveal interesting issues regarding the study at hand. Firstly, capabilities are needed to carry out certain activities. In this study, the activities are understood in terms of a firm's role in the network, i.e. the main and support activities a firm performs in a specific function. Moreover, in order to manage relationships in a network, particular capabilities are needed.

**Capabilities related to role**

Looking at a firm, specific activities are expected in connection with the given role (Anderson et al., 1998). These activities require certain capabilities from the companies. In this context Ritter's (2006) firm capabilities (See Table 8) that entail the areas of product, process and market capabilities become of interest. Ritter (2006) further identifies three levels of capabilities: operational, ad hoc and dynamic capabilities. The operational capability focuses on ordinary routines (e.g. production process management), while the dynamic ones (Collis, 1994; Teece et al, 1997; Eisenhardt & Martin, 2000) are concerned with changing operational capabilities (e.g. developing new customer segments). The ad hoc capability, derived from Winter's (2003) argument on non-repetitive behaviour, can be interpreted as a firm's ability to adapt into certain circumstances by being able to solve problems in a flexible way and/or abandon routines, if necessary. The ad hoc capability both supports and challenges the operational and dynamic capabilities.

Level	Product	Process	Market
Dynamic	New product development	New process development	New market-segment-customer development
Ad hoc	↑ Supports ↓ Challenges ↑↓	↑ Supports ↓ Challenges ↑↓	↑ Supports ↓ Challenges ↑↓
Operational	Product management (e.g. quality test and repair)	Process management (e.g. production)	Market management (e.g. marketing and sales)

**Table 8: A framework of firms' capabilities (Ritter, 2006)**

Product (including goods, services and other elements of offerings) capability refers to understanding the value a firm generates to its customer. In this sense, product capabilities are

routines related to the properties and characteristics of the value created by the firm for customers. If we take a shoe manufacturer in a supply network as an example, the product capability can be expressed in terms of a shoe manufacturer's knowledge the requested product i.e. a shoe.

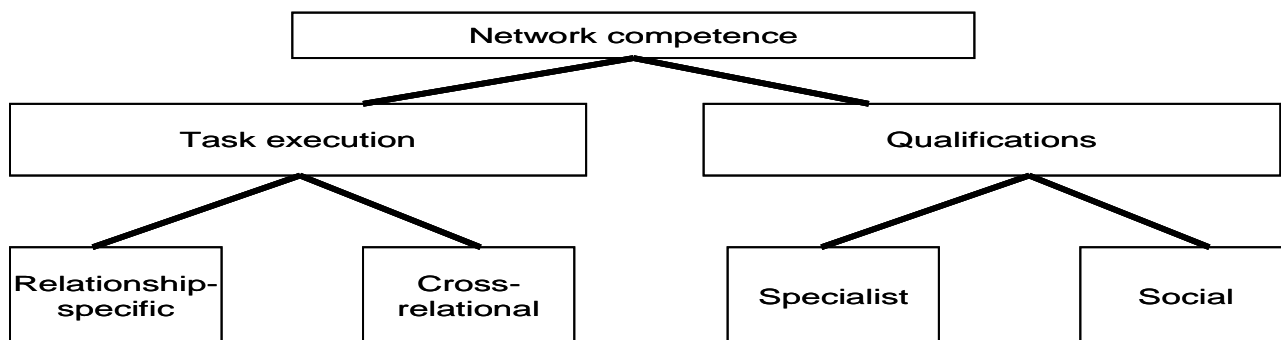
Process capability, in turn, is aligned with value creation i.e. efficiency and effectiveness. Or, to put it differently, process capabilities are routines related to the properties and characteristics of the value-creation process of the firm. The process capability in this context is concerned with a shoe manufacturer's ability to produce shoes in an efficient and effective way.

Finally, market capability entails the routines related to the properties and characteristics of the value transfer between the firm and its environment. In these terms it is understood as exchanging value, i.e. managing the boundary spanning interactions of the firm.

At this stage, the two first mentioned areas product and process are of interest as they are directly connected to a firm's activities and therefore suit well to the earlier defined elements of role. These two areas of capabilities are handled on a firm level. Thus, for the purposes of this thesis Ritter's (2006) product and process capabilities will be linked to a firm's role.

### ***Relationship capabilities***

In order to study capabilities related to relationships, Ritter's (1999) network competence (See Figure 9) becomes of interest. Ritter (1999, p. 471) defines network competence as "*a company's degree of network competence is defined as the degree of network management task execution and the degree of network management qualification possessed by the people handling a company's relationships*". He emphasises the role of groups and individuals within a firm is to carry out certain tasks and qualifications related to those tasks.



**Figure 9: Elements of a company's network competence (Ritter, 1999)**

Within the network management task execution Ritter distinguishes between relationship-specific and cross-relational tasks.

Ritter (1999) makes a distinction between specialist and social qualifications. Within specialist qualifications he defines skills such as technical, economic, and legal ones as being important as well as having knowledge about other actors. These skills are related to the more technical side of the relationships (Ritter, 1999). Technical skills are important to understand the partners and their requirements. Economic skills are required to define inputs and set prices. Skills in legal matters apply e.g. when setting up contracts. Finally, knowledge about other actors includes information about other companies, which is important in order to understand the development of the network (Ritter 1999).

When looking at the network competence in a supply network and the purchasing activities as the focus area, the capability discussion regarding purchasing is worth studying. In this context, the literature regarding purchasing capabilities (Das and Narasimhan, 2000; Narasimhan et al., 2001; Giunipero and Percy, 2000; Parker and Anderson, 2002; Axelsson et al., 2005; Rodrigues et al., 2006) offers an appropriate starting point for grasping what kind of specialist capabilities are necessary when performing cross-relational purchasing tasks. Das and Narasimhan (2001, p. 18) mention purchasing competence defined as *“the capability to structure, develop and manage the supply base in alignment with the manufacturing and business priorities of a firm”*. Table 9 summarises some of the recent contributions concerning purchasing capabilities.

<i>Author</i>	<i>Content</i>	<i>Focus</i>
<b>Das and Narasimhan (2000), Narasimhan et al. (2001)</b>	<b>Purchasing competence:</b> <ul style="list-style-type: none"> <li>• Supply base optimisation</li> <li>• Buyer-supplier relationship development</li> <li>• Supplier capability auditing</li> <li>• Purchasing integration</li> </ul>	'Optimal supply base'
<b>Giunipero and Percy (2000)</b>	<b>Purchasing skills:</b> <ul style="list-style-type: none"> <li>• Strategy</li> <li>• Process management</li> <li>• Teaming</li> <li>• Decision making</li> <li>• Behavioural</li> <li>• Negotiation</li> <li>• Quantitative skills</li> </ul>	Individual skills
<b>Parker and Anderson (2002)</b>	<b>Supply chain integrator skills:</b> <ul style="list-style-type: none"> <li>• Project execution</li> <li>- 'Hard' and 'soft' project management skills</li> <li>- Product development</li> <li>• Project evaluation</li> <li>- Systems engineering</li> <li>- Business case evaluation</li> <li>- Complexity management</li> <li>• Related domain knowledge</li> <li>- Operations management</li> <li>- Information technology</li> </ul>	Individual skills
<b>Axelsson et al. (2005)</b>	<b>Sourcing capabilities:</b> <ul style="list-style-type: none"> <li>• Organizational knowledge</li> <li>• Professional knowledge</li> <li>• Supply market knowledge</li> <li>• Supplier knowledge</li> <li>• Customer knowledge</li> <li>• Product knowledge</li> </ul>	Individual skills
<b>Rodrigues et al. (2006)</b>	<b>Purchasing competence:</b> <ul style="list-style-type: none"> <li>• Purchasing interaction</li> <li>- Access other functions' information</li> <li>- Participation other functions' decisions</li> <li>- Supplier involvement</li> <li>• Purchasing importance</li> <li>- Status and recognition</li> <li>- Top management support</li> <li>• Purchasing task execution</li> <li>- Search for information</li> <li>- Use of analysis techniques</li> <li>- Proactive focus</li> <li>- Procedural control</li> </ul>	Synthesis of purchasing role, tasks and interaction

**Table 9: Literature on purchasing capabilities**

Das and Narasimhan (2000) and Narasimhan et al. (2001) focus extensively on establishing and maintaining the optimal supply base that matches with a firm's manufacturing practices and other business priorities. Giunipero and Percy (2000), Parker and Anderson (2002), and Axelsson et al.

(2005) highlight the individual purchaser's skills in carrying out purchasing tasks. Finally, in a recent contribution, Rodrigues et al. (2006) attempt to provide a more holistic depiction of purchasing capabilities in terms of the way they are combined with other function intra- and inter-organizationally and highlight the role of purchasing in the corporate context. Moreover, Rodrigues et al. (2006) also include the tactical purchasing task execution as one area of capabilities.

When analysing the different contributions, we can observe that *certain technical skills* are necessary in carrying out purchasing tasks. E.g. Das and Narasimhan (2000) and Narasimhan et al. (2001) mention supplier capability auditing; Parker and Anderson (2002) refer to product development, and Axelsson et al. (2005) talk about supplier and product knowledge. In other words, a technical side of the purchasing capability entails having a sufficient product knowledge and ability to uncover which suppliers have the required capabilities.

In addition, finding the appropriate supplier is not only a question of technical skills or potential, but also an issue of selecting *the right supplier that can provide the given product for the right costs*. In this context, supply base optimisation (Das and Narasimhan, 2000; Narasimhan et al., 2001), quantitative skills (Giunipero and Percy, 2000) and supply market knowledge (Axelsson et al., 2005) have been mentioned. All in all, the areas of purchasing capabilities are in line with Ritter's (1999) generic specialist qualifications. For example, product and supplier knowledge refer to technical skills, while cost calculations are concerned with economic skills. Furthermore, these capabilities are useful both in relationship-specific and cross-relational settings.

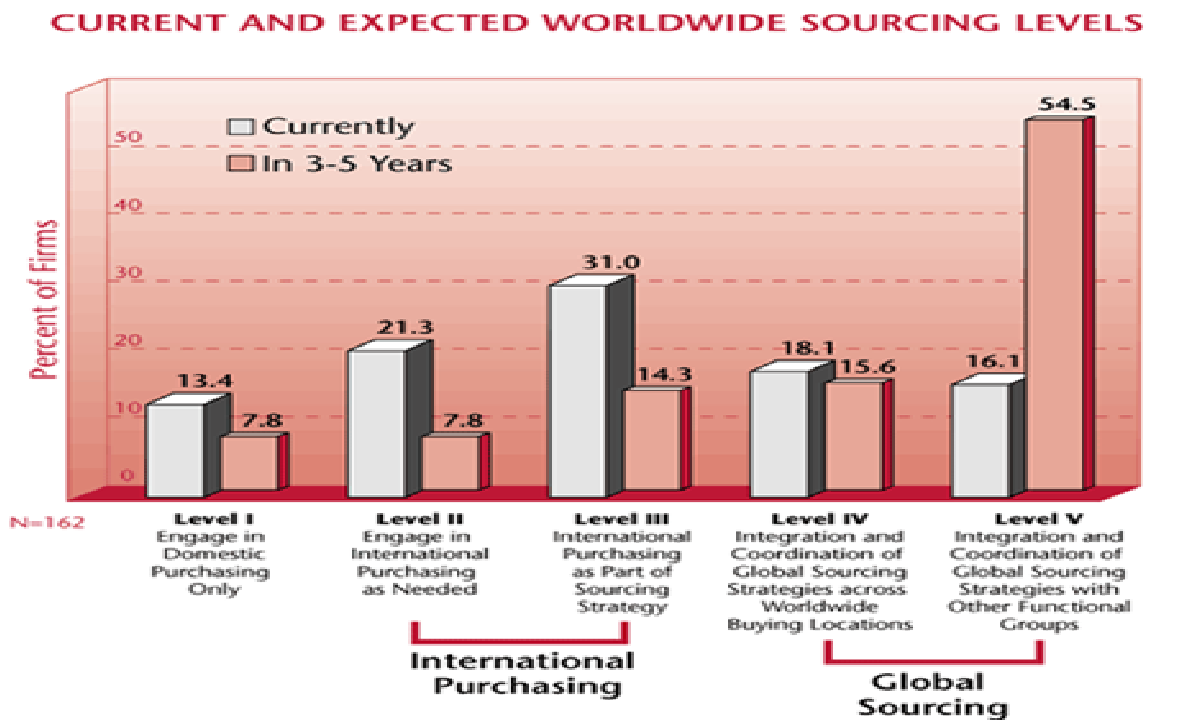
Furthermore, in pace with the increasing globalisation, the nationality of suppliers becomes of interest. The issue of globalisation of the supplier base is addressed by Trent and Monczka (2003), who present a continuum of worldwide sourcing levels (See Figure 10). On one side, these five levels of sourcing indicate the differences between international purchasing and global sourcing. Also, this continuum shows how a firm's supplier base is likely to become more international.

In relation to Axelsson et al. (2005) explicitly mentioning 'sourcing capabilities', Johnson and Ford (2006) are more concerned with cultural interaction capability. In this context, they mention issues such as bilateral development of supplier and customer's culture and value, and cross-cultural learning and development of international management skills through engaging with a variety of



counterparts in the network. I consider these sourcing capabilities or cultural interaction capabilities as relevant add-ons to the specialist qualifications in a contemporary business network, and for the purposes of this thesis I will label them as cultural skills.

**Figure 1**



**Figure 10: Purchasing continuum (Trent and Monczka, 2003; p. 34)**

However, as it has been noted earlier, a firm’s role is connected to a wider network. For example, specific supplier relationships are necessary in order to obtain those products and/or services that are needed in order to act in a particular role. Furthermore, the outputs are sold to those customers that desire them. Therefore, it is relevant to point out that a firm has a role in a specific network setting, and in order to be able to act in that setting, capabilities are needed. This issue is concerned with a firm’s ability to cope with the network in total (Håkansson and Snehota, 1995; Jüttner and Schlange, 1996).

Several notions regarding this ‘ability to cope with the network in total’ can be observed in the capability literature (Håkansson and Snehota, 1995; Jüttner and Schlange, 1996). Identifiable issues include obtaining knowledge about other actors (Ritter, 1999), holistic ways of capturing knowledge in all the areas spanning from an organization to suppliers and to a wider network (Axelsson et al., 2005) and market capabilities which are defined as “*routines related to the properties and characteristics of the value transfer between the firm and its environment*” (Ritter, 2006; p. 1033). In this thesis I will adopt Ritter’s (1999) knowledge about other actors as a dimension of relationship capabilities.

Moreover, relationship capabilities are also concerned with the ability to behave in an appropriate way when interacting with the counterpart. If we relate these capabilities to the relationship elements (cooperation-competition/conflict, power-dependency, trust-commitment), a person’s ability to handle these elements are of crucial value. Therefore, Ritter’s (1999) social skills (or qualifications) become of interest. The social qualifications emphasise the ‘soft’ part of the relationship and are of special interest because the relationships are based on interpersonal interaction (Ritter, 1999) The social qualifications are defined as “*the extent to which a person is able to exhibit autonomous, prudent, and useful behaviour in social settings*” (Ritter, 1999; p. 469). He identifies such social qualifications as communication ability, extraversion, conflict management skills, empathy, emotional stability, self-reflectiveness, sense of justice, and cooperativeness (Ritter, 1999).

To sum up, I will adopt Ritter’s (2006) firm capabilities within the areas of *product and process capabilities* to identify the capabilities that are requested to fulfil a certain role in a network. I will call them role capabilities. Individuals’ ability to manage relationships in a network will be labelled as relationship capabilities. These capabilities include *technical, economic and cultural skills* as well as *knowledge about other actors*. In the present study, these capabilities will be studied from the purchasing point of view, i.e. product and supplier knowledge, cost calculations, and the ability to manage international supplier relationships. Moreover, relationship capabilities also entail *social skills* that are considered as the ‘soft’ part managing relationships. The capabilities are presented in Table 10.

<i>Role capabilities</i>	<ul style="list-style-type: none"> <li>• Product capabilities</li> <li>• Process capabilities</li> </ul>
<i>Relationship capabilities</i>	<ul style="list-style-type: none"> <li>• Technical skills (product and supplier knowledge)</li> <li>• Economic skills (cost calculations)</li> <li>• Cultural skills (ability to manage international supplier relationships)</li> <li>• Knowledge about other actors</li> <li>• Social skills</li> </ul>

**Table 10: Capability measurement in this thesis**

### 3.3. Concluding remarks on Chapter 3

This chapter has emphasised on the concept of position. I started developing the concept by recognizing the characteristics of position. In this context, I concluded that position is a relative term, i.e. it is always seen in relation to something else. Furthermore, I stated that a position is studied in a specific context upon the judge's (researcher's) interests and abilities.

After having discussed the characteristics of position, I continued with the measurements. I argued that position is measured upon specific measures, which are subjective and dependent on from which angle the context position is studied.

I defined role in supply networks in the following way. Firstly, I identify a firm's *function* (e.g. supplier, manufacturer, distributor and customer), and *those activities that are typical and expected* in relation to the specific function. Secondly, there are *supporting activities* that are *carried out by a collection of actors*, and these activities support a firm's main role.

Regarding relationships, three relationship elements were identified: Cooperation - Competition/Conflict, Power Dependency and Trust Development. These elements were identified as important tools in describing the general structure, or atmosphere of the relationship. However, the examples above have indicated that the relationship elements as such do not tell the whole truth. This means that the relationship context in terms of interaction environment provides the platform reveal useful information concerning the relationship and help us understand them in a more comprehensive way

Finally, I identified two different types of capabilities concerning the role and relationships a firm has in a network. *Role capabilities* entail those product and process capabilities (Ritter, 2006) that are important for a firm when carrying out activities related to a specific function. *Relationship capabilities* include technical, economic and cultural skills as well as knowledge about other actors. In this study, these capabilities will be studied from the purchasing point of view, i.e. product and supplier knowledge, cost calculations and ability to manage international supplier relationships. Relationship capabilities entail also social qualifications that are considered as the ‘soft’ part managing relationships.

So far, the measurements of position have been defined as indicated in Table 11.

<i>Role</i>	<i>Relationships</i>
<ul style="list-style-type: none"> <li>• Expected and typical activities</li> <li>• Support activities</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation - Competition/Conflict</li> <li>• Power-dependency</li> <li>• Trust-commitment</li> </ul>
<i>Role capabilities</i>	<i>Relationship capabilities</i>
<ul style="list-style-type: none"> <li>• Product capabilities</li> <li>• Process capabilities</li> </ul>	<ul style="list-style-type: none"> <li>• Technical skills (product and supplier knowledge)</li> <li>• Economic skills (cost calculations)</li> <li>• Cultural skills (ability to manage international supplier relationships)</li> <li>• Knowledge about other actors</li> <li>• Social skills</li> </ul>

**Table 11: Role, relationships and capabilities**

## ***4. Repositioning in a supply network***

The previous chapter developed a model to capture a firm's position. This model is a tool when studying a firm's position in a network as a snapshot. In order to study changes in a firm's position, the concept of repositioning will be examined in this chapter, which starts by discussing the distinction between positioning and repositioning. The aim of the chapter is to develop the concept of repositioning in order to build up the framework for studying repositioning in this thesis.

### **4.1. Positioning – repositioning**

Positioning is an extensively studied concept in the management literature. Sjöström's (1996a) study of "Positioning under strategic uncertainty" defines positioning as *the process of finding, establishing and maintaining a position* (Sjöström, 1996a). He identifies four major perspectives on positioning as illustrated in Table 12.

Product-oriented positioning is concerned with an individual product and its relation to other products. The product is the starting point for positioning, and this orientation gives a somewhat static illustration of positioning, as a new product is considered to entail new positioning and not being a part of a long-term positioning of a firm (Sjöström, 1996a). It is characteristic for this orientation that it highlights remarkable product traits in such a way that customers can distinguish between different product offerings. Moreover, customers are treated as anonymous meaning that an individual customer's considerations regarding the product are not of interest (Sjöström, 1996a). Within this orientation, three sub-orientations are clearly distinguished: Communication, marketing mix, and service-oriented product positioning. The communication-based product positioning is concerned with influencing the customer and positioning the product 'in the heads of the customers' (Crawford, 1985; Pride and Ferrell, 1985; Ries and Trout, 1985; 1988a; 1988b; Zikmund and d'Amico, 1993). In the marketing-mix based orientation, positioning is discussed upon the four marketing mix variables, i.e. product, price, place and promotion. Moreover, this sub-orientation entails such elements as market share and segmentation (e.g. Stern et al., 1989; Reeder et al., 1991; Mercer, 1992; Dibb et al., 1994; Kotler, 1994). Finally, the service-based sub-orientation is closely related to the marketing mix, but this sub-orientation highlights the fact that positioning can be controlled and is dependent on the people involved in the process. In these terms, the 4 P's are

supplemented with three other P's, namely people, physical evidence and process (Cowell, 1984; Lovelock, 1984; Shostack, 1987; Bateson, 1992).

	<b>Perspectives on positioning</b>			
	Product-oriented positioning	Competition-oriented positioning	Relationship-oriented positioning	Phase-oriented positioning
Definition (Sjöström, 1996a)	Product forms the fundament for positioning. Customers are treated as anonymous. Product is related to other products	More than one product forms the fundament for positioning and a (e.g. SBU or product line) is a part of the object. A firm is related to other competing firms.	A focal actor's roles form the fundament for positioning. The role of the focal actor relates to the roles of other actors	The focus is on products , relationships and companies
Sub-orientations (Sjöström, 1996a)	1.Communication-based product positioning  2.Marketing-mix-based product positioning  3.Service-basedproduct positioning	1.Market share – based positioning  2.Industry-specific positioning	1.Network-based relationship positioning  2.Service-based relationship positioning	
Authors	1. Crawford (1985), Pride and Farrell (1985), Ries and Trout (1985, 1988a, 1988b),Zikmund and d'Amico (1993)  2. Dibb et al. (1994), Mercer (1992), Kotler (1994), Reeder et al. (1991), Stern et al. (1989)  3. Bateson (1992), Cowell (1984), Lovelock (1984), Shostack (1987)	1. Buzzell and Gale (1987)  2. Porter (1980, 1985, 1986, 1988 1990, 1991)	1. Johanson and Mattsson (1985, 1992), Mattsson (1985, 1987)  2. Grönroos (1988)	McKenna (1985, 1988, 1989, 1991)

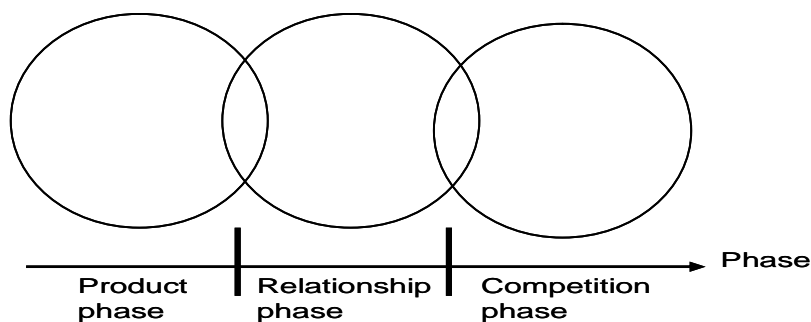
**Table 12: Four perspectives on positioning (based on Sjöström, 1996a)**

Competition oriented positioning is directed towards a firm's position in relation to its competitors and other actors in the environment, as well as the advantages and disadvantages a firm has in relation to other actors. Two major sub-orientations can be identified within this category; one dealing with market share and the other being more industry-specific. The market share-based

positioning is concerned with gaining as big a market share as possible. The PIMS-project (e.g. Buzzell and Gale, 1987) and results from the Boston Consulting Group (Henderson, 1980) indicate that a firm's market share is measured in quantitative terms and in relation to one or more competitors. The industry-specific positioning is to a large extent based on the contributions of Porter (1980; 1985; 1986; 1988; 1990; 1991), and focuses on a firm's or its strategic business unit's position within a specific industry, e.g. as a cost leader, an innovator or a niche producer (cf. also Miles and Snow, 1986).

Sjöström (1996a) identifies the Relationship-oriented positioning as the third major perspective of positioning. He bases this orientation to the early contributions of the industrial network approach (e.g. Johanson and Mattsson, 1985; 1992; Mattsson, 1985; 1987) and emphasizes that while the two first mentioned orientations are product and competition based, the network orientation is concerned with a firm's relationships with other actors in the network. Sjöström (1996a) distinguishes between network and service based sub-orientations. While the network based sub-orientation focus on the roles and relationships a firm has with other actors in the network, the service-based sub-orientation is particularly interested in those persons that are behind the positioning.

Sjöström (1996a) considers these three perspectives as stages of positioning, and therefore he identifies the fourth main perspective as being phase-oriented positioning. According to Sjöström (1996a) this orientation is based on the works of McKenna (1985; 1988; 1989; 1991), who looks upon how positioning evolves over time. In these terms there can be identified three overlapping positioning phases (see Figure 11) consisting of product, relationship, and competition phases.



**Figure 11: Positioning phases (Sjöström, 1996a)**

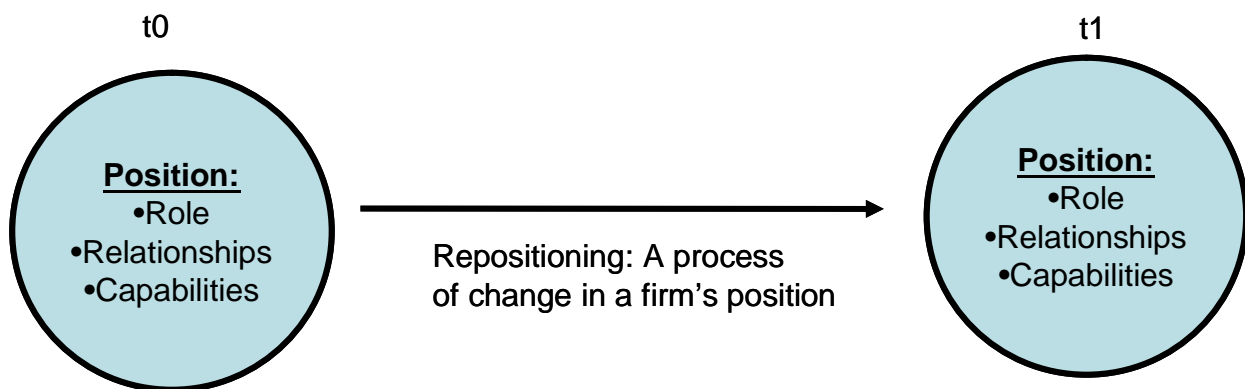
Sjöström (1996a) concludes that these three phases indicate two main elements, namely that positioning is a *process* and *relationships* are the binding element between different phases. This link from Sjöström's (1996a) view of phase-oriented positioning provides a good platform to study his notion further of how the positioning changes over time. However, I have concluded that this notion needs to be refined further. In this context, the term change gains relevance. Sjöström (1996b, p. 26, translated from Swedish) argues that "*the major difference is that the phase oriented positioning discusses how positioning changes over time, while network oriented relationship-based positioning does not do that (e.g. not how the role changes, just that it does)*". I have two major comments to this remark. Firstly, Sjöström (1996b) talks about 'how positioning changes'. I consider this statement somewhat tautological, since positioning is a process, and therefore answers the question 'how'. Consequently, I would rather say how *position* changes, as this notion is better aligned with Sjöström's (1996a) own definition of positioning (see page 58). Secondly, Sjöström (1996b) mentions change. But change in relation to what? If we are concerned with change, then we need a point of departure to be able to compare how change has taken place.

In this very context, the term repositioning becomes pertinent. According to a dictionary translation, repositioning means change in position or revision of the marketing strategy, so that the company's sales increase ([www.m-w.com/dictionary/repositioning](http://www.m-w.com/dictionary/repositioning)). Thorelli (1986) distinguishes between positioning and repositioning by defining four processes that characterize network membership: entry, positioning, repositioning, and exit. For Thorelli (1986), positioning and repositioning is a dichotomy where positioning is related to a new network entrant's positioning, while he views repositioning as the old network members' possible need for repositioning in order to accommodate the new entrant.

Based on the viewpoints provided by Sjöström (1996a; 1996b) and Thorelli (1986), I consider that positioning is concerned with the process of finding and establishing a position in the future. By this I mean that positioning examines an isolated process without having any point of comparison. Accordingly, repositioning considers a given situation and is therefore concerned with the process of change from a position at certain point in time ( $t_0$ ) to a position at another point in time ( $t_1$ ). The statement regarding repositioning and change related to a position is also supported in Mattsson (1987), who is concerned with strategic change and defines it as a major change in the firm's position. Moreover, Anderson et al. (1998, p. 169) state that "*the position as such is not a dynamic*



concept, but it is possible to describe change by comparing an actor's position at time  $t_0$  and at time  $t_1$ ". Furthermore, as I have defined repositioning as a process of change in a firm's position from  $t_0$  to  $t_1$ , I can utilise the measurements of a firm's position as identified in chapter 3. Based on these elements, the repositioning in this thesis involves the change process in a firm's role, relationships and capabilities as illustrated in Figure 12.



**Figure 12: Repositioning in this study**

As repositioning is concerned with change, it is relevant to start by looking at the change characteristics in networks before moving on to the change in position measurements. Therefore, the change in networks will be discussed in the following sections.

## **4.2. Change in networks**

Change has been one of the central issues among industrial network researchers (Axelsson and Easton, 1992). The early contributions dealing with change focused particularly on situations where change (e.g. technological) took place. Later on, it became important to understand change processes, and in this way, the concept of change in the network context has been followed by more theoretical formulations (Axelsson and Easton, 1992).

Change in supply networks, like in business networks in general, has appealed to many researchers. Within supply networks, two major streams of studies concerned with change can be identified. One

of them is the changes observed particularly in Toyota's supply network (Dyer, 2000; Dyer and Nobeoka, 2000) in terms of the evolution of the existing network. Dyer and Nobeoka (2000) identified three evolution phases between suppliers and customers. These phases are as follows:

1. Weak ties between the buyer and the different suppliers in the supply network (new relationships and low frequency).
2. Strong ties between the buyer and the different suppliers in the supply network (transformation of know-how from customer to the suppliers).
3. Strong ties among the suppliers (creation supplier sub-networks).

Another stream of change research focuses on supply network dynamics in more general terms. To a large extent, these dynamics are concerned with initiating or creating supply networks (e.g. Johnsen et al., 2000; Lamming et al., 2000; Harland et al., 2001; Harland et al., 2004; Mills et al., 2004; Hertz, 2006; Holmen et al., 2007). However, since the network approach does not view the network in terms of a lifecycle, the creation of networks becomes difficult to cope with. Networks, including supply networks, do not have a clear beginning or end and, therefore, it becomes relevant to study change issues in supply networks from the viewpoint that supports the fundamental ideas of industrial network approach.

Change in networks has been studied on various levels. Among these levels it is worth mentioning:

- development and change of individual business relationships (Ford, 1980; Dwyer et al., 1987; Mattsson, 1987; Wilson and Mummalaneni, 1986; Hertz, 1998; Halinen, 1997);
- change processes in marketing (Wilkinson, 1990) and distribution (Gadde and Håkansson, 1992) channels;
- change in small nets (triads) (Easton and Lundgren, 1992; Smith and Laage-Hellman, 1992; Havila, 1996), and
- change in networks more generally (Håkansson, 1992; Lundgren; 1992; Mattsson and Hultén, 1994; Håkansson and Henders, 1995; Håkansson and Snehota, 1995).

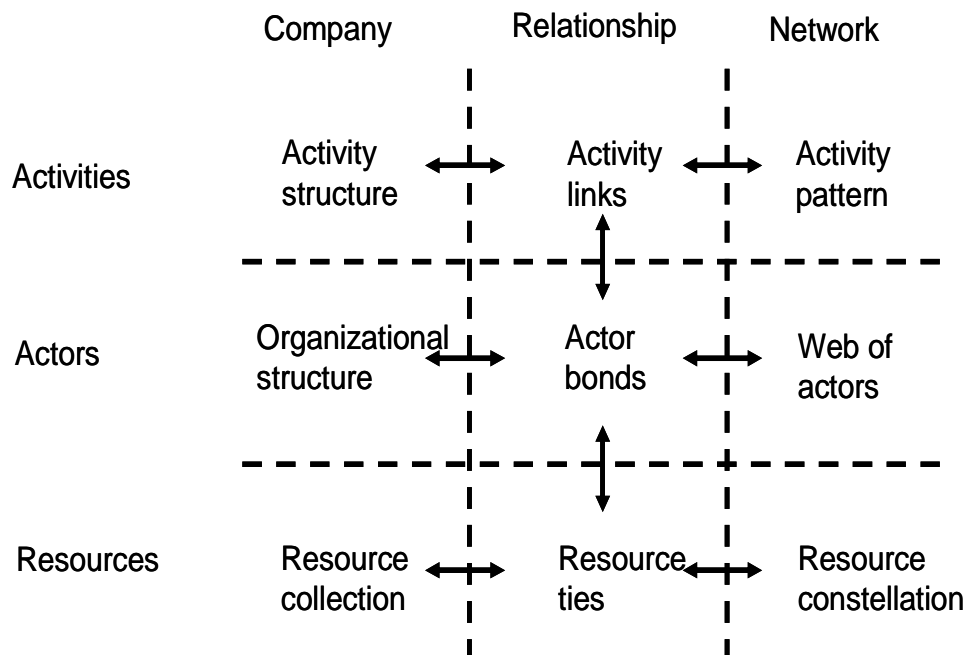
Business networks are composed of interrelated and interconnected relationships. The existing pattern of relationships is a result of experimenting with various combinations of actors, activities and resources (Håkansson and Snehota, 1995). As the different elements can be combined and

developed in various ways, networks never become static structures, but are more likely to evolve on a continuous basis. Due to the interrelated and interconnected nature of networks, changes are always a matter of two or more actors working together or against others when aiming at stabilising or changing networks (Håkansson and Snehota, 1995). Thus, “*substantial changes are initiated and carried out in interaction between the companies*” (Havila and Salmi, 2000). Moreover, no firm alone is capable of maintaining or changing the structure of the network (Håkansson and Snehota, 1995).

#### 4.2.1. Initiation and effects of change

Scheme of analysis combines the elements of ARA with company, relationship and network levels (See Figure 13). It can be used in two major ways (Håkansson and Snehota, 1995; p. 44): “*first, it can be used as a conceptual framework to analyse the effects of change in a relationship and/or to identify the factors that affect the possibilities of development of a relationship. Second, it can be used as a heuristic device in coping with relationships in business*”. Moreover, initiated changes are carried out through the interaction between actors and can be initiated on three different levels: 1) By the firm itself; 2) by a relationship, or 3) by somebody in the network (Håkansson and Snehota, 1995). On a firm level, a person in the company may e.g. figure out a more efficient way of carrying out a certain activity. On a relationship level, two counterparts may be faced by a technical challenge that they have to act upon. Finally, changes among third parties in the network may affect the relationships of a firm and initiate need for adaptations, e.g. government regulations.

Håkansson and Snehota (1995) distinguish between three types of effects that a change in a relationship may cause. Firstly, a direct effect that changes the potential of the relationships. This depends on how it affects the interplay of the different layers in the relationship. Secondly, change in a relationship may affect the firms involved and their cost-revenue parameters. Thirdly, a more indirect effect is likely to take place as the change might lead to different reactions in the overall network. Even though indirect effects often cannot be predicted beforehand, Johnsen and Ford (2007) argue that a firm can actively involve itself in an otherwise indirect relationship by ‘network intervention’. This intervention may then lead to a disintermediation or a transfer of an indirect relationship into a direct one.



**Figure 13: Scheme of analysis (Håkansson and Snehota, 1995; p. 45)**

The scheme can also be used to identify the impact of change on the development of a relationship. Any change (in any of the cells of the matrix) can affect the development of a certain relationship. As a matter of fact, one change can cause a number of reactions which might be both expected and unexpected for the party initiating the change. For example, changes in some activities among two actors might have effects on both the horizontal and vertical dimensions of the scheme. It can have a direct effect in terms of increased or decreased efficiency in the firm's activity structure. It might also have some direct effects on third parties who have to adapt to the new link with accompanying positive or negative effects on the activity pattern. The change may also have an indirect effect in terms of giving cause to further changes within the relationship (new ties or bonds). It can also give cause to adjustments in relationships to third parties (Håkansson and Snehota, 1995).

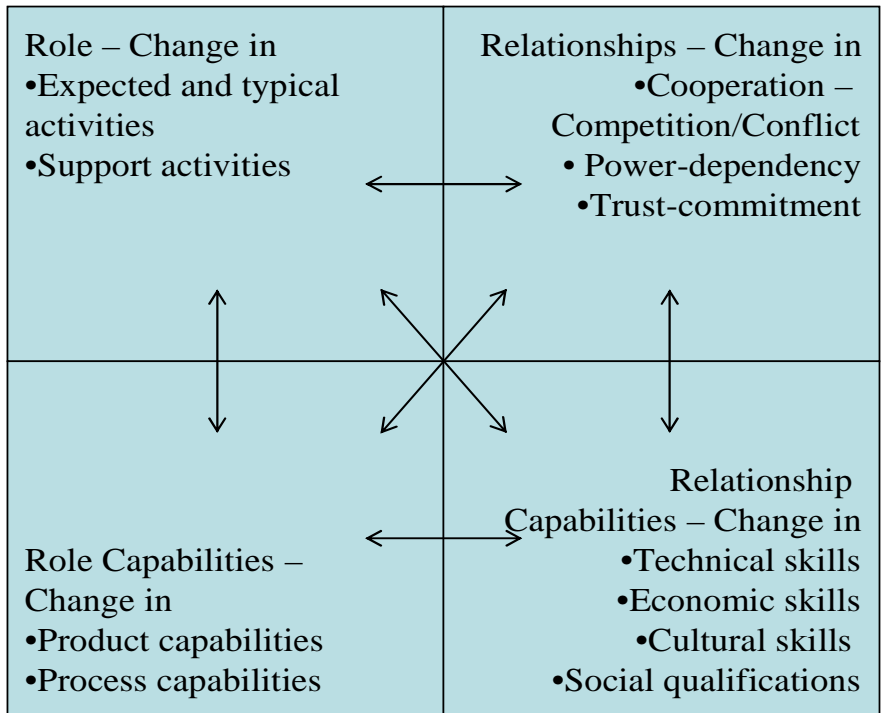
In relation to the above, Halinen et al. (1999) suggest that part of the change always remains within a dyad, whereas some part of change may also affect other relationships and other actors in a network. In this context, Halinen et al. (1999) distinguish between confined and connected change. *Confined change* characterizes this seemingly 'stable situation' in a network. They remain within a

dyad and are not received or acted upon by other actors in the network (Halinen et al., 1999; Havila and Salmi, 2000). But, as soon as a change in one business relationship also influences (an)other business relationship(s), it can be characterized as *connected change*. Halinen et al. (1999) define connected change as a change in one relationship that is received and acted upon by other actors in the network (Havila and Salmi, 2000).

To conclude, changes in networks are initiated and carried out in interaction. Therefore, business relationships play a substantial role in a change process. Change can be initiated by a firm itself, a relationship, or by other actors in a network. Changes initiated by any of the levels are likely to influence each other directly (confined change) or indirectly (connected change). These notions are of importance when we look at the change in the measurements of position as developed in chapter 3. I have also earlier addressed that role, relationships and capabilities are interlinked, as they are related to the ARA-model. This is an important fact to bear in mind when we start discussing repositioning in terms of change in a firm's position.

As these three measurements are interlinked, it means that change in any of the measurements has an effect on the other elements. We can start by recognizing the different position measurements by using the earlier developed categorisation. Role and relationships entail structural elements as shown in Figure 14. Moreover, there are two types of capabilities; one related to role and another to relationships.

Change in the measurements of the position can either be initiated by any of the role elements, relationships or by capabilities. For example, change in role is likely to affect relationships a firm's capability structure. Or, if the firm has acquired a new type of capability, this capability may lead to changes in a firm's role and relationships. Similarly, changes in capabilities may have an effect on role and relationships.



**Figure 14: Change elements of a firm’s position**

After having defined the initiation and the effects of change, the next step is to study, *how* changes actually can take place. For that purpose, the nature of network change will be introduced.

#### 4.2.2. *The nature of network change*

Business networks (and in this context supply networks) are never in a true equilibrium, but evolve continuously (Håkansson and Snehota, 1995). The twofold view of change in networks has been labelled as incremental versus radical change in Halinen et al. (1999) and Havila and Salmi (2000). Both contributions challenge the more traditional view of network change in terms of gradual and incremental steps as network actors interact and adapt to each other. Accordingly, change can be considered radical when a relationship between two actors is broken or a new relationship is established (Halinen et al., 1999; Havila and Salmi, 2000).

A literature review shows that incremental and radical changes understood as keeping the existing relationships in opposition to breaking up old or establishing new relationships have been an issue of concern among network researchers, though labelled under various terms (See Table 13).

		Authors			
The nature of network change	Network structure	Mattsson (1987)	Lundgren (1992)	Håkansson and Snehota (1995)	Halinen et al. (1999) Havila and Salmi (2000)
<b>Incremental</b> (Evolutionary, Continuous)	Existing relationships	Network-integrative strategies	Coordination	Structuring, specialisation and hierarchisation	Incremental
<b>Radical</b> (Discontinuous)	New relationships	Network- changing strategies	Mobilisation <ul style="list-style-type: none"> <li>• Network-integrative</li> <li>• Network-changing</li> </ul>	Restructuring, generalisation and hetearchisation	Radical

**Table 13: Dichotomy of changes in networks**

Mattsson (1987) refers to network-integrative or network-changing strategies. Integrative strategies imply a close adaptation to the network and a firm does not intend to change the network structure. Network-changing strategies, on the other hand, imply structural changes in the network and are likely to lead to many new relationships.

Lundgren (1992) distinguishes between the coordination and mobilisation processes and uses the first mentioned term to characterise continuous changes in networks while the latter one focuses on discontinuous changes. These terms are coherent with the other contributions in the sense that coordination refers to adaptations in the existing networks and mobilising presents the formation of new network structures and relationships. In this context, Lundgren (1992) chooses to subdivide the mobilisation process into network-integrative and network-changing mobilisation. Even though the terms are closely related to those of Mattsson (1987), they are still implicitly concerned with ‘radical’ changes. The network-integrative mobilisation refers to the process of expanding or extending the network in accordance with existing activity cycles. The network-changing mobilisation refers to the process of establishing new activity cycles or breaking of old ones or the combining of two or more previously unrelated activity cycles (Lundgren, 1992).

Håkansson and Snehota (1995) introduce dimensions of change that further can be categorised as resulting in closer connections between links, bonds and ties (the structuring, specialisation and hierarchisation vectors), and those breaking up some of the connections, resulting in changes in some of the basic parameters (the restructuring, generalisation and hetearchisation vectors). Håkansson and Snehota (1995, p. 283) refer to the incremental and radical changes by stating

*“Structuring, specialization and hierarchization tend to reinforce each other. They go hand in hand and are a typical pattern of network development when and where gradual changes are dominating. In the same way, restructuring, generalization and heterarchization tend to be a typical pattern when a more radical change is taking place”.*

Based on the above, two types of changes in networks are identifiable. The incremental changes are regarded as adaptations and development in the existing relationships and network, while the radical changes lead to changes in relationships in terms of terminating the existing relationships and initiating new ones. Moreover, in a network level radical changes lead to new network structures. This distinction between incremental and radical changes is also useful when change is studied in the measurements of position. In the following sections, I will identify the types of changes that can take place in relation to role, relationships and capabilities.

## **4.2. Change in role**

Change in role is related to those typical activities that a firm is expected to carry out in a certain role. Furthermore, change in role is also concerned with those sub-activities (e.g. purchasing and marketing) and persons involved in them designed to support the main activities.

Incremental changes in a firm's role are amendments in activities in an existing actor structure. This type of change is discussed in Håkansson and Snehota (1995) as specialization and is likely to result in more tightly connected activities in an existing actor structure. Moreover, specialisation is likely to exist among those companies that have a strong emphasis on cost efficiency (Håkansson and Snehota, 1995; Argyres, 1996). For example, a firm may specialise to certain activities in its activity chain, like in the case of a manufacturer of edge glued panels. That particular manufacturer chose to transfer a large part of its production to its existing supplier and specialised in becoming a know-how partner to that supplier.

A radical change in a firm's role happens, when a firm undertakes a new role in its existing supply network. This means that a firm will carry out new activities in relation to the new actors in the existing network. The earlier illustrated specialization and outsourcing issue may result in a new function, e.g. a formerly manufacturer may become a subcontractor. Or, a manufacturer may



become a retailer, as it is shown in the value chain upgrading literature (e.g. Gereffi, 1999; Humphrey and Schmitz, 2002; Humphrey, 2004; Gereffi et al., 2005), when a firm undertakes a function upgrading process.

Another type of radical change in a firm's role occurs, when it adopts a new role in a new network. For example, a firm that formerly used to produce furniture may step into a window production network. In this new network, the former furniture manufacturer can carry out similar activities (e.g. cut and plane sawn wood), but acts now as a subcontractor to the window industry. This type of change in role is also identified in the value chain upgrading literature that mentions inter sectoral upgrading process (Humphrey and Schmidt, 2002; Humphrey, 2004; Gereffi et al., 2005). This type of change can also be identified in Håkansson and Snehota (1995) in terms of generalization. Generalization means that a firm attempts to broaden its activity scope and tries to link its performed activities to other activity chains. Furthermore, a firm emphasises on developing new connections of activity links and actor bonds.

A firm's sub-functions are designed to support the performance of the overall role, and in many occasions, these support activities are adjusted in pace with the changes in a firm's main activities. For example, the enhanced specialisation and focus on the specific activities may lead to an increased structuring on the buying situation. For example, as a firm concentrates on fewer activities and as the activities become more repetitive and in this way the buying task is simplified. This can lead into more automated buying tasks, where for example a firm's IT systems detect minimum and maximum stock levels for the required material outputs and orders are generated more or less automatically. In principle, this simplification of buying tasks will require a purchasing team that consists of few people directly involved in the purchasing tasks. On the other hand, the fact that a firm has moved some of its activities to external actors requires more coordination.

Change in both a firm's function and its activities may require more drastic changes in the supporting activities. In the case of purchasing, new functions and new activities will result in new purchasing tasks. Let us think about a shoe manufacturer that becomes a distributor instead. This means that the main task for the purchasing function is not necessarily to acquire the raw material inputs to the production anymore, but to purchase ready-made shoes instead. This will result in a

different way of carrying out buying tasks. This type of change in purchasing tasks will also necessitate a different composition of a purchasing team with more people involved in the tasks within and across a firm's boundaries (Wind, 1978; Parker and Anderson, 2002; Andersen and Christensen, 2005) and preferably result in a specialist organisation (Miles et al., 1992).

To sum up, a firm may change its role in its existing network or step into a new network. In its existing network, a firm can undertake a new role towards its existing customers. Moreover, a firm can also carry out different activities and a manufacturer may become for example a retailer. By stepping into a new network, an actor undertakes a new role towards new actors.

### **4.3. Change in relationships**

Incremental changes in the relationships are adaptations in the existing relationships. Adaptation is one of the four process characteristics (also cooperation and conflict, social interaction and routinization) in a business relationship (Håkansson and Snehota, 1995). Moreover, mutual adaptations can be considered as prerequisite of the development and maintenance of a business relationship. Adaptations can be concerned with the products exchanged, as well as the routines and rules of conduct in order to improve inter-firm collaboration (Håkansson and Snehota, 1995).

A radical change in business relationships happens when a firm terminates existing relationships and initiates new ones. A firm can initiate new relationships by discovering new interconnections. This means that the actors a firm formerly has not been directly involved in its net now become directly interconnected (Ritter, 2000; Johnsen and Ford, 2007). For example, a furniture manufacturing firm may previously have sold the products to the wholesaler, who sold the items to a retailer. In a new setting, the firm can start interacting directly with the retailer. Moreover, if we look at the change, where a firm steps into a new network, we are likely to depict initiation of new relationships rather than use of the existing ones (Dohrup et al., 2006). For example, if a firm changes from furniture manufacturing to window production, both new supplier and new customer relationships become necessary.

Changes in relationships are to a large extent concerned with two major issues. Firstly, change can happen in a network as an adaptation in the existing relationships. Secondly, a firm can also terminate existing relationships and initiate completely new ones e.g. by discovering new interconnections.

#### **4.4. Change in capabilities**

In order to have a role and relationships, a firm needs certain capabilities. Moreover, specific capabilities are also required to carry out incremental and radical changes in a firm's role and relationships. Therefore, it is not appropriate to classify whether changes in capabilities are radical or incremental in nature. Instead, it is important to identify how capabilities can enable change, incremental or radical.

Changes in capabilities, i.e. role and relationship capabilities can be novel capability combinations that emerge from the existing ones (Håkansson and Snehota, 1995; Gadde et al., 2003). This means that a firm can make use of its existing capabilities in different contexts. If a firm both changes its function and activities, it may become necessary to apply the existing capabilities to the new context. These new capabilities are often likely to be related to the existing ones, as it is typical for firms to carry out changes that are closely related to the existing activities (Graetz and Smith, 2005). This is also seen in the value chain research (Gereffi, 1999; Kaplinsky et al., 2002; 2003) when former manufacturing companies purchase the products they used to manufacture in-house as ready-made instead.

The novel capability combinations can also be depicted in the outsourcing settings. When a firm transfers its production to another actor, it may become necessary that the new actor is taught in the manufacturing processes. This has often been observed when a production is moved to a low-cost country. The actor in the low-cost country can produce the product to a lower cost, but does not necessarily have all the required capabilities. Moreover, specialisation may also require different levels of capabilities both in the existing and in new supplier relationships. For example, a manufacturer of edge-glued panels transfers a larger part of its production capacity to another actor, whose operational excellence does not live up to the focal manufacturer's capabilities. But, as the external supplier has the potential to carry out this activity, it may require ad hoc and dynamic capabilities within the focal manufacturer to teach the external supplier.

A firm can also develop its existing capabilities. This change can be linked to Ritter's (2006) levels of capabilities. For example, a firm that has good operational process capabilities may choose to develop these capabilities so they become more dynamic in nature. In this way, a firm may succeed in improving its production processes on a continuous basis.

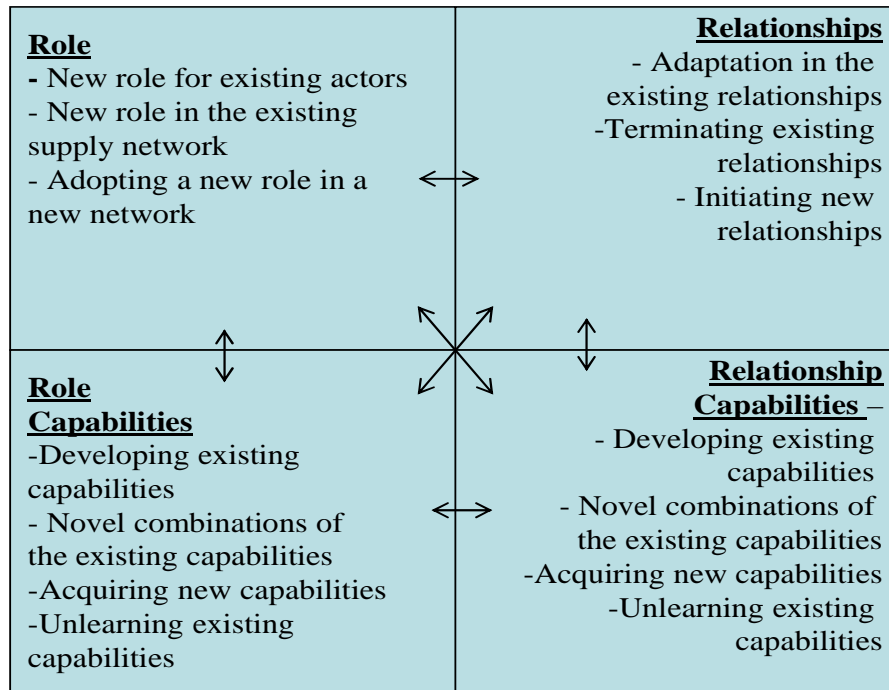
In some instances, it is necessary for a firm to acquire new capabilities (Stalk and Evans-Clark, 1992) to complement the old ones. This may become necessary when a firm changes its role and/or relationships. For example, if a firm changes from furniture manufacturing to window production, new product and process capabilities have to be adopted. Moreover, if a firm that is used to having a domestic supplier base initiates new supplier relationships with e.g. Chinese actors, cultural qualifications need to be learned.

Finally, sometimes existing capabilities have to be unlearned (Sheaffer and Mano-Negrin, 2003). In the event that a firm changes its role and possibly enters a new network, the way activities are carried out may be different. Alternatively, if a firm's production processes become more automated, the old manual process capabilities have to be unlearned. In the relationship context, it might be necessary to unlearn to way e.g. the supplier relationships have been handled, if a firm initiates new relationships. For example, a firm may be used to having parallel supplier relationships in order to ensure the lowest possible unit price. However, in a new network context this way of managing suppliers may not be accepted.

The changes in capabilities show that a firm can benefit greatly from its existing capabilities by developing them further, or by applying them in another network context. Also, it sometimes becomes necessary for a firm to unlearn the existing capabilities. However, existing capabilities are not always sufficient, and therefore a firm has to acquire new capabilities.

In this context, it is relevant to mention that change in one of the position elements is likely to affect the other elements. For example, change in a firm's role is likely to affect the relationships and then call for changes in the firm's capability structure. Or, if the firm has acquired a new type of capability, this capability may lead to changes in a firm's role. For example, a firm may discover a more efficient way of carrying out its activities. This does not necessarily lead to a change in the

function, but might call for changes in the supporting activities. Moreover, change in activities may demand amendments in the firm's process capabilities. Therefore, change in one of the position measurements can either be initiated by role, relationships or capabilities. In a similar vein, change in any of the elements is likely to affect and be affected by the other elements, as also indicated in Figure 15.



**Figure 15: Capturing changes in a firm's position**

#### **4.4. Concluding remarks on Chapter 4**

I started this chapter by elaborating on the understanding between the concepts positioning and repositioning. Positioning is concerned with the process of finding, establishing and maintaining a position in the future. In these terms, positioning examines an isolated process without having any point of comparison. Accordingly, repositioning looks upon the situation backwards and is therefore engaged in following the process of change from a position at certain point in time ( $t_0$ ) to a position at a different point ( $t_1$ ).

Following, I discussed change in networks. Changes in networks are initiated and carried out in interaction. Therefore, business relationships play a substantial role in a change process. Change

can be initiated by a firm itself, a relationship, or by other actors in a network. Changes initiated by any of the levels are likely to influence each other directly (confined change) or indirectly (connected change). Furthermore, two types of changes can be identified in networks. The incremental changes are regarded as adaptations and development in the existing relationships and network, while the radical changes lead to changes in relationships in terms of termination of the existing relationships and initiation of new ones. Moreover, on a network level, radical changes lead to new network structures. This distinction between incremental and radical changes is also useful when change is studied in the measurements of position.

As I defined repositioning as a process of change in a firm's position, I was able to utilise the measurements of a firm's position, i.e. role, relationships and capabilities. Change in the measurements of position can either be initiated by any of the role elements, relationships or by capabilities. Moreover, change in any of these elements is likely to affect other elements. I identified the ways these measurements can change and the following types of changes can be recognized:

Changes in role:

- A new role in a supply network for the existing actors.
- A new role in the existing supply network
- A new role in a new network

Changes in relationships:

- Adaptations in the existing relationships
- Termination of existing relationships
- Initiation of new relationships

Changes in capabilities

- Novel capability combinations that emerge from the existing ones
- Developing the existing capabilities
- Acquiring new capabilities
- Unlearning the existing capabilities

After having identified the nature and the types of change that can occur in the measurements of position, it is relevant to determine *why* these changes happen. To answer that question I will study the underlying forces behind change in the following chapter.

## ***5. Drivers of repositioning in a supply network***

Contemporary business practices are constantly challenged by changes, and these changes tend to take place more rapidly than before (Sapir, 2006). The impressive technological development over the past 25 years combined with an emergence of ‘one world’ has resulted in an increasing global competition (St. John et al., 2001; Sapir 2006). This global competition is characterised by e.g. an entrance of new nations and lower wages into the global trade arena (John et al., 2001).

Such factors are generally labelled as ‘drivers of change’ (St. John et al., 2001), but what exactly are these drivers? We may talk about reactions in the market system that can be “*an answer to change in external conditions or the effect of entrepreneurial acts of individuals*” (Håkansson and Snehota, 1995; p. 271) We may also consider a change driver as a critical event that is “*an incident that triggers radical change in a business dyad and or network*” (Halinen et al., 1999; p. 786). A change driver in this thesis is understood as a change at organizational, relationship or network level that leads to reactions in a network. In the following sections I will first discuss different types of change drivers. Thereafter, handling change is studied in terms of proactive versus reactive behaviour towards change. Finally, the different types of receiving change will be introduced.

### **5.1. Internal and external change drivers**

The rising discussion regarding change drivers can be traced back to the 1950s and 1960s when the contributions regarding firms coping with the ‘environmental uncertainty’ (e.g. March and Simon; 1958; Dill, 1958; Burns and Stalker; 1961; Chandler, 1962; Emery and Trist, 1965; Thompson, 1967; Lawrence and Lorsch, 1967; Terreberry, 1968) emerged (Jauch and Kraft, 1986). Many efforts went into reducing environmental uncertainty by internal uncertainty reduction strategies (Jauch and Kraft, 1986). Or to put it differently, uncertainty was seen as a problem to efficiency in organizations, and theories emphasize the importance of buffering the core activities and creating bridging mechanisms to reduce the external turbulence and achieve conditions for rational operations in the core (Thompson, 1967).

The distinction between organisation and its environment in narrow terms is concerned with an organisation as an isolated unit adapting to the environment or, as Løwendahl and Revang (1998, p.

757-758) state “*the concept of organization is based on a distinction between what is inside and controlled by the dominant coalition, such as size and technology, and factors on the outside, the so-called ‘environment’*”. By following this distinction, the difference between internal and external change drivers can be divided into organisational (internal) and environmental (external) factors.

These external and internal change drivers are handled in business networks as exogenous and endogenous factors (Håkansson and Snehota, 1995). These factors are defined as follows: “*Exogenous factors such as changes in the general economic conditions, social, technological and cultural developments will create new basic conditions... But there will also be from the network point of view changes initiated endogenously. There will always be some good reasons for at least some of the actors to initiate changes in at least some of their relationships*”. The change factor is thus assumed to be either endogenous, i.e. internal of the collective actors, or exogenous, i.e. external of the network (Håkansson and Snehota, 1995).

But in business networks, the distinction between external and internal change drivers is not unambiguous. Håkansson and Snehota (1995, p. 271) express this by stating “*we profess that change in a business network is to a large extent endogenous in relation to the network but exogenous of the single actor*”. In this context, it is also important to note that relationships in business networks function as transmitters and transformers of the exogenous change (Håkansson and Snehota, 1995). This means that even external change drivers such as general economic conditions will always be transformed into or combined with internal change parameters. For example, the 1990-93 recession in Finland led to a series of bankruptcies and a fundamental restructuring of the advertising industry. This also resulted in drastic side-effects in individual business relationships in terms of terminated relations (Halinen, 1997).

However, when adopting this distinction, there does not seem to be any ‘fixed’ division on how the internal and external change drivers should be categorised. For example, Ginsberg (1988, p. 363) refer to internal factors as e.g. “*shifts in organizational structure or managerial skills*”. Regarding external factors that drive change the following elements can be depicted in a large scale: Technology, economics, politics and society (Dervitsiotis, 2006). Moreover, Flint and Woodruff (2001) identified five external drivers which they call: 1) changing customer demands; 2) changing



internal demands: 3) competitor moves; 4) supplier demands and performance, and 5) macro-environmental change.

Halinen et al. (1999) refer to change drivers by talking about critical events that can arise from the companies within a dyad or from the general environment. Critical events (or change drivers) arising from the companies can be such as personnel changes in the upper levels of the organization (Gersick, 1991) and shifts in organizational structures (Halinen, 1997). Also, some of those changes that happen within a dyad may be critical of nature, e.g. entrepreneurial actions (Håkansson and Snehota, 1995), strategic actions (Havila, 1996) as well as acquisitions, mergers and bankrupts (Halinen et al., 1999). However, events where the dyad is the generator of radical network change only become radical on the condition that the other network actors perceive it as such (Halinen et al. 1999).

Critical events may also arise from changes in the general economic, political, social and technological environment, and it is typical that these types of events affect several network actors simultaneously. Still, while environmental forces seem to have a general impact on networks, they are always transmitted within the network through individual relationships. When business actors throughout the network react to environmental pressures, the change per se only takes place in individual dyads, from which it is then mediated to other connected dyads (Halinen et al., 1999).

Even though general change drivers can be identified (e.g. changes in economic, political, social and technological environment), the specific network context under scrutiny defines which internal and external factors are relevant to take into account. For example, in the furniture industry such general change drivers as globalisation and price pressure can be depicted (Gereffi, 1999; Kaplinsky et al., 2002; 2003, Gereffi et al., 2005). The globalisation is understood in terms of entrance of new low-cost actors in the Southeast Asian countries, and price pressure concerns both the low-cost actors as well as global retail chains that are the main customers. Moreover, in recent years, the furniture network has become more like a fashion network in terms of ever more rapidly changing designs and customer tastes (Leslie and Reimer, 2003).

I have defined change driver as a change on organizational, relationship or network level that leads to reactions in a network. Moreover, change drivers can be categorised as internal or external,

depending on whether the change arises from a firm itself, from its network or from the network. The external drivers can changes in the general network environment, while the internal drivers are concerned with the changes within the organisational and/or a firm's relationships. Moreover, change drivers are context-specific.

## **5.2. Predictable and unpredictable change drivers**

Categorising the change drivers to the specific types of internal and external change drivers is only one way of distinguishing between these drivers. Apart from the classification of general and context-specific change drivers, it does not tell us anything about the nature of these drivers. In this context we may ask whether a firm can be prepared for facing these change drivers? In some cases, change can occur totally unexpectedly, like in the case of natural catastrophes. Moreover, back in 2001, the terror attack on September 11<sup>th</sup> was sudden and led to drastic changes. In other cases, changes are more predictable. For example, the general economic environment is characterised by altering cycles which means that an economic upturn is likely to be followed by recession and a downturn.

Thus, changes on an organisational and on a relationship level can be predictable and unpredictable. For example, a firm's relationship with its long-term supplier may be faced by a supplier's continuous difficulties in delivering on time. After a certain period of time a firm may terminate this relationship, because it is not satisfactory any longer. This type of change is predictable, but what if a firm's long-term satisfactory relationship with its customer is suddenly terminated by the client? The client may have found a supplier that is able to deliver the same product at a lower cost. But could a firm have predicted this?

In relation to these issues, Ansoff and Sullivan (1993, p. 13) discuss the environmental turbulence which is "*a measure of the degree of changeability (or discontinuity) and predictability of the firm's environment*". They divide the environmental turbulence into five levels, where each level is determined by four descriptive factors. These factors are:

- Complexity of events which occur in the environment;
- Familiarity of the successive events;
- Rapidity with which the events evolve after they are first perceived; and
- Visibility of the consequences of these events.

Ansoff and Sullivan (1993) describe the environmental turbulence in a scale that is illustrated in Figure 16.

<b>TURBULENCE LEVEL</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
COMPLEXITY	National Economic	+	Regional Technological	+	Global Socio-Political
FAMILIARITY OF EVENTS	Familiar	Extrapolable		Discontinuous Familiar	Discontinuous Novel
RAPIDITY OF CHANGE	Slower than Response	Comparable to Response	Faster than Response		Much faster than Response
VISIBILITY OF FUTURE	Recurring	Forecastable	Predictable	Partially Predictable	Unpredictable Surprise

**Figure 16: Environmental turbulence scale (Ansoff and Sullivan, 1993; p. 13)**

The environment at turbulence level 1 is essentially unchanging. When a change does occur, it is very slow and response is gradual over a long period of time. In an environment at turbulence level 2, change is incremental. Change is slow, and a firm can respond in the time between initial and full impact. Changes are fast incremental at turbulence level 3. The future is a logical extension of the historical past. Firms at this level must have a forward-looking strategy so response can start before initial impact. At turbulence level 4, change is very fast and discontinuous, and the future is only partially predictable. In this kind of environment, the future may not resemble the historical past. Therefore, it is important for the firm to have a forward-looking strategy and an environmental scanning system not based on exploration of the past. The environment at level 5 is full of surprises.

Changes move so fast and the environment is so unpredictable that even well-managed firms will experience surprises (Ansoff and Sullivan, 1993).

The illustration above shows that it is necessary for a firm to analyse its environment. In this context, a wider knowledge about a firm's network becomes valuable. Kotter (1995) identified that firms often fail in establishing a sense of urgency to change. He further states that it is vital that the firms examine market and competitive realities by identifying and discussing crises, potential crises, or major opportunities.

This issue is also discussed in Gadde and Mattsson (1987): they show (See Table 14) how an extended analysis of a firm's relationships is necessary in order to be able to capture the connectedness of change.

Level of analysis	Characteristics	Implications
A-type: The individual relationship	Narrow analysis of individual relationships, where duration of the relationships dominates.	⇒ A narrow dyadic view does not give a sufficient view of the changes that happen in the relationships. ⇒ More attention should be devoted to analyse change in relations from a general network point of view
B-type: The customer's point of view	The relationship between the focal and supplier is analyzed in the total supply context of a customer between time periods.	
C-type: The supplier's point of view	The relationship between the focal and supplier is analyzed in the total supply context of a supplier between time periods.	
D-type: Individual relationships extensively analysed	A focal firm's relationships with other suppliers.	
E-type: The total network point of view	Placing the individual relationship in its structural network context.	

**Table 14: Levels of analysis for studying change (Gadde and Håkansson, 1987)**

Gadde and Mattsson (1987) used time sequences (following the matrix over different periods) to carry out a deeper analysis of the durability of buyer-seller relations. They claim that the observed stability in buyer-seller relations tends to be based on an A-type of analysis which they label as narrow analysis of business relationships. Therefore, Gadde and Mattsson (1987) propose that is important to place the individual relationships in a wider network context in terms of B-, C-, D- and E-types of analyses. By doing so, the seemingly stable dyadic buyer-seller relationship may appear

to be less stable than first assumed. This issue is also highlighted in the interaction model (Håkansson, 1982) in terms of the relationship atmosphere and environment. The relationship atmosphere can be argued to refer to Gadde and Mattsson's (1987) A-type of analysis, while the relationship environment is concerned with the E-type of analysis.

For example, a business relationship between a manufacturer of furniture components and sawmill that has lasted more than 10 years may be considered stable if we concentrate on the duration of the relationship in a narrow sense (A-type of analysis). But, if we widen the scope by including the development of a sawn wood network over the same period of time as the buyer-seller relationships has lasted, we can observe that e.g. construction industry has increased and the given sawmill has also become a supplier to a construction company. At the same time, the furniture industry has experienced continuous price pressure from the global retailers and the furniture manufacturer is obliged to negotiate lower prices with the sawmill. As the construction industry is able to pay more for sawn wood, the sawmill may find it more attractive to sell to the construction industry despite their long-lasting relationship with the furniture manufacturer.

Ansoff and Sullivan (1993) argue that certain general management capabilities (See Figure 17) are necessary to respond to the environmental turbulence. These capabilities are understood in terms of the way the firm manages change. Ansoff and Sullivan (1993, p. 14) state that *“for optimum profitability the levels of both the strategic aggressiveness and general management responsiveness of the firm must be aligned with the environmental turbulence level”*.

Level	1	2	3	4	5
Environmental Turbulence	REPETITIVE No Change	EXPANDING Slow Incremental Change	CHANGING Fast Incremental Change	DISCONTINUOUS Discontinuous Predictable Change	SURPRISEFUL Discontinuous Unpredictable Change
Responsiveness of General Management Capability	STABILITY SEEKING	EFFICIENCY DRIVEN	MARKET DRIVEN	ENVIRONMENT DRIVEN	ENVIRONMENT CREATING
Change Management	Supressess Change	Adapts to Change	Seeks Familiar Change	Seeks Related Change	Seeks Novel Change

**Figure 17: Responsiveness to turbulence (Ansoff and Sullivan, 1993; p. 15)**

Even though Ansoff and Sullivan's (1993) responsiveness to turbulence appears somewhat prescriptive, it gains relevance by telling us certain managerial capabilities are necessary in order to respond to change. In relation to this, my earlier discussions of relationship environment and relationship capabilities (Chapter 3) gain enhanced relevance. In that context, I stated that it is important for a firm to understand the general relationship environment in which the interaction takes place. Regarding relationship capabilities I identified 'knowledge about other actors' as a skill that sets a firm's relationships to a wider context. Both of these dimensions (relationship environment and 'knowledge about other actors') and the extent to which a firm rehearses these practices, is crucial when changes occur in a network.

In order to study the change drivers in this thesis, I will reapply the relationship environment and 'knowledge about other actors and label them as 'change capability'. Based on the discussion in this section, the main element of the change capability is a firm's ability to recognize and react to change. In order to grasp the degree of this change capability, a firm's ability to predict change can be determined by studying change drivers in the actual research setting. Seen in this context, it becomes relevant to answer the following questions:

1. What kind of change drivers can be identified?
2. To which extent are the identified change drivers predictable or unpredictable?

The degree of change capability is also dependent on the way a firm handles change. In this context such issues as sending and absorbing change (Håkansson and Snehota, 1995) gain relevance. These issues will be discussed in the following section.

### 5.3. Handling change

The previous sections have indicated that change is an inevitable part of networks and individual firms cannot avoid change. Therefore, the way a firm copes with the dynamics of change in networks and how it handles changes within and through relationships become essential issues to take into consideration.

The fact that change can be initiated on organisational, relationship and network levels triggers an interesting question regarding how companies response to changes. Håkansson and Snehota (1995) refer to this issue as absorbing and promoting change. Absorption refers to adaptation to changed circumstances, and it is therefore considered as actor’s reaction to change that has been initiated by another part. Accordingly, initiating or promoting change is concerned with the counterpart who sends the change signals.

Absorbing and promoting change can also be understood in terms of receiving and sending change, as identified in Easton and Lundgren (1992). They identified the following change process characteristics that concern both receivers and senders of change (See Table 15).

<b>Sending vs. receiving</b>	<b>Change sequence</b>	<b>Explanation</b>
<b>Receiving</b>	<b>Reflection</b>	Rejection or nullification of the requested change
	<b>Adaptation</b>	Modification of the requested change
	<b>Absorption</b>	Accepting the requested change
	<b>Transmutation</b>	Accepting the changes and making further modifications
<b>Sending</b>	<b>Transmission</b>	Passing the change to receiver with minimal impact on the sender
<b>Sending and receiving</b>	<b>Amplitude modification</b>	Extent to which an actor is prepared to absorb change or pass it on to the rest of the network
	<b>Dissemination</b>	Extent to which an actor that has accepted a change involves other network actors in the process

**Table 15: Change processes based on Easton and Lundgren (1992, p. 92-96)**

When categorising the change processes upon Easton and Lundgren's (1992) classification, two interesting notions arise. Firstly, on the receiving side there can be sub-classified different ways of responses varying from rejection (or nullification) to total acceptance and the willingness even to make further modifications. In that sense, the earlier dichotomy of absorption and promoting can be misleading, as absorption in the presented classification is just one of the possible ways to react upon change. Secondly, Easton and Lundgren's (1992) notion of amplitude modification and dissemination indicate the interconnected nature of business networks and the connectedness of change, as they take into account how the actor who receives the change passes it on in the network.

Another way of responding to change is to identify whether change is reactive or proactive (Dove, 1999). These modes are defined in Dove (1999, p. 21) as follows: "*Reactive change is opportunistic, and responds to a situation that threatens viability. Proactive change is innovative, and responds to a possibility for leadership*". In the industrial network terms this reactivity/proactivity can be understood by analysing, in which part of the network the change is initiated.

If we link these concepts of promoting (sending)/absorbing (receiving) and reactive/proactive to the discussion of, how firms react upon change, we can make the following distinction. Promoting and absorbing change can be intentional, and in these terms a firm can be prepared to absorb change. By this I mean that promoting and absorbing change are manifold concepts, where sending and receiving change can be both intentional and unintentional. Reactive vs. proactive behaviour towards change, in turn, is more straight-forward and characterizes more clearly whether a firm has been aware of the up-coming changes or not. For the purposes of this thesis, I will adopt this dichotomy of reactivity versus proactivity in order to identify how a firm's behaviour towards change as been.

However, by merely categorising whether a firm has been reactive or proactive towards change does not tell us the whole truth. As discussed in the earlier section, change may sometimes occur so abruptly that a firm does not have any other option than react upon change. Therefore, it is important to understand the change process in the specific research context. In this relation, the fact whether a change has been predictable or not gains relevance. In the research context, this means capturing the general network characteristics. For example, the furniture network has been



characterised by an increasing number of suppliers from the low-cost countries, but the emergence of this type of suppliers has not been sudden. For example, Tikkanen (1998) reported that difficulties in the Finnish wooden furniture industry were a result of the increasing number of suppliers from the low-cost countries. Similar patterns were also identified in South Carolina in the USA (Nwagbara et al., 2002). Finally, Kaplinsky et al. (2002, p. 1161) stated that *“the wooden furniture sector is becoming increasingly competitive, as more and more producers enter the global market. As a consequence, world prices are declining”*. This statement was based on furniture price statistics from 1989-91 and 1995-97.

In business networks, being reactive or proactive towards change is also dependent on a firm’s path dependence (David, 1988). Håkansson and Snehota (1995, p. 42) refer to this issue by stating *“there is a path dependence in the development of business relationships and networks. Every actor within the network structure will have some discretion in certain areas and at the same time be entirely locked into others. The network of business relationships is both a prison and a tool”*. This means that path dependent events can be self-reinforcing and reactive sequences (Mahoney, 1999; Harrison and Araujo, 2000) where history affects decision making.

Based on the above, I argue that if a firm understands its network context, it has a better possibility to grasp and predict changes. In these terms, a firm may be able to be proactive towards change. However, being proactive can be hindered by a firm’s dependency on the actions in the past, i.e. its path dependence. These elements are also a part of a firm’s change capability that is defined in Table 16.

	<b>CHANGE CAPABILITY</b>
DEFINITION	Ability to recognize and react upon changes
CHARACTERISTICS	Reactive vs proactive behaviour
DEPENDS ON	<ul style="list-style-type: none"> <li>• The degree of network knowledge</li> <li>• The degree of path dependence</li> </ul>

**Table 16: Change capability**

### **5.3. Concluding remarks on chapter 5**

In this chapter I have discussed the driving forces behind a firm's repositioning. I started by defining a change driver as a change at organizational, relationship or network level that leads to reactions in a network. In addition, I distinguished between internal and external change drivers. The classification of these drivers is dependent on whether the change arises from a firm itself, from its network, or from the network. The external drivers can changes in the general network environment, while the internal drivers are concerned with the changes within the organisational and/or a firm's relationships. Moreover, change drivers are context-specific, meaning that each research context has its particular change driver types.

In order to refine the dichotomy of internal and external change drivers, I identified that this classification is dependent on a firm's knowledge about its network. In this context, the predictability of changes gained relevance. Unless changes occur totally unexpected (e.g. nature catastrophes), changes may be predicted by studying a particular firm's network context and general characteristics in it. Moreover, I identified that a firm can either be reactive or proactive towards change. On certain occasions, a firm's ability to be proactive towards change increases when it captures a more holistic understanding of its network.

Based on these facts, I argued that a firm's ability to recognize and react upon change is dependent on its change capability that entails the holistic understanding of the firm's network structure. However, this capability may be hindered by a firm's path dependence.

## ***6. The framework of this study***

In the previous chapters I have discussed the four fundamental concepts applied in this thesis. In chapter 2, the *supply network* is defined as a net that looks at connections and dependencies between firms from raw material to final customer with a specific focus on supplier relationships.

In chapter 3 I defined role, relationships and capabilities as measurements of a firm's position in a network. Role was defined in the following way. Firstly, I identified a firm's *function* (e.g. supplier, manufacturer, distributor and customer), and *those activities that are typical and expected* in relation to the specific function. Secondly, there are *supporting activities* that are *carried out by a collection of actors*, and these activities support a firm's main role. In order to analyse a firm's role in a supply network, the following questions will be answered:

- Which activities does a firm carry out?
- What kind of purchasing activities are carried out to support a firm's role?
- Who is involved in the purchasing activities?

Regarding relationships, three relationship elements were identified: Cooperation - Competition/Conflict, Power Dependency and Trust Development. These elements were identified as important tools in describing the general structure, or atmosphere of the relationship. However, the examples above have indicated that the relationship elements as such do not tell us the whole truth. The relationship context in terms of interaction environment provides the platform reveal useful information concerning the relationship and help us understand them in a more comprehensive way. Therefore, when analysing relationships as position measurement, the following questions will be answered:

- What characterises the relationship environment?
- What is the duration of the relationships under scrutiny?
- Regarding cooperation and competition/conflict, what type of relationships can be identified in terms of
  - A non-crucial / Marginal relationship?
  - Arm's length / Hostile relationship?
  - Good working / Creative relationship?

- Ideal /Nice relationship?
- Regarding power and dependency:
  - To which extent is the firm dependent on the supplier?
  - To which extent is the supplier dependent on the firm?
- Regarding trust and commitment:
  - What is the level of trust in the relationships?
  - What is the level of commitment in the relationships?

Finally, I identified two different types of capabilities concerned with the role and relationships a firm has in a network. Role capabilities entail product and process capabilities (Ritter, 2006) that are important for a firm to carry out those activities that are related to a specific function. Moreover, technical, cultural and economic qualifications are required from personnel to support product and process capabilities. Finally, I recognized the network understanding capability, which is central for companies to operate in the network. Secondly, in order to handle relationships, I identified certain social qualifications as necessary to manage these relationships.

I further identified that in order to perform in the role and to manage relationships a particular capability set is required. To capture the capabilities, the following question is posed:

- Which capabilities are identified to perform in a role and to manage the relationships under scrutiny?

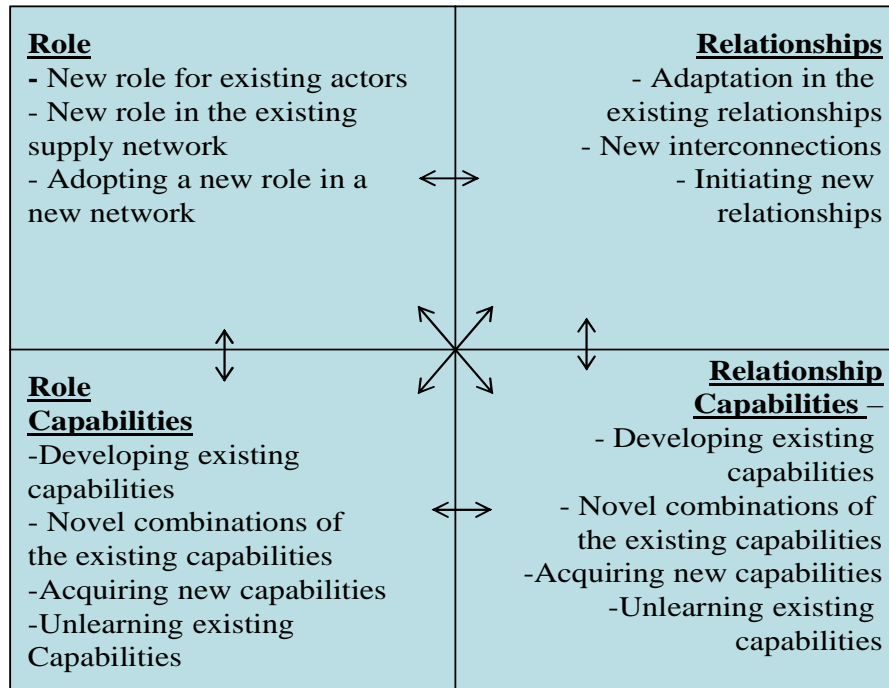
The framework to study a firm's role in a supply network is summarised in Table 17.

Position elements	<p style="text-align: center;"><b>Role</b></p> <ul style="list-style-type: none"> <li>• <i>Expected and typical activities</i></li> <li>• <i>Support activities</i></li> </ul>	<p style="text-align: center;"><b>Relationships</b></p> <ul style="list-style-type: none"> <li>• <i>Cooperation - Competition/Conflict</i></li> <li>• <i>Power-dependency</i></li> <li>• <i>Trust-commitment</i></li> </ul>
Operationalization	<ul style="list-style-type: none"> <li>• Which activities does a firm carry out?</li> <li>• What kind of purchasing activities are carried out to support a firm's role?</li> <li>• Who is involved in the purchasing activities?</li> </ul>	<ul style="list-style-type: none"> <li>• What characterises the relationship environment?</li> <li>• What is the duration of the relationships under scrutiny?</li> <li>• What types of relationships can be identified in terms of <ul style="list-style-type: none"> <li>- A non-crucial / Marginal relationship?</li> <li>- Arm's length / Hostile relationship?</li> <li>- Good working / Creative relationship?</li> <li>- Ideal /Nice relationship?</li> </ul> </li> <li>• To which extent is the firm dependent on the supplier?</li> <li>• To which extent is the supplier dependent on the firm?</li> <li>• What is the level of trust in the relationships?</li> <li>• What is the level of commitment in the relationships?</li> </ul>
Position elements	<p style="text-align: center;"><b>Role capabilities</b></p> <ul style="list-style-type: none"> <li>• <i>Product capabilities</i></li> <li>• <i>Process capabilities</i></li> </ul>	<p style="text-align: center;"><b>Relationship capabilities</b></p> <ul style="list-style-type: none"> <li>• <i>Technical skills (product and supplier knowledge)</i></li> <li>• <i>Economic skills (cost calculations)</i></li> <li>• <i>Cultural skills (international supplier relationships)</i></li> <li>• <i>Knowledge about other actors</i></li> <li>• <i>Social qualifications</i></li> </ul>
Operationalization	<ul style="list-style-type: none"> <li>• Which capabilities are identified to perform in a role and to manage the relationships under scrutiny?</li> </ul>	

**Table 17: Framework for studying a firm's position in a network**

In chapter 4 I discussed repositioning and defined as the process of change from position at certain point (t0) to position at another point (t1). In these terms change in position means changes in the measurements of the position, i.e. role relationships and capabilities. A change can trigger off any of the measurement elements and may affect and be affected by the other elements.

For the purposes of this research project I devised a framework to study this change. The framework is illustrated in Figure 18.



**Figure 18: Framework for studying a firm's repositioning**

In order to operationalize the change in a position, the following three questions will be posed:

1. What kind of changes can be identified in the role, relationships and/or capabilities?
2. What kinds of capabilities are necessary to carry out the changes?
3. To which extent are these capabilities present?

Finally, in chapter 5 I identified the drivers of repositioning. I defined a change driver as a change at organizational, relationship or network level that leads to reactions in a network. Thereafter I distinguished between internal and external change drivers. The classification of these drivers is depending on, whether the change arises from a firm itself, from its network or from the network.

In order to refine the dichotomy of internal and external change drivers, I identified that this classification is dependent on a firm's knowledge about its network. In this context the

predictability of changes gained relevance. Unless changes occur totally unexpectedly (e.g. natural disasters) changes can be predicted by studying a particular firm's network context and inherent general characteristics.

Based on these facts, I argued that a firm's ability to react upon change is dependent on its change capability that entails the holistic understanding of a particular firm's network structure. In relation to this, I reapplied a firm's knowledge about its relationship environment and 'knowledge about other actors' (Ritter, 1999) to be used in the change context and labelled them as change capability. Hence, I defined that a firm can either be reactive or proactive towards change. This behaviour is dependent on a firm's degree of network knowledge and path dependence.

Based on the above, the framework of this thesis is presented in Figure 19.

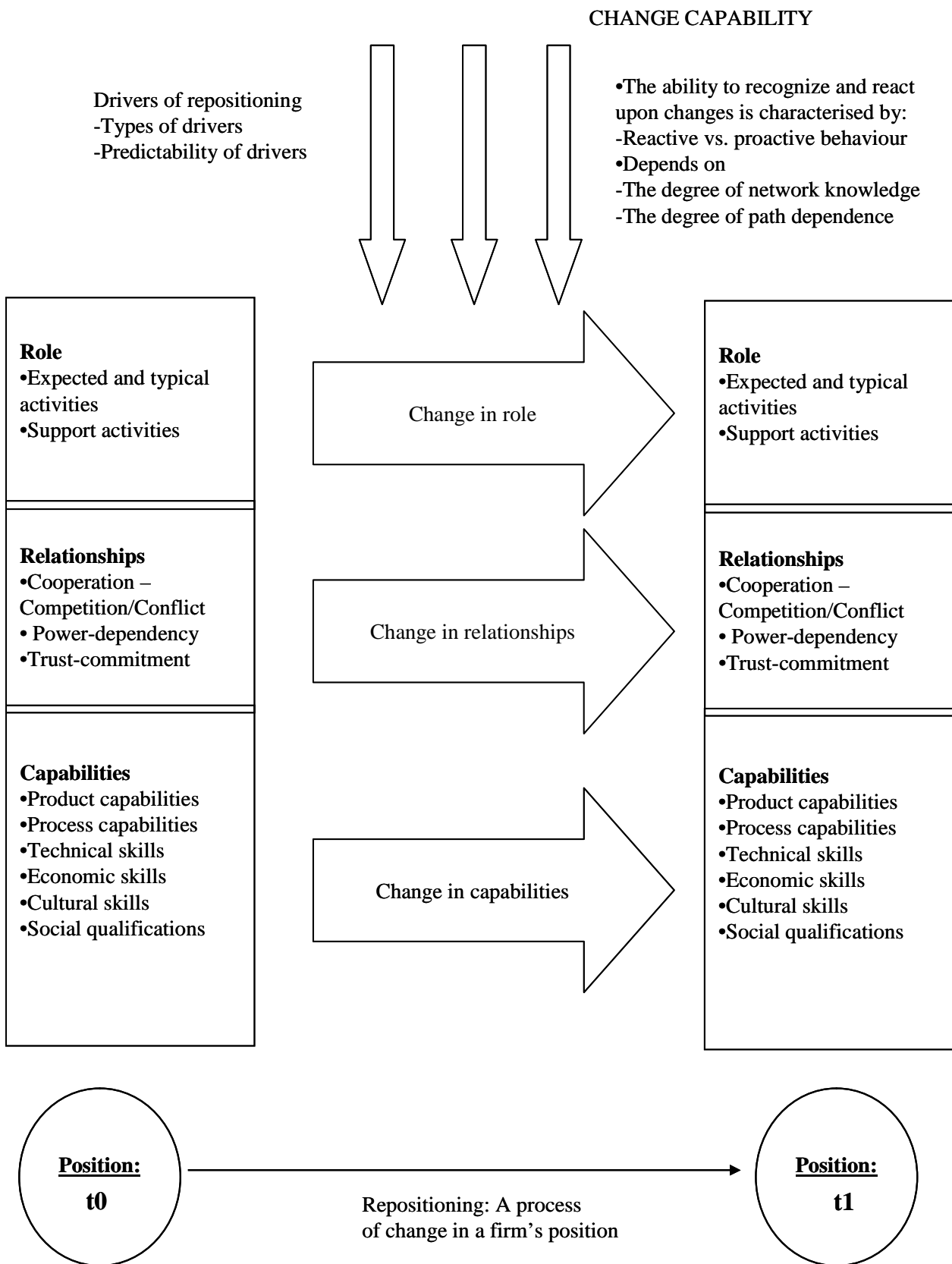


Figure 19: The framework of this thesis



### **III Research methods and case studies**

## **7. Methodology**

The term methodology can be equated with the phrase *how research is carried out* (Easton, 1995) while research method is concerned with the way the data is collected. For ‘practical researchers’, the broader issues of methodology tend to be irrelevant, and decisions on methodology can be based on common sense (Easton, 1995). However, it is important for the researchers to consider methodological underpinnings for three main reasons (Ramsay, 1998). Firstly, methodology directs the choice of research techniques. Secondly, it clarifies the philosophical limitations related to the interpretations of the research results and the reliability. Finally, the decisions regarding the appropriate research methods can only be made after the philosophical stance of the researcher has been made explicit (Ramsay, 1998).

In this research project, I will adopt the critical realist perspective. From this perspective, reality is ‘out there’ and can be discovered and understood (Easton, 1995). The critical realist approach entails that knowledge must be evaluated and tested critically in order to determine to which extent it represents or corresponds to the world (Hunt, 1990). Moreover, critical realism contends that the task of science is to “*separate illusion from reality, and thereby generate the most accurate possible description and understanding of the world*” (Hunt, 1990; p. 9). The reality in this study encompasses three Danish pine furniture manufacturers’ transformation from manufacturing to trading.

Easton (1995) introduces a taxonomy of methodologies (See Figure 20) and by using this framework, this study can be described in terms of methodology on five levels. On level one, axiology, this study is descriptive in nature. It focuses on creating an understanding of how firms can change position in a network. On level two, context, this study is an in-context-study where context is the field of pine furniture industry and the activities related to it. On level three, communication, this study uses communicative methods to a large extent. Regular visits to the companies accompanied by numerous interviews with the employees as well as observations have been a prerequisite for creating an understanding of the phenomenon under scrutiny. However, non-communicative methods such as websites and newspaper articles are used to complement the understanding of context.

On level four, sample, a multiple case study approach was selected. During my research project I have been attached to the Centre of Applied Market Science at Copenhagen Business School. This centre has its theoretical base in the Industrial Network Approach, and case approach is utmost applicable to network studies. Moreover, when I started this research the cases were already decided upon. Nine firms operating within the pine furniture industry had ordered a research project in order to learn more about the challenges they were facing. I will therefore only explain the case study approach and consequently argue why this approach is useful to investigate the theoretical framework. On level five, time, the study is longitudinal. The data collection covers a period ranging from January 2005 to July 2007.

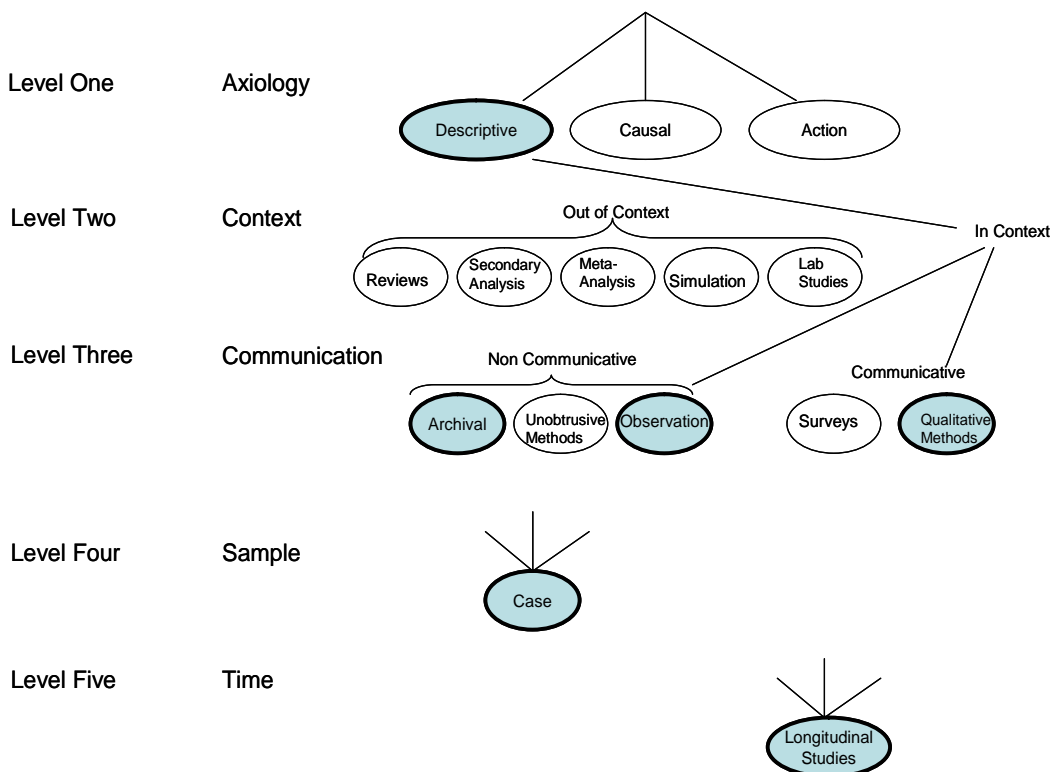


Figure 20: A taxonomy of methodologies (Easton, 1995; p. 453)

## 7.1. Case study research

In this section, the case study will be presented as a research method. To begin with, I will define what case study research is and capture its main characteristics. Following, I will depict the strengths and weaknesses of this type of research. Finally, I will argue why case study is a suitable research method in the present study.

### 7.1.1. Definition and characteristics of a case study

Case study as a research method can be defined as an empirical inquiry that investigates a contemporary phenomenon within its real-life context (Yin, 2003). Moreover, a case study is an in-depth study, where the researcher seeks to increase his or her understanding of the phenomena studied (Easton, 1995). The case might be given and studied with an intrinsic interest in the case as such. Alternatively, it might be selected purposefully or analytically, because it is e.g. rich in information, critical, revelatory, unique or extreme (Patton 1990, Stake 1995).

There is a distinction between singular and multiple cases. A single case is beneficial if we want to scrutinize a case in depth. Multiple cases, in turn, usually provide more manifold information, but less depth (Easton, 1995). Moreover, a case study is a combination of theoretical and empirical insights as also pointed out by Ragin (1992, p. 218): *“making something into a case or ‘casing’ can bring operational closure to some problematic relationship between ideas and evidence, between theory and data”*.

In order to become a case it has to be distinguished from its context, which necessitates distinct case boundaries (Miles and Huberman, 1994; Yin, 2003). However, case boundaries are likely to evolve during the research process (Dubois and Araujo, 2004). The dynamic nature of case boundaries is also stressed in Dubois and Araujo (2004, p. 225): *“What constitutes the phenomenon of interest and its boundaries is often the outcome of the study rather than a decision that can be firmed up prior to conducting the study”*. In this sense a case becomes the culmination of the research project, and it is only in the final stage of the research process that we know what the case is about (Dubois and Araujo, 2004).

### 7.1.2. *Strengths and weaknesses of a case study*

Using a case study has become a common method in many scientific disciplines. In addition, a case study research is considered as prolific in relation to the development of a theory (Eisenhardt, 1989). Case studies are widely used among industrial network researchers. Networks are complex in several ways: firms in network are interdependent and the study context can be understood in various ways. Therefore, to be able to understand these processes, a research design is required that allows for such complexity and multitude. Thus, industrial network researchers “*have been driven to cases because they make sense of the phenomena we [industrial network researchers] have sought to understand*” Easton (1995, p. 385-386).

The main argument against case studies has been that it is not possible to generalize on the basis of one individual case. Furthermore, it is claimed that a case study cannot contribute to scientific development (Yin, 2003). A way to generalize from a case study is known as “naturalistic generalization” (Stake, 1982) that has been proposed as alternative to statistical generalization. Naturalistic generalization advocates a realignment of the responsibility to generalize away from the researcher towards the reader. Ruddin (2006, p. 804) explains this way of generalization as “*the researcher’s liability is to afford sufficient contextual information to facilitate the reader’s judgment as to whether a particular case can be generalized to a specific field of practice. We could regard such views of generalization as empowering or democratizing*”. Flyvbjerg (2006, p. 238) continues that “*the goal is not to make the case study be all things to all people. The goal is to allow the study to be different things to different people*”.

The naturalistic generalization view may lead to a thick case description of events where researchers tend to describe everything and ‘as result describe nothing’, (Weick, 1979; Easton, 1995; Dubois and Gadde, 2002). As it obviously is difficult to generalize from one case to another, an analyst should try to generalize findings to ‘theory’ (Ruddin, 2006). This also implies that there should be an appropriate matching between a reality and theoretical constructs (Dubois and Gadde, 2002). Or, as Weick (1979, p.38) suggests, to “*invest in theory to keep some intellectual control over the burgeoning set of case descriptions*”.

Furthermore, case studies have been criticised of being sources of merely context-specific, practical knowledge (Campbell and Stanley, 1966). This criticism is dealt with in Flyvbjerg (2006), who

emphasises the importance of this very type of practical knowledge. Flyvbjerg (2006, p. 222) points out that “*context-dependent knowledge and experience are at the very heart of expert activity. Such knowledge and expertise also lie at the center of the case study as a research and teaching method or to put it more generally still, as a method of learning*”. Flyvbjerg’s (2006) notion is in line with Dubois and Gadde (2002, p. 554) who point out that “*learning from a particular case (conditioned by the environmental context) should be considered a strength rather than a weakness*”.

### *7.1.2. Why is a case study research method suitable for this research project?*

As mentioned earlier, the starting point for this thesis was the fact that the cases already existed at the outset of the research projects. In hindsight I could say that the cases selected me, not vice versa. Nine Danish pine furniture manufacturers took the initiative to start two PhD-projects dealing with purchasing and marketing practices. These research areas were pointed out by the companies, since from their perspective, their commercial capabilities had been sadly lacking, which had resulted in poor financial performance in the past years.

Bearing this in mind, a case study appeared to be a suitable research method. This was not only due to the fact that the cases already existed, but also because a case study provided a good platform for understanding a new phenomenon. The Danish pine furniture industry did not have any prior experience in the participation of academic research.

Case study was also selected from a learning point of view. Following the developments of companies struggling for survival is far from a success story, and understanding these developments may be beneficial for other industries. In that sense I was privileged to have the opportunity to expand my understanding of why the companies had failed. Moreover, by using case study methods I was able to develop a more nuanced view of reality and understand why the companies acted as they did. This view was enhanced by using multiple cases, as nine companies had signed up for the project.

## ***8. Research design***

This section has three main areas. To begin with, I will discuss the development of the thesis's theoretical framework and the case in terms of abductive approach (Dubois and Gadde, 2002). Following, the data collection procedure is introduced followed by a discussion on data validation.

### **8.1. Emergence of the framework and the case**

The empirical inquiry of this thesis is the case of Danish pine furniture manufacturers' transformation from furniture production to trading (described in chapter 9). The framework concerns a supply network, position, repositioning, and drivers of repositioning (chapters 2 – 5). Both the framework and the case have evolved during the research process leading up to this thesis. In retrospect, the following research phases are identified:

#### ***8.1.1. Overall direction: Purchasing practices in the Danish pine furniture industry***

Two research projects related to the Danish pine furniture industry started as of January 1<sup>st</sup>. The other project was connected to the marketing practices, whilst my area of research entailed the purchasing procedures. The overall aim of this first phase was to map and understand the companies' purchasing function. Furthermore, the aim was also to find a research topic of interest and relevance to the companies involved. This phase lasted six months and covered three main areas of data collection.

First, I visited the companies in order to learn their overall structure and strategy. For this purpose I interviewed the managing directors and/or the company owners. In addition to these interviews, I visited the companies' production departments. Secondly, these visits gave the first impression of the manufacturing procedures and materials required to produce pine furniture. During these interviews I was informed who my contact persons were regarding purchasing practices.

Thirdly, after having obtained the basic knowledge of the companies and their manufacturing processes, I continued by capturing the tasks and roles related to the purchasing function. For this purpose I carried out interviews with purchasing managers and other relevant purchasing personnel.

These interviews revealed what can be considered state-of-the-art purchasing practices within pine furniture manufacturing. In order to understand these practices, I also visited the production departments of the respective case companies, thereby obtaining a more in-depth knowledge of the manufacturing process and the related purchasing practices.

The theoretical foundation was anchored in the purchasing theory in order to structure the purchasing findings. At the same time, I began getting acquainted with the Industrial Network Approach.

### *8.1.2. Redirection in the empirical material: Purchasing as a boundary spanning activity*

The interviews conducted from January till June 2005 indicted that most of the companies were under financial pressure and had therefore started sourcing ready-made furniture to fulfil the under-capacity in the production department. However, not all the companies were carrying out this particular activity. In June 2005 I presented my initial findings in the introduction seminar, where I was encouraged to continue with the sourcing topic. At this stage I did not discard any of the participating companies even though sourcing practices were not carried out by all. My supervisor advised me to raise the level of abstraction in order to continue including all the participating case companies.

In that context my focus was on answering the question of how a firm's boundaries were determined, i.e. what is considered to be included within the boundaries and what is excluded. On a theoretical base, I concentrated on the concept of boundaries, and at this point the theoretical reference frame focused on developing the boundary concept with the aid of Industrial Network Approach and General Systems Theory.

During this phase I continued collecting data on the companies' purchasing practices in order to expand my understanding of how these practices were performed among the pine furniture manufacturing firms.



### *8.1.3. Redirection of theory: The concepts of position and repositioning*

The results of the research project so far were presented in the midterm seminar in October 2006. Here, the challenging situation between the relatively high theoretical level of abstraction and the managerial relevance of the research project culminated. One of the discussants, Professor David Ford, expressed this by saying:

*“You are dealing with companies with everyday problems. It is very challenging to try to explain an everyday problem with an abstract theoretical tool. I suggest you abandon the General Systems Theory and focus more on the cases”.*

This midterm seminar was a twofold turning point in my research project. Firstly, according to an agreement already made at the beginning of the project, I changed supervisor after the midterm seminar. Secondly, I had to admit that it was extremely difficult to continue working with eight case companies forming the research project fundament without any common problem formulation. Consequentially, together with my new supervisor I decided to focus on the sourcing challenge, and the theoretical anchor was now redirected to the concept inherent in the Industrial Network Perspective. As the phenomenon under scrutiny dealt with change from own manufacturing practices to purchases of ready-made furniture, the concepts of position and repositioning gained relevance.

As the theoretical foundation now was anchored around the concept of position, I took up a starting point in the IMP literature within this field. As my area of interest was concerned with manufacturers' change from manufacturing to trading, the concept of position was handled both in a static and a dynamic way. In this context, I enjoyed a unique possibility to observe change while it was happening, enabling me to study the phenomenon from the process point of view. However, this meant that I had a starting point being a firm's position (snapshot 1) as a pine furniture manufacturer. For that purpose I identified three measurements (role, relationships and capabilities) to study position. Secondly, as I had defined repositioning as change in position, the end position, or snapshot 2, was based on the changes in position measurements. The space between the snapshots defined the process explained in this thesis through drivers of repositioning.

During the months after the midterm seminar, I concentrated mainly on building up the theoretical frame of reference to structure and explain my case. At this stage I benefited greatly from my earlier literature studies, and I was able to strengthen my theoretical frame by topic related literature. For example, the value chain upgrading literature (Gereffi, 1999; Fakude, 2001; Kaplinsky et al., 2002; Kaplinsky et al., 2003) helped me to understand the development the Danish pine furniture manufacturers had undergone.

#### *8.1.4. Redirection of the empirical material: In-depth information about the trading activities*

The new theoretical fundament led to further case evolvement. Empirically, I concentrated on gathering in-depth information about trading in three case companies, who were chosen because they represented the most significant changes in transforming away from manufacturing activities to trading.

These interviews were conducted based on the theoretical reference frame. During this phase I enhanced my understanding of the firms' trading activities, supplier relationships and capabilities. Moreover, the drivers of repositioning were captured by asking why the particular companies had initiated this activity.

#### *8.1.5. Redirection of the framework: Refining the theoretical concepts*

After the empirical data collection regarding the trading activities, I returned to the theoretical framework. At this stage the concepts were revised and sharpened. This meant that the construction of measurements went through several revisions until the final structure was defined. Moreover, during this phase the interconnectedness between the position elements was enhanced. This work led to the final framework used to analyse the cases in this thesis.

In terms of theory, I developed the concept of position in business networks by defining three measurements, namely role, relationships and capabilities. The construction of these measurements was an iterative process between the theory and the empirical world, meaning the measurements

can be considered both general and context-specific. As an example, the generic dimension of relationship capabilities (Ritter, 1999) was applied in this research context by adding the ‘cultural qualification’ (Johnsen and Ford, 2006) dimension. My field work revealed that many companies had replaced their former relatively local supplier relationships with Chinese relations.

At the same time, the drivers of repositioning went through a tremendous development. This development was based mainly on the observations among the participating firms. From the very beginning of the research project it was clear that my objects of study had somewhat passively absorbed the changes arising from their network. By combining this view with different theoretical underpinnings, i.e. internal vs. external drivers, predictability of change and handling change, I was able to build up a framework that explained the firms’ way of acting in this research context.

#### *8.1.6. Re-direction of the case: A case of Danish pine furniture manufacturers’ transformation*

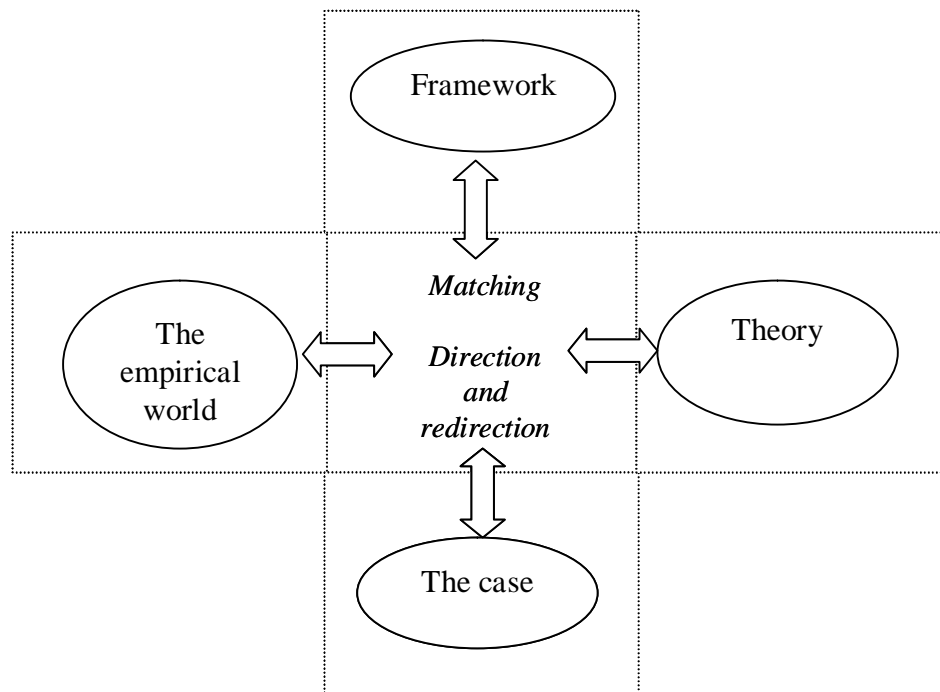
After the theoretical framework was finalised I was able to finish the cases. During this process I combined my empirical inquiries from the first research phase when I investigated the companies’ purchasing practices related to the manufacturing activities. The companies’ trading activities were unfolded similarly. The framework helped me to structure the cases to include only relevant information.

To sum up, six research phases can be recognized regarding direction and redirection of the theory and the case. I have identified these phases in retrospect. In this context it is relevant to note that these phases were not planned.

#### *8.1.7. Systematic combining*

The research process described above is abductive in nature, i.e. it combines the theoretical and empirical backgrounds. Conducting case study research in an abductive way is referred to as “systematic combining” (Dubois and Gadde, 2002). Systematic combining is defined as follows (Dubois and Gadde, 2002; p. 554):

“Systematic combining is a process where theoretical framework, empirical fieldwork, and case analysis evolve simultaneously, and it is particular useful for development of new theories”.



**Figure 21: Systematic combining (Dubois and Gadde, 2002; p. 555)**

Systematic combining includes two main processes. The first process deals with matching theory and practice, and the second is concerned with direction and redirection. These processes are illustrated in Figure 21. The matching between theory and reality depends on the harmonisation of the evolving case and framework, which necessitates a process characterised by directions and redirections. While direction refers to the case and the framework developing in a certain direction, redirection refers to a change in that direction, for instance a different focus.

Systematic combining also means that the empirical evidence, theory, framework and case develop simultaneously and iteratively. Moreover, by including the above-mentioned research elements, a researcher’s way of understanding them may increase. Dubois and Gadde (2002, p. 558) express this by stating “*the reason the framework should evolve during the study is because empirical observations inspire changes of the view of theory and vice versa*”. In these terms, the case may be

regarded as a tool for interacting with the theory and the framework. Moreover, a case can also be considered as a product, i.e. a result at the final stage of the research.

To sum up, by applying systematic combining as a research method, the understanding of theory and the empirical world are likely to enrich each other. Furthermore, the theory underpins the research framework that guides the process of developing the case. Accordingly, the theoretical assumptions guide the search in the emerging case.

## **8.2. Data collection**

This section presents the way I collected the thesis data. In the next section I will describe how the interviews were conducted. Successively, I will present the other sources of data used in this project. Finally, I will introduce the particular characteristics of data collection in this research project.

### *8.2.1. Conducting interviews*

In total, this thesis builds on 82 semi-structured interviews with persons employed by the case companies. Of these interviews 31 can be categorised as being carried out in the inductive phase. Other 41 interviews were carried out to obtain more detailed information on the purchasing function. Finally, 10 interviews were made as in-depth interviews related to the sourcing of ready-made furniture. All the interviews lasted between 45 minutes and 2½ hours and were performed on the respective case company locations. I conducted the majority of the interviews in the inductive phase together with my colleague, who also participated due to being assigned to the same case companies through another PhD-project. Notes taken during all the interviews were transcribed as soon as possible after each interview.

The interviews were booked mostly by mail and phone. On the basis of the first interview with the company owners/managers I was informed who was to be my main purchasing contact person. On some occasions, an appointment for the next meeting was already scheduled at the end of the

current meeting. This was especially the case during interviews with a different contact person than the usual one.

Conducting interviews can be divided into three main phases. In the first phase, the aim was getting to know the companies and their purchasing practices. This phase was predominantly inductive and was based on a couple of interview themes. The second phase entailed more detailed information gathering on the purchasing practices. These interviews based largely on the main purchasing categories identified in the first phase as well as some theoretical foundations. In the last phase, which can be described as in-depth interviews within the sourcing activities, the created theoretical framework was used to structure the interviews. Data collection was more goal-oriented than in the first two phases. The three data collection phases are presented below.

#### ***Inductive phase: Company and backgrounds and the overall purchasing practices***

In this initial phase of the research project, the interviews were carried out in an inductive way. The main purpose was to capture an overall understanding of the firms and their purchasing practises. Consecutively, these interviews were used as basis for determining a more detailed research question. During this phase I conducted the 31 interviews presented in Appendix 1.

#### ***More detailed information about the purchasing practices***

This phase took place from August 2005 to October 2006. During this period I conducted 41 interviews (see Appendix 2) with the case companies. The aim of these interviews was to enhance my understanding of the roles and tasks related to the sourcing activity.

#### ***In-depth interviews related to the sourcing of ready-made furniture***

After the midterm seminar, my data collection became more focused and it was concentrated on three companies carrying out trading activities as a significant part of their business (the five companies not included in the final research process are briefly presented in Appendix 1). The two remaining companies also participated in trading practices, but were discarded for other reasons. In one case, sourcing of ready-made furniture was not an activity as such, but it was used to

complement their own product programme with types of furniture they did not produce in-house. The other was in fact initially included as a trading company case. However, at the end of 2006 the firm was sold to an equity fund, and contact with the company from a research point of view came to an end.

During the period of November 2006 and July 2007 I conducted 10 in-depth interviews with the remaining three case companies. These interviews are shown in Appendix 3.

### *8.2.2. Other sources of data*

The interviews with the participating companies were the main source of data. In addition, various other types of data sources were used. Firstly, in order to capture a more comprehensive picture of the pine furniture industry, I visited two furniture manufacturers in 2006 that produced furniture in other wood types than pine. Additionally, I also visited the International Furniture Fair in Cologne in Germany in 2006 and 2007. Participating in this trade fair gave a good opportunity to meet some of the case companies in an international context while observing the other furniture suppliers. Furthermore, I had also the opportunity to meet some of the Chinese furniture suppliers and see how they worked at an international trade fair.

Secondly, various internet pages provided me with constant information on the Danish furniture industry. One of the most important pages was [www.woodsupply.dk](http://www.woodsupply.dk) that displays news on a daily basis related to the Danish wood-working industry. Also, the case companies' own homepages were a relevant source of data.

Thirdly, a few other actor groups in the pine furniture network were interviewed. Altogether, I conducted three interviews with suppliers, of which two were suppliers of sawn wood and one a fitting supplier. All these three interviews contributed to further understanding the purchasing practices in the Danish pine furniture industry.

### *8.2.3. Particular characteristics of data collection*

Collecting data for this research project was challenging and had the following particular characteristics:

#### ***Rivals participating in the same research project***

All the companies were acting within the pine furniture industry and were therefore directly or indirectly competitors. This setting was obvious when collecting data. Often when visiting a given company, a representative would ask:

*“How is Company Cx doing? Is their production running?”*

*“Is Company Cx more successful than we are?”*

Every time I was faced by this kind of questioning, I clarified that all the collected data was confidential and used solely for research purposes. Moreover, due to the fact that the participating companies were rivals, it was not possible to use a tape recorder at the interviews. For example, when I asked an interviewee about using a tape recorder, the response was as follows:

*“If you switch on a tape recorder, I can tell you that instead of spending an hour in this interview, it will only take 15 minutes. And you will only receive politically correct answers”. [Purchasing manager of a participating firm]*

#### ***Companies struggling for their survival***

This research project provided a unique possibility to study companies that were in a dire financial situation. These conditions affected my data collection in several ways. Firstly, during the entire research project, three of the participating went bankrupt. One of the companies, C9, went out of business only a month after data collection had commenced. In fact, I was on a way to visit this company on a Monday morning at the end of February 2005, when I received the following message:



*“I hope you are not too far away from your home, because I have to cancel our meeting. I have just learnt that our company went bankrupt”. [Supply chain manager of a participating company]*

Moreover, the grim financial situation facing the companies repeatedly resulted in personnel being dismissed. For example, when I conducted an interview with in June 2005, I was informed as follows at the beginning of the meeting:

*“I have to interrupt this interview at noon, because I have to go to the production department and lay off ten blue collar workers”. [Factory manager of a participating firm]*

Another time, in April 2005 I arrived at one of the case companies wondering why the administrative front office was almost empty. I asked the receptionist/sales assistant whether the personnel had already left for a public holiday. She answered me as follows:

*“Well, you could say that they are all on a long vacation. We have just dismissed three of our employees in the administration”. [Sales assistant from a participating firm]*

I conducted a number of in-depth interviews during the last year of my data collection. For this purpose my interview design was relatively structured. But even if I had planned to conduct a semi-structured interview, it did not always run as intended. For example, I visited a company in February 2006 with the intent to collect more detailed data on their purchasing practices of ready-made furniture in China. on that very day I was told:

*“We have just lost our biggest customer and the last orders will be delivered by the end of June. They found a producer in Vietnam who could produce an identical product to ours at a lower cost”. [Purchasing manager of a participating firm]*

After this point I knew I would not be able to carry out my interview as planned. Instead, we talked about their situation for 1½ hours and my role that day was more of a psychologist than a researcher.

### *Scepticism towards academic research*

The challenges related to collaboration between the practitioners and academic research are acknowledged among academics (Sheth and Sisodia, 1999; Calder and Tybout, 1999; Ankers and Brennan, 2002). On one hand, the discussion has been concerned with the relevance of the knowledge to the managerial purposes (Easton, 2000; Brennan and Turnbull, 2000; Ankers and Brennan, 2002). In this perspective, academic research has two roles: It is seen of importance to the practitioners (Brennan and Turnbull, 2000). But on the other hand, academic research is also intended to have the purpose of advancing knowledge, regardless of whether the knowledge is useful or not (Ankers and Brennan, 2002).

There has never been any tradition for academic research inside the Danish pine furniture industry. Therefore, in some cases it was difficult to communicate with the companies. In the case of C8, for instance, it was the owners' son who signed up for the project. I remember one of the first visits and the way I felt the resistance. I arrived in the office and saw two generations sitting in a row; mother, grandfather and father. The grandfather and the father did not even look at me. As the mother was also the receptionist, I told her that I had an appointment with their son regarding the research project. She picked up the phone and called the son by saying:

*“You have a guest. That lady is here again”. [A participating firm]*

It was also difficult to be a pioneer and meet people that did not know what a PhD was about. For example, one interviewee asked me the following:

*“Why do you come back and pose the same questions time after time. Haven't you noticed that we talk about the same issue over and over again? Unfortunately, I think that you have become very narrow-minded”. [Purchasing manager of a participating firm]*

*“When are you going to finish your project? Is it not time for you soon to return to real life and get an ordinary job”? [Purchasing manager of a participating firm]*

### ***Expectations***

The companies that joined this research project were struggling for their survival, and some of them had signed up for the research project in order to save their business. The following quotes indicate this:

*“You are our solution. So, you should hurry up and finish your project, because you have to save us”. [Director of a participating firm]*

*“I think this project was a relatively cheap way to obtain help. I have tried consultants, and they could not help us”. [Managing director of a participating firm]*

### ***8.2.4. Data validation***

A central issue in the research project is the reliability of the data collected. Case studies all have in common that they are validated through *triangulation*, i.e. many methods are combined (Yin, 2003). In this context, both data collection methods, sources of data or investigators might also be triangulated (Denzin, 1978).

The data validation in this thesis entails five main areas. First, understanding the context in which the data is collected forms the foundation of the thesis. Secondly, in this research project the process was followed up by both experience exchange and supervisory board groups. Furthermore, the data collected in this project was also enhanced by another PhD-scholar, who was attached to the companies through a similar project, but seen from a downstream perspective. Finally, throughout the entire project, I participated actively in conferences, courses and workshops where the outcomes of my research projects were presented and discussed at length. In the following sections the five main areas are described in detail.

### ***Understanding the field of pine furniture manufacturing***

Since I finished my Master’s degree in forest products marketing back in 1999, I have been interested in the doctoral studies. However, my main condition for applying for such a study was that the doctoral studies had to be related to the sawn wood business in one way or another. My

working experience within the Danish industry for the wood-based products started already in 1996, while I was still studying for my Master's degree. I was part of a Finnish research project that investigated the sawn wood consumption in the Danish pine furniture industry. Later on, from 1997 to 2004, I was employed in three different job capacities and projects that offered me plenty of insight in the Danish wood-working industry.

One of the angles was to understand the sales channels from sawmills to industrial customers. Another approach was my Master's thesis that investigated the development of the importer segment within the Danish market for wood-based products. In this context, I made an extensive review of the development of the Danish furniture industry. Finally, during my employment within Stora Enso Timber, a large international group for wood-based products, I had rich opportunities to learn about different industrial customer segments for sawn wood. One of these was the group of pine furniture manufacturers. Through my employment in Stora Enso Timber from November 2001 to December 2004 I could closely follow the development of the companies' sawn wood purchases. Moreover, I had personal contact with many pine furniture manufacturers, and I could therefore follow the manufacturers' progress.

This relatively long practical industry-related experience from the sawn wood point of view was a helpful starting point for my doctoral studies. First of all, I was familiar with the basic work flows within the industry. Secondly, through my personal relations with the actors in the wood-working industry, I knew the culture and the way of communicating with these actors.

### ***Experience exchange group and advisory board***

The experience exchange group entailed purchasing representatives from each of the participating companies. The aim of this group was twofold. First, it was an arena for the companies to meet and discuss topics that were of relevance to their business practices. Also, I presented my ongoing research results at each meeting. The exchange experience group met four times a year, and Appendix 4 includes the meeting topics and dates.

Two individual experience exchange groups were established for the respective PhD-projects. According to the initial plans, these meetings were intended to be held separately. However, 7 out

of 10 meetings were joint meetings together with the other experience exchange group. Moreover, the advisory board was also present at two of the seven joint meetings. There were two main reasons for the joint meetings. Most importantly, the topics were related to both groups. Secondly, after the third experience exchange group meeting for the purchasing persons, it was evident that the number of participants was often very small.

The advisory board group monitored the research process. It also ensured that the project was studying a theme relevant for the group. This group met bi-annually and the participants were the main company representatives that signed the financial agreement. It also provided an extra opportunity to discuss their current industry-related challenges. In total, 5 advisory board meetings were held, of which two were joint meetings with the experience exchange groups. The meeting date and topics are listed in Appendix 5.

### ***Parallel research project***

Simultaneously with my research project another PhD-study was initiated. This other doctoral student was attached to the same case companies from a downstream point of view. As we were connected to the same case companies, we shared interview notes and discussed our experiences with the companies. This continuous knowledge sharing and many discussions both from up- and downstream angles were very useful when validating the data.

### ***Courses, workshops, conferences and seminars***

Throughout the research project I participated actively in courses, conferences, work-shops and seminars where the outcomes of my research projects were presented and discussed. These activities are listed below in Table 18.

<i>Time</i>	<i>Type</i>	<i>Name</i>	<i>Paper presented/Topics discussed</i>	
2005	May-August	Course	Analysing business networks	<ul style="list-style-type: none"> <li>• Purchaser's new role in the Danish pine furniture industry</li> </ul>
2005	August	Workshop	15th Nordic Work-shop	<ul style="list-style-type: none"> <li>• Relationships selection and its impact on innovation</li> </ul>
2005	September	Conference	21st IMP Conference	<ul style="list-style-type: none"> <li>• How to approach purchasing and marketing practices in the Danish pine furniture industry?</li> </ul>
2006	January	Seminar	Skagen Seminar	<ul style="list-style-type: none"> <li>• From manufacturer to wholesaler: relationship characteristics when time is running out</li> </ul>
2006	May	Conference	35th EMAC Conference	<ul style="list-style-type: none"> <li>• Relationships throughout decline – How organisations survive, but industries may die</li> </ul>
2006	August	Workshop	16th Nordic Work-shop	<ul style="list-style-type: none"> <li>• Upstream boundary-spanning activities</li> </ul>
2006	September	Conference	22nd IMP Conference	<ul style="list-style-type: none"> <li>• Systems meeting networks – Applying general systems theory in the industrial network perspective</li> </ul>
2006	October	Course	Knowledge Management	<ul style="list-style-type: none"> <li>• Research findings discussed with course participants</li> </ul>
2007	January	Seminar	Skagen Seminar	<ul style="list-style-type: none"> <li>• Activity upgrading process in furniture networks</li> </ul>
2007	May	Seminar	3rd IMP Journal seminar	<ul style="list-style-type: none"> <li>• Repositioning of a firm and its impact on the purchasing function</li> </ul>

**Table 18: Courses, work-shops, conferences and seminars participated**

## ***9. Case studies: Repositioning from manufacturing to trading in the Danish pine furniture industry***

In this chapter, the Danish pine furniture manufacturers' transformation from furniture production to trading will be presented. I will start by depicting the development of the Danish pine furniture industry. Following, I will describe and analyse three case studies that illustrate this repositioning on a company level.

### **9.1. Development of the Danish pine furniture industry**

The Danish pine furniture industry started in the early 1970s when former carpenters started using their production overcapacity for furniture manufacturing. Since the beginning of 1980s, the development has been characterized by internationalization of the customer base, two flourishing decades of increasing sales and further investments in production capacity. By the end of 1990s, the industry experienced more intense competition from producers in the low-cost countries, which forced the Danish manufacturers to revise their strategies. Finally, in recent years, many pine furniture manufacturers have started sourcing ready-made furniture from Southeast Asia in order to complement their manufacturing activities in Denmark.

The development of the Danish pine furniture industry can be divided into 5 phases as shown in Figure 22.

The two main drivers for the birth of the Danish pine furniture industry (hereafter PFI) in the early 1970s were the closing stages of the building boom and the emergence of mass produced furniture. The building boom in Denmark started in the late 1950s and the building activities peaked in 1973 after which the development stagnated and fell due to the oil crisis. In the same year, 50,399 new house building projects were started, while 55,566 projects were completed. In 1974, the number of new house projects started decreased by about 49 %, while the number of house projects completed declined by 12.5 %. Figure 23 and Figure 24 illustrate this development. This sudden decrease in building activities left excess capacity available in the production plants that earlier had been used for house building purposes.

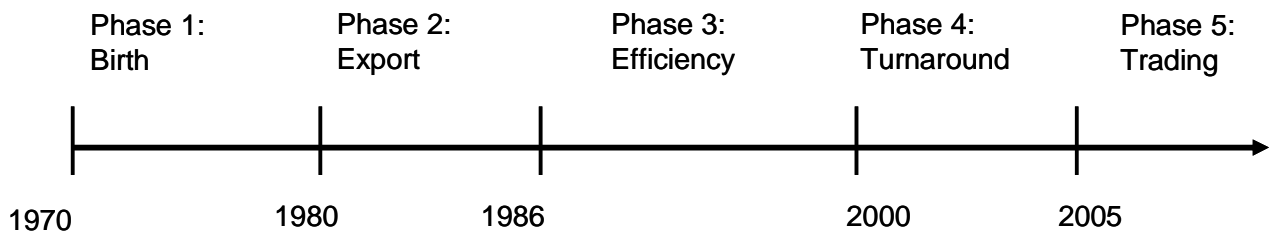


Figure 22: Development phases of the Danish pine furniture industry

### 9.1.1. Phase 1: Birth – From house builders to furniture manufacturers (1970-1980)

As a consequence of the end of the building boom, a need for new furniture emerged. IKEA was an international home product retailer that had pioneered in designing and producing ready-to-assemble (RTA) furniture. IKEA was established in 1943, and the first store was opened in Sweden in 1953. The first IKEA store opened in Denmark in 1969. As this furniture could be obtained at affordable prices, the demand increased rapidly and resulted in large volume mass production of furniture.

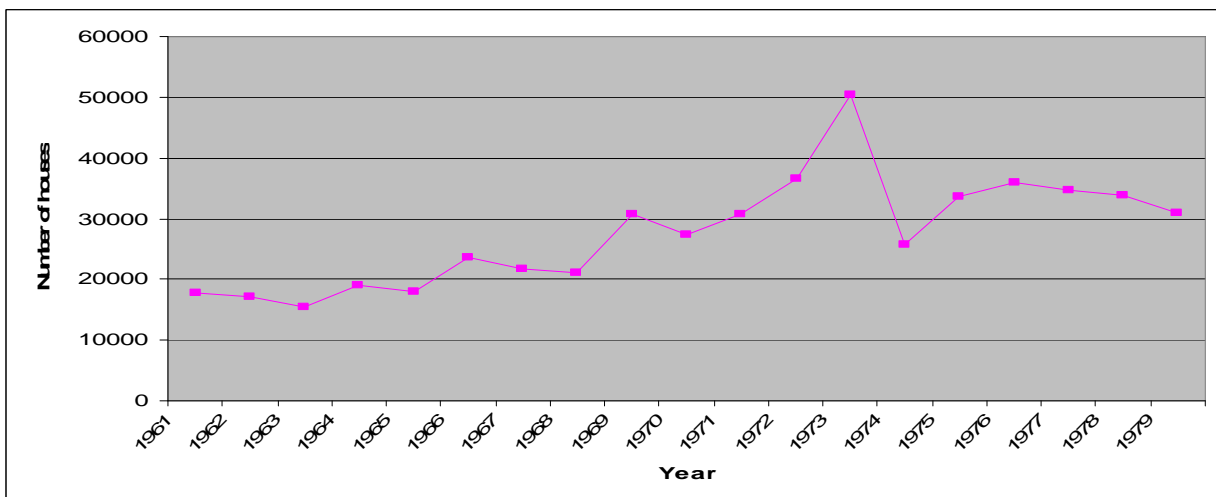
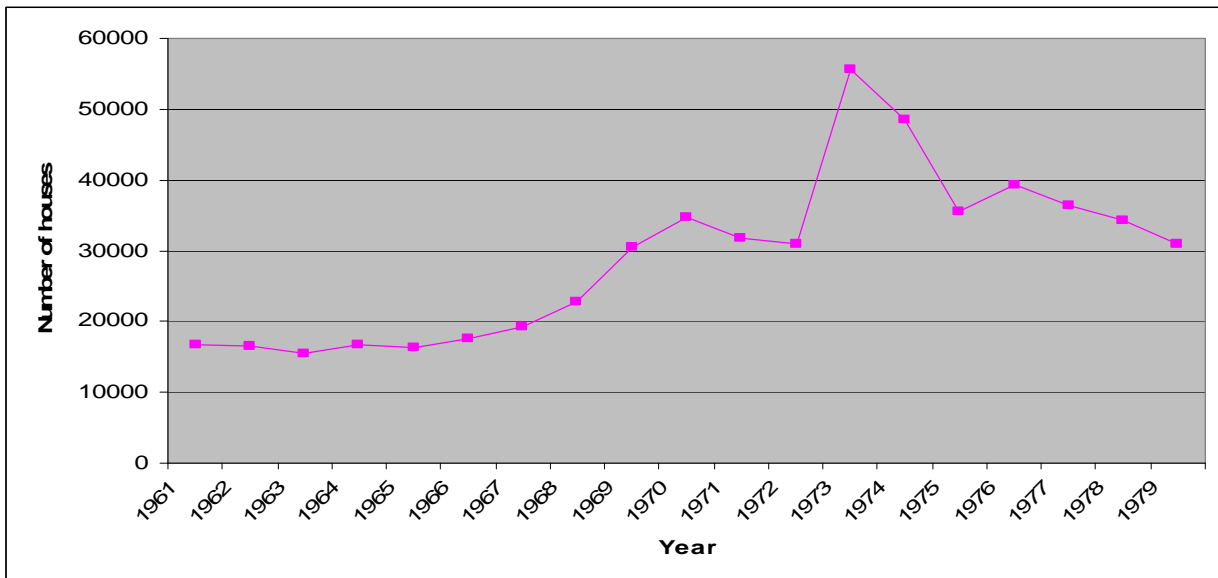


Figure 23: The number of houses started on an annual basis 1961-1979 ([www.dst.sk](http://www.dst.sk))





Th

**Figure 24: The number of houses finished on an annual basis 1961-1979 ([www.dst.dk](http://www.dst.dk))**

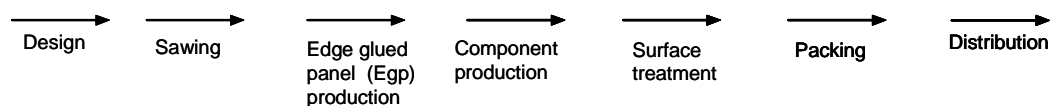
These circumstances of decreasing building activities and increasing demand on furniture provided a suitable platform for the production of pine furniture. Firstly, house builders were familiar with pine sawn wood as a raw material, since it was also used as a major building material in roof, floor and wall constructions. Secondly, parts of the house building production capacity could be used for producing furniture components. Consequently, former house builders often started as subcontractors to the existing furniture manufacturing firms. Companies producing pine furniture were located in Jutland, and especially the area around the Salling Peninsula experienced a remarkable number of newly started pine furniture companies.

### ***Pine furniture manufacturing chain***

As a recipe for success, producing RTA furniture was typically related to minimizing procurement and manufacturing costs. The design for this type of furniture was originated in 1955 by an IKEA employee. The following story is depicted on [www.ikea.com](http://www.ikea.com):

*“Then, by lucky inspiration, one early IKEA employee decided to remove a table’s legs so it would fit into a car, and to avoid transport damage. From that point on, we began to think in terms of design for flat packaging”.*

The major input in the production process of the pine furniture was pine sawn wood (*Pinus sylvestris*), which was transformed into an edge-glued panel (egp), a 15-28mm thick board consisting of lamellas that are 3cm wide and glued together side by side. Many furniture manufacturers had this transformation process done in-house, while others chose to procure edge-glued panels. Panels were then cut and drilled according to design specifications. This was followed by a surface treatment, where the components became harder and could be differentiated in colors. The final stage of manufacturing was the packaging of a complete set of parts, including assembly instructions and special assembling tools (Bramorski et al., 2000). Figure 25 illustrates the pine furniture manufacturing activity chain.



**Figure 25: Pine furniture manufacturing chain**

Manufacturing pine furniture was based on the following material input categories:

- Pine sawn wood
- Production equipment (sanding belts, cutting tools)
- Painting and lacquer
- Components, e.g. table and bed legs in wood or in other materials
- Fittings
- Packaging materials.

In cost terms, pine sawn wood totaled the most considerable share of the pine furniture manufacturing process. Based on interviews among Danish pine furniture manufacturers, sawn wood purchases accounted for up to 60-70 per cent of the furniture's cost price. As Denmark

maintained very limited sawn wood resources, firms obtained the raw material mainly from Swedish and Finnish sawmills.

Production equipment consisted of the materials used for cutting and polishing the sawn wood. Lacquer was applied to harden the surface, while painting provided different finishes. Components like molded table legs were not manufactured in-house. The reasons for obtaining the components externally were two-fold: Either they could be obtained for lower cost from an external supplier, or the firm's production facilities were not appropriate to manufacture the specific component.

Supplier base was characterized by actors that had been involved in the supply process from the beginning. Each product category was represented by a few suppliers that were able to replace one another as supplier. In other words, there were not many supplier possibilities, but those who were available were competent.

### *9.1.2. Phase 2: Export – From domestic sales to export (1980-1986)*

Companies were small in size, and the head of the company, often the founder and owner, was not only in charge for the purchases of the raw materials, but also for production and marketing. In the beginning, the pine furniture was sold almost exclusively on the domestic market, but since the early 1980s, export started to play an active role in the industry. Germany, the Scandinavian countries and Great Britain were dominant as export markets, as these countries traditionally have favoured pine furniture.

Thus, it was neither easy nor necessary to build up and maintain an internationally oriented sales organisation. As mentioned earlier, the firms manufacturing pine furniture were established by former house builders, and they were more focused on production processes than on marketing efforts. In this context, an annual export-forwarding trade fair that took place in Herning, in the Mid-Jutland gained relevance among the pine furniture manufacturers. At this trade show, international retailers searched for products from the Danish manufacturers. This appeared to be a convenient way of making acquaintances with international retailers, since these customers took care of sales. Moreover, retailers were responsible for product design, and after the relevant modifications in production terms, retailers forwarded the orders to manufacturers at fixed unit

prices. In this way, pine furniture manufacturers were able to concentrate on what they did best: the production of pine furniture.

### 9.1.3. Phase 3: Efficiency – Investments in the production facilities (1986-1996)

Since the 1970s, companies producing pine furniture became used to ever-increasing annual sales. As sales grew, companies invested in expanding their production capacity. During the 1980s and early 1990s, increasing demand on pine furniture resulted in investments in larger production capacity and the number of employees increased as a result. With growing demand, new entrants started producing pine furniture. This made it convenient for the retailers to demand the same product from different manufacturers.

The export of pine furniture increased steadily from 1986 to 1996. Table 19 below shows the value of Danish furniture export based on the data from Statistics Denmark. During the period of 1988 to 1996, the export of pine furniture accounted for about 40% of the total furniture export<sup>1</sup>. Moreover, the main target export markets were France, Germany, Great Britain, the Netherlands, as well as Norway, Sweden and USA. These countries accounted for approximately 80 % of the total Danish furniture export.

Country	1988	1989	1990	1991	1992	1993	1994	1995	1996
France	233.607,00	285.659,00	322.285,00	325.011,00	334.338,00	334.846,00	394.164,00	444.292,00	454.953,00
Germany	1.831.391,00	2.343.459,00	2.948.633,00	3.953.668,00	4.519.777,00	5.302.913,00	5.442.508,00	6.356.776,00	6.281.414,00
Great Britain	816.711,00	1.030.885,00	946.830,00	863.545,00	911.524,00	757.227,00	730.527,00	715.448,00	744.886,00
Netherlands	232.811,00	245.079,00	315.903,00	371.643,00	340.133,00	377.283,00	451.111,00	583.827,00	580.780,00
Norway	954.742,00	917.082,00	1.035.685,00	1.126.390,00	1.070.977,00	1.001.911,00	1.017.300,00	948.570,00	894.250,00
Sweden	768.141,00	966.755,00	1.208.993,00	1.389.096,00	1.227.330,00	1.027.623,00	1.172.519,00	1.033.378,00	961.867,00
USA	978.243,00	1.043.776,00	992.634,00	745.311,00	722.552,00	701.783,00	890.492,00	717.729,00	683.151,00
Other countries	1.200.064,00	1.428.913,00	1.546.839,00	1.754.759,00	1.805.673,00	1.710.979,00	2.065.647,00	2.154.488,00	2.133.509,00
<b>Total in billion DKK</b>	<b>7.015.710,00</b>	<b>8.261.608,00</b>	<b>9.317.802,00</b>	<b>10.529.423,00</b>	<b>10.932.304,00</b>	<b>11.214.565,00</b>	<b>12.164.268,00</b>	<b>12.954.508,00</b>	<b>12.734.810,00</b>

**Table 19: Export of Danish furniture in 1988-1996 ([www.dst.dk](http://www.dst.dk))**

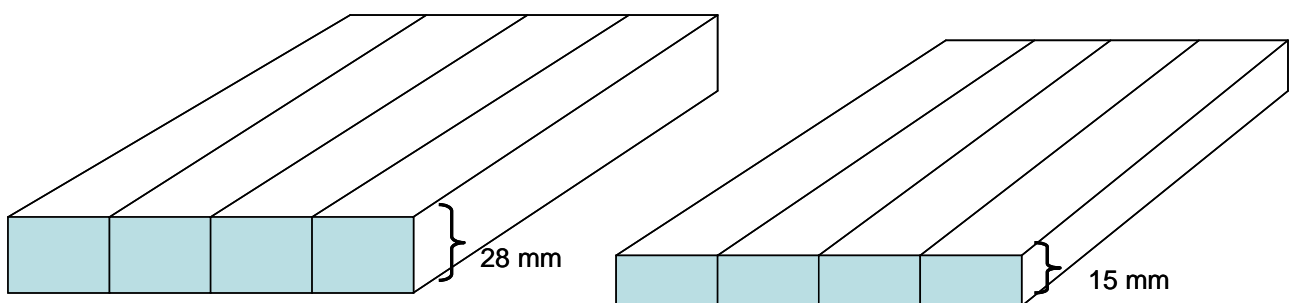
<sup>1</sup> This estimate originates from Keld Korsager, the director of the Association of Danish Furniture + Interior.

#### 9.1.4. Phase 4: Turnaround – From flourishing industry to shrinking profit margins (1996-2005)

The new situation with many actors providing the same products to the same customers initiated a price war in the mid 1990s. Manufacturers tried to keep production volume high while keeping production costs low. In order to remain competitive, furniture producers initiated several process upgrading activities in their production. Firstly, some operations were automated in the late 1990s, e.g. robots lifting packed furniture. Secondly, there was a continuous focus on the work processes to make them more efficient. Moreover, in order to reduce production cost, pine furniture manufacturers started producing thinner EGP (see Figure 26). In many instances the panels were produced in thicknesses of 15 to 18 mm compared with the earlier thickness of up to 28 mm.

Changes in the firms' production processes affected supplier relationships as well. For many suppliers, the pine furniture industry was the key customer, but they were losing importance. This is pointed out in the following quote:

*“Back in 1995 more than 70% of our turnover was gained from the Danish pine furniture industry. At that time I had 35-40 pine furniture manufacturers as customers. In 2005 the share was about 30 % and my customer base had shrunken to 7 pine furniture manufacturers. Luckily, other types of furniture producers, kitchen manufacturers and increasing export has compensated for that loss”.*  
[A leading fitting supplier]



**Figure 26: Change in the thicknesses of the EGP**

Moreover, as price competition became more intense, suppliers faced a trend towards arm's length relationships, where suppliers were played against one another, as indicated by the following quote:

*“We experienced more constant price comparisons from the customers, and our competitors started promising more than they could deliver merely in order to receive the order. We lost many customers for a short period, but many of competitors were not able to live up to time and/or price expectations, so the customers have returned”. [A leading fitting supplier]*

Furthermore, the supplier base of Danish pine furniture manufacturers was predominantly domestic. The pressure of being able to produce at a lower cost tempted several manufacturers to purchase materials abroad. But, as these companies generally had no experience with foreign suppliers, many of these attempts failed.

*“I had learnt that an Eastern European component supplier could provide the small item needed in our production process for 20 cent (EUR) cheaper than our local supplier. We ordered the item from the Eastern European component supplier, but were faced by extremely many problems. First, after having confirmed the order they informed us that they were not able to produce the item requested. Secondly, when they finally produced the item, it took far longer than agreed. While we were waiting for the item to arrive, we produced the furniture. When the item finally arrived, we were obliged to open each package and put the item into the box, one by one”. [Purchasing responsible, C8]*

In the beginning of 2000, the image of pine furniture changed from good quality natural products, towards low quality discount products. At the same time, many new manufacturers entered the industry mainly located in low-cost regions (Eastern Europe and Asia). Thus, due to lower consumer prices, lower production costs and overcapacity, the industry faced strong price pressures.

Danish pine furniture manufacturers were heavily challenged by these developments. The Danish producers were traditionally dependent on a small number of international buyers, and their products were tailored to customer requests without any manufacturer branding. Competition was twofold: On one hand, the competition was fierce among the Danish manufacturers because

products and customers were to a large extent the same. On the other hand, Danish manufacturers competed against other regions, in particular low-cost regions.

The falling manufacturing activities had detrimental effects on the companies' performance. The large investments in the production facilities in the 1980s and 1990s made it difficult to diversify activities to other areas, as many financial resources were bound to these investments. Based on this situation, companies tried desperately to fill the production capacity. For example, many tried to capture orders from competitors by offering lower unit prices, even though they were below the factual cost prices, simply to keep the machines running:

*“Our production facilities are the heart of this company. And I enjoy seeing the machinery running. That gives me a feeling of success. I can't bear to see the machinery standing still”. [Owner, C3]*

In other cases, production of components that earlier had been outsourced to external suppliers were recommenced, merely to fill up the production capacity. However, production facilities that had been adapted to produce large batches suffered from decreasing incoming orders. In many instances facilities were used to manufacture small batches that required many time-consuming changeovers. This resulted in an unfavorable cost structure. Problems with the manufacturing activities led to lay-offs of production personnel. In some cases, these lay-offs were so massive that it was difficult to make ends meet.

*“This is quite bizarre. As a matter fact we obtained a big order, but we could not accept it. We dismissed 50 blue collar workers recently, and now we don't have enough personnel to carry out the manufacturing activities”. [Factory manager, C 2]*

The high dependency on production facilities put many companies under pressure and resulted in numerous bankrupts among the Danish pine furniture manufacturers. In this context, however, it is worth mentioning that Danish furniture exports continued to increase on a moderate level (see Table 20) during the period from 1997 to 2005. Nevertheless, compared with the relatively high share of pine furniture export in 1988-1996 (about 40 % of the total export), the share had decreased by 10

% by the end of 2005<sup>2</sup>. The export of Danish furniture consisted increasingly of designer furniture and furniture made of other wood types than pine.

The manufacturers that survived were compelled to search for alternatives to their manufacturing activities. In relation to this, two main focus areas could be pinpointed related to the product upgrading processes. Firstly, instead of being highly dependent on customers' designs, many companies started more deliberately to create their own design. For this purpose, furniture designers were either employed or used on a consultancy basis.

Country	1997	1998	1999	2000	2001	2002	2003	2004	2005
France	539.334,00	653.231,00	542.642,00	660.237,00	847.722,00	869.623,00	822.735,00	788.882,00	968.416,00
Germany	5.731.896,00	5.668.578,00	5.394.099,00	5.252.411,00	4.842.395,00	4.488.590,00	4.340.121,00	4.018.758,00	3.757.483,00
Great Britain	936.055,00	1.006.221,00	1.358.979,00	1.772.169,00	2.294.677,00	2.532.519,00	2.367.028,00	2.326.635,00	1.902.205,00
Netherlands	507.823,00	540.513,00	549.125,00	595.521,00	674.261,00	653.777,00	589.684,00	601.955,00	635.874,00
Norway	1.125.157,00	1.195.171,00	1.141.884,00	1.277.445,00	1.230.100,00	1.426.008,00	1.484.059,00	1.675.988,00	1.863.736,00
Sweden	1.064.500,00	1.088.021,00	1.116.448,00	1.323.107,00	1.346.820,00	1.452.299,00	1.573.933,00	1.588.328,00	1.631.793,00
USA	826.481,00	1.016.991,00	1.178.698,00	1.539.780,00	1.275.516,00	1.139.682,00	1.229.818,00	1.346.505,00	1.222.856,00
Other countries	2.282.975,00	2.254.251,00	2.418.173,00	2.864.640,00	3.040.179,00	3.191.695,00	3.365.252,00	3.666.103,00	3.925.523,00
<b>Total in billion DKK</b>	<b>13.014.221,00</b>	<b>13.422.977,00</b>	<b>13.700.048,00</b>	<b>15.285.310,00</b>	<b>15.551.670,00</b>	<b>15.754.193,00</b>	<b>15.772.630,00</b>	<b>16.013.154,00</b>	<b>15.907.886,00</b>

**Table 20: Export of Danish furniture in 1997-2005 ([www.dst.dk](http://www.dst.dk))**

Secondly, in order to fill the production capacity, some companies started producing furniture in other wood types than pine. In this context, it became relevant to find wood types that met the more contemporary tastes. This meant using 'cleaner' and more knotless surfaces. While pine furniture was characterized by visible knots in the surface, both clear wood (*Pinus radiata*) and rubber wood (*Hevea brasiliensis*) were wood types without remarkable visible knots. However, in some situations, using the existing production facilities became problematic. For example, the existing cutting tools were not suitable for cutting the new wood types, due to they were harder than pine. Hence, new cutting tools had to be obtained. Secondly, as both clear and rubber wood were heavier

<sup>2</sup> Again, this estimate originates from Keld Korager, the director of the Association of Danish furniture and interior.



than pine, the manual handling of materials was more difficult. Finally, using other wood types than pine in the manufacturing process was aimed at creating furniture that was more expensive than pine.

In some occasions, pine furniture manufacturers chose to start producing components to a different network, e.g. windows and doors. In this sense, they carried out an inter-sectoral upgrading, which means that the other networks like windows and doors were relatively closely related to that of pine furniture. For example, a company chose start producing window components to a local window producer, and for that purpose, the existing production equipment could be used.

Finally, in addition to product and inter-sectoral upgrading processes, many pine furniture producers started sourcing ready-made furniture from Southeast Asia, thereby initializing a concentration on functional upgrading. Even though a change from manufacturing to trading sounded drastic, many furniture manufacturing companies were familiar with this trading function from before. In many cases, firms had completed their furniture series by purchasing ready-made furniture. E.g., a firm may produce dining tables and chest of drawers but not chairs. As the customer (retail chain) often wished to procure the whole programme from the same producer, the manufacturer was likely to purchase matching chairs from a supplier to complete the programme.

#### *9.1.5. Phase 5: Trading - Made in China: Increasing trading of ready-made furniture (2005- present)*

Denmark has longstanding traditions in manufacturing furniture. However, in recent years the manufacturing activities stagnated and growth was measured only on a moderate level. For example, while the Danish furniture production in 2003 accounted for approximately DKK 18.9 billion, the production had increased by merely 2,2 % in 2007. At the same time, furniture trading increased rapidly. In 2003, the import of furniture was approx. DKK 6 billion and by the end of 2006, trading had increased by 34 % to around DKK 8.1 billion. The production and trading figures are indicated in Table 21.

<b>Billion DKK</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
Total Danish production	18.878,00	19.037,00	19.301,00	19.437,00
Trading	6.068,00	6.355,00	6.852,00	8.141,00

**Table 21: Total Danish production and trading of furniture (www. danishfurniture.dk)**

Furniture trading in Denmark was dominated by actors specialised in importing furniture and reselling domestically and world-wide. There were two visible actors, namely Actona Company A/S and BoConcept A/S. Actona provided a complete range of furniture to the Danish and foreign retailers. BoConcept combined both importing a total range of furniture and accessories with reselling it in its own stores. BoConcept was represented in 47 countries. The Danish pine furniture manufacturers concentrated mainly on sourcing wooden furniture in China. The manufactureres considered that they had the relevant capabilities as they were used to producing pine furniture. Moreover, in this way the pine furniture manufacturers believed that it was realistic for them to find a niche in trading furniture among the dominating actors.

The Far East, especially China, increased its importance in becoming the source of furniture. While the import of Chinese furniture accounted for DKK 208 million in the beginning of 2000, the value of import increased to DKK 1.8 billion by the end of 2006. The reasons were many. Firstly, China had a rapidly growing large supplier base. Secondly, due to the low Chinese cost structure, sourcing became a substitute for production. Moreover, as sourcing increased in China, the Chinese suppliers also improved in consistency and reliability. Sourcing of furniture was an activity of interest among furniture manufacturers as well. For example, Kaplinsky et al. (2002) reported that former pine furniture manufacturers in North Carolina in the USA started sourcing furniture, as their own manufacturing capabilities were no longer profitable. Similarly, sourcing became an activity among the Danish pine furniture manufacturers. As mentioned earlier, purchases of ready-made furniture were carried out to complete a product portfolio. However, in some cases it became evident that it was possible to source furniture normally manufactured in-house at a lower cost in China.

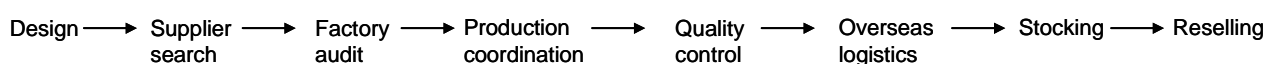
While pine furniture manufacturers traditionally sold their products through global furniture retailers, reselling the imported furniture was a new challenge. In some cases, the present customer base was accustomed to selling the product, but altogether new customer relationships were

required. In order to appeal to new customers, there was an enhanced focus on design. Many pine furniture manufacturers therefore started using external furniture designers.

### ***Furniture trading chain***

Sourcing of ready-made furniture differed greatly from furniture manufacturing activities. In this context, searching for and assessing the potential suppliers became key activities. Based on a company's own design, a relevant supplier base was explored, often through Chinese furniture trade fairs. This produced the first impression of a supplier's potential. Later on, if the supplier was considered interesting, a visit to the production plant was the next phase. By assessing the production facilities and product quality, the further actions could be agreed on. Following this, the production coordination would be carried out in several sub-phases. Firstly, in some cases the supplier was taught to produce furniture in a specific way. Secondly, if the supplier was considered potential, a sample would be produced and evaluated. Thirdly, the supplier carried out a trial order, after which the contract was signed, providing that the product met the requirements. After signing the contract, the supplier was visited on a regular basis in order to ensure a homogenous quality.

When the furniture was ready, it would be shipped to Denmark. Here, the products were stocked and resold to the customers. Figure 27 illustrates the trading activity chain.



**Figure 27: Trading activity chain**

It was typical for the companies to use Chinese agents to establish supplier relationships. As a result, building up reliable supplier relationships as well as continuous control visits to the production plants called for more permanent presence in China. For these reasons, many manufacturers established their own sales offices in China.

After having outlined the overall development of the Danish pine furniture industry, it is time to focus on the development in the companies. In the following sections, three manufacturers' repositioning from manufacturing to trading will be presented.

## **9.2. Company 1 and repositioning from furniture manufacturing to trading**

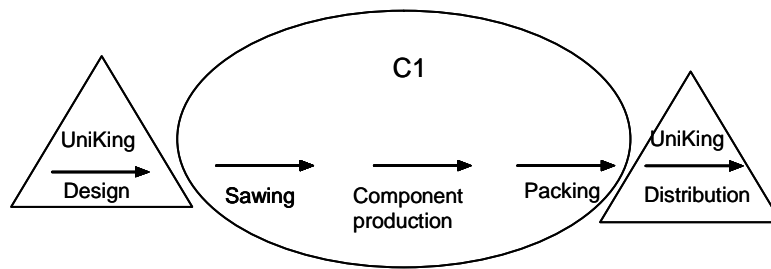
Company 1 (C1) was established by its current owner in 1979. In the beginning, C1 was a subcontractor for other Danish furniture manufacturers providing them with individual parts and components. In the late 80's, C1 started producing complete furniture, e.g. beds, dressers, chests of drawers and tables.

### *9.2.1. Company 1's position as furniture manufacturer*

By 2005, the main products were untreated (i.e. without surface treatment) chests of drawers at the lower end of the quality scale. The products were mainly sold to a large mail-order retailer in Great Britain (hereafter called UniKing) through a Danish agent (hereafter called DanAg). UniKing accounted for over 80% of C1's turnover.

#### ***Role - Activities***

The production of the chests of drawers was based on UniKing's product design. UniKing forwarded the product design, and C1 translated the product drawings into production instructions suited to C1's production facilities. The main material in the production was sawn pine wood which accounted for 65-70% of the total costs. The fronts and top of the product were made of edge-glued panels (EGP) acquired externally. The rest of the drawers consisted of sawn components that were produced in-house. C1 produced the furniture components (sawing, drilling, and finishing). The parts were then assembled and packed in cardboard boxes together with fittings and assembling instructions. Due to limited stocking facilities, C1 employed a "produce-upon-order" policy. UniKing assumed responsibility for transportation and logistics. The manufacturing chain is illustrated in Figure 28.



**Figure 28: C1 furniture manufacturing chain in 2005**

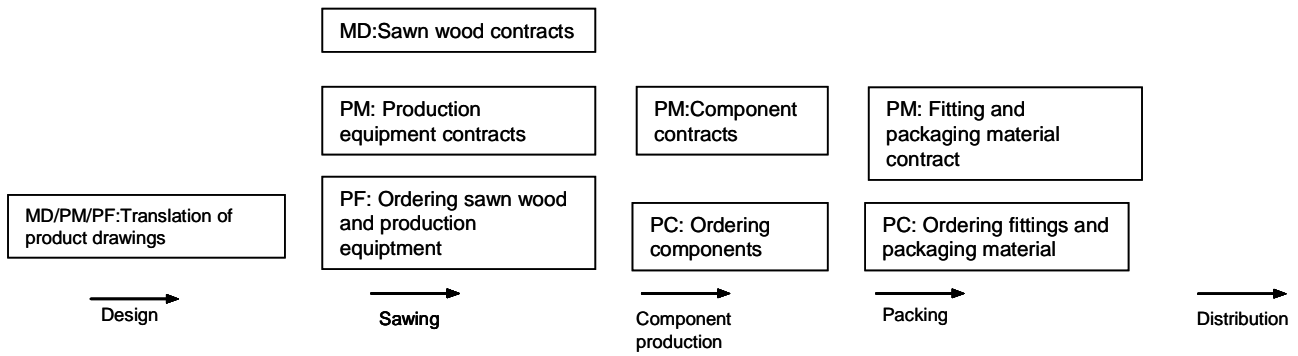
As C1 mainly concentrated on manufacturing the chest of drawers to UniKing upon an already determined design, the material purchases were straight re-buys upon specification. The main task of the purchasing function was to provide the production department in time with the requested material flow.

***Role - Supporting activities***

There were four persons involved in the purchasing tasks that supported manufacturing activities:

- **Managing director (MD)**, responsible for sawn wood purchases and contracts. Also responsible for translating product drawings to fit the production together with the Purchasing manager and the Production foreman.
- **Purchasing manager (PM)**, responsible for contracts and purchases within other areas than sawn wood (i.e. production equipment purchases, fittings, packaging materials).
- **Purchasing coordinator (PC)**, worked in close collaboration with the purchasing manager and responsible for forwarding orders to suppliers.
- **Production foreman (PF)**, informed the purchasing coordinator whenever new supplies were needed. Also responsible for orders of sawn wood.

The persons involved in the manufacturing chain are showed in Figure 29.



**Figure 29: Buying team and tasks in C1's manufacturing chain**

C1's purchasing tasks were aimed at ensuring a steady and timely flow of material inputs for the manufacturing activities. The production processes were based on standard material specifications and in that sense the purchasing personnel did not have to search for new material types or suppliers.

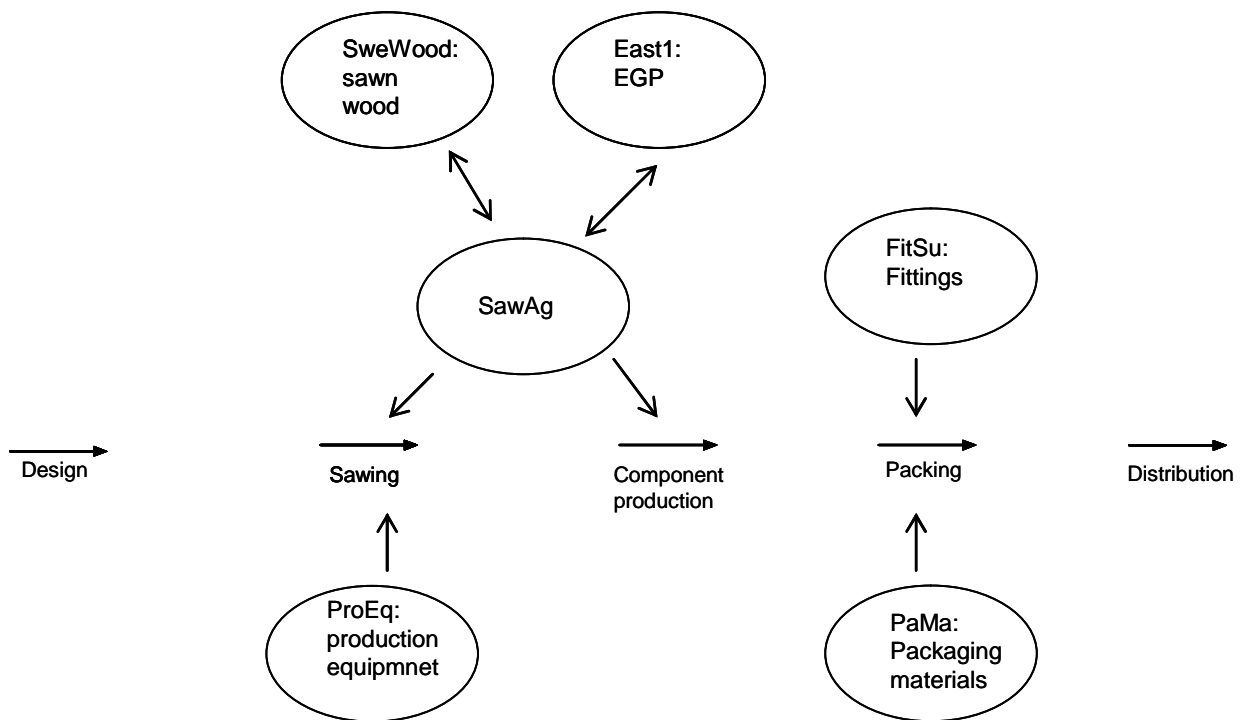
### ***Relationships***

C1's supplier base was mainly local, even though EGP and sawn wood were obtained from East Europe (East 1) and Sweden (SweWood). However, both suppliers were contacted through a Danish sawn wood agent (SawAg) that was mainly responsible for the communication with the suppliers. Moreover, C1 used one major supplier for product equipment (ProEq), fittings (FitSu) and packaging materials (PaMa). All the supplier relationships had lasted for more than five years. The suppliers in the manufacturing chain are shown in Figure 30.

The pine furniture network was characterised by high pressure on the unit prices. This often resulted in pressure on the suppliers, and many manufacturers used alternative suppliers within the same product category to achieve the lowest prices. However, C1 had chosen to rely on one supplier per product category.

*"I did not think that we could obtain the materials to a lower cost by shopping around. Our company size was relatively small, and therefore the amount of inputs needed for the production*

were limited. Moreover, I felt that by being committed to our suppliers, we were treated well. For example, if we suddenly needed some materials on a short notice, our suppliers were willing to help us”. [MD, C1]



**Figure 30: C1's supplier base in 2005**

By using one supplier per product category and long-term relationships, C1's supplier relationships could be described as nice or ideal. Moreover, even though C1 was highly dependent on the suppliers' inputs, the relationship atmosphere was harmonic. Albeit the volumes C1 used were marginal for many suppliers, C1 was treated well. Furthermore, the level of trust and commitment was high in C1's supplier relationships through long-lasting and personal relationships.

*“We had a main fitting supplier (FitSu). The story behind this was that our contact person worked previously for another fitting supplier (FitSu 1) that was our fitting supplier previously. By the time our contact person got a job with FitSu, we stayed with him and changed the supplier. However, as*

*FitSu went through a turnaround, our contact person was fired and he re-joined FitSu 1. Anyway, we decided to stay with FitSu, as we were satisfied with the company and their professionalism".*  
[PM, C1]

### **Capabilities**

Translating product drawings to fit into production required capabilities that C1 had built up over the years. As C1's main product was the specific type of chest of drawer, the operational product and process capabilities gained relevance. From the specialist qualifications' point of view, technical and economic skills were important. For example, it was important to acquire the right quality sawn wood to the production at the right price, and it was therefore relevant to find a supplier that could provide the requested product. The following quote illustrates MD's technical qualifications:

*"I was most interested in doing business with those Swedish sawmills that cut standard dimensions and qualities. In this way I could be relatively certain about a good and homogenous raw material quality".* [MD, C1]

Both MD and PM demonstrated high levels of social skills when managing the supplier relationships. Due to the marginal size of the firm, C1 had chosen to concentrate on few suppliers as they did not believe that using multiple supplier sources would result in the lower costs. In this manner MD and PM had a high level of self-justice. Moreover, communication with the suppliers was open and cooperative.

As UniKing was C1's sole customer, C1 was not particularly concerned with the downstream market capabilities. Moreover, C1 also relied on an established supplier base and was therefore not actively acquiring knowledge about new potential suppliers. However, C1 used its established supplier base to acquire knowledge about the other actors in the pine furniture network, as shown in the following citation:

*"Our fitting supplier used to contact me on a short notice. He might have called and said that as he was nearby visiting another company, he wanted to pass by. This suited me well, as I was always*



updated, if there were new products coming up, or if one of our competitors had received a new order, or went bankrupt “[PM, C1].

Table 22 below summarises C1’s position as manufacturer.

<b>Role</b>	<b>Relationships</b>	<b>Capabilities</b>
<p><i>Function:</i> Manufacturer of untreated chest of drawers</p>	<ul style="list-style-type: none"> <li>• Long-term relations</li> <li>• One supplier per product category</li> <li>• High involvement and low competition -&gt; Nice/ideal relationships</li> <li>• Harmony in power-dependency</li> <li>• High level of trust and commitment</li> </ul>	<p><i>Firm capabilities:</i></p> <ul style="list-style-type: none"> <li>• Operational product capabilities</li> <li>• Operational process capabilities</li> </ul> <p><i>Specialist qualifications:</i></p> <ul style="list-style-type: none"> <li>• Technical skills: Product and supplier knowledge</li> <li>• Economic skills: Cost calculations</li> </ul> <p><i>Social qualifications:</i></p> <ul style="list-style-type: none"> <li>• Communication ability</li> <li>• Sense of justice</li> <li>• Cooperativeness</li> </ul> <p><i>Knowledge about other actors</i></p> <ul style="list-style-type: none"> <li>• Supplier knowledge</li> <li>• Competitor knowledge</li> </ul>
<p><i>Activities:</i> Typical and expected manufacturing activities</p>		
<p><i>Supporting activities</i></p> <ul style="list-style-type: none"> <li>• Ensuring timely input flow in the production</li> </ul> <p><i>The composition of the purchasing team:</i></p> <ul style="list-style-type: none"> <li>• Managing director (MD)</li> <li>• Purchasing manager (PM)</li> <li>• Purchasing coordinator (PC)</li> <li>• Production foreman (PF)</li> <li>• Sales assistant (SS)</li> </ul>		

**Table 22: C1’s position as manufacturer in 2005**

### 9.2.2. Drivers of repositioning

Since the late 1990s C1 had experienced that the competition among the Danish and foreign pine furniture manufacturers (PFM1 – PFMn) had become more intense. The prices in pine furniture decreased and C1 absorbed this change in prices in two major ways. Firstly, part of the production line was automated in order to make the production process more efficient. Secondly, C1 changed the product design and started using thinner pine wood panels in order to reduce the cost price of the product.

In the beginning of 2005, C1 was faced by an economical crisis that was a result of several changes in their customer relationships. Firstly, back in 2004 DanAg obtained C1's production drawings and forwarded them to another supplier that was able to produce the requested product at a lower cost than C1. As a consequence, C1 lost the order which resulted in a big loss in C1's turnover. Secondly, C1 experienced an increasing dependency on UniKing, as the following quote indicates:

*“Whenever UniKing designed new product, they requested a prototype from us. And, if we managed to receive the order, we also became responsible for obtaining sufficient stock of that product for UniKing. The worst thing was though that we were also obliged to take full responsibility of the product stock, if the item turned out to be a flop. And in fact that happened to us in early 2006, when UniKing had designed a product that did not sell as expected. We ended up with a huge excess stock of a non-saleable product, and because of that, we lost about EUR 4 million in turnover”.*  
[MD, C1]

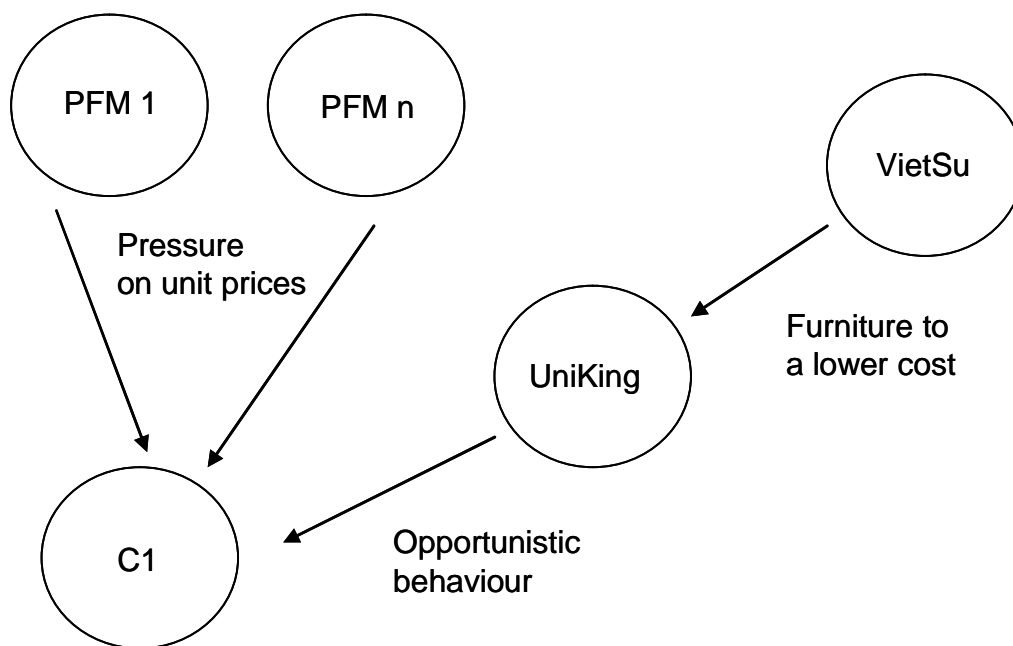
Moreover, UniKing contacted C1 in 2006 and informed them that they had decided to source the chests of drawers from Vietnam in the future, because the Vietnamese supplier (VietSu) was able to deliver the same product at 17 % lower costs than C1. This meant that C1 lost about 85% of their total turnover.

The decreasing unit prices and the opportunistic behaviour of UniKing can be described as predictable changes. The unit prices had decreased since the late 1990s, and UniKing had behaved in an opportunistic way on several occasions. To some extent, we may consider the termination of the relationship between C1 and UniKing as unpredictable. However, judging from the general development of the pine furniture network in terms of intense price competition and the emergence

of new suppliers the change may have been predicted. Moreover, as C1's relationship with UniKing had been characterized by difficulties earlier, the termination of the relationship was not totally unexpected. Figure 31 illustrates C1's drivers of repositioning.

Losing their sole customer threatened C1's existence. In order to survive, C1 started focusing on sourcing of furniture in China. This activity emerged as follows:

*"Relying on one customer became too risky and we had to diversify our activities if we wanted to survive. As many other manufacturers had started sourcing in China, we decided to do the same in the beginning of 2005. I was even lucky to have my ex-girlfriend (ChA), who is Chinese to help us in initiating contacts with Chinese suppliers". [MD, C1]*

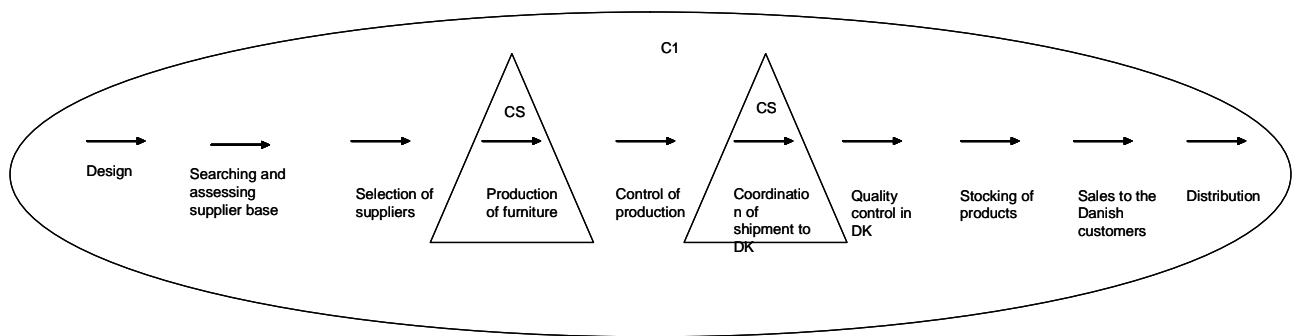


**Figure 31: C1 drivers of repositioning**

### 9.2.3. Company 1's new position as a trading house

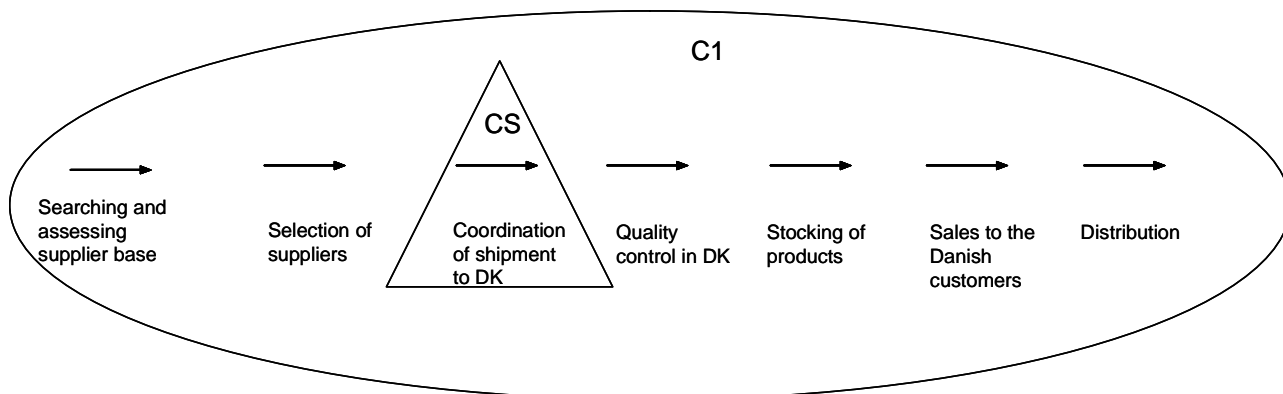
#### **Role - Activities**

In its new trading house role, C1 became responsible for the whole chain stretching from design of furniture to sales and distribution. The selection of suppliers and products were addressed in two major ways. Firstly, MD and PM visited Chinese trading fairs and looked for potential suppliers. ChA helped in initiating contact with potential Chinese suppliers (CS) that on a longer term could produce furniture to C1 upon C1's design. The trading activity chain is illustrated in Figure 32.



**Figure 32: C1's planned activity chain as trading house in 2007**

Secondly, the visits on Chinese trade fairs resulted in various purchases of ready-made furniture, i.e. without C1's own design. PM and MD relied on their tastes in selecting the pieces of furniture they wanted to acquire. Shipping was coordinated together with CS. The activity chain is illustrated in Figure 33. In reality, it showed that C1's direct purchasing activities on trade fairs became the main way of carrying out trading activities.



**Figure 33: C1's realised activity chain as a trading house in 2007**

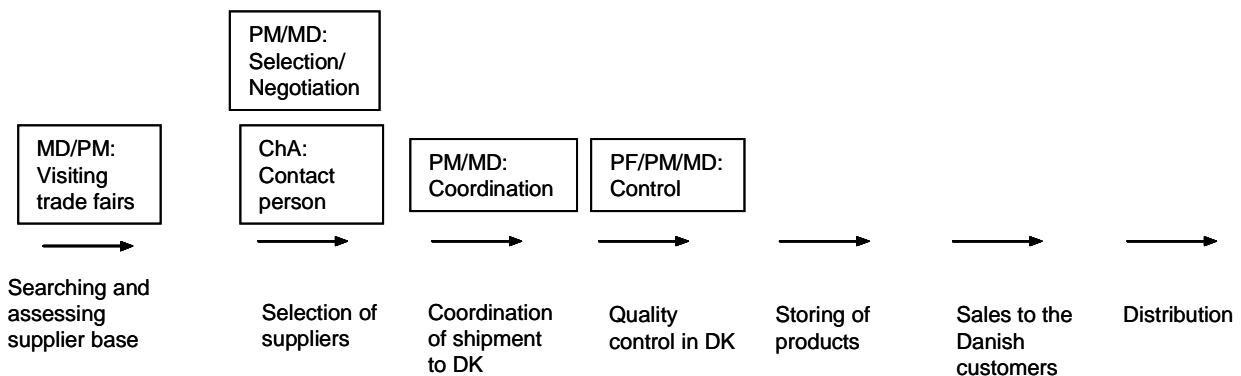
### ***Role - Supporting activities***

C1's new role as a trading house led to changes in the purchasing activities. Searching for new suppliers became one of the most important activities. Moreover, new activities such as the coordination of deliveries from China to Denmark and product quality control emerged. New supporting activities also led to changes in the purchasing team. A new person, ChA, was included and MD, PM and PF obtained new purchasing tasks.

The following persons carried out purchasing activities supporting the trading activities:

- **Managing director (MD) and Purchase manager (PM)** were mainly responsible for this new function and activities related to it, i.e. visiting trade fairs, assessing suppliers, coordinating deliveries from China to Denmark and controlling the quality.
- **Chinese Agent (ChA)** acted as an agent in order to get in contact with the relevant Chinese suppliers. Furthermore, the production foreman was responsible for receiving, storing and dispatching the ready-made furniture.
- **Production foreman (PF)** was responsible for controlling the quality together with MD and PM.

Figure 34 shows the purchasing personnel involved in the trading chain.



**Figure 34: Buying team and tasks in C1's trading chain**

### ***Relationships***

As a consequence of the change in a role, the old supplier relationships were dissolved. New supplier relationships were initiated to acquire ready-made furniture. There was no fixed number of suppliers, as C1 mainly contacted new potential suppliers by visiting trade fairs. Apart from the fact that the supplier relationships were new, the degree of involvement and competition was low, i.e. the supplier relationship were characterised as marginal or non-crucial.

As C1 had abandoned its own manufacturing activities, it became dependent on the Chinese suppliers' outputs. However, as contacts to these suppliers were relatively sporadic, power and dependency in the relationships was not significant. Moreover, the contracts signed were based on the particular items purchased at the fair and did not obligate to any further purchases. This entailed that the level of trust and commitment in the relationships was low.

### ***Capabilities***

The new role as trading house called for changes in the capabilities. C1 experienced that some of its existing capabilities were beneficial in the new context. The operational product and process

capabilities were used on an ad hoc basis when assessing the product quality and production facilities in China. The following quote is used to illustrate this point:

*“I had seen an interesting oak table at a trade fair. Through ChA we got a chance to visit the supplier. He showed us his production facilities and even though many of the production processes were very manual, he had acceptable basic equipment”. [MD, C1]*

Moreover, the existing specialist qualifications could be used in these new activities. MD’s PM’s and PF’s product knowledge was useful in assessing the quality of the products bought in China. Finally, MD’s extensive knowledge about pine furniture could be applied to the other wood types, e.g. oak. In this context I was told the following story:

*“Naturally, not all the areas in China are suitable when searching for wooden furniture. The oak from the southern parts of China is not of as good a quality as that from North China”. It is the same with pine. The pine from northern parts of Sweden is more durable than the pine from Poland. [MD, C1]*

Even though C1 could use the existing firm capabilities and specialist skills in a novel way, many new capabilities had to be learnt. As C1 initiated new supplier relationships, the old local supplier base was replaced by the Chinese relations. Therefore, cultural qualifications became relevant, and C1 benefited greatly from having ChA as the main contact person between C1 and the Chinese suppliers. As ChA was Chinese and used to doing business in China, she was aware of how to tackle relations with these new suppliers.

Since C1 also was responsible for finding customers for the products, finding and selecting the type of furniture that was saleable was challenging. Therefore, developing downstream market capabilities became crucial for C1. The following quote illustrates the challenges.

*“I visited a furniture trade fair in Shanghai in the beginning of 2006. I found some nice leather sofas and assumed that we could sell them to the Danish furniture retailers. So, I ordered a full container and was anxious to hear the response from the Danish customers. However, I soon realized that I had misapprehended the Danish taste and we did not sell a single sofa. And now we*

*struggle with the space problem, because those sofas occupy quite a few square meters in our stock”.[MD, C1 ]*

By the beginning of 2007, C1 experienced more and more often that Danish retailers were not interested in the products C1 offered. Soon, the stock was crammed with unsold products. Thus, in the spring of 2007, C1 decided to open a stock outlet to sell furniture directly to end-users. They discovered that much of the furniture they did not succeed in selling to the Danish retailers actually appealed to the end-users. However, the opening of the outlet did not appeal to the Danish furniture retailers. They claimed that the opening hours of the outlet were illegal and after numerous protests C1 closed down the outlet in summer 2007. Moreover, after this outlet failure, C1 decided to leave the pine furniture network and joined the window and door network where they had the possibility to apply their original production capacity.

Table 23 shows C1’s new position as trading house.



<i>Role</i>	<i>Relationships</i>	<i>Capabilities</i>
<p><i>Function:</i> Trading of ready-made furniture</p>	<p>Supplier relationships characterised by</p> <ul style="list-style-type: none"> <li>• Sporadic contacts in the furniture fairs</li> <li>• New supplier relationships initiated</li> <li>• Non-crucial/marginal relationships</li> <li>• Low power and dependency</li> <li>• Low trust and commitment</li> </ul>	<p><b><u>Existing capabilities in the new context:</u></b></p> <p><i>Firm capabilities:</i></p> <ul style="list-style-type: none"> <li>• Operational product capabilities</li> <li>• Operational process capabilities</li> </ul> <p>-&gt; Assessing supplier's products and production facilities</p> <p><i>Specialist qualifications:</i></p> <ul style="list-style-type: none"> <li>• Technical skills: Product and supplier knowledge</li> </ul> <p>-&gt; Applying knowledge of pine sawn wood in relation to other wood types</p> <p><b><u>New capabilities required:</u></b></p> <ul style="list-style-type: none"> <li>• <i>Cultural qualifications</i></li> </ul> <p><i>Knowledge about other actors</i></p> <ul style="list-style-type: none"> <li>• Customer knowledge</li> <li>• Competitor knowledge</li> </ul>
<p><i>Activities:</i></p> <ul style="list-style-type: none"> <li>• Typical and expected trading activities</li> </ul>		
<p><i>Supporting activities:</i></p> <ul style="list-style-type: none"> <li>• Initiation of new supplier relationships</li> <li>• Coordination of the trading activities</li> <li>• Quality control</li> </ul> <p><i>The composition of the purchasing team:</i></p> <ul style="list-style-type: none"> <li>• Managing director (MD)</li> <li>• Purchasing manager (PM)</li> <li>• Chinese Agent (ChA)</li> <li>• Production foreman (PF)</li> </ul>		

**Table 23: C1's new position as trading house**

#### 9.2.4. Concluding remarks on Company 1's transformation

C1 had long traditions for fulfilling a role of manufacturer in the pine furniture supply network. Since the late 1990s, C1's development as a furniture manufacturer had been characterized by more intense price competition arising from other Danish pine furniture manufacturers. Moreover, the emergence of suppliers from low-cost countries also had an effect on the decreasing unit prices. C1 absorbed these changes by attempting to make the production processes more efficient. Moreover, C1 changed the product design in order to decrease the cost price of the product. C1 had concentrated its marketing strategy on a sole British customer, UniKing. However, this relationship

became weaker, and lastly, when C1 had lost 85 % of its turnover, new activities had to be discovered. In this context, C1 started acting as a trading house thus obtaining a new role in the existing network. If we compare the manufacturing and the trading activities, we can pinpoint two major changes. Firstly, the manufacturing activities were mostly carried out in-house. As a matter of fact it was only design and distribution activities that were executed by UniKing. When C1 started the trading activities, it became involved in the whole supply network in a completely different way. For example, as C1 now purchased the furniture ready-made, all the manufacturing activities took place in China in the Chinese production plants. C1 became occupied with new types of activities, such as controlling and storing the products. Moreover, C1 was responsible for finding customers for the products purchased in China.

The other remarkable change was the fact that many sub-activities previously carried out in the purchasing department now became C1's main activities. For example, finding the appropriate supplier and product, as well as controlling the products used to be typical supporting activities. This change resulted in the persons previously employed in the sub-activities and relationship-specific network management tasks now became involved in the main activities. This change also resulted in a different purchasing department and a wider range of activities.

The new role required C1 to initiate new customer relationships. At the same time the existing supplier relationships regarding manufacturing activities were terminated. The new role and the new relationships called also for new types of capabilities. The existing capabilities could be applied in novel ways. The existing operational process and product capabilities were useful in assessing supplier's products and production facilities. Moreover, the existing technical skills in terms of product and supplier knowledge within pine sawn wood could be applied in relation to other wood types.

However, new capabilities were also requested. By initiating new supplier relationships with Chinese suppliers, it was relevant to acquire cultural qualifications. C1 did that by establishing a business relationship with a Chinese agent who assisted with the negotiations with the Chinese suppliers. Finally, in its new role as a trading house C1 needed to acquire better knowledge about customers and competitors. Initiating new customer relationships appeared to become C1's biggest challenge. In its role as furniture manufacturer, C1 had never been concerned with downstream market capabilities. In its role as trading house, C1 had many difficulties in finding customers for

the products bought at trade fairs. As a matter of fact, C1 did not succeed in creating a customer base and failed in its role as trading house. However, this failure was not only caused by lacking downstream market capability. The reactive behaviour in the transformation process was fatal. C1 started the transformation process without any real financial resources, as it had lost its turnover to UniKing. In this context we can claim that C1 did not have the overall understanding of the supply network it was operating in. Hence, C1 did not foresee the continuous price pressure and UniKing's opportunistic behaviour as impetus for revising its activities until it was too late.

### **9.3. Company 2 and repositioning from furniture manufacturing to trading**

Company 2 (hereafter called C2) was established in 1964 by its current owners' father (two sons took over the firm in 2003), and since the establishment of the company, C2 has been through several changes in the market for wood-based products. The company started within the construction industry by producing components for house builders. They experienced prosperous times during the building boom in Denmark. However, the recession in the building industry in the beginning of the 1970s left many carpenters with excess capacity. Like many other Danish house builder suppliers, C2 started a production of furniture components aimed at the larger local furniture manufacturers. This was followed by a change from subcontracting to manufacturing in 1977 when C2 started its own production of pine wood furniture that was sold on the domestic market. Ten years later, in 1987, the main activity was still production of pine furniture, but the domestic customers had been replaced by foreign retailers almost by 100%, mainly in Germany and Great Britain.

C2 experienced a steady growth in demand during 1980-1992, and the production capacity was increased both by investing in own production facilities as well as by acquiring two furniture manufacturing factories in the local area. However, in the mid 1990s, C2 acknowledged for the first time the emerging price pressure on unit prices. This pressure on unit prices was mainly a result of fierce competition among Danish pine furniture manufacturers who basically replicated each other's products and were selling to the same customer base, i.e. large retailers, like IKEA, JYSK and Argos.

C2 reacted on the shrinking production volumes by selling off the acquired factories and by moving all activities to the main building on the Peninsula of Jutland in 1997. Moreover, the production orientation was shifted towards more customer-oriented activities. During the period ranging from 2000 to 2003, C2 acquired a sales office and 50% of a mail order firm in Germany, as well as a large sales office in Great Britain.

### *9.3.1. Company 2's position as furniture manufacturer*

#### ***Role - Activities***

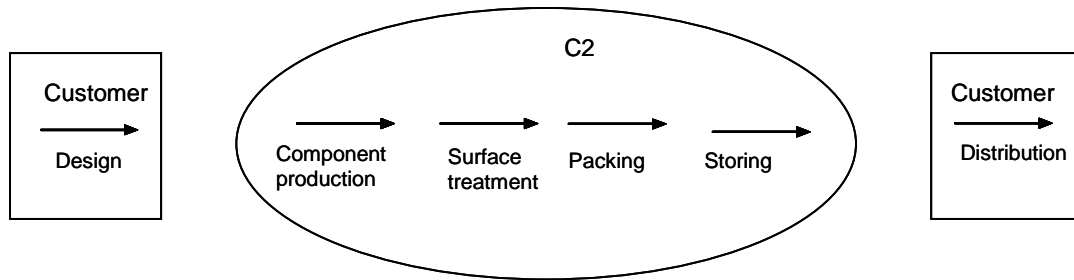
In the beginning of 2005, C2's main manufacturing activities entailed the production of treated pine furniture for dining and living rooms, entrance halls and bedrooms. Two major product categories could be identified:

1. Chests of drawers
2. Wardrobes and cabinets

The main customers were British, German and Scandinavian retailers. Products were manufactured for the customers in two main ways. Firstly, a design could be initiated by a customer who for instance showed the required piece of furniture and asked for a copy of it (See Figure 35). Secondly, furniture could also be designed by C2 and showed to the customers at trade fairs (See

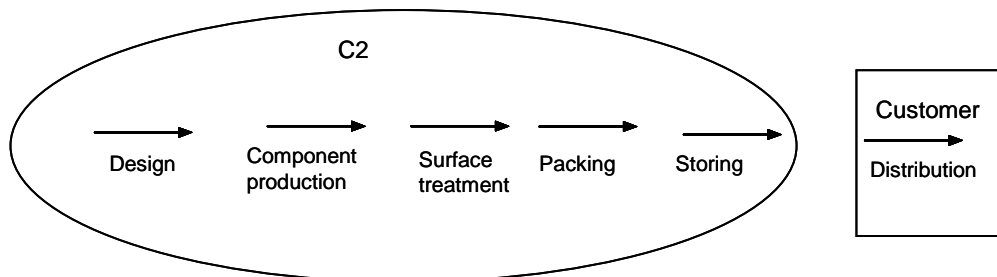
Figure 36).

The production of the above-mentioned product categories was carried out in-house. The main material was edge-glued panels (EGP) produced in-house until the beginning of 2005. Since then, EGPs were purchased from a Danish EGP supplier. After receiving the EGPs, they were cut and drilled, followed by a surface treatment. This surface treatment could be either plain lacquer or a combination of lacquer and paint according to customer requests.



**Figure 35: C2 activity chain in 2005 with customer design**

Some components such as rear ends of wardrobes, cabinets and chests of drawers were not produced in-house. These components were obtained from external suppliers and added to the packages together with fittings. Finally, the packages were sealed and transferred automatically from the packing band to store rooms to await shipment. In some cases, whole pieces of furniture were purchased from an external supplier to complete the product programme. Either because the particular piece of furniture could not be produced in-house, or because make-or-buy calculations had indicated that it was economically more beneficial to source it externally.



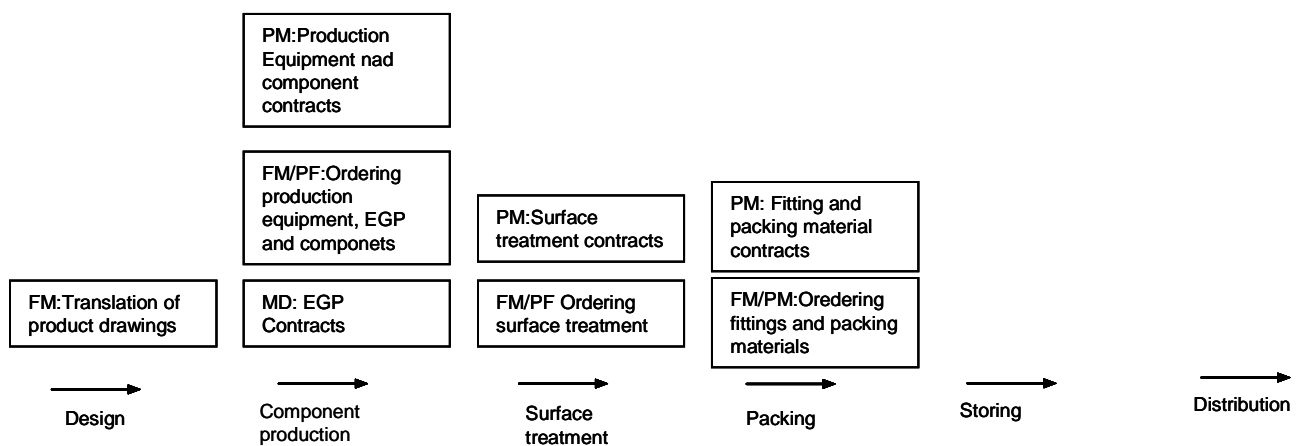
**Figure 36: C2 Activity chain in 2005 with own design**

### *Role - Supporting activities*

There were four people involved in the buying team and they carried out the following purchasing tasks:

- **Managing director (MD)** in charge for agreement with EGSu
- **Factory manager (FM)** responsible for translating product drawings and scheduling the material flow.
- **Purchase manager (PM)** negotiated with suppliers in all the other categories than EGP. Occasional ordering of material inputs in accordance with FM's schedules.
- **Production foreman (PF)** ordered the material inputs according to FM's schedules.

The persons involved in the manufacturing activities are illustrated in Figure 37.



**Figure 37: Persons participating in C2's manufacturing chain.**

C2's purchasing function supported manufacturing activities by ensuring a steady material flow to the production. As C2 was an experienced furniture manufacturer, materials needed for the production were usually direct re-buys based on existing product specifications.

## Relationships

The general relationship environment between C2 and its suppliers was influenced by the severe price competition among the pine furniture manufacturers. This led to two major changes in C2. Firstly, own production of EGP was externalised in the beginning of 2005 and a new supplier relationship with a Danish EGP supplier (EGPSu) was initiated. Secondly, in 2000, C2 started using parallel supplier relationships to ensure a low price level. C2 used mostly domestic suppliers apart from components and ready-made furniture obtained in Eastern Europe.

Alternative suppliers were used for production equipment (ProEq1 and ProEq2) and fittings (FitSu1 and FitSu2). In both categories, the supplier base had been used for more than five years, but as they could be replaced by one another, these supplier relationships could be characterised as arm's length in nature. However, C2 had a high involvement and low competition relationship with a surface treatment supplier (SuTreSu) that was the only supplier in this category. The environmental regulations for painting and lacquer emissions had become tighter since the 1990s, and C2 collaborated closely with SuTreSu within this area. Finally, in the component (CoSu n) and the ready-made furniture (FuSu n) categories, no permanent supplier base was used, and these relationships were somewhat marginal. C2's supplier base in 2005 is shown in Figure 38.

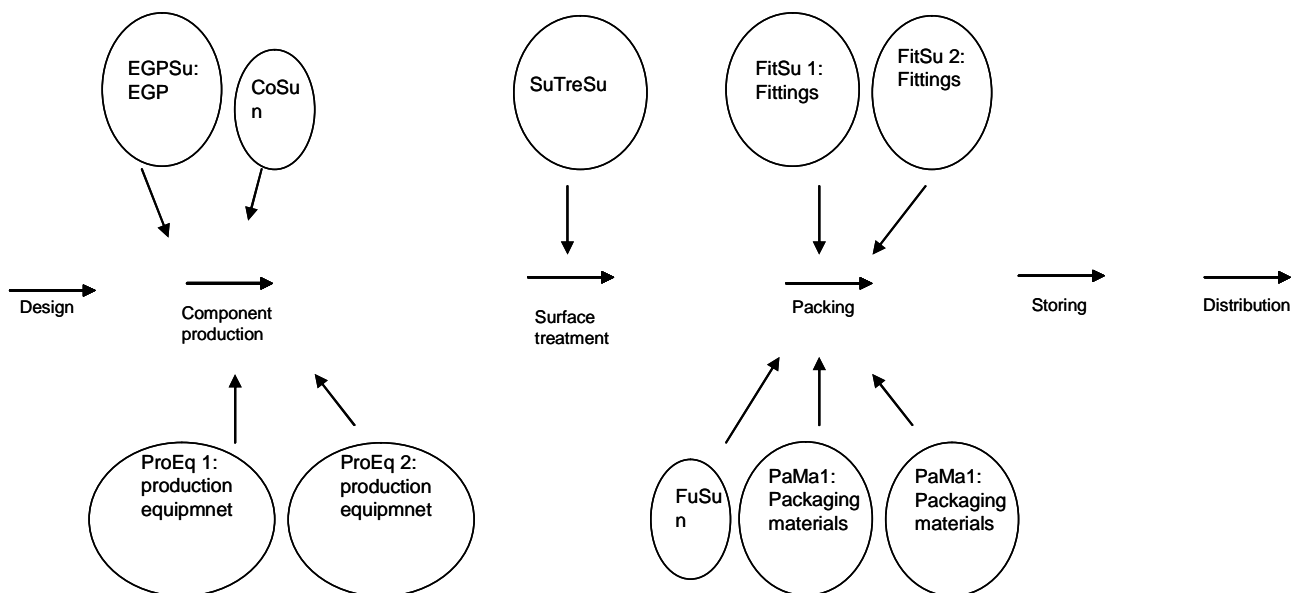


Figure 38: C2's supplier base in 2005

The examples above show that C2 had various kinds of supplier relationships regarding cooperation and competition. Moreover, C2 acted powerfully towards their suppliers. In the 1990s, C2 was among the largest pine furniture manufacturers in Denmark, which resulted in sizeable orders to the suppliers. In this sense suppliers were dependent on C2's volumes, while C2 had gained a powerful position.

As a result of the fierce price competition, trust and commitment among the existing supplier base diminished. Secondly, since 2000 new supplier relationships had been initiated to complement the existing relations. During one of my visits to C2, I asked about the number of suppliers they were using.

*"We have many. I have a list of suppliers and their telephone numbers here. If one supplier cannot live up to my price expectations, I threaten them by contacting another one. And it is easy to contact another supplier – it just requires a phone call". [PM, C2]*

Furthermore, in the new supplier relationship with EGPSu, a mutual high involvement was a prerequisite, as C2 became dependent on EGPSu's products and EGPSu was dependent on C2's volume. However, an interview with EGPSu showed that the involvement was not mutual.

*"To begin with, the agreement between C2 and us is valid for three years, and we guarantee a stable price level. In addition to that, C2 is not obliged to purchase any minimum amount from us." [Sales manager, EGPSu]*

*"We were sitting around the round table and started talking about the cost prices for production of EGP. C2 neglected to show their cost calculations, and held the piece of paper indicating these facts against their chest." [Owner, EGPSu]*

### **Capabilities**

C2 had built up remarkable product and process capabilities. As C2's production was characterised by changing product designs in terms of own designs and customer requests, it became apparent that operational, ad hoc and dynamic product capabilities were needed. Moreover, C2's process



capabilities were dynamic, as FM was constantly involved in improving the production flow. For example, he developed an IT-system that accurately monitored whether the production capacity was fully utilised or not.

PM had obtained his education at the local timber yard, and after more than 15 years of experience with different furniture manufacturers, he possessed a high level of technical qualifications. He had an extensive supplier knowledge regarding e.g. components and was used to handling relationships with Eastern European suppliers. He could therefore be characterised as culturally competent. Moreover, he was good at cost calculations. Regarding the network understanding capability, C2 had shown over the years that it had managed to change from one position to another. In the 1970s, C2 had transformed from house building to furniture subcontractor activities, and in the 1980s from subcontracting to furniture manufacturing activities. In its manufacturer role, C2 rehearsed its downstream market capabilities by launching own designs. Moreover, C2 was also active in increasing its knowledge about other suppliers by using components and ready-made furniture to complement the manufacturing activities.

The level of social qualifications was not as high as those of specialists. Communication with the suppliers was characterised by a harsh tone, as the examples above also indicated.

Table 24 summarises C2's position as manufacturer.

<i>Role</i>	<i>Relationships</i>	<i>Capabilities</i>
<p><i>Function:</i> Manufacturer of chests of drawers, wardrobes and cabinets</p>	<p>Supplier relationships characterised by</p> <ul style="list-style-type: none"> <li>• Price pressure</li> <li>• Long-and short-term relations</li> <li>• Ideal relationship (SuTreSu)</li> <li>• Arm's length relations (ProTeSu, FitSu, CoSu, FuSu)</li> <li>• Suppliers dependent on C2</li> <li>• Low level of trust and commitment</li> </ul>	<p><i>Firm capabilities:</i></p> <ul style="list-style-type: none"> <li>• Operational-ad hoc - dynamic product capabilities</li> <li>• Dynamic process capabilities</li> </ul> <p><i>Specialist qualifications:</i></p> <ul style="list-style-type: none"> <li>• Technical skills: Product and supplier knowledge</li> <li>• Economic skills: Cost calculations</li> </ul> <p><i>Knowledge about other actors</i></p> <ul style="list-style-type: none"> <li>• Downstream and upstream market knowledge</li> </ul>
<p><i>Activities:</i></p> <ul style="list-style-type: none"> <li>• Typical and expected manufacturing activities</li> </ul>		
<p><i>Supporting activities</i></p> <ul style="list-style-type: none"> <li>• Ensuring timely input flow to the production</li> </ul> <p><i>The composition of a purchasing team</i></p> <ul style="list-style-type: none"> <li>• Managing director (MD)</li> <li>• Factory manager (FM)</li> <li>• Purchasing manager (PM)</li> <li>• Production foreman (PF)</li> </ul>		

**Table 24: C2's position as a manufacturer in 2005**

### 9.3.2. Drivers of repositioning

Since the late 1990s, C2 had experienced increasing pressure on the unit prices. Like C1, C2 had experienced that the competition among the Danish and foreign pine furniture manufacturers (PFM1 – PFMn) had become more intense. The prices in pine furniture decreased and C2 absorbed this change in prices by two major methods. Firstly, part of the production line was automated in order to make the production process more efficient. In this context, C2 also outsourced its EGP production to an external supplier. Secondly, C2 changed the product design and started using thinner pine wood panels in order to reduce the cost price of the product. Moreover, C2 attempted to make pine furniture more attractive by focusing on own design.

Despite the many efforts regarding the products and production processes, C2 experienced a decreasing utilisation of its production capacity. Apart from the fierce price competition, it transpired that it was very difficult for C2 to manage the sales offices in Germany (SalOfD). The main problem was that the top management stayed in Denmark, which resulted in a lack of motivation among SalOfD personnel. The sales office went bankrupt in 2006 and was closed down.

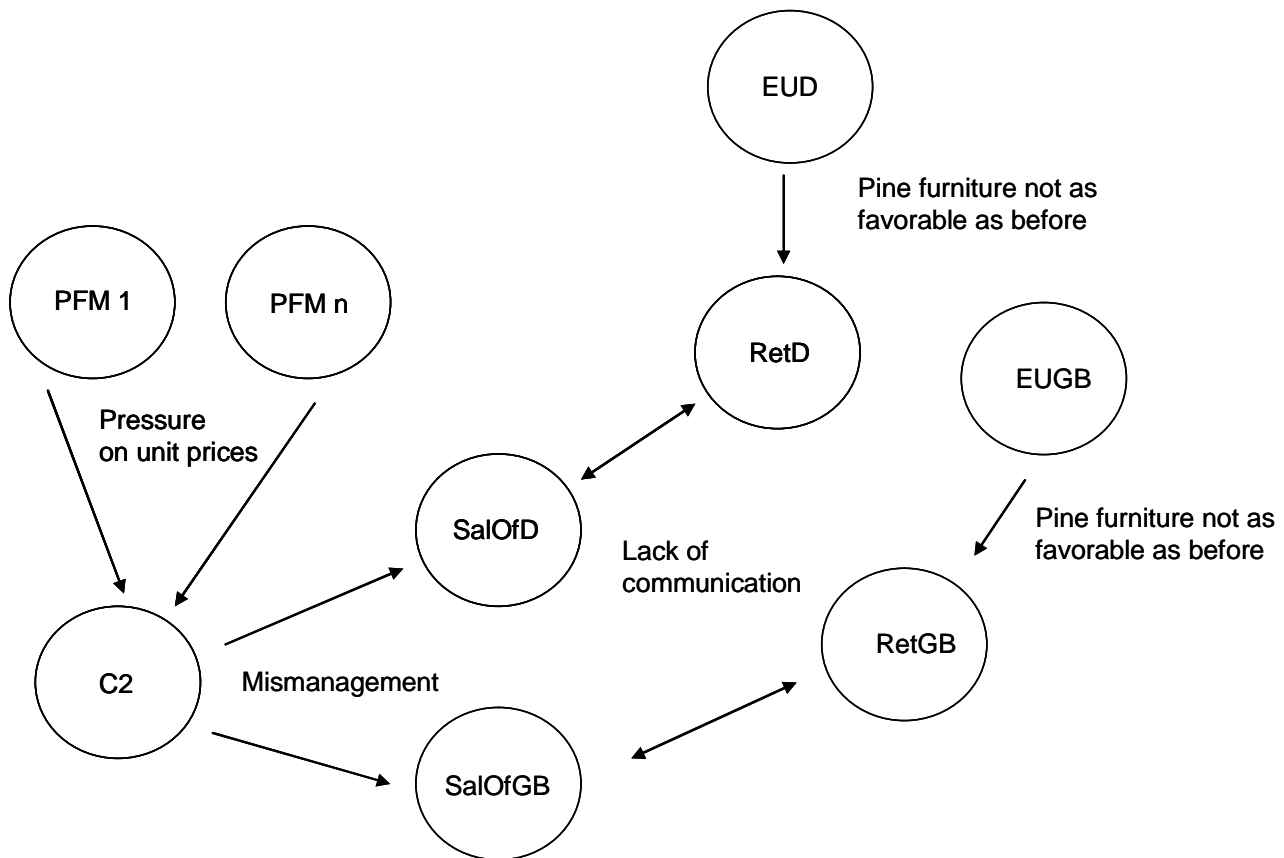
In addition, the sales office in Great Britain (SalOfGB) turned out to be unsuccessful as well, and C2 decided to centralise all sales activities in Denmark.

When moving the sales activities from Germany and Great Britain to Denmark, C2 became responsible for re-establishing the contacts to the retail chains in the respective countries. This appeared to be a challenging task in Germany, as shown in the following quote.

*“It transpired that our personnel in SalesOfD had hardly been in contact with the German retailers. After having closed down SalesOfD, we visited these retailers and they told us that they had been neglected by us. According to them, we would have to convince them to be re-selected as suppliers”. [MD, C2].*

Moreover, the retail chains in Germany and Great Britain indicated lower interest toward pine furniture, and they had started selling furniture in other wood types like oak. In this sense both German and British end-users (EUD and EUGB) indicated that pine furniture was not as favourable as before.

When looking at C2’s drivers of repositioning, we discover that change drivers arose from different levels. Firstly, the general development in the pine furniture network in terms of increasing price pressure had been an ongoing change driver since the late 1990s. A change driver arose from C2’s mismanagement of its sales offices, as well. Due to the sales offices’ lack of communication with the retailers, the contact to the retailers became weaker. As a consequence, C2 did not receive updated market information. The drivers of C2’s repositioning are shown in Figure 39.



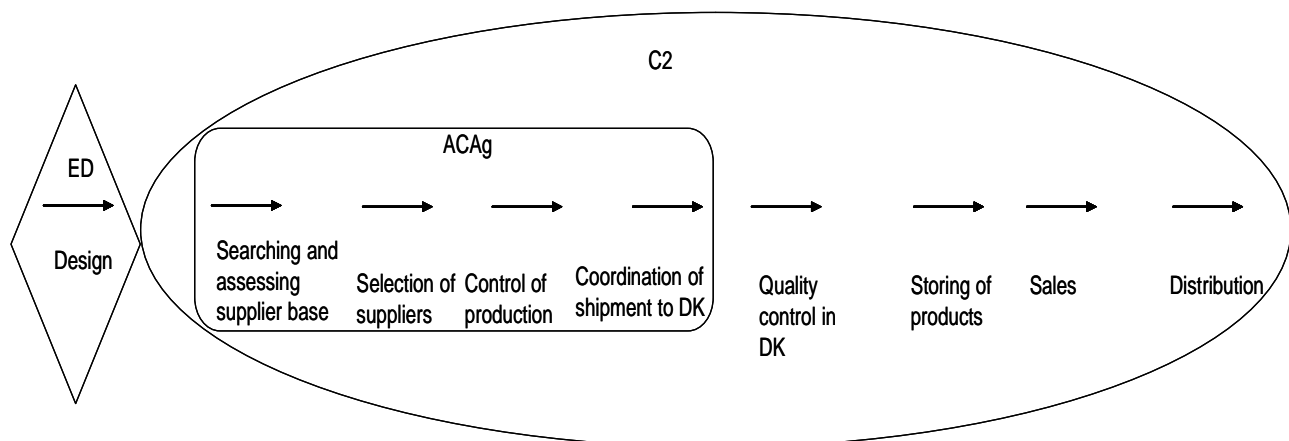
**Figure 39: C2 drivers of repositioning**

At the end of 2004, C2's current owners decided to focus on sourcing of ready-made furniture in Eastern Europe and China after the failed attempts to focus on production and foreign sales offices. At the same time, C2 experienced shrinking financial profits and felt that the company had to start earning money quickly. In fact, C2 had been involved in the sourcing activities during the past 15 years by purchasing some ready-made furniture to complete a furniture program (e.g. purchasing chairs to match the dining tables that were produced in-house). But compared to these previous activities, C2 wanted to become wholesaler of furniture and increasingly focus on such issues as own design and incorporating different wood types.

### 9.3.3 .Company 2's new position as a trading house

C2's main function in its new position was the import and the wholesale of ready-made furniture. By focusing on this function, C2 acted as a sales channel to Danish and foreign furniture retailers. Moreover, C2 wanted to focus on their own design and selling different types of furniture, e.g. wood, metal, laminate and upholster. Finding and assessing potential new suppliers became crucial. Besides, as production now took place far away from Denmark, it showed that it was necessary for C2 to control both production and ready-product. In the beginning, this was performed by C2 and the American-Chinese agent (ACAg). Furthermore, C2 coordinated the shipments to Denmark together with ACAg. When the products arrived in Denmark, they were rechecked before storing. Lastly, the products were sold and re-shipped to different customers in Denmark and abroad.

Figure 40 below shows C2's trading activity chain in 2005.



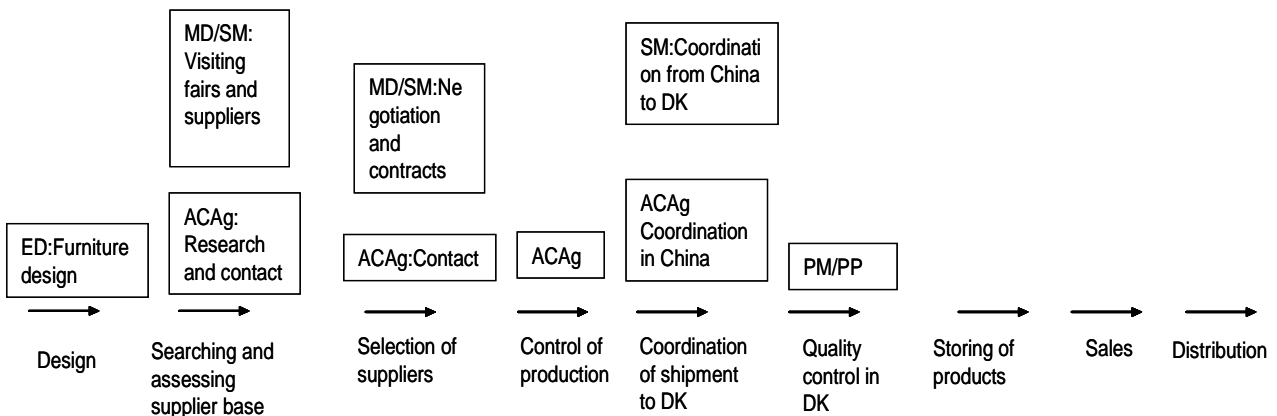
**Figure 40: C2 trading activity chain in 2005**

#### ***Role - Supporting activities***

C2's new role as trading house resulted in numerous changes in the purchasing team and the various activities. Two members (MD and PM) of the former buying team joined the new team and received new tasks. Moreover, new members were recruited, and some of these new members were external actors while others were employees in C2. The new buying team consisted of the following persons and tasks:

- **External designers (ED)** furniture architects who designed furniture for C2.
- **Managing director (MD)** responsible for visiting and negotiating with the Chinese suppliers.
- **Sourcing manager (SM)** responsible for searching for, visiting and negotiating with the Chinese suppliers. In addition, in charge of coordinating deliveries from China to Denmark.
- **American-Chinese agent (ACAg)** in China became C2's main contact person in China for carrying out supplier research and being a contact person between C2 and most of the suppliers.
- **Purchase manager PM and purchasing personnel (PP)** responsible for quality control in Denmark.

Figure 41 below shows the buying team and their tasks in the trading chain.



**Figure 41: Buying team and tasks in C2's trading chain in 2005**

In order to be successful in this new role as trading house, C2 employed SM in January 2005 who had a broad experience in sourcing ready-made furniture in China. MD worked in close collaboration with SM, and they visited trade fairs together. From time to time, MA also visited suppliers with SM. Moreover, collaboration with ACAg was initiated through SM who had a personal relationship to this agent via his previous job. C2 also began using an external furniture designer (ED) to create C2's own style.

The purchasing tasks that supported the trading activities differed to a large extent from those that supported the former manufacturing activities. Firstly, some supporting activities became C2's main activities. For example, searching for and selecting new suppliers was a crucial activity for C2. Furthermore, as the furniture manufacturing activities took place in China, a lot of coordinating activities were initiated, e.g. arranging the deliveries from China to Denmark. In order to create saleable products, a close collaboration was required between SM, ED, and C2's marketing department.

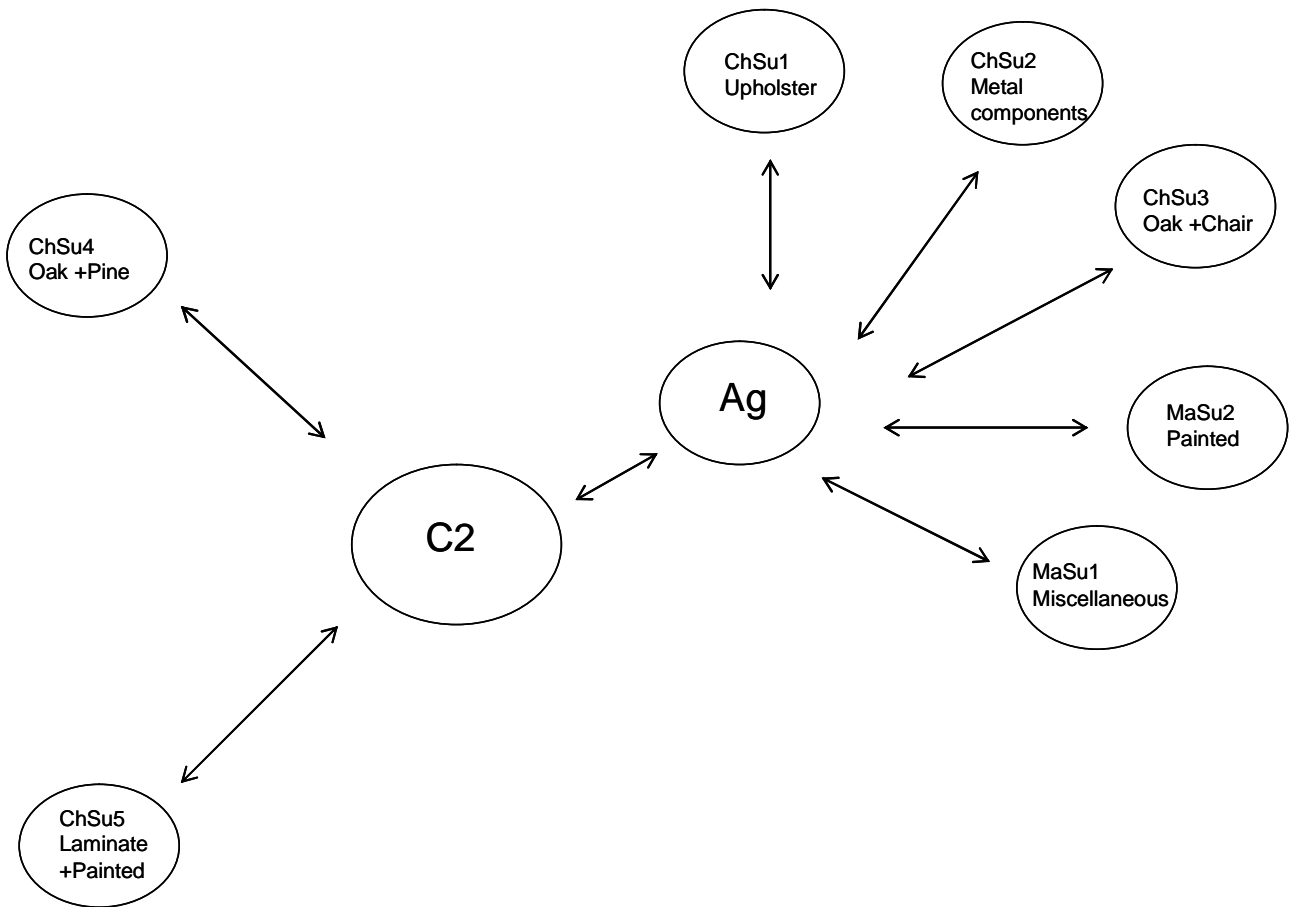
### ***Relationships***

Changing from the manufacturing activities to trading necessitated a completely new supplier base. SM brought in part of his supplier network from his previous job in a Danish trading house. In this way he was able to start working in an effective and efficient way from the beginning. This supplier network consisted of six furniture suppliers. Five of them were Chinese (ChSu), while two were Malaysian (MaSu).

One supplier produced upholstered furniture (ChSu1). Another specialised in manufacturing steel furniture (ChSu2). Wooden furniture in oak was obtained from ChSu3 and ChSu4. These suppliers also produced chairs and pine furniture, respectively. The fifth Chinese supplier (ChSu5) concentrated on the laminate and painted furniture.

One of the Malaysian suppliers (MaSu1) could provide a wide range of furniture (chairs, painted furniture, upholster), while another (MaSu2) specialised in painted wooden furniture. Four of the suppliers were contacted through ACAg and two were contacted directly. C2's new supplier network is shown in

Figure 42.



**Figure 42: C2's new supplier network**

The American retailers and furniture manufacturers had already started sourcing ready-made furniture in China in the 1990s. It had been typical for these relationships that the American customers (ACs) shifted suppliers on a regular basis in order to obtain lower prices. This meant that many of the ACs had started the sourcing activities in the southern parts of China and later on moved towards northern parts of China to obtain more attractive unit prices. Moreover, in recent years many ACs had abandoned China and moved to new lower-cost countries like Vietnam. These experiences with the ACs had affected Chinese suppliers. Some of them had invested in larger production facilities to meet the volume requirements from the ACs. After ACs had terminated these relationships, some Chinese suppliers felt abused and had tremendous excess production capacity.



Therefore, building up trust with the Chinese suppliers was crucial in establishing and maintaining successful relationships. This required numerous negotiations and building up personal relations. In that context the following quotes illustrate that building up trust was a time-consuming process.

*“You did not sign the contracts in the production plants. No, getting there required that you had dinner with the supplier many times. Even though I was tired in the evenings after exhausting days in the production plants, I did not say no to the Chinese supplier’s dinner invitation. In this way I got to know the personal side of him and finally signed the contract”. [SM, C2]*

*“I had been travelling in China frequently in the past months and I was hoping to be able to make the trip shorter this time. Anyway, I decided to leave a couple of days earlier from Denmark to China and visit one of my Chinese supplier’s daughter in the hospital. I had learnt this supplier and his family to know very well and I knew my visit would be appreciated. My boss thought that I was wasting my time and could not understand why I should visit a supplier’s daughter. Well, by the end of that particular trip I signed a new contract with the supplier” [SM, C2].*

The Chinese suppliers insisted on commitment from C2. In many occasions the contract was based on a certain amount of containers that were dispatched according to a time schedule. I was told the following story:

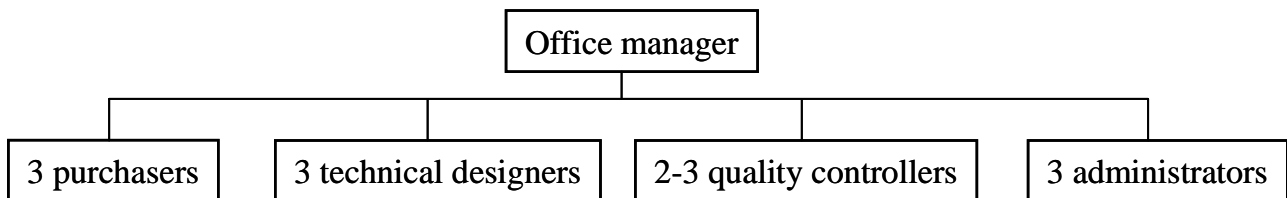
*“I have signed the contracts with the Chinese suppliers. The first five containers will arrive in Denmark in June, and honestly, I do not know how we can handle that”. [SM, C2]*

However, C2 experienced many problems with the quality, and if the supplier was not able to meet the requirements, the relationship was terminated. In that sense both parties were relatively dependent on each other, and the supplier relationships could be characterised as creative or good working relationships.

### *The situation in 2007*

The trading activities required that SM frequently travelled to China. He spent a lot of the time in the various production plants to ensure that the production processes ran as planned, both in terms of time and quality.

MD realised that it was important for the company to be present in China on a more permanent basis. For that purpose C2 established a sales office and a showroom in Shanghai in the spring of 2007. The sales office was a joint venture between C2 and ChSu5. The sales office personnel originated from ChSu5 and the organisation consisted of the following persons shown in Figure 43.

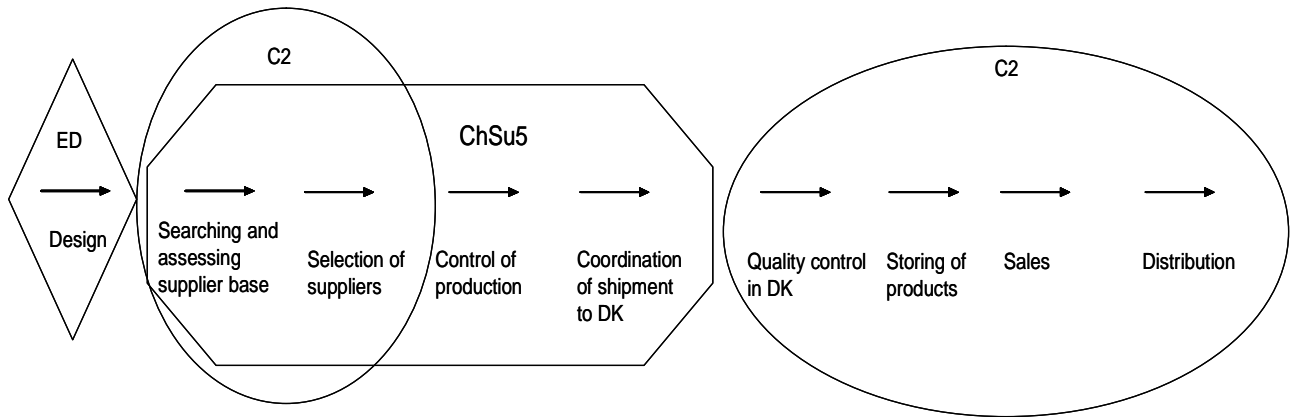


**Figure 43: C2's Chinese sales office**

The office manager was responsible for running the Chinese sales office (CSO). Purchasers were in charge of daily contact with the suppliers. They were also responsible for finding new potential suppliers. Technical designers acted as a link between ED and the suppliers, and translated the furniture design to fit to the suppliers' production processes. Quality controllers were in charge of product quality in the production plants. Finally, administrators were responsible for arranging dispatch in China. Apart from the office manager, all the employees were Chinese. Upon mutual agreement, SM left C2 by the end of July 2007. At that time the position as office manager was still vacant and MD became main responsible for the trading activities.

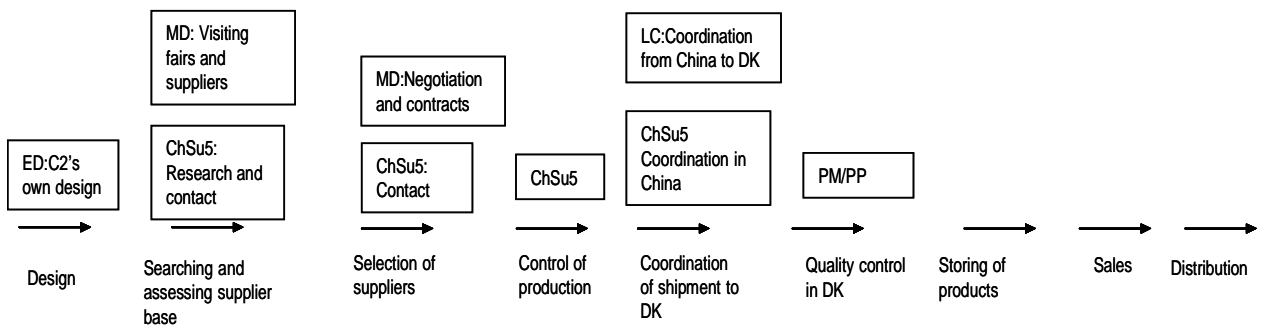
The establishment of the sales office in China led to further changes in the buying team. ACAg still played an important role in communicating with the existing suppliers, but CSO became the main responsible when contacting new suppliers. Furthermore, as the quality control tasks were enhanced and up to three quality controllers undertook these activities, the control activities in Denmark decreased.

C2's trading activity chain in July 2007 is shown in Figure 44



**Figure 44: C2's activity chain as trading house in 2007**

The buying team and their tasks in the trading chain in 2007 are shown in Figure 45.



**Figure 45: C2's buying team and the activities in the trading chain in July 2007**

### ***Capabilities***

C2 benefited greatly from its product and process capabilities built up on its position as pine furniture manufacturer. Process capabilities were important when assessing the potential Chinese producers of wooden furniture. Moreover, PM's product capabilities became of great significance when he controlled the products arriving from China.

However, using the existing capabilities in the new context appeared to be problematic in the beginning. The many quality problems in the beginning may have been due to a wrong assessment of the Chinese suppliers. They might not have been as capable as requested, and despite teaching, the quality did not live up to C2's expectations.

*"I went to the production plant every day to begin with. Just to make sure that they had understood what I meant by that particular product specification. I also always had to make sure that a person that understood English was there to translate our requirement into Chinese". [SM, C2]*

The change from manufacturing activities to trading also required new capabilities. The relationships with the Chinese suppliers called for high cultural qualifications. C2 obtained these qualifications by employing SM, who was experienced in managing Chinese relationships. Moreover, the American-Chinese agent (ACA<sub>g</sub>) was also helpful in managing these relations. The trading activities also entailed purchases of other types of furniture than pine, and therefore new product and supplier capabilities were needed. Furthermore, as trading activities also included sales to existing and new customers, the more holistic network understanding capability gained relevance. The following quotes illustrate the challenges.

*"I had ordered the first containers of different types of furniture. They are on a way to Denmark, but our sales department has not sold them yet. They do not seem to know which types of customers they should contact". [SM, C2]*

*"I saw the most fantastic glass table in China, and I was confident that it could be sold in Denmark. Unfortunately our sales department does not agree with me." [SM, C2]*

Controlling the products that arrived from China required different qualifications than controlling the pine furniture C2 was used to manufacturing. Firstly, much of the furniture from China was sold at a lower cost than the ones produced in-house, so the quality level was not comparable as such. However, it was difficult for C2 to handle.

*“People in production were very anxious to see the products in the first container that arrived. When PM opened the container filled with oak furniture, he simply laughed at the quality. In his opinion there was no reason to source that bad-quality furniture in China when we were able to produce top quality in Denmark”. [FM, C2]*

C2 faced challenges in trying to employ an office manager in China. As there were many problems with the quality, MD wanted to have an office manager with a technical background to improve on the product quality. However, SM did not agree on that profile and emphasised as follows:

*“I do not think that we should be so product-oriented. We already have focus on the quality issues. I think it is more important to employ a person who understands what these trading activities are about, from the supplier contacts to selling the products in Denmark”. [SM, C2].*

Finally, C2 had been used to managing the supplier relationships in a somewhat harsh way. However, when negotiating with the Chinese suppliers, the harsh way of treating suppliers had to be unlearned.

*“MD was very disappointed with the quality from one of our Chinese suppliers. MD said that the next time he meets them he will threaten by cancelling the order. I tried to explain him that a harsh tone would not help. Not at all.” [SM, C2]*

C2's new position as trading house in July 2007 is illustrated in Table 25.

<i>Role</i>	<i>Relationships</i>	<i>Capabilities</i>
<p><i>Function:</i> Trading of ready-made furniture</p> <p><i>Activities:</i></p> <ul style="list-style-type: none"> <li>• Typical and expected trading activities</li> </ul> <p><i>Supporting activities:</i></p> <ul style="list-style-type: none"> <li>• Initiation and the management of the new supplier relationships</li> <li>• Coordination of the trading activities</li> <li>• Quality control</li> </ul> <p><i>The composition of the purchasing team:</i></p> <ul style="list-style-type: none"> <li>• Managing director (MD)</li> <li>• Chinese sales office (CSO)</li> <li>• Chinese Agent (ChA)</li> <li>• Logistics Coordinator (LC)</li> <li>• Purchase manager (PM)</li> <li>• Production personnel (PP)</li> </ul>	<p>Supplier relationships characterised by</p> <ul style="list-style-type: none"> <li>• New supplier relationships</li> <li>• Chinese context</li> <li>• Good working relationships</li> <li>• Mutual power-dependency</li> <li>• Trust and commitment a prerequisite for having Chinese relationships</li> </ul>	<p><b><u>Existing capabilities in the new context:</u></b></p> <p><i>Firm capabilities:</i></p> <ul style="list-style-type: none"> <li>• Dynamic and ad hoc product capabilities</li> <li>• Dynamic and ad hoc process capabilities</li> </ul> <p>-&gt; Assessing supplier's products and production facilities</p> <p><i>Specialist qualifications:</i></p> <ul style="list-style-type: none"> <li>• Technical skills: Product and supplier knowledge</li> </ul> <p>-&gt; Applying knowledge of pine sawn wood in relations to other wood types</p> <p><b><u>New capabilities required:</u></b></p> <ul style="list-style-type: none"> <li>• <i>Cultural qualifications</i></li> </ul> <p><i>Knowledge about other actors</i></p> <ul style="list-style-type: none"> <li>• Customer knowledge</li> <li>• Competitor knowledge</li> </ul> <p><b><u>Unlearning existing capabilities</u></b></p> <ul style="list-style-type: none"> <li>• <i>Chinese furniture ≠ Danish furniture</i></li> <li>• <i>Abandoning the pure product orientation</i></li> <li>• <i>Chinese supplier relationship ≠ Danish supplier relationships</i></li> </ul>

**Table 25: C2's new position as trading house in July 2007**

#### *9.3.4. Concluding remarks on Company 2's transformation*

C2 had undergone a transformation from house-building activities to manufacturing pine furniture in the late 1970s. In its role as furniture manufacturer, C2 had experienced many different phases. Firstly, the increasing demand in the pine furniture in the 1980s resulted in the investments in the production capacities. However, this trend stopped in the mid 1990s, and since the late 1990s, C2 was obliged to adjust the production capacity by selling out production capacity and by dismissing blue collar workers. Later, C2 focused on the sales efforts and established own sales offices in Germany and in Great Britain. These efforts failed, and in 2005 both offices were closed down.

At the end of 2004, C2 decided to focus on a new activity; trading. In retrospect, C2 has been relatively reactive on the changes in a supply network and absorbed the changes by starting up new activities after the old ones were not successful any longer. It is true that until now, they have been able to survive, but late reactions have also been expensive in terms of cost. When C2 started the new trading activities, the financial resources were limited due to the balance deficit. In this context we can argue that the drivers of C2's repositioning were somewhat predictable as the changes in the network developed incrementally e.g. in terms of decreasing unit prices.

When C2 transformed from the manufacturing activities to trading, it adopted a new role in an existing network. This resulted in amendments in the main and the purchasing activities. Like in C1's case, many previous supporting activities carried out in the purchasing department now became C2's main activities. Moreover, the buying team in the new activity was more manifold and included different kinds of persons. For example, the buying team that supported the manufacturing activities included only persons from C2 and they were all connected to the purchasing department in one way or another. The new buying team, in contrast, included both C2's own employees, but also persons from outside C2. This structure required more coordination between different tasks.

C2's new role required changes in the supplier base. New supplier relationships were established to carry out the new trading activities. The new role and the new supplier relationships demanded different capabilities. Some of the existing capabilities like dynamic and ad hoc product and process capabilities were useful in assessing the new suppliers' products and production facilities. Moreover, the existing technical skills regarding product and supplier knowledge within the pine sawn wood sector could be applied when assessing other wood types.

In addition to applying the existing capabilities in a novel way, new capabilities were also necessary. The new supplier relationships with the Chinese suppliers called for cultural qualifications and C2 obtained these by employing a sourcing manager who was used to managing Chinese business relations. In its new role, C2 was also obliged to acquire new capabilities regarding knowledge about customer and competitor. C2 had traditionally been relatively product and process oriented, and did not have any strong downstream market capabilities. When it started in its new role, it had not adjusted the sales efforts to match the trading initiatives. Therefore, it was challenging to establish a new customer base for the new types of products.

Finally, it was also necessary for C2 to unlearn some of the existing capabilities. This was evident when assessing the products arriving from China. They were often sold at a lower cost than the pieces of pine furniture C2 manufactured in-house. Moreover, C2's transformation from manufacturer to trading called also for abandoning the pure product and production orientation. Finally, managing Chinese supplier relationships was not the same as handling the relatively local supplier relationships in the pine furniture network.



#### **9.4. Company 3 and repositioning from furniture manufacturing to trading**

Company 3 (hereafter called C3) was established in 1975 by the owner of the firm, who was also the managing director of the firm until April 2007. The former finance director in C3 took over the management tasks in April 2007, while the owner of the firm is still director of the holding company and a member of C3's board. The firm is owned by a holding company and by four leading C3 employees. The aim is that 60 % of C3 will be taken over by these leading employees by 2009.

Since the company started, C3 concentrated on manufacturing pine furniture for dining and bedrooms in the mid-range and low-end segments. C3 had two major customers, a Norwegian and a Danish retailer. The Danish retailer also operates on the German market. The products were primarily sold in Germany and Scandinavia through agents. C3 employed about 200 persons.

##### *9.4.1. Company 3's position as furniture manufacturer*

###### ***Role - Activities***

C3's main manufacturing activities entailed the production of treated pine furniture for dining and living rooms, entrance halls and bedrooms. The product categories were as follows:

1. Chests of drawers
2. Wardrobes and cabinets
3. Beds
4. Tables

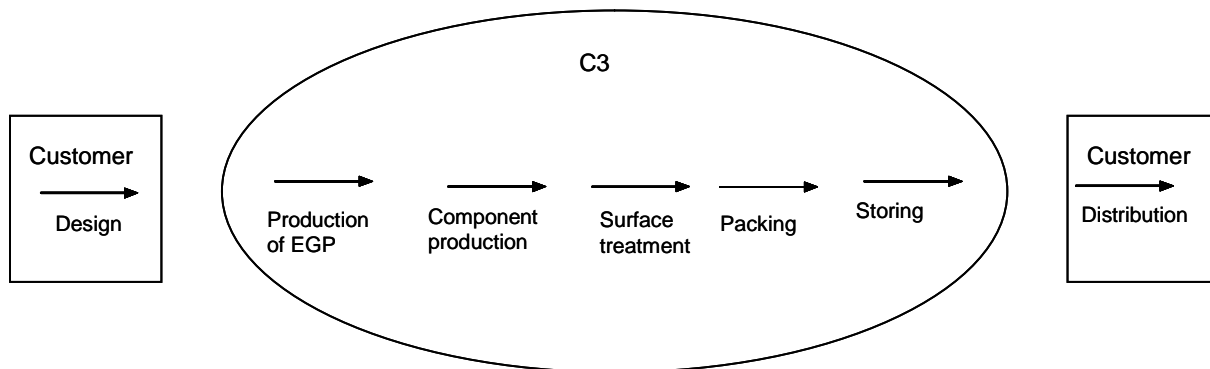
In 2005, the main customers were German and Scandinavian retailers. A design for the products was often initiated by the customers for instance by pointing out a required piece of furniture in a catalogue and asking for a copy of it. However, furniture could sometimes also be designed by C3 and showed to the customers at trade fairs.

The production of the above-mentioned product categories were carried out in-house. The main material were edge-glued panels (EGP) that were produced in-house up to a length of 165 cm.

Larger dimension of EGP were purchased ready-made. After producing and/or receiving the EGP, the panels were cut and drilled, and then given a surface treatment. This surface treatment could be either plain lacquer or a combination of lacquer and paint according to customer requests.

Some components such as table and bed legs, rear ends of wardrobes, cabinets and chests of drawers, were not produced in-house but obtained externally. In some cases, the whole piece of furniture was purchased from an external supplier, because the particular piece of furniture could not be produced in-house (e.g. round tables). Finally, the components were packed together with the fittings after which the packages were sealed and transferred automatically from the packing band to the store to await shipment. The shipment was often arranged by the customer. Two different packaging processes could be identified. Cardboard boxes were produced in-house for batches smaller than 500. For this purpose, C3 purchased cardboard in long lengths and cut and folded it according to need. For batches bigger than 500, ready cardboard boxes were used.

The manufacturing activity chain is illustrated in Figure 46.



**Figure 46: C3's pine furniture manufacturing chain in 2005**

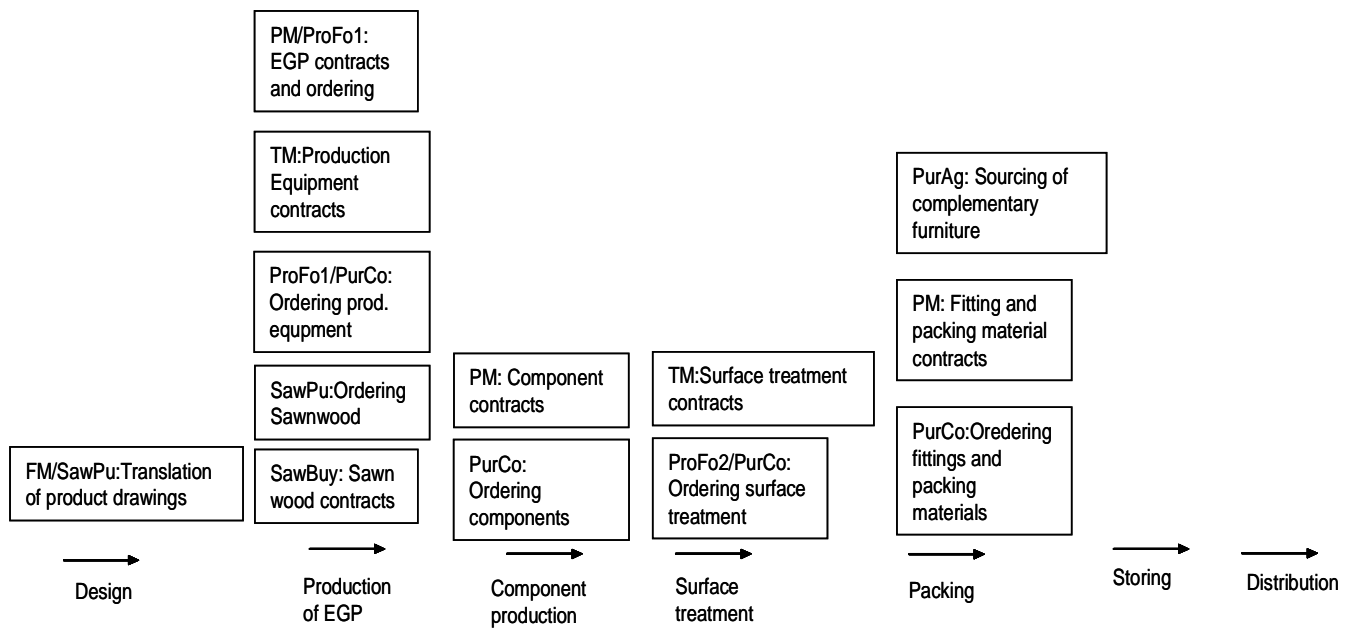
### ***Role – supporting activities***

C3's buying team supported manufacturing activities by ensuring a steady material flow to the production. As C3 was an experienced furniture manufacturer, materials needed for production were usually direct re-buys based on existing product specifications.

The following nine persons were involved in the purchasing activities:

- **Factory manager (FM)** participated in translating the product drawings.
- **Technical manager (TM)** was involved in the production technical purchases, e.g. cutting tools and painting. Also responsible for ensuring that production processes were carried out in an effective and efficient way. In charge of the purchases of new machinery.
- **Sawn wood purchase organisation (SawBuy)** was responsible for sawn wood contracts. This organisation consisted of five Danish producers of wood-based products who had centralised their sawn wood purchases.
- **Sawn wood Purchaser (SawPu)** was responsible both for translating product drawings and ordering sawn wood.
- **Purchase manager (PM)** was responsible for EGP, fitting, packaging material and some component (e.g. table and bed legs) contracts. She was the owner's daughter and married to TM.
- **Purchase coordinator (PurCo)** assisted PM and coordinated orders.
- **Production foreman for manufacturing EGP (ProFo1)** re-ordered the necessary production-technical material, either by forwarding them to TM or PurCo.
- **Production foreman for surface treatment (ProFo2)** re-ordered the materials needed by sending a mail to the purchase coordinator.
- **Purchase agent (PurAg)** was used to obtain components and ready-made furniture in Eastern Europe and China. PurAg was partially owned by C3. The company was established in 2000/2001 and concentrated on sourcing components and ready-made furniture in wood for furniture manufacturers and wholesalers.

Figure 47 shows the buying team and their tasks in the manufacturing chain.



**Figure 47: Buying team and tasks in C3's manufacturing chain**

### *Relationships*

The general relationship environment between C3 and its suppliers was influenced by the severe price competition among the pine furniture manufacturers. For that reason, C3 had also become a part of SawBuy that purchased sawn wood to the Danish companies. The idea behind SawBuy was that by purchasing sawn wood from different types of wood-manufacturing companies, the various qualities and dimensions of sawn wood could be used. Hence, it was SawBuy's aim to become an attractive customer to the Swedish (SawS) and Finnish (SawFi) sawmills. SawBuy had a long-term relationships with these sawmills and the relationships had lasted in many cases for more than 10 years.

In order to ensure the lowest possible cost prices per unit, C3 used parallel supplier relationships. For example, EGP was purchased from two Danish EGP suppliers: EGPSu (the same supplier as C2 used) or EGPSu2. Similarly, two alternative fitting (FitSu1 and FitSu2) and packaging material (PaMa1 and PaMa2) suppliers were used. In these categories, the relationships had lasted for more than five years, and the supplier base was Danish apart from PaMa2 that was German.. Up to year 2000, before the demand on pine furniture decreased, C3 was in a relatively powerful position, as

its demand for material inputs was high. However, in recent years, the production volume had decreased and C3 was not as attractive as before.

*“Our purchase volume is not as high as it used to be, and we cannot achieve as low prices as before from our suppliers.” [PM, C3]*

Some components such as table and bed legs were not produced in-house and were therefore obtained externally. The suppliers could be Danish or Eastern European (CompSu n). In addition, ready-made furniture (e.g. chairs) was used to complement the product programmes. These products were obtained from Eastern European or Chinese suppliers (FuSu n) through PurAg. C3’s relationships with these alternative suppliers could be described as arm’s length relations, because the commitment to the suppliers was based on the lowest price achieved.

For surface treatment, C3 used one supplier ((SuTreSu). This relationship had lasted for more than five years. Moreover, the relationships was characterised by mutual dependency and high levels of trust and commitment. SuTreSu was highly involved in finding the best solution for C3’s production processes.

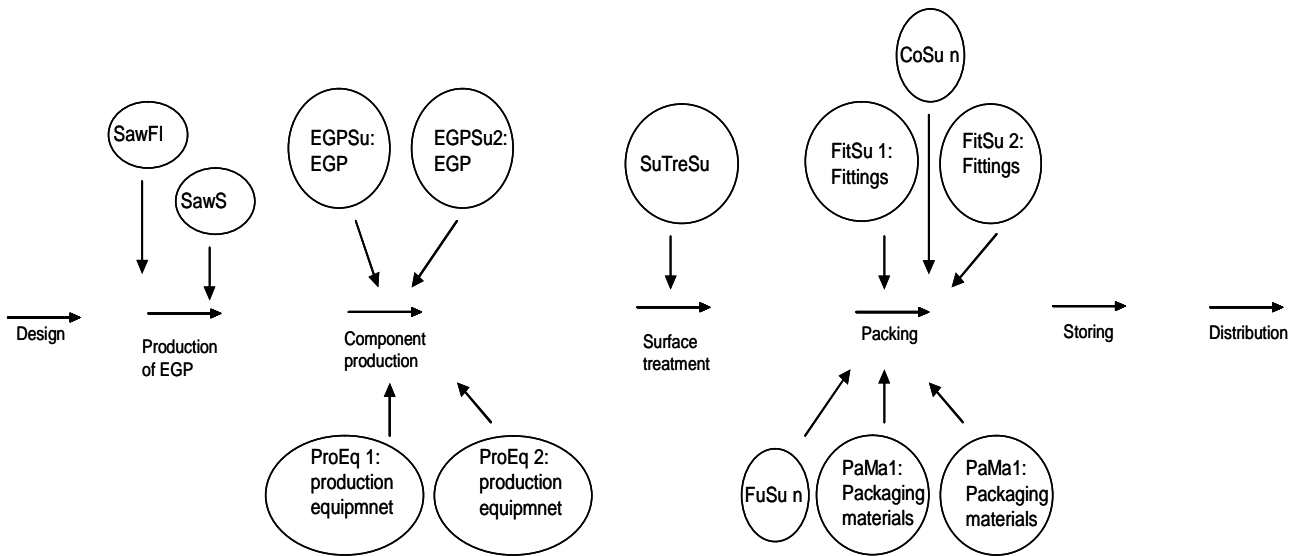
*“The lacquer supplier (LS) comes every 1½ weeks to check that everything runs according to plan. Moreover, we have a continuous focus on improving the lacquer quality.” [ProFo2, C3]*

C3’s supplier base in 2005 is shown in Figure 48.

### **Capabilities**

C3 had built up many dynamic process capabilities over the years. Even though many other companies within the industry had stopped investing in the new machinery due to the dire financial situation, C3 continued to invest in machinery.

*“It is necessary to invest in machinery if you want to survive. New machinery is so automated and can save us from excess manpower”. [TM, C3]*



**Figure 48: C3’s supplier base in 2005**

Also, with regards to raw materials, C3 focused on utilising materials effectively and possessed dynamic process capabilities. For example, earlier they used to manually repair EGP that had visible mistakes, e.g. holes from dead knots. In 2004, C3 invested in the WoodEye-machinery, a scanner that inspects, grades and optimises the use of sawn wood. By using this machinery, it was possible to identify those parts of sawn wood that had many knots. In this way, C3 also developed its supplier by relying on those sawmills that could provide the appropriate quality. Furthermore, by using WoodEye, it was no longer necessary for C3 to repair panels manually.

C3 had extensive operational product capabilities and was able to translate product drawings to fit production processes in an efficient way. During one of my visits in C3, SawCo showed me a picture of a bed in a furniture catalogue and the product drawings.

*“Look at the picture of this bed and the drawings I have made. I know precisely which materials and lengths suit our production facilities”. [SawCo, C3]*

C3 had an increased focus on the cost calculations and used many alternative suppliers to achieve the lowest price.

*“After the prices in pine furniture went down I have been obliged to have a supplier base consisting of two to four suppliers per category and play them against each other in order to obtain the best price”. [PM, C3]*

The focus on cost prices also led to increased knowledge of suppliers in the pine furniture network and in that sense C3’s rehearsed network understanding capability. The relationship capabilities in C3 were not particularly highly developed. Even though C3’s sawn wood purchases were organised through SawBuy, C3 was responsible for ordering sawn wood. SawPu found it somewhat uncomfortable to communicate with the Finnish sawmills due to the language barriers.

*“I prefer communicating by e-mail with the Finnish sawmills. My English skills are limited, and e-mail reduces the possibility of making mistakes. Moreover, by sending an e-mail, I will always have documentation of the communication flow.” [SawPu, C3]*

Finally, as C3 had decided to use alternative suppliers, PM’s communication with the suppliers was sometimes characterised by an unkind tone.

*“I do not want visits from my suppliers unless they have price reductions or something new to offer. Anyway, if they have a Christmas gift for me, they are most welcome!” [PM, C3]*

Table 26 summarises C3’s position as pine furniture manufacturer in 2005.

<i>Role</i>	<i>Relationships</i>	<i>Capabilities</i>
<p><i>Function:</i> Manufacturer of chests of drawers, wardrobes and cabinets, beds and tables</p> <p><i>Activities:</i></p> <ul style="list-style-type: none"> <li>• Typical and expected manufacturing activities</li> </ul> <p><i>Supporting activities</i></p> <ul style="list-style-type: none"> <li>• Ensuring timely input flow to the production</li> </ul> <p><i>The composition of the purchasing team</i></p> <ul style="list-style-type: none"> <li>• Factory manager (FM)</li> <li>• Technical manager (TM)</li> <li>• Sawn wood purchase organisation (SawBuy)</li> <li>• Sawn wood Purchaser (SawPu)</li> <li>• Purchase manager (PM)</li> <li>• Purchase coordinator (PurCo)</li> <li>• Production foreman for manufacturing EGP (ProFo1)</li> <li>• Production foreman for surface treatment (ProFo2)</li> <li>• Purchase agent (PurAg)</li> </ul>	<p>Supplier relationships characterised by</p> <ul style="list-style-type: none"> <li>• Price pressure</li> <li>• Long-term relations</li> <li>• Ideal relationship (SuTreSu)</li> <li>• Arm's length relations in those categories where substitute suppliers were used</li> <li>• Mutual power and dependency</li> <li>• Low level of trust and commitment in arm's length relations</li> </ul>	<p><i>Firm capabilities:</i></p> <ul style="list-style-type: none"> <li>• Operational product capabilities</li> <li>• Dynamic process capabilities</li> </ul> <p><i>Specialist qualifications:</i></p> <ul style="list-style-type: none"> <li>• Technical skills: Product and supplier knowledge</li> <li>• Economic skills: Cost calculations</li> </ul> <p><i>Knowledge about other actors</i></p> <ul style="list-style-type: none"> <li>• Upstream market capabilities</li> </ul>

**Table 26: C3's position as a pine furniture manufacturer in 2005**

#### 9.4.2. Drivers of repositioning

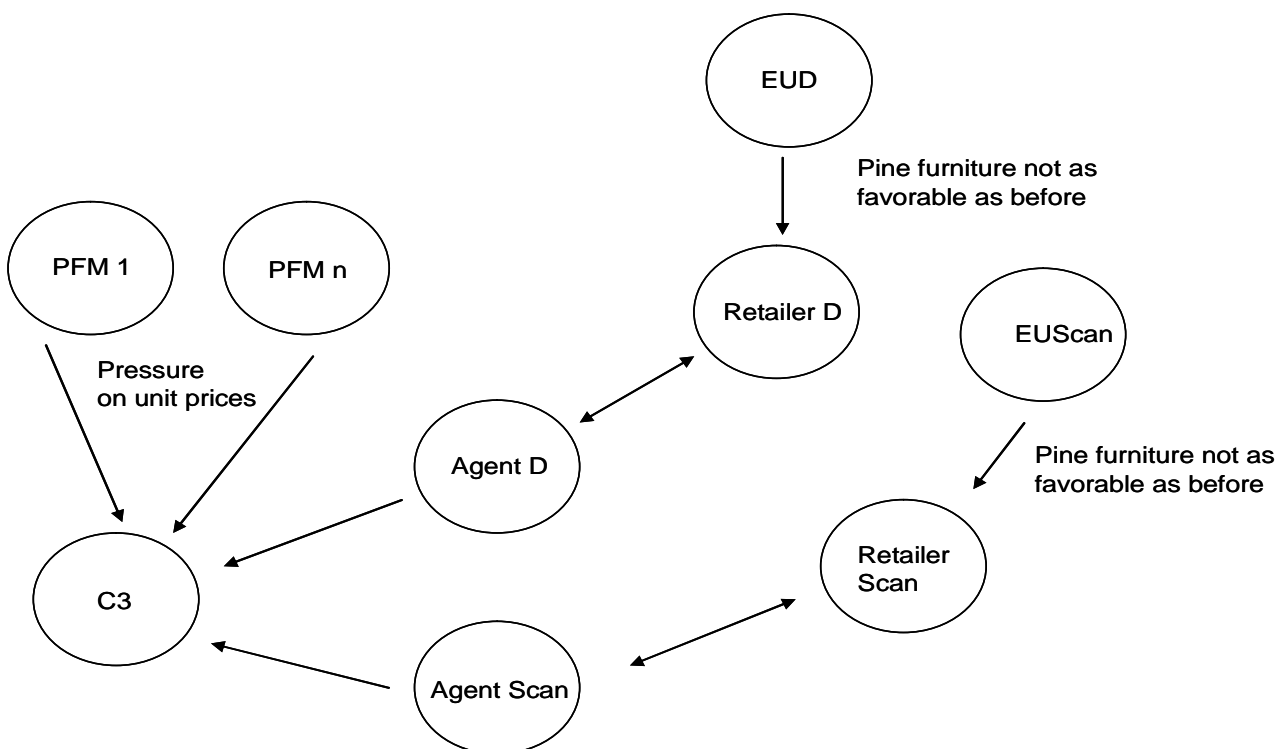
Since the company was established, C3 concentrated on being a manufacturing firm. Up to the late 1990's, production capacity was more or less fully utilised. Similar to C1 and C2, C3 had experienced that the competition among the Danish and foreign pine furniture manufacturers (PFM1 – PFMn) had become more intense. The prices in pine furniture decreased and C1 absorbed this change in prices by two major methods. Firstly, part of the production line was automated in order to make the production process more effective and efficient. Secondly, C3 changed the product design and started using thinner pine wood panels in order to reduce the cost price of the product. Moreover, as C3's economy was based on the fully utilised production capacity, C3 looked for other production alternatives. The company started producing furniture made of clear wood (*Pinus radiata*) in the beginning of 2005. This production was carried out by using the same machinery that was used to produce pine furniture.



Since the triggering crisis in the pine furniture segment, C3 experienced falling production activities. C3 had traditionally used agents to manage customer relationships, and the German agent experienced a decrease in the German retailers' demand for pine furniture.

*“Traditionally, German end-users (EUD) have favoured pine furniture, but now it seems that they are more interested in oak furniture. In addition to that, in the German outlets, the suppliers of a particular furniture type are given floor space upon the volumes that are sold. For pine furniture this has been a vicious circle in the past years. As furniture does not sell as well as before, floor space decreases. In that way it also becomes difficult to appeal to customers, as they cannot see that type of furniture any more”. [Agent, C3]*

In a similar way the sales of pine furniture decreased in Scandinavia, as end-users (EUScan) started to favour other wood types. The drivers of C3's repositioning are shown in Figure 49.



**Figure 49: C3's drivers of repositioning**

When studying C3's drivers of repositioning, we discover that change drivers arose from C3's network. Firstly, the general development in the pine furniture network in terms of increasing price pressure had been an ongoing change driver since the late 1990s. A change driver arose from the German and Scandinavian end-users. This change was transferred to C3 through the agents' (Agent D and Agent Scan) relationships with the retailers (Retailer D and Retailer Scan). The drivers were somewhat predictable as C3 had experienced both pressure in the unit prices and decreasing production volumes. However, due to its high dependency on the production facilities, C3 had reacted upon changes in the earlier stages as adaptations in the manufacturing activities.

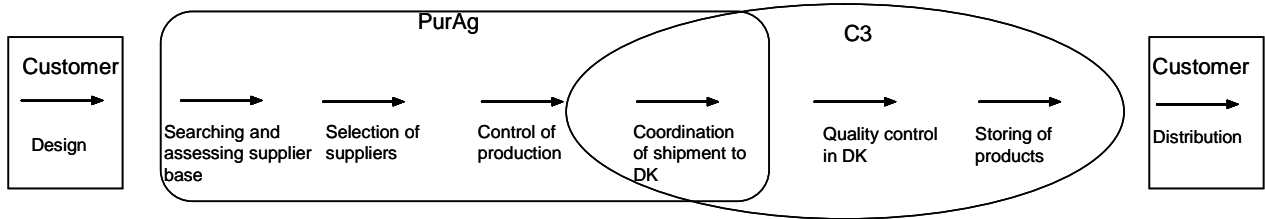
C3 acknowledged that it was too risky to depend solely on production activities. As PurAg already was a part of C3's organisation, it became natural for C3 to enhance activities within purchases of ready-made furniture.

#### *9.4.3. Company 3's new position as a trading house*

##### ***Role-Activities***

By focusing on trading activity in the beginning of 2007, C3's main role became to source furniture to the existing customers, i.e. Bohus and Jysk. This was done by finding furniture upon customer request, and from time to time by suggesting some new models to the existing customers. PurAg became responsible for many of the new trading activities, and undertook all the activities from searching and assessing the supplier base to the control of production. The coordination of shipment to Denmark was done in collaboration with C3's marketing department. After the products had arrived in Denmark, C3 was responsible for carrying out quality control and storing furniture. Finally, the customer arranged the final distribution.

C3's new activity chain in 2007 is shown in Figure 50.



**Figure 50: C3's activity chain as trading house in 2007**

### *Role - Supporting activities*

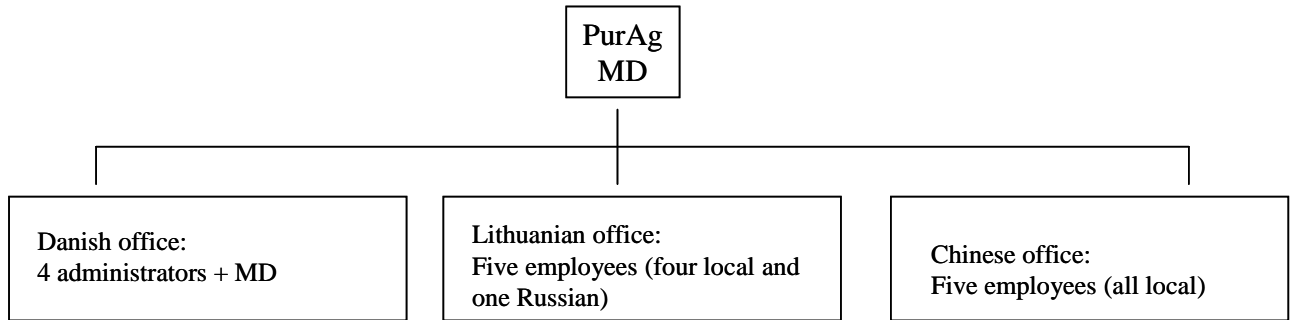
The establishment of trading activities led to a different composition of the purchasing team. Like in the earlier cases, many of the supporting activities became main activities. The new purchasing organisation entailed many persons outside C3's boundaries. Moreover, internally, C3's marketing department became involved in the trading activities. The new buying team consisted of the following three units:

- Purchase agent (PurAg)
- Marketing department (MarDe)
- Production department (ProDe)

PurAg had been involved in sourcing components and ready-made furniture in C3's former role as furniture manufacturer. In this new role, PurAg became the main responsible for carrying out the purchasing activities. For this purpose, the whole PurAg organisation (see Figure 51) was involved. The organisation consisted of the managing director (MD) and four administrators located in Denmark. In addition, five employees in Lithuania managed and searched for suppliers in Eastern Europe. Four of these employees were local and one was Russian. Finally, five local employees were involved in the purchasing activities in the Chinese office.

The employees in C3's marketing department (MarDe) became involved in this new activity as well. Sales managers had a close dialogue with the customers and received product specifications from them. Then, the product specifications were forwarded to PurAg, who searched for the appropriate suppliers. Moreover, when the deliveries were planned from China or Eastern Europe to

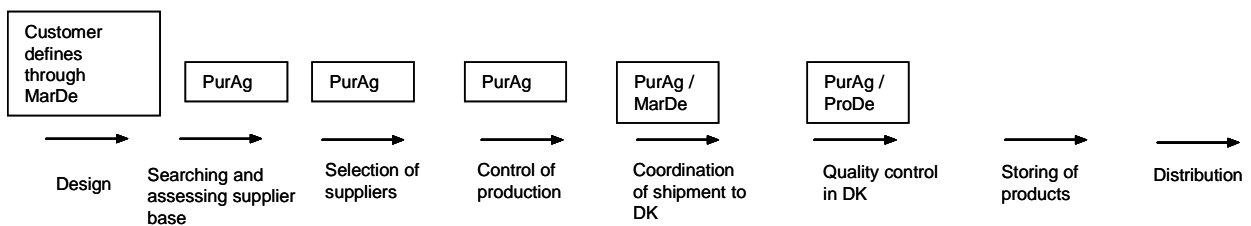
Denmark, the sales assistants played an important role in coordinating this activity in collaboration with PurAg’s personnel in the Danish office.



**Figure 51: PurAg organisation**

Finally, C3’s personnel in the production department (ProDe) became responsible for carrying out quality control after the products had arrived in Denmark. The quality had been assessed by the employees in the Chinese and the Lithuanian offices before dispatch, but sometimes the items could suffer from damages during the dispatch. Therefore, it was necessary to check whether the furniture had been damaged during the shipment.

Figure 52 shows the purchasing personnel involved in the trading activity in 2007.

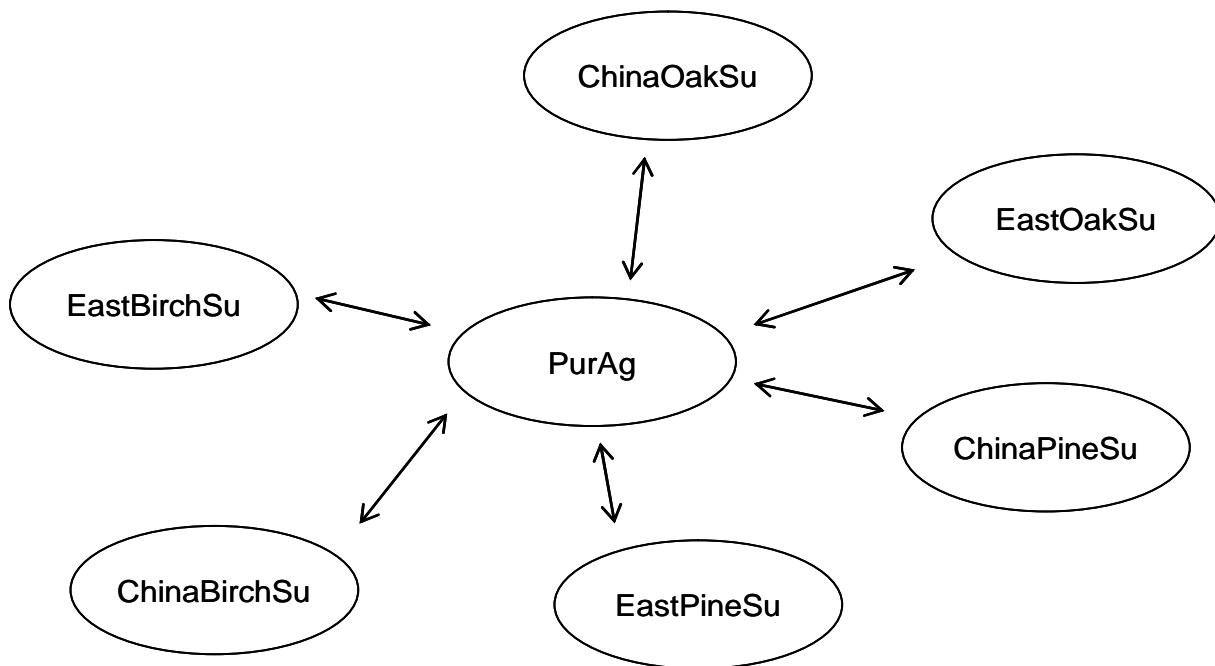


**Figure 52: Purchasing personnel involved in C3’s trading activities in 2007**

### ***Relationships***

Before MD of PurAg started collaboration with C3, he had owned a furniture firm in the 1990s. This firm had specialised in producing chairs made of pine wood. However, MD experienced an increasing price pressure from Eastern Europe in the late 1990s and became familiar in this way with the Eastern European furniture suppliers. MD sold his company to another actor in Denmark after which MD and C3 established PurAg in 2000. After 2000 PurAg diversified its activities, and sourced components as well as ready-made furniture from Eastern Europe and China mostly to the various Danish customers. In that way, C3 was both a co-owner and a customer of PurAg. Among the other Danish customers were other furniture manufactures and trading houses.

PurAg concentrated on sourcing furniture from Eastern Europe and China. Eastern European suppliers were used if the customer requested small batches and/or short delivery times. The Chinese suppliers were chosen if the batches were large and the customer accepted a longer delivery time. Using these two supplier bases meant that PurAg had oak furniture suppliers in China (ChinaOakSu) and in Eastern Europe (EastOakSu). In a similar manner, alternative supplier bases were used to cover demand for pine (ChinaPineSu, EastPineSu) and birch (ChinaBirchSu, EastPineSu) furniture. Figure 53 illustrates PurAg's supplier base.



**Figure 53: PurAg's supplier base**

PurAg has developed its Eastern European and Chinese supplier relationships since 2000. In order to communicate directly, PurAg preferred to initiate relationships with suppliers that did not use any middlemen. Furthermore, PurAg based its collaboration with the suppliers on mutual commitment and interdependency. Above all, developing ideal relationships with the Chinese suppliers was a major focus point.

*“We are not interested in ‘shopping-around’ with the Chinese suppliers. Therefore, we have identified the most suitable suppliers in the different provinces. You know, the different provinces have different specialities, e.g. glass and metal in the south, wooden furniture in the north”. [MD, PurAg]*

### ***Capabilities***

C3’ new role as trading house called for new capabilities, which were acquired by using PurAg as the main responsible for carrying out trading activities. As the MD of PurAg was a former furniture manufacturer, he was able to use his existing operational product and process capabilities in a new way when assessing the potential supplier capabilities. Moreover, PurAg had established offices in Lithuania and Russia, and the local employees had extensive technical skills regarding product and supplier knowledge.

Also, good cultural and social qualifications were a prerequisite for successful business in China. As MD had developed relationships with the Chinese suppliers since 2000, he was well aware of the business culture in China.

*“You just cannot jump from one Chinese supplier to another. If you think that you can have arm’s length relationships with a Chinese supplier, you are wrong. Many of these Chinese suppliers are former government employees and know each other well. They share information about their customers.” [MD, PurAg]*

*“Internal communication in the Chinese manufacturing company is extremely top-down, and even though the top management understands what the customer requests quality-wise, the production*

*workers are not necessarily informed. Therefore, it is important our local representatives have a direct contact with the factory workers and can explain what the customer wants”. [MD, PurAg]*

Moreover, as PurAg worked with many different types of customers, they obtained a comprehensive understanding of the trading network.

*“Five years ago, companies were asking for well-defined and narrow product programmes. Nowadays companies are interested in a wider spectrum and want to see alternatives”. [MD, PurAg]*

*“This way of doing business with the Chinese suppliers will not continue forever. As a matter of fact, some Chinese actors have already started their own exports to Europe”. [MD, PurAg]*

Even though PurAg was in charge for the trading activities, changes in C3’s own capabilities gained relevance as well. Firstly, the supporting activities were now carried out in the marketing department and in that sense new capabilities, such as coordinating activities with the Chinese actors had to be developed. However, C3 did not consciously build up these skills. For example, during one of my interviews with C3, I pointed out that sales assistants were also part of a trading organisation, and I received the following answer:

*“You are right, but I never thought about it in that way. I guess we are still a traditional manufacturing company and attach purchasing activities with materials to the production.”[Sales Manager, C3]*

Moreover, manufacturing furniture in-house differed greatly from the trading activities. In its role as manufacturer, C3 was used to extensive documentation both regarding product drawings and process descriptions. Thus, when C3 received product from China, they expected to receive comprehensive documentation as well.

*“The Danish manufacturers’ production-oriented mindset and demand for extreme documentation slows down the business activities with the Chinese counterparts. The Danish manufacturers’ should abandon this mindset. [MA, PurAg]*

***The situation in July 2007***

By July 2007, the trading activities covered 25-30% of C3's turnover. The trading activities had developed quickly due to PurAg's good capabilities. However, the further development of these activities was hindered by C3's production.

*“C3 is very bound to its production facilities and even though we could easily develop the trading business much more, the daily problem is still dealing with how to fill the production capacity.”[Managing director, C3]*

Also, C3 concentrated purely on sourcing furniture to existing customers upon their requests, and in these terms the downstream market capabilities did not develop. The trading activities developed quickly and by July 2007, these activities covered 25-30% of C3's total turnover. However, even though C3 could benefit even to a larger extent to PurAg capabilities in developing its role as trading house, further development was hindered by the dependency on production facilities.

Table 27 shows C3's new position as trading house in July 2007.



<i>Role</i>	<i>Relationships</i>	<i>Capabilities</i>
<p><i>Function:</i> Trading of ready-made furniture</p>	<p>Supplier relationships characterised by</p> <ul style="list-style-type: none"> <li>• New supplier relationships – had been developed since 2000 by PurAg</li> <li>• Chinese / Eastern European context</li> <li>• Ideal relationships</li> <li>• Mutual power-dependency</li> <li>• Trust and commitment a prerequisite for having Chinese relationships</li> </ul>	<p><b><u>Existing capabilities in the new context:</u></b></p> <p><i>Firm capabilities:</i></p> <ul style="list-style-type: none"> <li>• Dynamic product capabilities</li> <li>• Dynamic process capabilities</li> </ul> <p>-&gt; Assessing supplier's products and production facilities</p> <p><i>Specialist qualifications:</i></p> <ul style="list-style-type: none"> <li>• Technical skills: Product and supplier knowledge</li> </ul> <p>-&gt; Applying knowledge of pine sawn wood in relations to other wood types</p> <p><b><u>New capabilities required:</u></b></p> <p><i>Specialist qualifications:</i></p> <ul style="list-style-type: none"> <li>• Technical skills: Product and supplier knowledge</li> </ul> <p>-&gt; Obtaining new products and suppliers</p> <ul style="list-style-type: none"> <li>• <i>Cultural qualifications</i></li> </ul> <p><i>Knowledge about other actors</i></p> <ul style="list-style-type: none"> <li>• Understanding the trading context</li> </ul> <p><b><u>Unlearning existing capabilities</u></b></p> <ul style="list-style-type: none"> <li>• <i>Chinese documentation ≠ Danish documentation</i></li> <li>• <i>Abandoning the pure production orientation</i></li> </ul>
<p><i>Activities:</i></p> <ul style="list-style-type: none"> <li>• Trading activities to existing customers</li> </ul>		
<p><i>Supporting activities:</i></p> <ul style="list-style-type: none"> <li>• Initiation and the management of the new supplier relationships</li> <li>• Coordination of the trading activities</li> <li>• Quality control</li> </ul> <p><i>The composition of the purchasing team:</i></p> <ul style="list-style-type: none"> <li>• Purchase agent (PurAg)</li> <li>• Marketing department (MarDe)</li> <li>• Production department (ProDe)</li> </ul>		

**Table 27: C3's new position as trading house in July 2007**

#### 9.4.4. Concluding remarks on Company 3's transformation

Since the triggering crisis in the pine furniture segment in the late 1990s, C3 experienced declining production activities. C3 absorbed this change by adjusting its product features and production processes. As C3's economy was based on the fully utilised production capacity, the company started producing furniture made of clear wood (*Pinus radiata*) in the beginning of 2005. At the same time there was an increasing focus on the trading activities. In this context C3 benefited to a large extent from PurAg, who had developed trading activities with C3 since 2000. Until 2005, PurAg's main role in C3 had been to source components and ready-made furniture to complement C3, who had traditionally used agents to manage the customer relationships. The German agent experienced a decrease in the German retailers' demand for pine furniture. Similarly, pine furniture sales decreased in Scandinavia, as end-users started to favour other wood types.

C3's change drivers were predictable as C3 had experienced both pressure through the unit prices and decreasing production volumes since the late 1990s. However, due to its high dependency on production facilities, C3 reacted to changes by adjusting the manufacturing activities. C3 started the trading activity up in 2005, because the existing turnover from the manufacturing activities was not sufficient.

In its role as a trading house, C3 adopted a new role to its existing customer. The establishment of trading activities led to a different composition of the activities and the purchasing team. Like in the earlier cases, many of the supporting activities became main activities. The purchasing team that supported the manufacturing activities was extremely production-oriented and included many persons from the production department. Moreover, the purchasing activities were aimed at ensuring a steady input flow to the production practises. The new purchasing organisation became involved in the main activities and entailed many persons outside C3's boundaries. Furthermore, internally, C3's marketing department became involved in the trading activities.

The new activities resulted in new supplier relationships with Chinese and Eastern European suppliers. Some of these suppliers had already been used to complementing the manufacturing activities with ready-made pieces of furniture. The new role and the new supplier relationships demanded different capabilities. Some of the existing capabilities like dynamic product and process capabilities were useful in assessing the new suppliers' products and production facilities.

Moreover, the existing technical skills regarding product and supplier knowledge within the pine sawn wood sector could be applied when assessing other wood types. In addition to applying the existing capabilities in a novel way, new capabilities were also necessary.

The new supplier relationships with the Chinese suppliers called for cultural qualifications, and C3 obtained these by using PurAg who was used managing Chinese business relations. In its new role, C3 was also obliged to acquire more knowledge about the trading network. Again, PurAg had been involved in the trading activities since 2000 and had built up an extensive knowledge about this network. Moreover, as C3's marketing department became involved in the purchasing activities, it had to obtain new capabilities regarding the coordination of deliveries from the foreign suppliers.

By obtaining a new role, it became necessary for C3 to unlearn some of the existing capabilities. C3 had traditionally been relatively product and process oriented, and was thus used to the comprehensive documentation. However, demanding the same documentation from the Chinese suppliers hindered the development of activities.

## **9.5. Concluding remarks on the three cases**

The cases presented above illustrated three very different transformations from the manufacturing practices to the trading activities. However, all three cases have been valuable and enhanced the overall understanding of the firms' transformation.

### *9.5.1. Role*

All three companies obtained a new role by transforming from the manufacturing practices to the trading activities. In the case of C1, the establishment of a new role meant that it started to sell ready-made products to a customer segment it did not have any previous relationships with. This meant that C1 undertook an entirely new role in the existing network. The situation was somewhat the same for C2 that also started in a new role in the existing network. C3, in turn, chose to carry out the trading activities inside its existing customer structure.

The shift from manufacturing to trading meant that former production-oriented activities were replaced by downstream-oriented ones. Moreover, the activities earlier carried out in-house took place outside the firm's physical boundaries. In that manner, the manufacturing activities were executed by external actors and companies. C1, C2, C3 became more involved in integrating and coordinating the activities between various actors.

When we look at the supporting, i.e. purchasing activities, we notice that they changed remarkably. In the companies' roles as manufacturers, the main function of the buying team was to ensure a steady material flow to the production. In that sense, the buying team was closely related to the production department. When the companies started carrying out trading activities, two main amendments took place regarding the purchasing activities. Firstly, many of the former supporting activities became part of the firms' main activities. For example, searching and assessing suppliers became crucial for fulfilling trading activities. Secondly, the former buying teams were replaced by new ones.

The new structure of the buying team varied from company to company. In the case of C1, the number of members, i.e. four, in the buying team remained the same. Three of the former buying team members were the same (MD, PM and PF), while the Chinese agent (ChA) became a new external member. The structure of C2's buying team changed more radically than C1's. Two persons from the former buying team (MD and PM) became part of the new buying team, and three new actors were added (SM, ED, ACag). Apart from SM, the new actors were external. Finally, C3's new buying team became was a totally new composition. Even though PurAg was partially owned by C3, it was an external actor and also had other customers than C3. However, PurAg became the main responsible for the trading activities. Moreover, the marketing department gained a more significant role in coordinating the activities and became a part of the new buying team. Finally, the production department became involved in the purchasing activities in terms of quality control.

### *9.5.2. Relationships*

In all three cases, adopting a new role led to the establishment of new supplier relationships. Compared with the supplier relationships that were connected to the manufacturing activities, the new relations were different in two important areas. Firstly, a relatively local supplier base was replaced by culturally more distant suppliers. Moreover, while the suppliers in the manufacturing chain delivered input to the transformation process, the new supplier base was responsible for the whole product. In addition to those two factors, the trading relationship environment differed greatly from the manufacturing one. While the manufacturing environment had been characterised by arm's length relationships, the trading environment called for more commitment from the outset.

### *9.5.3. Capabilities*

The transformation from the manufacturing practices to the trading activities called for different capabilities. In all three cases, some of the existing capabilities could be used in a new way. This applied especially to role capabilities, i.e. product and process capabilities. However, acquiring new capabilities was also important in two areas. Firstly, as the firms now started interacting with Chinese actors, it was necessary to obtain cultural skills. In all three cases, these skills were obtained by using a local contact person. C1 established a business relationship with a Chinese agent (ChA), and C2 used an American-Chinese agent (ACA<sub>g</sub>) as a contact person in its most Chinese supplier relationships. Finally, in the case of C3, the Purchase Agent (PurAg) had local employees in China and Eastern Europe to take care of the local supplier relations.

Secondly, it was necessary for the firms to obtain a new type of knowledge about other actors. In this context, capturing the new supplier relationship environment became relevant. In the cases of C2 and C3, the persons (i.e. SM in C2 and PurAg in C3) responsible for the trading activities had former experience in managing business relationships in the trading context. Therefore, both of them had a high degree of knowledge about the supplier network and its development. It was also necessary for the firms to acquire more knowledge about the customers. When C1 started the new trading activity, it did not have a customer base for these new products. C1 had previously been dependent on a sole customer and had not developed its downstream market knowledge. C1 did not succeed in developing this capability in its new role, and the transformation from manufacturing to trading failed.

C2 met similar challenges. Especially in the beginning, many of the products arriving from China were not sold beforehand. Moreover, at this stage C2's sales department did not have sufficient capabilities to initiate contacts with new customers. Dissimilar to C1 and C2, C3 established the trading activities to serve its existing capabilities.

Finally, when adopting a new role, it was important for the firms to unlearn some of their existing capabilities. It was common for all three companies that they had to become more market oriented and in that sense abandon the high production orientation. The difficulty to do so was experienced by C2 and C3. In the case of C2, MD was constantly focused on the product quality and was therefore most interested in employing an office manager in China with a technical background. For C3, it was difficult to discard demand for extensive documentation regarding the Chinese products even though it hindered interaction with the Chinese suppliers.

#### *9.5.4. Drivers of repositioning*

Common change drivers could be identified in all three cases. They were as follows:

- The fierce price competition
- The emergence of suppliers from the low-cost countries
- Changing customer trends that did not favour pine furniture to the same extent as before

All these changes triggered in the late 1990s and were mediated to the case companies through their customer relationships. All the case companies had experienced a decreasing utilisation of production capacity and had tried to make the production processes more efficient. Moreover, they also adjusted the product design in order to reduce the cost price of the products. In these terms, the identified change drivers were predictable. Also, similar changes had been observed in the other countries, too (e.g. Tikkanen, 1998; Nwagabra, 2002; Kaplinsky et al., 2002; Reimer and Leslie, 2003).

All three case companies were clearly reactive towards change. Even though the change drivers had been present since the late 1990s, the companies did not undertake the transformation from manufacturing to trading until late 2004/early 2005. At this point all the companies had encountered

decreasing profits. This reactive behaviour can be explained by the lack of network knowledge, i.e. identifying the elements of the present network context. Even though the warning signals were quantifiably clear and identifiable, the firms did not react. Thus, the reactive behaviour can also be explained by a high degree of path dependence. Since the emergence of the Danish pine furniture industry in the beginning of the 1970s, the development over the next two decades was characterised by a steadily increasing demand. For many companies this meant increasing investments in their production facilities. Furthermore, the Danish pine furniture manufacturers had traditionally sold their products to the large retailers. As a result, it had not been necessary to develop downstream market capabilities.

To sum up, the following four main conclusions can be drawn:

*1. In order to change position in a network, change in all position measurements, i.e. role, relationships and capabilities, have to take place.*

This means that even if a firm has the necessary capabilities, it cannot undertake a change in role if it does not have the right relationships. In the cases studied in this thesis, the main hindrance to change in position was the insufficient change in capabilities, especially in developing knowledge about other actors and unlearning some of the existing capabilities.

*2. Purchasing tasks became the main activity of a firm.*

All three cases indicated clearly that many of the former supporting activities became the firms' main activities. For example, searching and assessing potential suppliers became a key activity.

*3. Purchasing tasks and the composition of a purchasing team became more manifold.*

The conducted study showed that purchasing tasks had changed radically, when firms transformed from manufacturing to trading. In these terms, inter-organisational integration and coordination of activities gained relevance.

*4. Path dependence hindered recognizing and reacting upon change. Moreover, it also hampered firms' capability development*

The case companies were locked in their past manufacturing activities and customer relationships. Therefore, they tried to continue in their manufacturing role for as long as possible. Moreover, when they changed roles, it was difficult for them to develop downstream market capabilities and unlearn some of the existing capabilities.



## **IV Conclusions**

## ***10. Conclusions***

This thesis set out to study the reshuffling of activities in networks. Particularly, there was a focus on former pine furniture producers' transformation from pure manufacturing activities to take part in the trading of ready-made furniture.

The preceding chapters have provided the theoretical foundation and the method used in this thesis. Subsequently, three cases were presented to illustrate this change from manufacturing activities to trading. In this chapter, the research questions defined in the beginning of this thesis are answered. Thereafter, considerations regarding the research process and method are presented followed by contributions and implications. Finally, future research areas are identified.

### **10.1. The research questions**

This research project was concerned with companies' change from own manufacturing activities to sourcing of ready-made products, instead. In these terms the following overall research question was defined:

*How does a firm reposition in supply networks?*

In order to answer this question, three sub-questions were defined. They are answered in turns in the following sections.

#### ***How is a supply network defined?***

This question was answered by looking at the general way of conducting network research. To begin with I agreed on that one can never study the industrial network (Easton, 1995). Therefore, an industrial network study always presents a sample of a network. In this context network studies are concerned with the level of analysis that entails structural and actor elements (Ritter and Gemünden, 2003). The structural elements include dyad, portfolio, triad, net and network levels, while the actor elements entail individual, group, organisation and group of organisations.

In this thesis, the supply network was defined as a net delimited from the network for the particular research purposes. Moreover, a supply network looks at connections and dependencies between firms from raw material to final customer.

### ***How is a firm's position defined in supply networks?***

The theoretical anchor of thesis was based on the concept of position. The starting point for studying this concept was in the existing IMP literature and included two main fields of discussions. Firstly, I identified three dimensions of position. The first of them stated that a position is a relative term, and is therefore always seen in relation to something else. Secondly, since a position is a composite of sub-positions, it is studied in different contexts. In this thesis, the context was defined in terms of a firm's supply network. Thirdly, a position is also characterised by the way we see the position, i.e. I see a position in a different way than another person. This means that the way a position is seen depends on who is judging. In this thesis I, as a researcher, was the judge.

Another part of position discussion was concerned with the measurements of position defined as measurements in this thesis. I identified three measurements. I argued that position is measured upon specific measures, which are subjective and dependent on the context position is studied in. I defined role in supply networks in the following way. Firstly, I identify a firm's function (e.g. supplier, manufacturer, distributor and customer), and those activities that are typical and expected in relation to the specific function. Secondly, there are supporting activities that are carried out by a collection of actors, and these activities support a firm's main role.

Regarding relationships, three relationship elements were identified: Cooperation - Competition/Conflict, Power Dependency and Trust Development. These elements were identified as important tools when describing the general structure or atmosphere of the relationship. However, the examples above have indicated that the relationship elements as such do not tell the whole truth. Hence, the relationship context in terms of interaction environment provides the platform to reveal useful information concerning the relationship, and help us understand them in a more comprehensive way.

Finally, I identified two different types of capabilities that are concerned with the role and relationships a firm has in a network. Role capabilities entail those product and process capabilities (Ritter, 2006) that are important for a firm to carry out activities related to a specific function. Relationship capabilities include technical, economic and cultural skills as well as knowledge about other actors. In the present study, these capabilities have been studied from the purchasing point of view, i.e. product and supplier knowledge, cost calculations and ability to manage international supplier relationships. Relationship capabilities also entail social skills that are considered the ‘soft’ part of managing relationships.

### ***What is meant by a firm’s repositioning?***

Repositioning in this thesis was understood in terms of following the process of change from a position at a certain point (t0) to a position at another point (t1). In other words, this thesis took its starting point by studying a firm’s position as pine furniture manufacturer and followed the process of change from this position to a new position as furniture trader. As the concept of repositioning was anchored in the concept of position, the change in position included the changes in the measurements, i.e. role, relationships and capabilities.

### ***What drives this repositioning process?***

A change driver is defined as a change at organizational, relationship or network level that leads to reactions in a network. I also distinguished between internal and external change drivers. The classification of these drivers is dependent on whether the change arises from a firm itself, from its network or from the network. The external drivers can explain changes in the general network environment, while the internal drivers are concerned with the changes within the organisational and/or a firm’s relationships. Moreover, change drivers are context-specific, meaning that each research context has its particular change driver types.

In order to refine the dichotomy of internal and external change drivers, I identified that this classification is dependent on a firm’s knowledge about its network. In this context the predictability of changes gained relevance. Unless changes occur totally unexpected (e.g. natural disasters), changes may be predicted by studying a particular firm’s network context and inherent

general characteristics. Moreover, I identified that a firm can either be reactive or proactive towards change. On certain occasions, a firm's ability to be proactive towards change increases when it captures a more holistic understanding of its network. Based on these facts I argued that a firm's ability to recognize and react upon change is dependent on its change capability that entails the holistic understanding of the network structure that the firm is part of. However, this capability may be hindered by a firm's path dependence.

## **10.2. The research process and method**

One of the ultimate learning points in writing a PhD-thesis is the fact that after having finished the thesis you know how you should have done it. This research process was characterised by an active interplay between the theory and the empirical field. As the cases were a starting point for this thesis combined with the fact that I wanted a better understanding of a firm's transformation process, a case study method was selected. The research project was scheduled to last 3 years. I spent the first six months on learning about the companies and explored the research question. In retrospect, a pre-project might have been more appropriate.

Changing supervisor in the middle of the research process is challenging. In my own case I was supervised by two completely different supervisor types. Again, seen in retrospect their work has been complementary in nature. Professor Laurids Hedaa was my supervisor to begin with, and he encouraged me to visit the companies often. In his opinion it was elementary to get to know the companies, and in order to do that a certain level of trust between the case companies and myself had to be established. His guidance was worthwhile in the inductive phase of the research project. Moreover, the many visits in the companies have resulted in the detailed case descriptions.

Already when I was under Professor Hedaa's supervision, my area of interest was the companies' repositioning from manufacturing to trading. However, at that time my entrance point to this field was somewhat vague, because I kept the level of abstraction high through the General Systems Theory. After the mid-term seminar, as was planned, Professor Thomas Ritter took over the supervision. Professor Ritter pinpointed very clearly that I should concentrate on the repositioning process and in these terms study the concept of position. This decision led me to the deductive phase of the research project and the challenges related to it. As I was used to conducting research

in an inductive manner, it was suddenly difficult to avoid the companies and purely concentrate on the literature reviews. But, it soon appeared that my field work turned out to be utmost beneficial in this theoretical phase, and it felt as if the pieces of this research puzzle started to fall into place. The emerging framework structured my cases and vice versa. This phase was also very valuable from the learning point of view, because it taught me how to present my research in a coherent way.

As mentioned earlier, the eight companies were the starting point for this thesis. In other words, the cases selected the study, not the other way around. The question of what to do with the cases, and whether to involve all of them, was a question that arose constantly throughout the research process. In all honesty, I felt obliged in some way to include them all, as they co-financed the project. I tried doing this until I was half way through. But, I realised that if I wanted to include all the companies in the research project, it would require a very high level of abstraction. As I was concerned with companies with everyday business challenges, this level did not meet the research needs. Moreover, the numerous visits in many companies were extremely time-consuming, and I therefore decided to concentrate on the companies and excluded, for example, contacts to the suppliers.

In this context one may ask why I did not focus simply on only one company in order to achieve depth in the study. But, as I had chosen a phenomenon that I had observed strongly in three particular companies, it was natural to include them all in my research. Moreover, I had three very different cases that all could contribute to a better understanding of the repositioning process. This provided me with a more nuanced view of reality. I would not have been able to achieve that view if I had only concentrated on one case.

In this thesis the cases were the starting point for the entire research project, and the companies chose to participate in the research project by paying an annual fee over three years. The fact that the research was carried out on a PhD-level called for a high theoretical conceptualisation. For me, this entire process has been a culmination of practitioners meeting academia and the challenges related to it. Being a researcher on project co-financed by private firms is akin to walking on a tightrope. On one hand it is important to be able to communicate with the practitioners and provide them with learning. On the other hand, the research project has to meet a certain academic level.

It is very difficult to succeed completely in both areas. In principle, if I do not succeed in my research project in an academically satisfactory way, I will not obtain my PhD degree. Then, what is worse, not being able to meet the practitioners' expectations or failing to obtain an academic degree? In any case, apart from obtaining the PhD degree, my own point of departure for carrying out this research project was to provide companies with useful knowledge. I was aware of that I would and should not solve their problems. Even though I included only three companies in the final stage of the project, I would argue that the outcomes of the repositioning issues are applicable to all the remaining companies as well.

### **10.3. Contributions and implications**

This thesis has both theoretical and managerial contributions. On a theoretical plane, I have added more insight into the discussion of how a firm's position is seen in relation to others. This thesis has clarified the position measurements by pinpointing that the earlier contributions within this field can be categorised under a limited number of measurements. Secondly, I have added an alternative way of studying change in networks. In this way, the position measurements can be used as operational tool to explore change issues in a network. The third theoretical contribution is concerned with the concept of supply network. This thesis has anchored the supply network as being a useful and appropriately delimiting tool to study global sourcing issues in industrial networks.

From the managerial contribution point of view, a highly relevant issue has been pinpointed. In this thesis I have studied change from upstream-oriented activities to more downstream-oriented ones in the context of pine furniture industry. But these challenges are met in many other industries as well. Hence, this thesis may help companies to realise that global sourcing issues are ruling current business practices.

Moreover, despite the challenging research setting, I have felt supremely privileged to have the opportunity to study companies that were under economic pressure. In this era of continuous discussions regarding outsourcing and global sourcing, this study has indicated that these decisions are not necessarily neatly defined strategic decisions. Moreover, I argue that by studying cases that are not success stories, more learning can be deliberated than if I had been studying companies in

which everything was under control. This study indicated the importance of understanding how companies are related to their network and what kind of capabilities gain relevance.

For practice measures, this research has the following implications. Firstly, purchasing has increased its importance significantly. Not only in terms of more strategic purchasing, but in the presented cases purchasing became the firm's main function. This also implies that the traditional way of dividing organisations into particular sub-functions, e.g. purchasing, marketing and production becomes more merged. In other words, while collaboration earlier has been desirable between different sub-functions, it has now become an obligation, and state-of-the-art in contemporary firms. Tasks and persons involved from within a firm and across its boundaries require enhanced integration.

Secondly, capabilities are of utmost important when carrying out a role of managing business relationships and undertaking change in networks. The necessary capability set is required to carry out these activities, and it is important for the firms analyse, whether their capabilities fit the present situation. Moreover, it is of ultimate importance that the firms understand the network context they are operating in. In these terms, it is not enough to know who your suppliers, competitors and customers are. It is also crucial to recognize the more general development of the present network and capture the change driving forces.

Thirdly, in this study path dependence was one of the factors that hindered the firms' repositioning and the development of capabilities. In this context capabilities can also be seen as impetus for changing this. An analysis of the capabilities found in a particular firm can be a source of more proactive change. It might even transpire that a firm will discover capabilities that will lead to a change from an existing network to a totally new one. A firm's relationship can be used in a similar way, and the existence of a latent or indirect business relationship can lead to changes in a firm's role and capabilities. Therefore, a more proactive way of using capabilities and relationships as shown above can lead to a change in a firm's network logic.

To sum up, managers could benefit from the following checklist (See Table 28 ) to identify a firm's position inside a network.



<b>Position measurement</b>	<b>Questions</b>
<i>Role</i>	<ul style="list-style-type: none"> <li>• What are the main activities?</li> <li>• Which sub-units undertake supporting activities?</li> <li>• Who are involved in the supporting activities?</li> </ul>
<i>Relationship</i>	<ul style="list-style-type: none"> <li>• What characterizes the relationship environment(s)?</li> <li>• What characterizes the relationship atmosphere(s)?</li> <li>• Can there be identified any latent relationships?</li> </ul>
<i>Capabilities</i>	<ul style="list-style-type: none"> <li>• What capabilities are needed to carry out a firm's role and relationships?</li> <li>• Which capabilities are present?</li> <li>• Which capabilities are lacking?</li> <li>• Are there any capabilities that are not used at the moment?</li> </ul>

**Table 28: A managerial checklist to identify a firm's position**

#### **10.4. Future research**

This study gives rise to further research in several fields. Firstly, many companies are undergoing the same process as the Danish pine furniture manufacturers. Therefore, it would be interesting to conduct similar studies in other industries. These studies could strengthen the developed framework and depict a more comprehensive understanding of firms' repositioning from upstream activities towards more downstream-oriented ones.

Secondly, the present study provided a different angle to study the driving forces behind change. This area appears to be relatively under-researched. The model developed in this thesis can be developed further to capture change processes in firms. Therefore, more studies within the driving forces behind change are needed.

Thirdly, more focused studies about companies' purchasing function are relevant. This study has indicated that purchasing has changed its role from a support function to becoming a key activity. In this sense purchasing truly has increased its strategic importance, and deserves more fundamental research entailing a more holistic way of seeing a firm's purchasing function.

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## **Appendices**

***Appendix 1: Interviews conducted in the initial research phase***

<b>Date</b>	<b>Company</b>	<b>Person(s) interviewed</b>
03-02-2005	C1	Owner / MD
03-02-2005	C7	MD
07-02-2005	C6	Co-Owner / MD
08-02-2005	C3	Owner / MD
08-02-2005	C9	MD and Supply chain manager
09-02-2005	C8	Owner's son
16-02-2005	C2	Owner / MD
22-02-2005	C4	HR Director
22-02-2005	C7	Owner / Sawn wood purchaser
01-03-2005	C6	Purchasing manager
09-03-2005	C5	Purchasing manager
10-03-2005	C8	Owner's son
14-03-2005	C4	Purchasing director
17-03-2005	C3	Purchasing manager and sawn wood purchase coordinator
04-04-2005	C2	Purchasing manager
07-04-2005	C7	Owner, MD and logistics coordinator
21-04-2005	C1	Purchasing manager, purchasing coordinator and owner/MD
21-04-2005	C5	Purchasing manager
26-04-2005	C2	2 purchasing coordinators
27-04-2005	C4	Purchasing manager
27-04-2005	C6	Purchasing manager and production foreman
02-05-2005	C3	2 production foremen, purchasing manager
02-05-2005	C8	Production planner and owner
19-05-2005	C5	IT Manager
24-05-2005	C2	Purchasing manager
24-05-2005	C7	Controller / Purchasing coordinator
25-05-2005	C5	Production manager
31-05-2005	C1	Purchasing manager
31-05-2005	C6	Purchasing manager
21-06-2005	C4	Purchasing director
23-06-2005	C5	Owner / MD

**Appendix 2: Interviews conducted in the second research phase**

<b>Date</b>	<b>Company</b>	<b>Person(s) interviewed</b>
10-08-2005	C1	Purchasing manager
06-09-2005	C8	Production foreman and Owner's son
12-09-2005	C3	Production manager and Technical manager
15-09-2005	C7	Sales manager
20-09-2005	C4	HR Director and Purchasing director
23-09-2005	C2	Purchasing manager
26-09-2005	C5	Owner/MD
03-10-2005	C6	Managing director and Purchasing manager
07-10-2005	C2	Purchasing manager
07-10-2005	C5	Purchasing manager
13-10-2005	C1	Purchasing manager and Owner / MD
21-10-2005	C2	Production manager and Logistics coordinator
25-10-2005	C4	2 purchasing coordinators
09-11-2005	C3	Purchasing manager and Sawn wood purchasing coordinator
10-11-2005	C2	Purchasing manager
10-11-2005	C7	Controller/Purchasing coordinator
15-11-2005	C1	Purchasing manager and Purchasing coordinator
15-11-2005	C4	Sourcing manager
23-11-2005	C8	Owner's son
25-11-2005	C5	Purchasing manager and Production manager
09-02-2006	C1	Purchasing manager and Owner / MD
09-02-2006	C6	MD
17-02-2006	C4	Purchasing director
17-02-2006	C8	Owner's son
24-02-2006	C5	New MD
28-02-2006	C2	Purchasing manager (Production) and Owner / MD
04-04-2006	C4	Purchasing director
05-04-2006	C3	Production manager
10-04-2006	C5	Purchasing manager
11-05-2006	C3	Purchasing manager
09-06-2006	C1	Owner / MD
12-06-2006	C6	Purchasing manager
14-06-2006	C3	Sourcing agent
30-06-2006	C5	Purchasing manager
03-07-2006	C7	Controller/Purchasing coordinator
14-07-2006	C2	Purchasing manager
29-08-2006	C4	Sourcing manager
16-10-2006	C1	Purchasing manager
30-10-2006	C2	Purchasing manager
03-11-2006	C5	Purchasing manager
11-11-2006	C3	Sourcing agent

*Appendix 3: Interviews conducted in the third research phase*

<b>Date</b>	<b>Company</b>	<b>Person(s) interviewed</b>
13-03-2007	C2	Purchasing manager
23-04-2007	C1	Purchasing manager
25-04-2007	C3	Sourcing agent
24-05-2007	C2	Purchasing manager
12-06-2007	C1	Purchasing manager and Owner / MD
12-06-2007	C3	Sourcing agent
02-07-2007	C1	Purchasing manager and Owner / MD
02-07-2007	C3	Sourcing agent and MD
04-07-2007	C2	Purchasing manager
09-07-2007	C2	Purchasing manager

***Appendix 4: Dates and topics of the experience exchange group meetings***

<b><i>Time</i></b>		<b><i>Topic</i></b>	<b><i>Joint meeting</i></b>
2005	April	Introduction to the project context	X
2005	June	Sawn wood purchases	
2005	September	Supplier segmentation	
2005	November	Price setting	X
2006	February	Industry collaboration	X
2006	April	Industry collaboration continued	X
2006	June	Make-or-buy analyses	
2006	August	Danish export service	X
2007	January	Innovation and Design	X
2007	June	Presentation of research results	X

*Appendix 5: Dates and topics of the supervisory board meetings*

<i>Time</i>		<i>Topic</i>	<i>Joint meeting</i>
2005	April	Introduction to the project context	X
2005	October	Status for pine furniture industry	
2006	April	Industry collaboration continued	X
2006	October	New possibilities with wood	
2007	April	Presentation of research results	